Blue Mountain Forests' Monitoring Report – Fiscal Year 1999
Section U - Umatilla National Forest

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MONITORING ITEMS NOT REPORTED FOR FY 1999

A number of Monitoring Items from the Umatilla Forest's 1994 Monitoring Strategy were not reported in FY 1999. 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. Some items not found in this section were reported in Section C, the coordinated monitoring items.

A handful of monitoring items were scheduled for monitoring in FY 99 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 6	Stream Sedimentation
Item 7	Stream Channel Morphological Features
Item 9	Riparian Vegetation
Item 11	Range Condition and Trend
Item 16	Ponderosa Pine Regeneration
Item 24	Old Growth
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Item 58	Forest Budget
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The Summary Of Recommended Actions, beginning on page U-5, shows all Umatilla Monitoring Items and whether they were deferred, consolidated with the other Blue Mountain Forests (Section C of this Monitoring Report), or reported in this Section.

SUMMARY OF FINDINGS AND RECOMMENDED ACTIONS

The Summary of Recommended Actions, beginning on page U-5, is a table showing all Umatilla Monitoring Items and whether they were deferred, consolidated with the other Blue Mountain Forests (Section C), or reported in this section (U). The table summarizes the key findings and the recommended actions to be taken because of this year's monitoring for the Umatilla National Forest. A more complete analysis of this years included monitoring items can be found later in this section (U) or in the Coordinated Monitoring Section (C).

Categories of recommended actions 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 to be changed or clarified through the amendment or revision process.

Continue Monitoring (CM) - Indicates we will continue with the current scheme.

Not Evaluated (NE) – The monitoring item was not evaluated this year.

Summary of Recommended Action

♦ 1999 Monitoring Report ♦

Umatilla National Forest

Report Section*	MI #	Monitoring Item (MI)	1998 Action	1999 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
I. PHYSICAL RESOURCES							
Coord	1	Air Quality	CM				Prescribed burning acres and particulate emissions decreased from the prior 2 years. One smoke intrusion was reported for Baker City.
Uma	2	Soil Productivity	CM				Monitored sales generally met soil protection goals. Off road vehicle use onto saturated soils is an increasing problem.
Uma	2A	Soil Productivity over Time	FE		X		Winged subsoilers to reduce compactions increased tree seedling survival.
Def	3	Water Quantity	CP				Not reported FY 99
Uma	4	Water Quality	CP	X			Most BMPs are being met. Systematic sampling is needed.
Uma	5	Stream Temperature	CP	X	X		Many streams are not meeting state water quality standards.
Def	6	Stream Sedimentation	CM				Not reported FY 99
Def	7	Stream Channel Morphological Features	CM				Not reported FY 99
Uma	8	Fire Effects - Wildfire on Water and Soils	CM				Continue monitoring Tower, Boundary, and Wheeler Point fires.
II. BIOLOGIC RESOURCES							
Def	9	Riparian Vegetation	NE				Deferred FY 99.
Coord	10	Forage Utilization	CM FE	X	X		93% of the monitored pastures met standards
Def	11	Range Condition and Trend	NE				Funding did not support integrated range analysis.
Coord	12	Noxious Weeds: Invasive Vegetation	CM				About 1,760 acres (gross) were treated, primarily through manual and chemical means.
Coord	13	Silvicultural Harvest Method	AP			X	Change in harvest method needs to be evaluated and adjusted upon completion of ICBEMP process.

* More information on items can be found in: Uma = Umatilla; Coord = Coordinated; Def = Deferred (not evaluated FY 99); Accom Report = Accomplishment Report Table at the end of the Umatilla section.

Report Section*	MI #	Monitoring Item (MI)	1998 Action	1999 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
Uma	14	Created Openings	NE				FY 99 EAs did not propose activities that would exceed standards.
Coord	15	Stand Management - Regeneration	FE		X		Third year survival problems need investigation.
Def	16	Stand Management - Ponderosa Pine Regeneration	NE				Deferred FY 99.
Uma	17	Stand Management – Noncommercial Thinning.	CM				Funding for thinning remains inadequate and the backlog is growing.
Coord	18	Fire Effects - Prescribed Fire	CM				2576 acres of activities fuels were treated.
Def	19	Vegetation Management	CM				Continue monitoring.
Uma	20	Threatened, Endangered, and Sensitive Plants	CM				There were 283 known populations of sensitive plants in FY 99. Current monitoring indicates sensitive plants are adequately protected.
Coord	21	Insect and Disease Control	CM				Insect populations remain low with the exceptions of Douglas fir beetle and Douglas fir tussock moth.
Uma	22	Anadromous and Resident Fisheries	CM				Bull trout redd counts increased on 5 of 6 creeks monitored. Chinook counts were up on the N Fork John Day River.
Uma	23	Elk/Deer Habitat and Estimated Populations	FE		X		Deer populations remain below Management Objectives. Elk populations remain stable.
Def	24	Old Growth Tree Habitat	NE				Not reported in FY 99.
Uma	25	Dead and/or Defective Tree Habitat	CP FE		X		Snag and down wood levels exceeded standards on 6 of 7 monitored units.
Def	26	Pileated and Northern Three-Toed Woodpecker Populations	NE				Deferred for FY 99.
Def	27	Pine Marten	NE				Deferred for FY 99.
Uma	28	Threatened/Endangered/Sensitive Wildlife and Fish Species	CM				Continue monitoring.
Def	29	Plant and Animal Diversity	NE				Deferred for FY 99.

Report Section	MI #	Monitoring Item (MI)	1998 Action	1999 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
III. RESOURCES AND SERVICES TO PEOPLE							
Uma	30	**A. Forest Plan Implementation** Management Areas/Standards and Guidelines	NE			X	Forest Plan revision should be done after ICBEMP is completed.
Uma	31	**B. Recreation** Primitive/Semi-Primitive Recreation and Roadless Areas	NE				Continue monitoring.
Def	32	Off-Highway Vehicle Use	NE				Deferred for FY 99.
Def	33	Developed Sites	NE				Not reported FY 99.
Def	34	Wild and Scenic Rivers	NE				Deferred for FY 99.
Def	35	Existing Visual Condition	NE				Deferred for FY 99.
Def	36	Nonconforming Uses	NE				Deferred for FY 99.
Def	37	Limit of Acceptable Change (LAC) and Amount of Primitive Wilderness Resource Spectrum (WRS)	NE				Deferred for FY 99.
Coord	38	Allotment Planning	CM				No AMPs were completed in FY 99. Reduced funding has reduced the Forests' ability to complete AMPs.
Accomp Report	39	Range Outputs	CM				62,700 AUMs were reported in FY 99. Future Forest Plan Adjustment may affect outputs.
Accomp Report	40	Range Improvement	CM				42 structural improvements were made
Uma	41	Identification of Lands Suitable for Timber Management	NE				Since FY 95, no documents specified suitability changes. Continue monitoring.
Def	42	Timber - Yield Projection	NE				Deferred for FY 99.
Coord	43	Timber Offered for Sale	FE AP		X	X	Timber offered was 16% below Forest Plan projections. Need to adjust Plan when ICBEMP process is completed.
Uma	44	Availability of Firewood	CM				Current demands are being met.
Coord	45	Mineral Development and Rehabilitation (MDR) Accessibility	CM				One abandoned mine was reclaimed in FY 99.
Coord	46	Forest Road System	CM				About 1 mile of road was obliterated.

Report Section	MI #	Monitoring Item (MI)	1998 Action	1999 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
Coord	47	Open Road Density	CM				Not reported FY 99.
Def	48	Trails	NE				Not reported FY 99.
Coord	49	Fire - Program Effectiveness	CM				Number of fires and acres burned was below average.
Coord	50	Cultural Properties/Sites	NE				Not reported FY 99.
Def	51	Effects of Forest Management Activities on Special Interest Areas	NE				Deferred for FY 99.
Def	52	Research Natural Areas (RNAs)	NE				Deferred for FY 99.
Uma	53	National Environmental Policy Act (NEPA)/National Forest Management Act (NFMA)	CP				The Forest is completing fewer but more complex environmental documents.
IV. SOCIAL AND ECONOMIC **							
Coord	54	Changes in Income Levels, Populations, and Employment	CM				Reported in ICBEMP, Feb 98.
Coord	55	Payments to Counties	CM				Refer to table C-22 for summary.
Coord	56	Lifestyles, Attitudes, Beliefs, Values, and Social Organizations	CM				Not reported in FY 99.
Def	57	Forest Contributions to the Local Timber Supply	CM				Not reported in FY 99.
Coord	58	Forest Budget	CM				Not reported in FY 99.
Coord	59	Costs/Values of Forest Plan	CM				Not reported in FY 99.

**A new budget process (FFIS) delayed report generation for many of the budget items.

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?

Timber harvest and associated activities continued to be the focus of soil monitoring during FY 1999. Road construction activity was limited to temporary access roads with most work related to drainage improvements, road obliteration or decommissioning. Grazing effects monitoring is again very limited due to funding shortfalls. Cursory assessment of grazing effects occurred concurrently with other monitoring or field visits. Watershed improvement projects are being evaluated for erosion and sedimentation effects and, in some cases, for productivity effects. The objective(s) of many of these projects includes improvement of productivity or growing conditions.

As in the recent past, Timber Sale Administrators provide much of the daily monitoring of soil impacts and erosion for harvest operations by observing/inspecting unit erosion control measures (Best Management Practices or BMPs) and soil rehabilitation work (e.g., subsoiling, cross ditching, and barricading). Specific areas inspected/monitored included temporary roads, tractor skid trails, forwarder routes, skyline/cable corridors, tractor and hand firelines, and log landings. The Forest Soil Scientist monitored additional unit areas on an intermittent, sample basis.

POMEROY RD

There were three active timber sales operating on the Pomeroy Ranger District during 1999. The three sales were Tucannon, Gobbler and Lick. All three sales were monitored for compliance with Forest-wide Standards and Guidelines for soil disturbing activities during routine sale administration and engineering representative inspections, with intermittent monitoring by the Forest Soil Scientist. The Tucannon Timber Sale is a helicopter sale. It was active in 1998, and was completed in 1999. Gobbler Timber Sale was completed in 1999 and employed whole tree mechanical as well as cut to length harvesting systems. Activity on the Lick Timber Sale was limited to road reconstruction in preparation for logging in the 2000 season.

Tucannon Timber Sale

The Tucannon Timber Sale utilized helicopter yarding and is well within standards and guidelines for soil impacts, as there is little disturbance or compaction within the harvest units. Most impacts with helicopter yarding take place at the landings. All landings and access roads for the Tucannon sale were preexisting. As the landings will be used in the future, they were treated for erosion control using BMP guidelines and revegetation treatments, but not decompacted (subsoiled). Roads that were not to be used for recreational purposes or were not part of the permanent transportation system were ripped to break up compaction and improve drainage, and then revegetated following BMP guidelines.

Slash was layered on exposed areas of landings, reducing the possibility of soil erosion. Slash was piled with a track mount grapple loader on each landing. As an alternative to burning the slash, chipping the landing piles for hog fuel is being considered. This would reduce soil impacts from pile burning.

Reconstruction of the 47 road to provide better drainage and stabilization of cut and fill slopes was included as part of the Tucannon Sale. This has been effective in reducing erosion potential from the road system and to meet objectives of BMPs in the sale area.
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Gobbler Timber Sale

Gobbler Sale was sold in 1998, completed in 1999, and required a cut-to-length system for 5 of the 12 units on the sale. Three of the units are plantation thinnings and the other two are different timber and site types. This provided specialists with good examples of this new technology and a chance to evaluate how well it meets objectives in the different stand conditions on the district.

In general, the cut to length system met soils protection objectives. The plantation commercial thinnings had plenty of slash to provide a mat for the equipment to operate on, protecting the soils from disturbance and compaction. There were some areas where the equipment had to turn, creating deep displaced ruts even with the slash mat. Overall, conditions are well within the standards and guidelines. As with all equipment operation, the amount of disturbance depends on the operator. One harvester operator was able to place the processed logs on every other trail so the forwarder only had to travel every other trail. This way the harvester was on every trail but the forwarder which makes multiple passes was able to stay on every other trail reducing forwarder impacts on approximately 1/2 the trails.

Other observations from unit #12 follow. Slash was generally well distributed, thereby keeping exposed soil to a minimum and retaining nutrients (in the slash) on site. There was some minor rilling on one skid trail (due to recent shower), where slash ended up on the side of the trail leaving exposed soil. The mobilized soil traveled about 20 feet before redepositing on a gentler slope break. This was an isolated occurrence; few other areas had any erosion from the rainfall. The north end of this unit is steep (30% plus) and a problem area; the soils are deep on (this) north aspect with some deep tire rutting from a skidder. The back-hauled slash is very effectively providing erosion control on the downhill sections.

Unit 5 of the sale was supposed to be all cut to length. After several meetings with the purchaser, operator and FSR, it was decided that a large portion of the unit had a high percentage of oversize material. The operator felt that this would not be a very efficient use of the cut to length system and ground impacts would be significantly higher due to the lack of slash to operate on for both the harvester and forwarder. A portion of the unit was left as cut to length and the rest was harvested using the whole tree system that was used on the other units.

The other 7 units in the Gobbler Sale, plus a portion of unit 5, required a whole- tree mechanical ground based system that would meet Forest standards and guidelines for soils protection. Some trees too large for the feller buncher head were felled by hand to designated skid trails. All trails and landings were designated prior to felling, providing minimal clearing limits reduced landing size. A layer of slash, sometimes 2 feet thick, was left on the landing for equipment to operate on. Excess slash was placed back onto the skid trails concurrently with the skidding operations. The objectives were to reduce the disturbance to soils in the skidtrails, protect the skid trails from erosion, and return nutrients to the unit. This method of skid trail treatment was effective for nutrient retention and erosion control, but less so for total disturbance.

Unit #4 provided an example of 'backyarding' the slash that resulted from whole-tree yarding (WTY). Problems noted with WTY included displacement from whole-tree skidding across the entire skid trail width and length, especially on major feeder trails close to the landings. Compaction on trails increases with the extra processing and trafficking. These effects are offset to some extent by the replacement of the slash back onto the otherwise bare trails. This practice controls erosion and the needles and small branches being placed on the trail provide additional nutrients.

Trail spacing, number of landings, and landing size are still the key to keeping soil impacts within guidelines on whole-tree mechanical sides. For this sale no more than two landings were used in any unit except unit 1 (140 plus acres with 5 landings). Only 1 landing exceeded the 1/3-acre size target size. Some skid trail spacing was closer than desired, but overall, soils guidelines were met for the Gobbler Timber Sale using the whole tree mechanical system.

Lick Timber Sale

The Lick Timber Sale (sold in 1999) had road reconstruction completed in 1999. All work areas were revegetated to reduce erosion, and drainage was improved on several roads. This will reduce the erosion potential on the sale area roads. All temporary roads were constructed with an excavator creating minimal cut and fill slopes. Where possible slash was windrowed at the toe of the fill slope, all disturbed areas were grass seeded and access blocked to prevent unauthorized use. These roads are scheduled for obliteration when work on the sale is completed. This work on this sale met management guidelines for soils protection and BMP guidelines for erosion control.

WALLA WALLA RD

Moe Salvage

Logging operations on this sale were accomplished using a cut-to-length system. The operator did an excellent job and all management objectives were met. The prescribed burning that followed harvest met most objectives. There were only a few areas with burn intensities higher than planned. Because of stand conditions, several units had undesired levels of tree mortality. Duff and downed log retention overall was high although downed log scorch was extensive in some units.

Swampy Salvage

The Swampy Salvage Timber Sale was harvested using a Cut-to-length/Forwarder logging system. Field reviews by the Sale Administrator and the Forest Service Representative included the following findings:

This sale has 4 harvest units that were individually tree marked. Two harvest units were logged in the summer of 1999, with operations as follows: A Valmet 500T processor cut the timber and placing the tops, limbs, slash, etc., in the trails. This slash mat reduces or eliminates compaction. The equipment is required to stay on designated trails which are not closer than 40 feet and do not exceed 12 feet in width. Most trails were further apart than required because the processor had the capability of reaching 32 feet, with a usable reach of 28 feet. Following the log processor was a Valmet log forwarder. The forwarder picks up the logs without leaving the designated trail and carries them to predesignated landings. All landings were located in existing openings adjacent to the haul roads. No landing construction was needed. Landings were then seeded with native seed when operations were completed.

Using a harvest trail spacing of approximately 45 feet, and assuming that the only portion of each trail with exposed mineral soil was the last 50 feet before the landing, approximately 2% exposed mineral soil occurred on the sale area.

The Forest Soil Scientist estimated some units have less than 2% exposed soil. Minor compaction and rutting was observed in units 5 and 6, with overall detrimental impacts estimated in the 4 to 8% range. Unit 4 was visited on October 5. The unit was lightly marked for salvage tree removal, with high slash volumes and leave tree densities. The slash volume allows an excellent mat for machinery to operate on, and the operator did an excellent job of protecting the standing live trees. Soil protection objectives were easily met with total disturbance levels low.

Cliffhanger Timber Sale

Operations and harvest results have been very good with close attention to soil and site conditions. One exception occurred in the late winter of 1999 when a skidder operator continued traveling across some open dry meadow areas of Fox Prairie, despite thawing conditions. This resulted in areas of considerable rutting on some meadow sites. Operations

were halted and the sites rehabilitated as soon as conditions permitted. The rehabilitation treatments worked well and native grass seed was used to revegetate the damaged areas. The area will be monitored in the spring of 2000.

NORTH FORK JOHN DAY RD

Lone; Dragon Salvage-Tower Fire

In late fall of 1998, the Lone and Dragon Salvage Sales were enjoined, as a result of the Big Tower litigation, from further operations. In addition, deteriorating weather prevented much of the work needed for erosion control and site stabilization from being completed. The following spring considerable work was accomplished as court hearings and agreements were completed, but some work was delayed into the summer and inadequately treated areas were subjected to spring and summer storms. A separate agreement allowed the Forest Service to remove six log decks from the area following the injunction. Part of the agreement to remove these decks included monitoring results of the removing and subsequent mitigation. This monitoring will be take place in the spring of 2000 and be reporting in the FY 2000 Monitoring report. Follow-up monitoring will take place in subsequent years. A general discussion of the salvage operations follows.

LONE SALVAGE

Units in and around the summer cabins at Pearson Meadows include areas of cut-to-length forwarders running up and down short, steep sections with little available slash or residual downed wood for erosion control. There was material available that might have been pulled onto trails on the last turn, but the unit was not completed due to the injunction. There is some question whether the contract provides for this type of mitigation and whether it would have occurred without the injunction. However, no soil movement was observed on any of the units when inspected in September 1999.

This unit is an example of where harvest operation could have better addressed erosion control. In wildfire areas such as this, placement of available remaining unmerchantable logs on the processing trails would provide an extra measure of erosion hazard protection and would reduce the need for waterbar construction under some conditions. Where adequate wood is not available, proper waterbar construction may be adequate.

DRAGON SALVAGE

The court injunction also affected this sale, so it is difficult to determine what results would have been if the sale were completed. The following observations were made on the portion of the sale where harvest was finished.

Allowing whole-tree yarding (WTY) resulted in pushing aside slash, limbs, and logs on several of the major skids trails exposing the soil surface and increasing erosion hazard. It is difficult to determine what follow-up work would have been completed if the injunction had not occurred. As it was, waterbarring was inadequate on temporary roads left over winter. No slash or logs were redistributed on trails or temporary roads or logs placed from sides,

and BMPs were generally inadequately implemented. There was also some excessive side-hill rutting where machines turned on deep soils. As a result of the WTY, large piles of cull decks and processing debris were left on landings. This type of material should either be left in the woods or hauled from the site if excess fuel loading is a concern.

Tarweed

Unit 120 has some excessive rutting from logging operations, as did unit 126. The damage is not extensive, but treatment of affected areas is warranted. Tractor-made fire-lines on unit 57 and 54 are much better than those constructed earlier on Rockhard. However there is still some question whether they are needed.

Rockhard

Units 15,14: Tractor firelines appear to be constructed to a higher standard than necessary. Off road vehicles are using them as trails.

Mullein/Rockhard “Slashbuster” operations

A Slashbuster site preparation device was employed on several units of the North Fork John Day Ranger District. This machine consists of a rotary head cutter mounted on an excavator chassis. It is designed to reduce and evenly distribute logging slash.

As of 11/2/99, Slashbuster site preparation operations were completed on units 97 and 98. Operations look good, with little additional soil disturbance from the slashing operations. There was adequate down wood left on the site and this factor combined with dry conditions, minimizing the potential for compaction.

Unit 93 is similar to units 97 and 98. Adequate regeneration is present and residual trees were protected during slashing operations. Only jackpot burning is now necessary, and this can be completed without damage to residual trees.

Unit 115 showed good results. There was little new compaction or displacement. The contractor did a nice job thinning grand fir thickets while leaving well-spaced Douglas fir, larch, or lodgepole pine.

Rockhard 14 and 15--slashbuster operations look good. Slash and existing regeneration were treated in preparation for unit burning. If burning is completed, these units will be monitored again in 2000.

HEPPNER RD

Yellow Rose Salvage

Chipping of logs on site was initiated on this sale to see if results would be acceptable. The following summarizes some observations made on different dates.

8/19/99: Unit #14; an agreement was made where unusable chip material (material that could not be marketed) would be spread back on unit roads and skid trails. To date, the trails in this unit look good with fairly uniform depths (6-8”) of chips that have covered all exposed soil. Because this unit has sufficient existing down material remaining in trails, the erosion hazard is low, even without the chips.

9/21/99 Unit 14: Chip placement is excessive in places. It will be long time before decomposition is sufficient to allow revegetation, and in places the chip and saw dust is too deep to plant seedlings. Carbon to nitrogen ratios will be disrupted for an extended period. There are some small areas of deep rutting on the lower west side, but overall operations are very acceptable in this unit.

10/7/99 (Summary): If chip waste material is spread too deeply, it will take a long time to decompose, especially in this climate. The waste material may be useful for erosion risk reduction in some situations, such as skid roads and trails, but applications will need to be monitored to determine long-term effects. Larger amounts may be utilized in highly disturbed sites such as landings and major skid trails if incorporated into the soil and a nitrogen source is introduced. Otherwise chipped material should not be spread more than 6-8” deep.

Lonestar - Prescribed Fire

Unit 16 was visited on 10/7/99: It appeared to have been burned during the spring of 1999 with overall good results. A few spots where the fire burned at high intensity were noted. Ground cover retention was very good yet some mineral soil seedbed is available. No fireline was constructed around this unit, yet there were no apparent control problems. This reduced disturbance and eliminated the exposure and erosion risk associated with tractor line construction.

Unit 23 was grapple-piled for site preparation and fuel reduction. There was good control of equipment and operations in the unit. The operator used existing trails as much as possible. There is some rutting from turns and some additional compaction where down wood and slash was not available for the machine to operate on. Low soil moisture at the time of operations helped to reduce compaction risk.

Unit 28 is steeper and was more difficult to operate on. However, good operator control minimized soil disturbance.

OTHER OBSERVATIONS

Springtime use of saturated meadow areas by off-road trucks and recreational vehicles seems to have increased this year. These off-road excursions have led to extensive rutting of meadow areas that are very susceptible to damage when wet after snow melt or extended rain. There is a considerable amount of damage from this activity; and the Forest does not have the money or resources available to repair it.

Grazing impacts appear to be lessening as a general observation, but funding is not available to provide any details to support this assertion.

In summary, soil monitoring indicates that various logging systems used on the Forest vary in their impacts but generally meet soil resource protection goals and Forest-wide Standards and Guidelines. Mechanized harvest systems (such as cut-to-length systems) are achieving acceptable results, but can have undesirable results without proper operational control. Ground-based systems continue to have higher levels of detrimental impacts when compared with aerial systems, but work acceptably when used to their full capability. Tractor fireline construction is still excessive or unneeded on some units.

Results from spreading cull chip material back on temporary roads and skid trails were variable. Additional monitoring is necessary before prescribing this practice on any additional units.

Harvest system selection, variances and operational controls need to place erosion control as a high priority in wildfire salvage operations anywhere. In damaged habitat areas like this, it is even more essential.

Illegal ‘recreational’ off-road excursions by motorized vehicles onto saturated sites are an increasing problem.

Recommended Actions:

- Continue to monitor.
- Continue to adjust contractual language to provide for maximum erosion control and site protection measures for all land-disturbing activities.
- Follow-up effectiveness monitoring of erosion control, restoration projects and other measures should continue or expand.

UMATILLA Monitoring Item 2A
SOIL PRODUCTIVITY OVER TIME-TREATMENT EFFECTIVENESS

Questions: Is soil productivity maintained or enhanced over time? Are rehabilitation treatments effective?

The Davis Unit 31 monitoring/demonstration project began in 1990 on the Heppner Ranger District. The intent of the project was to assess the benefits of site preparation and soil restoration with a self-drafting, winged subsoiler to reduce compaction. The project area had a history of multiple, ground-based harvesting operations that compacted soils to a degree considered beyond the limits of standards and guidelines. Artificial reforestation had commonly been a problem in areas like this, and the compacted conditions were believed linked to reforestation failures and shortfalls.

Plot areas on three sites/soil types within the unit were selected for treatment with the subsoiler or received no treatment. Subsoiling was done in 1991. In 1992, seedlings of 2/0 ponderosa pine were planted using planting hoes, and some of the tree seedlings on one site (the ash soil type) were fertilized. The effectiveness of site preparation was assessed in each year since planting by comparing planted tree survival.

Over seven growing seasons (1991-1998), substantially higher tree survival continued to be consistently associated with site preparation using the self-drafting, winged subsoiler. Measurements were taken in 1999, but the data has not yet been analyzed. This information will be included in a future monitoring report.

Recommended Actions:

- The project needs to shift focus and review growth differences in addition to tracking tree survival.
- A formal report will be submitted for publication.

UMATILLA Monitoring Item 4
WATER QUALITY

Question(s): 1. Are Forest management activities or other factors affecting water quality parameters in Forest streams? 2. Has the Forest met its designated obligations and responsibility with respect to management of non-point source pollution? Did the Forest comply with the Clean Water Act as outlined in memorandum of understandings (MOU's) with the States of Oregon and Washington? 3. What is the long-term trend in water quality? 4. Are Best Management Practices and other measures implemented as designed to protect water quality? 5. Are Best Management Practices and other practices effective in meeting water quality goals?

I. Baseline Monitoring:
The Forest operated 11 automated pumping samplers on the following streams: Tucannon River (two locations), Pataha Creek, Charley Creek (summer only), Desolation Creek, Skookum Creek (two locations), and Willow Creek (4 locations).

Daily (composite) samples were analyzed for suspended sediment (mg/l), turbidity (NTU), total dissolved solids (mg/l), and conductivity (mmhos). These data have not been summarized or interpreted.

Grab samples were collected at 14 locations (nine streams and one lake) on the Heppner District. Samples are collected 4 times per year and analyzed for dissolved oxygen (mg/l), coliform bacteria (total, fecal, and *E. coli*), suspended solids, total dissolved solids, conductivity, and pH.

II. Project Monitoring:

Ski Bluewood – three sediment-monitoring stations were operated on the North Fork Touchet River until 1998 when they were shut down. Data for 1997 and 1998 were analyzed for compliance with the State of Washington turbidity standard. The standard was exceeded on multiple occurrences at the North Fork Touchet River below Skyline station. The longest period occurred during late January and early February 1998 (turbidity ranged from 5 to 20 NTUs over background).

Phillips Creek road restoration – road and bridge treatments were reviewed for implementation and effectiveness. Treatments included subsoiling, recontouring, bridge removal, and revegetation. Overall, plans were implemented as designed. Stream crossings appeared to be stable and revegetating although hardwood planting survival appeared to be low and sites appeared to be revegetating naturally.

Flood repair work on Pomeroy District roads – flood repair work on FS road 47 (rolling dips) appeared to improve some road drainage problems. However, the road location in a narrow valley-bottom continues to impact the river from runoff and sedimentation.

Timber Sales – four projects were reviewed on Pomeroy, Walla Walla, and Heppner Districts. A range of practices were evaluated including: fuels treatments, slash management at landings, yarding systems, temporary roads management, winter logging effects, streamside buffers, and erosion control measures. Each practice was reviewed in terms of level of implementation and effectiveness. Results indicate that in most cases BMPs were implemented as designed, however, additional time and reviews will be needed to validate effectiveness. Examples of full implementation of BMPs include erosion control measures and streamside buffers. Partial implementation was observed on one prescribed burn unit where some overstory residual trees were killed by the fire. BMPs were not implemented in one case during winter logging when temperature conditions changed (warming) and skidding over thawed ground resulted in rutting and soil displacement.

Tri Forest Restoration Monitoring on the Umatilla – riparian planting and road decomissioning projects were reviewed by an interdisciplinary team on projects in the Tower burn area (1996 fire). In general, the team found the planting implemented and effective as designed. Overall objectives for planting were to accelerate hardwood recovery to provide stream shade and nutrient source. Hardwood planting methods are being developed and tested in several projects across the Forest. Road decommissioning activities were evaluated with mixed findings. In one case, a culvert had been left in place, which should have been removed. In another case, rehabilitation of a road-stream crossing (which failed during a storm event) had reduced sediment delivery to the stream and was an improvement.

Discussion:

Many Forest streams (≅ 50 stream segments) do not meet state water quality standards. However, forest practices have changed in recent years (e.g., PACFISH), and improvements in water quality are being seen. Water Quality Management Plans are being developed for 303d listed streams. Determinations have been made through watershed analysis that natural conditions for some streams may make state temperature standards unachievable (Desolation Ecosystem Analysis, Umatilla and Meacham Ecosystem Analysis).

Recommended Actions:

Data management is an ongoing concern. In the past, water quality data were input into the STORET program maintained by the U. S. Environmental Protection Agency. This program is being updated to improve data entry and accessibility. As a result, the new database program will have to be reinstalled on the Forest Service computer system; however, Forest Service water quality data management protocols are not yet final. There is uncertainty as to agency support for use of this national databank, and what alternative system might be developed. Approximately 2 years of data are backlogged pending this decision (no data after Dec 31, 1998 has been entered).

For land management practices, continued improvement in managing streamside activities, e.g., road maintenance, road decommissioning, recreational activities, mining and grazing.

Reinstall sediment monitoring on the North Fork Touchet River to evaluate BMP effectiveness associated with the Ski Bluewood facility.

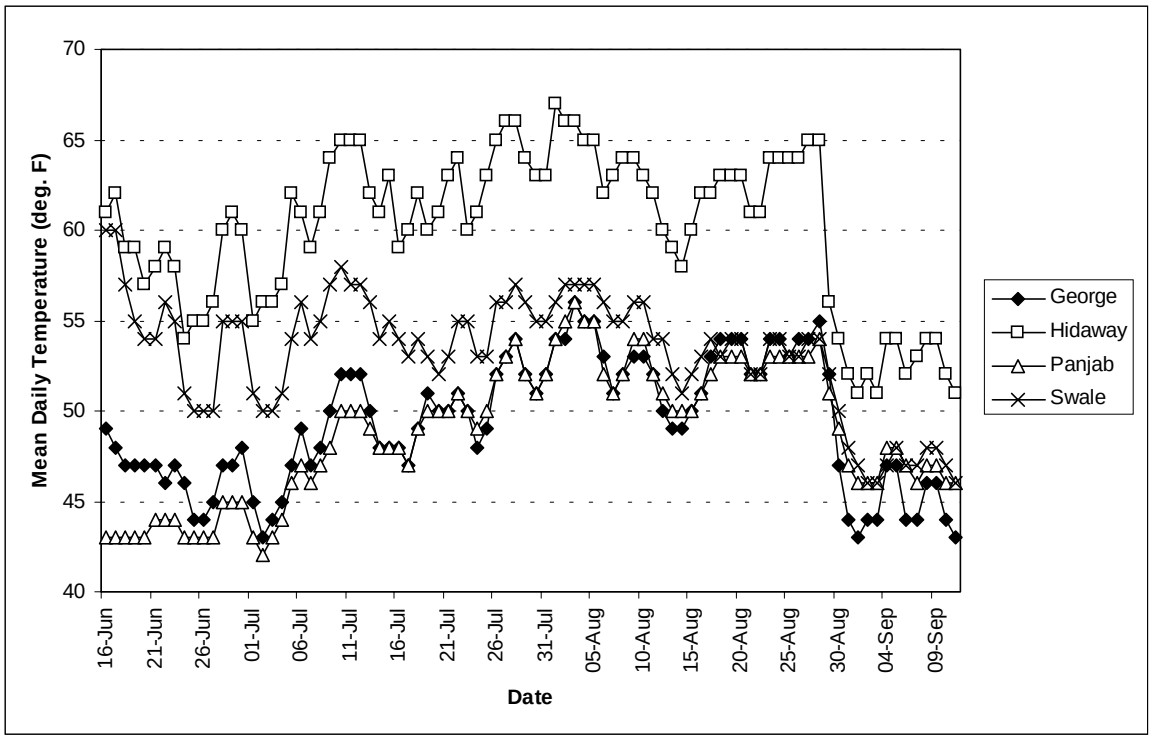
Best Management Practices reviews are conducted on an “opportunistic” basis, not on a systematic sampling basis. An improved more systematic sampling approach of selected projects and practices is needed to determine to what level BMPs are implemented and effective across the Forest. The effectiveness of restoration projects such as road decommissioning and riparian planting should be an emphasis for future monitoring efforts.

UMATILLA Monitoring Item 5
STREAM TEMPERATURE

Questions: 1. Is project implementation in riparian areas resulting in attainment of desired future conditions for stream surface shading and/or in-stream water temperatures? 2. What are the long-term changes and trends in stream temperatures? Are the long-term changes meeting Forest Plan objectives? 3. What are the cumulative effects of Forest management activities on stream temperatures?

Water temperatures were measured at 119 locations across the Forest using thermographs, measuring devices used for recording water temperatures. Summer water temperatures reached maximum in mid to late July (Figure U-1). Stream temperature conditions vary across the Forest as shown by examples from the north half of the Forest (George and Panjab Creeks) and the south half (Hidaway and Swale).

Figure U-1
SUMMER STREAM TEMPERATURES 1999
(Mean daily temperatures, degrees Fahrenheit)



A summary of the maximum 7-day average of the daily maximum temperatures for selected streams across the Forest over the past 5 years shows year-to-year variability resulting from seasonal differences in climate, water supplies, and overall watershed condition. Differences in annual maximum water temperatures are most evident where large-scale changes watershed conditions have occurred such as watersheds that have had extensive wildfire (Table U-1).

Another technique for measuring surface water temperatures increasingly in use is aerial mapping using infrared radar, or "FLIR" (Forward-Looking Infrared Radar). Many streams in northeastern Oregon have been mapped using the FLIR technology, and the data are increasingly being used to map temperature profiles along river reaches, identify cold-water refuge areas, and augment thermograph monitoring.

Five or more years of thermograph data are available for many stations across the Forest. These data show year-to-year variability and provide evidence of trends such as elevated temperatures following wildfire. In one example, the annual 7-day average of the daily maximum temperature was higher on Oriental Creeks in the three years following the 1996 Tower fire in part because of reduced stream canopy cover. Overall, most streams monitored are not meeting state temperature standards. Achieving target temperature standards may not be possible in all streams, and, in some situations such as after extensive wildfire where recovery of riparian vegetation may take 5 to 10 years (Table U-1).

Temperature monitoring expanded over the past 10 years with the availability of low-cost data recorders resulting in an increase in the number of sites being monitored. Overall, quality assurance/control has improved in data collection with newly published standard methods in place (Water Quality Monitoring Technical Guide Book, Oregon Plan for Salmon and Watersheds, July 1999), and in data management with methods for summarizing and storing data in place.

Table U-1
ANNUAL SUMMER MAXIMUM WATER TEMPERATURES
SELECTED STATIONS, 1995-1999.
(7 Day moving average of the daily maximum, degrees Fahrenheit)

Stream Name	Basin	1995	1996	1997	1998	1999	Temp Standard	# Monitored Days in '99 above Standard
Henry Cr @FB	John Day	73	72	71	**75**	72	64	78
Herren Cr	Willow	58	61	62	64	ND	64	ND
Wall Cr @FB	NF John Day	77	68	68	77	76	64	74
Hidaway Cr[1]		78	75	77	78	75	64	68
Oriental Cr[1]		58	61	65	75	72	64	62
White Creek Cr[2]		59	63	62	63	60	64	0
SF Desolation[3]		59	62	62	62	60	50	81
NFJD @Camas		72	76	ND	76	74	64	55
NF Meacham Cr	Umatilla	68	67	67	70	68	50	106
SF Umatilla		66	ND	67	69	66	50	138
NF Walla Walla	Walla Walla	63	63	64	66	63	50	99
SF Walla Walla		54	54	53	55	53	50	61
Lookingglass@ FB	Grande Ronde	56	56	55	55	55	50	83
Wenaha@ Wilderness Bdy		ND	66	66	70	61	50	51
NF Asotin @FB	Snake R (WA)	62	ND	63	68	ND	61	ND
SF Asotin @FB		56	ND	ND	60	67	61	34
Panjab Cr		59	57	58	60	60	61	2

ND=No Data
FB=Forest Boundary
1 Streams in 1996 Tower fire area
2 Stream in 1994 Boundary fire area
3 Stream in 1996 Summit fire area

Recommended Actions:

- Recent emphasis has been on developing a stable program with strong quality assurance/quality controls in place.
- Future needs include: maintaining sites with longer-term records using thermograph recorders; analyzing and interpreting data; and characterizing overall thermal conditions (cold-water areas, high heat zones).
- Thermograph monitoring should be combined with FLIR data to improve understanding of stream thermal conditions and characterize conditions at monitoring locations (i.e. determining if the site is representative of reach conditions).
- Focus efforts on mitigating/reducing management activities that degrade streamside conditions.

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?

Spring and summer storms, produced by convective air masses (topographic lifting), tend to be more localized and often have higher precipitation intensities than winter frontal weather systems, which are generally more widespread and have lower precipitation intensities. The burned areas are particularly vulnerable to thunderstorms because of reduced protective groundcover. Evidence of accelerated surface erosion (rilling and gullying), channel erosion (scour), and mass wasting processes (debris flows and torrents) were noted in Oriental Creek, South Fork Desolation Creek, and Big Creek.

There were no large fires in FY 1999 on the Umatilla. The Winom Creek BAER seeding sites look very good and are well established now. Concave positions are getting ceonothus reproduction, but not on south aspects. Few if any tree seedlings are apparent in this part of the burn, although there is a considerable seedling take of lodgepole pine along the trail to this area in from the road.

Revegetation of the Tower and Boundary Fire areas is increasing rapidly and has expanded to include much of the slow to respond higher elevations.

Recommended Action:

Continue monitoring projects on Tower, Boundary and Wheeler Point fires.

UMATILLA Monitoring Item 14
CREATED OPENINGS

Questions: Are unit sizes complying with direction in the Forest Plan, National Forest Management Act (NFMA), and Regional Standards?

During the past 10 years, on the southern half of the Forest, extensive areas of insect damaged and large, intense fire mortality have been harvested in salvage timber sales. The Forest Plan permits the 40-acre created opening size standard to be exceeded when natural catastrophic situations occur. Therefore, some harvest units exceeded the 40-acre limit on these projects. Most of the salvage harvest has been completed, although there is several proposed future projects where salvage harvest may create openings that exceed 40 acres.

A review of EAs approved in FY 1999 showed that there were no proposed harvest activities that would exceed Forest Plan created opening standards.

Recommended Action:

The need for larger openings can be expected to continue into the near future. Planning for salvage of dead and dying trees is on going for the large, destructive wildfires that occurred on the Forest during 1996. In addition, some of the large-scale insect mortality may still be salvageable.

UMATILLA Monitoring Item 17
STAND MANAGEMENT - NONCOMMERICAL THINNING

Questions: How many acres received a stocking-level control treatment? How many of the acres needing stocking-level control were treated?

The total acreage of noncommercial thinning accomplished on the Forest in 1999 was 3,175 acres. The planned amount was 2,900 acres (Forest Plan, Table 4-1). Thus, the 1999 accomplishment is about 24 percent above the Forest Plan projected output. The acreage reported is within the Forest Plan's threshold of variability (20% deviation). The following table shows the actual output from 1995 to 1999 and the percentage of the actual output measured against planned output.

Table U-2
NONCOMMERCIAL THINNING ACRES 1995-1999

1995	1996	1997	1998	1999	5 Year Average	Percentage of Forest Plan (Actual/Planned) 5 Year Average
3,132	4,127	2,769	4,841	3,175	3,609	+25%

Based upon the five-year average, the Forest exceeds Forest Plan projections. However, the Forest's needs for stocking-level control have continued to grow at a very rapid rate, indicating that Forest Plan projections may have seriously underestimated future needs with respect to thinning, release, and weeding.

As stated in previous monitoring reports, funding for stocking-level control has been deficient for at least five years now. The Forest continues to accumulate a backlog of acres needing stocking-control treatment. If shifts in funding or priorities do not occur (e.g., shifting the priority from reforestation to stocking-level control), the acreage needing to be thinned will continue to grow at almost an exponential rate.

Thinning has been emphasized recently because it reduces susceptibility to certain insects and diseases, so it can improve forest health. The Blue Mountains gained national notoriety for forest health problems over the last 30 years (outbreaks of Douglas-fir tussock moth, mountain pine beetle and other bark beetles, western spruce budworm, etc.), and increases in thinning have been proposed as a response to these problems. High levels of insect and disease damage were not anticipated in the Forest Plan, so that is probably one reason for the Plan's relatively low projections with respect to stocking-level control.

Recommended Action:

Although the Forest exceeded plan projections based upon the 5-year average, but is within Forest plan thresholds, a change is needed. Funding for stocking level control has been lacking for several years. The Forest currently has a backlog of acres to treat. Unless a shift in funding and priorities from reforestation to stocking control occurs, the amount of acres needing thinning will continue to increase. It is unlikely the Forest will be able to accomplish all of the acres needing treatment and meet long-term desired future conditions, sustainability and improved forest health. The Region is currently looking at this issue to try to come up with possible solutions and alleviate some of the survival data relating to funding.

UMATILLA Monitoring Item 19
VEGETATION MANAGEMENT

Questions: 1. Is the Forest Meeting the intent of the Managing Competing and Unwanted Vegetation Final Environmental Impact Statement and Mediated Agreement? 2. Is the Forest reporting vegetation management project analysis results in project environmental assessments and environmental impact statements? 3. Is the Forest applying mitigation measures as outlined in Appendix E of the Forest Plan FEIS? How effective are the mitigation measures?

The requirements of the Final Environmental Impact Statement (FEIS) and the Mediated Agreement (MA) for Managing Competing and Unwanted Vegetation are continuing to be applied on the Forest during development and analysis of projects "involving the management of 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.

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 located with other EA documents and materials. 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. A Noxious Weeds Report is also included as part of the analysis. This report focuses on how the prevention strategy, as presented in the MA, can be implemented for the project. Although relatively few projects were developed in FY 1999, a vegetation management plan (or checklist) and Noxious Weed Report was completed. Where monitoring has occurred, mitigation results are reported in other appropriate monitoring items.

Recommended Actions:
The Forest expects to continue monitoring the effects of managing vegetation in eight 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 and Facilities Maintenance;
7. Rights-of-Way Maintenance
8. Genetics Program

UMATILLA Monitoring Item 20
THREATENED, ENDANGERED, AND SENSITIVE PLANTS

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

During FY 99, the Regional Forester's List of Sensitive Plant Species was officially updated for the first time since 1992. There were draft lists produced in 1993 and 1997, but they were never signed. On the Umatilla National Forest, we have unofficially used the 1993 list, so the species changes described here reflect changes between the 1993 and 1999 list. The 1999 update dropped the number of species we were tracking by five species in Oregon and one species in Washington, and added four species in Oregon and four species in Washington. The current species totals are as follows (numbers that may appear not to match accounted for by multiple species at the same sites):

Table U-3
NUMBERS OF SENSITIVE PLANT SPECIES AND POPULATIONS: 1998-1999

State	1998 Total Sensitive Plant Species	1999 Total Sensitive Plant Species	1998 Total Sensitive Plant Populations	1999 Total Sensitive Plant Populations
Oregon	21	17	630	218
Washington	14	12	64	65
Total	34	26	715	283

Two sedge species were added to Oregon: *Carex crawfordii* is known to be present on the North Fork John Day Ranger District, and *Carex interior* is known to be present on the Walla Walla, North Fork and Heppner Ranger Districts. Because they weren't sensitive at the time they were found, their exact location wasn't recorded.

In addition, the Federally Listed plant *Spiranthes diluvialis*, known from Okanogan County near the Canadian border in Washington, was added to the list of species that need to be consulted on in Washington State. Because of all these changes, surveys that were previously adequate may not have been adequate for the newly listed species (especially any projects in riparian areas in Oregon), and all projects in Washington State had to be revisited for the presence of *Spiranthes diluvialis* habitat.

Because of the list changes, there were two levels of surveys this year. The first level was our usual intuitive controlled large area surveys with full species lists. We also conducted "blitz" cursory surveys looking for the presence of specific species or habitats for the newly listed species, without generating a full species list, to make sure planned projects complied with the new list. Six new sensitive plant populations were found this year.

Table U-4
PLANT SURVEY ACRES BY SURVEY TYPE AND DISTRICT

1999 Survey Acres	Intuitive Controlled Survey Acres	Cursory "Blitz" Survey Acres	Total Survey Acres
Walla Walla RD	15,770	727	16,497
Pomeroy RD	18,411	22,086	40,496
North Fork RD	4,870	1,053	5,923
Heppner RD	163	41,713	41,876
Total	39,215	65,578	104,793

A total of 63 Biological Evaluations for plant species listed as "sensitive" on the Regional List were issued for the Ranger Districts' projects in FY 99: 10 for Walla Walla, 15 for North Fork John Day, 15 for Heppner, and 13 for Pomeroy. Four Biological Assessments for *Spiranthes diluvialis* were also completed; three for Pomeroy and one for Walla Walla.

Monitoring activities for sensitive plant populations consisted almost entirely of informal presence/absence spot checks on known populations including:

Botrychium pinnatum, *B. lanceolatum* , *B. minganense*, *B. montanum*, *B. fenestratum*, and *B. paradoxum* on the Walla Walla Ranger District;
B. lanceolatum , *B. minganense*, *B. montanum*, *B.* "*echo*" (which may be *B. pedunculosum*), *Trifolium douglasii* and *Calochortus longebarbatus* var. *longebarbatus* on the North Fork John Day Ranger District;
Trifolium douglasii, *Silene spaldingii*, *Calochortus macrocarpus* var. *maculosuss* and the three *Cypripedium fasiculatum* sites on the Pomeroy District.

Current status of plants monitored in FY 99 suggests that sensitive plants are adequately protected.

Recommended Actions:

- Continue monitoring, with priority given to "at risk" populations or if populations are subjects of mitigation measures written into biological evaluations. Other populations should be monitored as time and budget allow.
- Establish permanent monitoring plots in Desolation Meadows in preparation for the proposed meadow burns.
- Focus monitoring efforts on species that are 1) most likely to be Federally Listed, and 2) 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 fish 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?

Steelhead and resident redband trout were recognized as management indicator species for streams and riparian habitats in the Forest Plan. Habitat requirements of the selected species were presumed to represent those of a larger group of species. Steelhead and redband are among the most well distributed fish species on the Forest. While they don't require the coldest water of species on the Forest, they do require good water quality.

All anadromous fish in Region 6 were added to the Regional Forester's Sensitive Species List in August 1997. Even though steelhead was selected in 1990 to represent anadromous fish and rainbow trout was selected to represent resident fish it is now necessary to assess the status of all anadromous fish with emphasis on those listed under the Endangered Species Act to monitor Forest Plan performance. An updated list of Aquatic Management Indicator Species would include all stocks of steelhead trout, chinook salmon, bull trout, and resident redband trout.

Resident redband trout, previously called rainbow but commonly referred to as redband trout east of the Cascade Mountains, may share a common gene pool with anadromous steelhead trout in the same geographic area over evolutionary time periods. Resident fish are generally considered part of the steelhead Evolutionary Significant Unit (ESU) but may not be included when an anadromous life form is listed under the Endangered Species Act. The National Marine Fisheries Service did not include resident redband trout in the steelhead listings.

Steelhead

The National Marine Fisheries Service (NMFS), under the Endangered Species Act, listed steelhead trout in the Snake River ESU as a threatened species in August 1997. The status of Snake River steelhead on the Umatilla National Forest was reviewed as part of the project screening activity completed in the August 1998. A summary of information used in that review is in the 1998 Monitoring Report.

Redd surveys are not a good indicator of wild steelhead production in the Tucannon River because both wild and hatchery steelhead spawn together, and the operation of the weir/trap at the Tucannon River hatchery may have effected upstream migration of adult steelhead in past years.

On March 25, 1999, the Steelhead in the Mid-Columbia ESU were listed by NMFS under the Endangered Species Act as a Threatened species. The John Day, Umatilla, and Walla Walla River drainages are in the Mid-Columbia ESU. Biological Assessments of on-going and proposed activities are being prepared at this time to document the environmental baseline and assess effects of Federal actions.

Chinook Salmon

The NMFS listed the Snake River spring chinook salmon and Snake River fall chinook salmon as threatened species in May 1992. Critical habitat was designated for both species in December 1993. Fall chinook and their critical habitat are not found on the Umatilla National Forest but are downstream from several of the Forest's Snake and Columbia River tributaries. Snake River spring chinook are found in the Tucannon watershed and major Grande Ronde tributaries on the Forest.

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. North Fork John Day Ranger District employees from 1992 through 1999 conducted additional spring chinook spawning surveys. Camas Creek, Hidaway Creek, and North Fork John Day River were surveyed for chinook redds, carcasses, and number of live fish. Previous years counts were summarized in the 1998 Monitoring Report. The District did not conduct surveys in 1997, 1998, and 1999 on Camas Creek or Hidaway Creek. New survey results are displayed in Tables U-5 and U-6.

Table U-5
CHINOOK COUNTS BY INDEX REACH
USFS MEASUREMENTS (North Fork John Day Ranger District)
Umatilla National Forest

	Year	No. of Redds	No. of Carcasses	No. of Live Fish
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
	1997	-	-	-
	1998	1	2	0
	1999	4	4	1

Table U-6
ODFW CHINOOK REDD COUNTS - REDDS/MILE
North Fork John Day River Drainage

Index Reach	1992	1993	1994	1995	1996	1997	1998	1999
Clear Creek	11.7	25.6	4.0	2.8	9.5	7.3	2.8	3.8
Granite Creek	16.5	19.8	14.5	2.2	14.7	10.0	8.4	11.6
N.Fork John Day (wilderness)	28.1	27.3	15.6	2.5	20.6	18.1	9.3	10.1
N.Fork John Day (lower)	11.4	16.1	7.6	0.7	12.6	5.2	3.5	3.9

Bull Trout

The U.S. Fish and Wildlife Service listed Columbia River bull trout (*Salvelinus confluentus*) as a threatened species in June 1998. Bull trout are present on the Umatilla NF in the Umatilla, Walla Walla, Tucannon, Asotin, Wenaha, Lookingglass, and North Fork John Day drainages. The Forest, in cooperation with Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, and 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 drainage. Results are displayed in the following table.

Table U-7
BULL TROUT REDD COUNTS
Umatilla National Forest

		Total Bull Trout Redd Count					
Subwatersheds	**Miles Surveyed**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Tucannon	8.5	131	114	184	78	108	222
Lookingglass Creek	12.3	15	16	29	39	62	57
Touchet	8.2	86	27*	64	41*	95	146
Mill Creek	15.7	191	165	134	118	137	190
S.F. Walla Walla	21.5	143	114	177	180	276	431
Umatilla	18.7	39	22	37	32	84	154
TOTAL	4.9	605	458	625	488	762	1,200

**Counts may be low due to late season monitoring (Wolf Fork).*

Fire Recovery

The North Fork John Day Ranger District has been monitoring recovery of fish populations in streams that experienced fish kills caused by the 1996 Tower Fire. This was the third year of population monitoring in affected and control reaches. Population estimates are for resident redband trout within 100-meter sample areas, except where noted. The Tower Fire effects monitoring study of fish populations will continue for at least two more years. Preliminary results are displayed in Table U-8.

Table U-8
REDBAND TROUT POPULATION ESTIMATES
for the surveyed reaches (standard error in parentheses)
Umatilla National Forest

Stream	Reach	1996	1997	1998	1999
Texas Bar	Treatment #1	No Fish	3 (0)	20.5 (2.2)	31.7 (1.1)
	Treatment #2	No Fish	2 (0)	36 (1.4)	107.8 (3.5)
South Fork Cable	Treatment #1	31.7 (2)	96.4 (4.1)	59.5 (7.0)*	169.8 (5.3)
	Treatment #2	No Fish	96.9 (4.1)	103.2 (3.7)	400.3 (4.8)
Oriental	Treatment #2	No Fish	5.3 (1.0)	--	39.5 (2.6)
Texas Bar	Control #1	76.5 (4.2)	136.9 (5.3)	112.5 (3.3)	57.7 (2.4)
	Control #2	128.2 (9.7)	150.2 (6.5)	170.7 (6.1)	91.7 (3.5)
Hidaway	Control #2 (50m)	84.3 (6.6)	47.6 (1.0)	107.4 (5.5)	--
Oriental	Control #1	77.8 (7.9)	67.8 (3.7)	2 (0)**	65.0 (4.1)
	Control #2	94.3 (6.3)	50.7 (2.7)	1 (0)**	57.4 (2.2)
Frazier	Control	--	--	55.7 (1.2)	28.5 (3.8)
Battle	Control	--	--	63.0 (5.6)	42.7 (1.8)
Sponge	Control	--	--	28.8 (1.3)	37.0 (3.9)

** Treatment #1 in South Fork Cable was moved during 1998; the new reach partially overlaps the old reach.*
*** Oriental Creek experienced a debris torrent in spring of 1998, altering habitat and likely pushing all fish out of the stream.*

Almost all subwatersheds on the Umatilla National Forest contain habitat for at least one listed aquatic species. The Forest will work closely with the Regulatory Agencies toward recovery of the listed species and restoration of their designated critical habitat.

Recommended Action:

It is well recognized that the recovery of listed species in the Columbia Basin will require a coordinated effort across all land ownerships and actions that effect salmon. Fish habitat on the National Forest is generally in better condition then habitat on non-federal land. Through consultation with the Regulatory Agencies, the Forest will protect habitat that is in the best condition and work to restore fish habitat that presently supports fish populations at lower levels because habitat is in poorer condition.

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, and open roads valid? Are the assumptions relating elk habitat effectiveness to elk populations valid?

Elk and deer population estimates were derived from the Oregon Department of Fish and Wildlife, and Washington Department of Fish and Wildlife reports for 1999. Tables U-9 and U-10 contain elk and deer management objectives, population estimates, and herd composition for each State Management Unit (SMU) occurring on the Forest. Management units have been aggregated into various groups for evaluation and monitoring.

The estimated elk population and distribution in Table U-14 closely reflect the elk populations on the Forest because the bulk of suitable elk habitat within SMUs occurs on National Forest lands. In 1999, the total number of elk on the Forest was estimated at 23,126 animals. Over the last 3 years, the elk population across the Forest has remained stable and above the Forest Management Objective of 21,200 animals (for the first decade). The 1999 estimate is about 6 percent above the previous year's estimate and nearly equal to the 1997 estimate. Overall, the 1999 estimated Forest-wide elk population (total) is 9 percent above the Forest Management Objective and well within the 20 percent threshold of variability identified in the Forest Plan. On the other hand, when all lands are considered, the 1999 estimate is 15 percent below State Management Objectives (SMO) for combined State Management Units.

Elk populations continue to vary by area on the Forest. When combining elk population estimates in Washington with the northern Oregon units (“North Umatilla”), populations continue to fall below the management objectives for State Management Units. In the past, this area has been consistently below the 20 percent threshold, however the last few years elk populations have remained stable and even increased slightly. Concern for low populations on the “north” end of the Forest still centers around low calf survival, changes in habitat suitability leading to a seasonal shift in the herd followed by an increase in vulnerability, and/or the efficient harvest of cow elk in antlerless hunts in Washington and Oregon.

In general, the bull/cow ratio for the Forest has been above or near the SMO during the last 3 years. SMUs consistently below objectives for the last 3 years include the Tucannon, Lick Creek, Mt. Emily, and Heppner units. In 1999, the average bull/cow ratio Forest-wide was estimated at 11 bulls/100 cows. This estimate is within the Forest Plan 20 percent threshold of variability.

In 1999, calf/cow ratios were generally below 40 calves/100 cows for all SMUs on the Forest, the exception was the Fossil unit that had a calf/cow ratio of 86. Only four management units (Ukiah, Desolation, Heppner, and Fossil), all on the south end of the

Forest, had calf/cow ratios >30 calves/100 cows. The average calf/cow ratio for SMUs in Washington was 22 calves/100 cows. Over the last 3 years calf/cow ratios have averaged less than 24 calves/100 cows for SMUs in Washington and less than 35 calves/100 cows for SMUs in Oregon.

Table U-9

ROCKY MOUNTAIN ELK
MANAGEMENT OBJECTIVES, COMPOSITION, AND
"END-OF-WINTER" POPULATION TRENDS FOR 1999-1997
Umatilla National Forest

State Management Units	Population Estimates				Bulls Per 100 Cows				Calves Per 100 Cows		
	Mgmt. Object.	1999	1998	1997	Mgmt Object.	1999	1998	1997	1999	1998	1997
Washington *											
"North" Umatilla											
Mill Creek	400	878	738	375	15	11	22	26	23	21	24
Dayton	800	931	908	719	15	16	15	9	19	19	25
Tucannon	1,200	443	448	376	15	12	8	13	24	26	23
Wenaha	1,200	600	600	600	15	16	33	19	11	11	13
Lick Creek	1,000	622	684	600	15	7	6	5	25	18	23
Mt. View	1,100	622	478	475	15	18	12	14	27	27	27
WA Total	*5,700*	*4,096*	*3,856*	*3,145*	*@ 15*	*@ 13*	*@ 17*	*@ 14*	*@ 22*	*@ 18*	*@ 23*
Oregon**											
"North" Umatilla											
Wenaha	4,250	1,300	1,300	1,500	10	9	16	12	12	16	14
Walla Walla	1,800	1,600	1,600	1,600	10	9	17	11	24	22	20
Mt. Emily	5,700	5,400	6,000	6,300	10	6	5	6	23	27	27
OR -"North" Total	*11,750*	*8,300*	*8,900*	*9,400*	*@ 10*	*@ 8*	*@ 13*	*@ 10*	*@ 20*	*@ 22*	*@ 20*
"South" Umatilla											
Ukiah	5,000	5,500	6,000	5,500	10	8	10	6	33	27	36
Desolation	1,300	1,365	1,500	1,600	10	9	12	10	37	31	52
Heppner	2,800	3,025	3,100	3,300	10	9	7	5	37	37	43
Fossil	700	840	1,100	900	10	12	9	4	86	39	52
OR -"South" Total	*9,800*	*10,730*	*11,700*	*11,300*	*@ 10*	*@ 10*	*@ 10*	*@ 6*	*@ 48*	*@ 34*	*@ 46*
Forest Total	27,250	23,126	24,456	23,845	@ 12	@ 11	@ 13	@ 11	@ 29	@ 25	@ 29

* Washington Department of Fish and Wildlife, 1999 Game Status and Trend Report and personnel communication with Pat Fowler.
** Source: Oregon Department of Fish and Wildlife, Big Game Statistics 1999 and personnel communication with Kevin Blakely.
@ Average for the area described

Unlike elk, deer are distributed widely across SMUs, occurring on Forest lands as well as State and private lands. The deer estimates for the Forest would, therefore, be less than the estimate for the entire SMU. Population densities and management objectives identified on Table U-10 are estimates for National Forest lands (i.e., an estimated portion of the management unit). The estimates for herd composition on National Forest land should mimic trends on SMUs.

In 1999, the total number of deer associated with the Forest was about 15,200 animals. Over the last 3 years, deer populations on the Forest have been below Forest Management Objectives (18,300 animals) and below SMOs (16,800 animals). The 1999 deer population estimate was above the 1998 and 1997 estimates. In Washington, the deer population has declined over the last 3 years and is currently 59 percent below the SMO. The Oregon population remains stable but slightly below the SMO for the area. Overall, the Forest-wide deer population (total) is inside the 20 percent threshold of variability identified in the Forest Plan. Speculation about the low deer numbers revolves around the same factors that may be influencing the elk population levels (i.e. predation, low fawn survival, etc.).

The bucks per does ratios have been variable across all management units for the last 3 years. In 1999, the majority of units were above MO for bucks/100 does. Generally, buck/doe ratios were slightly below MO on the "north" end of the Forest and above MO on the "south" end. The 1999 Forest-wide ratio is 16 bucks/100 does. This is just above the MO of 15 bucks/100 does, but within the Forest Plan threshold of variability. The fawn/doe ratios for the "north" and "south" ends of the Forest are above the 1998 estimates and generally greater than 45 fawns/100 does in 1999.

Table U-10
MULE DEER
MANAGEMENT OBJECTIVES, COMPOSITION, AND "END-OF-WINTER" POPULATION TRENDS FOR 1999-1997
Umatilla National Forest

State Management Units	Population Estimates				Bucks Per 100 Does				Fawns Per 100 Does		
	Mgmt. Object.	1999	1998	1997	Mgmt. Object.	1999	1998	1997	1999	1998	1997
Washington *											
"North" Umatilla											
Mill Creek	-	50	50	65	16	-	-	20	-	-	40
Dayton	-	475	475	945	16	-	-	15	-	-	70
Tucannon	-	125	125	250	16	-	-	10	-	-	70
Wenaha	-	100	60	190	16	-	-	10	-	-	39
Lick Creek	-	50	50	95	16	-	-	20	-	-	66
Mt. View	-	65	65	125	16	-	-	10	-	-	65
WA Total	*2,100*	*865*	*825*	*1,670*	*@ 16*	-	-	*@ 14*	-	-	*@ 58*
Oregon**											
"North" Umatilla											
Wenaha	1,100		770	715	12	13	9	10	74	48	14
Walla Walla	650		390	420	15	13	10	6	46	51	20
Mt. Emily	1,950		1,560	1,560	15	14	19	14	46	47	27
OR -"North" Total	*3,700*		*2,720*	*2,695*	*@ 14*	*@ 13*	*@ 13*	*@ 10*	*@ 65*	*@ 49*	*@ 20*
"South" Umatilla											
Ukiah	2,450		2,330	2,330	15	18	18	22	55	38	49
Desolation	2,200		1,650	1,500	15	23	11	21	50	33	73
Heppner	4,350		4,785	5,090	12	15	14	13	66	58	65
Fossil	2,000		1,900	1,860	12	16	12	13	55	50	79
OR -"South" Total	*11,000*		*6,665*	*9,860*	*@ 14*	*@ 18*	*@ 13*	*@ 17*	*@ 57*	*@ 45*	*@ 67*
Forest Total	16,800		10,210	14,225	@ 15	@ 16	@ 13	@ 14	@ 56	@ 46	@ 61

* Washington Department of Fish and Wildlife, 1999 Game Status and Trend Report and personnel communication with Pat Fowler.
** Source: Oregon Department of Fish and Wildlife, Big Game Statistics 1999 and personnel communication with Kevin Blakely.
@ Average for the area described

The elk Habitat Effectiveness Index continues to be determined for activities that could affect forage and cover values. However, as mentioned in previous monitoring reports, the HEI model has problems and is no longer considered a useful tool to evaluate elk habitat. Key elk habitat components, such as forage, cover (satisfactory and marginal), road density, and their interrelationships will continue to be evaluated at the project level. A continuing need is to conduct follow up monitoring of changes in elk (and deer) habitat resulting from activities and other disturbance events across the Forest. The relationship between habitat quality on the Forest and elk populations needs to be explored.

Meeting cover objectives can be problematic when the project encompasses areas of high mortality from past insect and disease infestations. However, this is usually compensated by a reduction in the road density through implementation of the Access and Travel Management Plans. Thinning is expected to increase across the Forest to reduce stand densities and allow for more tree-sustainable forest condition. Because of the anticipated action, a change in cover quality will occur when areas of suitable cover are moved to marginal cover. Elk needs for cover is still a point of debate. Recent literature (Cook, et. al., 1998) indicates that thermal cover may not be as important as earlier studies show.

Recommended Actions:

- Monitoring and evaluation of habitats for elk and deer on the Forest are needed, particularly where large- scale insect infestations and fires have occurred and have likely affected overall habitat quality.
- Continue reviewing the utility of HEI and change Forest Plans as needed during the Forest Plan adjustment process (upon completion of ICBEMP).

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 and down wood inventories are conducted at the project level on all the Ranger Districts on the Forest. Inventories conducted in 1999 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, April 14, 1993) were addressed. The results of dead standing and down wood inventories are displayed in Table U-11 and Table U-12 for activities that have had pre-treatment and post-treatment surveys.

Table U-11
DEAD STANDING WOOD DENSITIES (#/ac.)
For Inventoried Management Activities
Umatilla National Forest

Management Activity	"Eastside Screens" Guidelines		Pre-treatment Inventory		Post-treatment Inventory	
	Total	> 20" dbh	Total	> 20" dbh	Total	> 20" dbh
Grande Ronde Salvage 06	2.25	0.14	2.2	7.70	8.7	1.9
Grande Ronde Salvage 13	1.80	0	29.8	0.40	6.1	0.9
Grande Ronde Salvage 14	1.80	0	21.3	0	5.5	0
Grande Ronde Salvage 15	1.80	0	21.3	3.80	2.8	0
Umatilla Breaks Salvage 25	1.80	0	21.0	0.90	1.8	0
Umatilla Breaks Salvage 26	1.80	0	11.0	0.91	5.7	1.9
Umatilla Breaks Salvage 27	1.80	0	57.0	0	3.7	0

The dead wood densities identified in Table U-11 and U-12 are from the Grande Ronde Salvage Timber Sale and the Umatilla Breaks Salvage Timber Sale on the Walla Walla Ranger District. Inventories were conducted after the units were marked (pre-treatment), and after the units were harvested (post-treatment). The same transects lines were used for both pre and post treatment surveys. The purpose of the survey was to determine the effectiveness of marking guidelines and the effects of harvest operation on dead standing and down wood retention. All sales exceeded the standards set by the "Eastside Screens". Snag densities actually increased in some units when comparing pre- and post-treatment densities because mortality continued to occur in the stand. While the required densities were met, there is a concern that most of the snags retained are "soft" snags and few are "hard" snags. This could affect future snags in the area, since "hard" snags need to be recruited into the stand to replace "soft" snags after they fall.

Table U-12
DEAD DOWN WOOD DENSITIES (no./ac.)
For Inventoried Management Activities
Umatilla National Forest

Management Activity	"Eastside Screens" Guidelines *		Pre-treatment Inventory		Post-treatment Inventory	
	# Logs*	Total Length (>6'/piece)	# Logs**	Total Length (>10'/piece)	# Logs**	Total Length (>10'/piece)
Grande Ronde Salvage 06	15-20	100-140	48.4	484	16.0	160
Grande Ronde Salvage 13	15-20	100-140	10.4	104	9.4	94
Grande Ronde Salvage 14	15-20	100-140	23.0	230	26.0	260
Grande Ronde Salvage 15	15-20	100-140	28.0	280	16.0	160
Umatilla Breaks Salvage 25	15-20	100-140	15.0	150	23.0	230
Umatilla Breaks Salvage 26	15-20	100-140	17.0	170	19.0	190
Umatilla Breaks Salvage 27	15-20	100-140	10.0	100	34.0	340

* Log Pieces ≥ 12" diameter at the small end and ≥ 6' in length. ** Log Pieces ≥ 10" diameter at the small end and ≥ 10' in length.

On the Heppner Ranger District, pre-harvest inventories in the Hitching Post Timber Sale and the Yellow Rose Timber sales, revealed that dead standing and down wood met and or exceeded the "Eastside Screens".

Recent past and current harvest activities have focused on stands with a high density of dead or dying trees and low to no existent density of green trees. The retention level for green replacement trees is met when sufficient numbers and size classes are available for retention. When a sufficient number or size is not available, the next lowest quantity and/or size is retained.

Recommended Actions:

- Continue monitoring with emphasis on review of post-harvest dead wood densities, including trees greater than 20 inches, number down logs, and green tree retention. Habitat use monitoring is an ongoing need.
- Tentative results suggest that additional work is needed throughout the operations process, to improve snag selection and placement in harvest units in order to minimize the loss of snags.
- Snag densities after marking should exceed minimum levels in order to offset anticipated losses from follow up 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 NMFS being followed?*
Sensitive Species*: Are potential habitats being identified and protected to maintain identified species and to ensure management standards are being met?*

Bald Eagles

The Dry Creek (Rail Canyon) bald eagle nest was monitored in 1999. However, only one visit was conducted in July, because of reduced funding. During the survey, one fledged young was observed around the nest. Since 1994, this nest site has fledged nine eaglets, for an average of 1.5 eaglets fledged per year. The site-specific management plan initiated in 1998 for the Dry Creek Bald Eagle nest was completed in 1999.

Two winter bald eagle survey routes were run on the North Fork John Day Ranger District in 1998-1999, which followed the same routes used in the original study by Frank Isaacs (1991-1992). Overall, the number of wintering bald eagles was lower than previous years; however, not alarmingly low considering the abnormal winter weather (warm and wet) that occurred that year. With the lower than normal snow depth, the eagles could have been well dispersed and foraging over a larger area. No evidence of new night roosts was found on the Forest.

No bald eagles were detected after the end of March. No evidence of nesting or attempted nesting eagles was observed on the Forest in 1999.

Peregrine Falcon

Aerial or ground surveys for peregrine falcons were not conducted on the Forest in 1999. No peregrines or nesting sites were observed on the Forest in 1999. However, incidental falcon sightings continue to occur in July and August at various locations in the area. These late season observations could be dispersing juveniles or individuals migrating through the area.

Canada Lynx

Field surveys for lynx were conducted on the Forest in 1999 to determine presence. The National Survey Protocol for Lynx was used along with a modified protocol developed by the Fish and Wildlife Service. Both inventories are based on the natural cheek-rubbing behavior of cats. The detection method used a scent, studded, carpet pad to collect facial hair. Approximately 130 square miles of the Umatilla National Forest were surveyed. Carpet pads were collected and sent in for DNA analysis. The analysis showed that no lynx hairs were collected on the Forest.

Sensitive Species

During 1998, no report was submitted specific to the Forest's sensitive species. Other Threatened and Endangered (T/E) species populations and their habitat were not compromised because of management activities on the Forest in 1999. Effects on T/E species and their habitat continue 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 Actions:

- Continue to monitor. Follow up monitoring and documentation is needed for the Forest's sensitive species program.
- Continue to analyze potential impacts to T/E and Sensitive species in the project Biological Evaluation and or Specialist Report.

UMATILLA Monitoring Item 30
MANAGEMENT AREAS/STANDARDS AND GUIDELINES

Monitoring Questions: 1. Are project plans and their implementation consistent with the intent of Forest Plan Management area direction (standards and guidelines)? 2. Are the management areas, through project implementation, bringing about the desired future condition on those areas of land where they are applied? 3. Are Forest Plan standards and guidelines being implemented as designed? 4. Do the Forest Plan standards and guidelines achieve the stated goals, objectives, and DFC's of the Plan?

In FY 99, two environmental assessments (EAs) and 42 categorical exclusions (CEs) were prepared on the Umatilla National Forest. The number of CEs prepared in FY 99 was similar to FY 98, when 44 CEs were completed. However, far fewer EAs were completed this fiscal year. (See Umatilla Monitoring Item 53 for details).

Because of the limited number of (EAs) prepared in FY 1999, no Forest consistency monitoring took place. In addition, there were no formal implementation reviews made by the Forest Leadership team during the FY. Several Districts reported informal monitoring reviews by District teams and in all instances, no major problems were noted. The Abla Timber Sale and Fuel Reduction Project, on the Walla Walla Ranger District, included a site specific, non-significant forest plan amendment. This amendment changed the Management Area from A3 to A4 along Forest Road 6403 to provide greater flexibility in construction of a fuel break. Boundaries on several C1, Dedicated Old Growth Areas were also changed away from Forest Road 6400 and the A6, Developed Recreation Area around Jubilee Lake. There was no net loss of C1.

As noted in previous monitoring reports, the interim direction in PACFISH and the "EcoScreens" seems to have changed the focus of Forest Plan implementation in some of the management areas. Both Regional amendments blur the distinction between management areas with over-riding requirements for leave trees and harvest restrictions.

Recommended Action:

The results of informal monitoring on the Forest indicate that, in some cases, the intent of current Forest Plan management area direction and Forest-wide S&G's is not being met. The deviations and adjustments suggest that broader scale Forest Plan amendments are probably needed. However, until the Interior Columbia Basin Ecosystem Management Project (ICBEMP) is done, monitoring will continue to focus on the planning, implementation and effectiveness of individual projects. Questions addressing progress toward meeting Forest Plan Desired Future Conditions will generally be deferred until the ICBEMP FEIS and ROD provide the information necessary to re-define these objectives.

UMATILLA Monitoring Item 31
PRIMITIVE/SEMI-PRIMITIVE RECREATION AND ROADLESS AREAS

Questions: Are the identified roadless areas or parts thereof managed as the Forest Plan allocated or prescribed? Are the primitive and semi-primitive recreation opportunities available as shown in the Plan?

During 1999, the Forests 22 roadless areas continued to be managed in accordance with the Forest Plan. 185 acres of timber harvest, thinning and site-preparation occurred in the Texas Butte Roadless Area, located on the Heppner District. All timber harvest took place from an existing road; no new permanent or temporary roads were constructed.

In 1999, the Forest provided forest users with primitive (wilderness areas) and semi-primitive opportunities in all roadless areas as described in the Forest Plan.

Recommended Action:

Continue to monitor.

UMATILLA Monitoring Item 41
LANDS SUITABLE FOR TIMBER MANAGEMENT

Questions: Have lands identified as unsuitable for timber production become suitable? (Identified in the Plan as unsuitable incorrectly or become suitable due to changes in management practices.) Should lands identified as suitable in the Plan be more accurately classed as unsuitable?

Suitability for timber management is usually evaluated through proposed project environmental analysis for an area. Results of the evaluation are disclosed in a decision document for the project and are incorporated in the Forest database. This item was last reported in the FY 1995 Monitoring Report. Since that time there have been no decision documents approved which specifically disclosed suitability changes.

Recommended Action:

Continue to monitor on a project basis.

UMATILLA Monitoring Item 44
AVAILABILITY OF FIREWOOD

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

In 1999, the Forest's firewood output was 4.1 million board feet (mmbf), nearly 27 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. The general trend continued in 1999 for firewood output and total permits, although total permits increased from 1996. Table U-13 shows the firewood program trends from 1989 to 1999.

Table U-13
FIREWOOD PROGRAM - CHARGE PERMITS ISSUED 1989-99
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
1998	2,308	4.0
1999	2,869	4.1

Current "demand" for firewood continues to be met from the Forest. Firewood "demand" is expected to continue at relatively low levels for the next few years, particularly as other sources of energy remain plentiful and at low cost. The Forest continues to anticipate 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 trees for firewood have been declining as the dead material deteriorates and some is removed in salvage sales. In addition, some popular areas such as Tollgate, that are closer to population centers, are nearly depleted of available dead/down material. Ranger district restrictions and closures of these areas to firewood gathering have required the public to travel farther to areas with adequate supplies.

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?

In FY 99, two environmental assessments (EAs) and 42 categorical exclusions (CEs) were prepared on the Umatilla National Forest. The number of CEs prepared in FY 99 is similar to FY 98, when 42 CEs were completed. However, far fewer EAs were completed this fiscal year. This can be attributed to several factors. First, the timber sale planning workload has been declining and in the past, many of the EAs were prepared for timber harvest. Second, the Forest is in the process of preparing several Restoration environmental impact statements (EISs) that will be completed in FY 2000. Since these documents normally cover a large area and include several different projects, they may take the place of several EAs.

The CEs covered a wide range of activities. Ten documented timber harvest. However in September 1999, a nation wide injunction was issued that precluded the use of the timber harvest CE category. Although the court ruling did not extend to other CE categories, until the court case is settled, CEs may no longer be used to document timber harvest.

Because of the limited number of EAs completed, no formal NEPA/NFMA compliance reviews were conducted by the Forest Interdisciplinary (ID) team this fiscal year. Several less formal reviews by ranger district NEPA coordinators and district management teams as well as Supervisor's Office staff were conducted. Generally, it was found that all NEPA requirements were being met.

In response to concerns expressed about the adequacy of cumulative effects analyses, the Forest hosted a cumulative effects workshop in February 1999. This 3-day session was presented by various specialists from the Regional Office and included a wide range of topics. The session was well received by participants and should help improve the quality of cumulative effects analysis in our NEPA documents.

Recommended Action:

The Forest is completing fewer, but more complex Environmental Documents. The Forest NEPA coordinator needs to evaluate the need for additional training to facilitate completion of the large environmental impact statements.

The following Table provides a summary of selected Forest accomplishments and resource outputs for FY 99. Where possible, these are compared to Forest Plan estimates, but in many cases, the unit of measure has changed since the Forest Plan was completed and direct comparison is no longer possible.

Table U-14
FOREST ACCOMPLISHMENTS – Fiscal Year 1999
Umatilla National Forest

Resource Activity/Output	Unit of Measure	Forest Plan Projection (Avg/Year)	Actual FY 99 Forest Output	% Actual to Forest Plan
FIRE				
Natural Fuel Treatment	Acres	3,400	3,050	90
Activity Fuel Treatment	Acres	5,800	2,576	44
FISH				
Anadromous Stream Restored/Enhanced	Miles	Not Specified	7	NA
Inland Stream Restored/Enhanced	Miles	Not Specified	11	NA
RANGE				
Permitted Grazing – Sheep & Goats			30,700	NA
Permitted Grazing - Cattle & Horses	AUM	58,000	32,000	55
Non-structural Improvements		Not Specified	0	NA
Structural Improvements		Not Specified	42	NA
Noxious Weed Treatment		Not Specified	1,759	NA
RECREATION				
Trail Construction/Reconstruction	Miles	30	*	
Developed Recreation Capacity	PAOTS	255,000	702,000	312
ROADS				
Construction	Miles	92	0	0
Reconstruction	Miles	94	37.7	40
Obliteration	Miles	Not Specified	0.6	NA
THREATENED, ENDANGERED, and SENSITIVE SPECIES				
Aquatic Habitat Restored/Enhanced	Miles	Not Specified	4	NA
Terrestrial Habitat Restored/Enhanced	Acres	Not Specified	0	NA
TIMBER				
Total Program Sale Quantity	MMBF	159	26	16
Reforestation	Acres	7,500	4,208	56
Timber Stand Improvement	Acres	2,900	3,175	109
WILDLIFE				
Habitat Restored/Enhanced	Acres	10,000	2,795	27
Habitat Structures	Structures	75	63	84
WATER				
Watershed Improvements	Acres	454	273	60

* Data Not Available

FOREST PLAN AMENDMENTS

Only one nonsignificant Forest Plan Amendment was prepared on the Umatilla National Forest in FY 99.

Amendment Number	Date	Summary and Comments
23	11/5/98	Abla Timber Sale and fuel reduction project. Changes Management Area A3 to A4 along portions of FR 6403.