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Forest Service

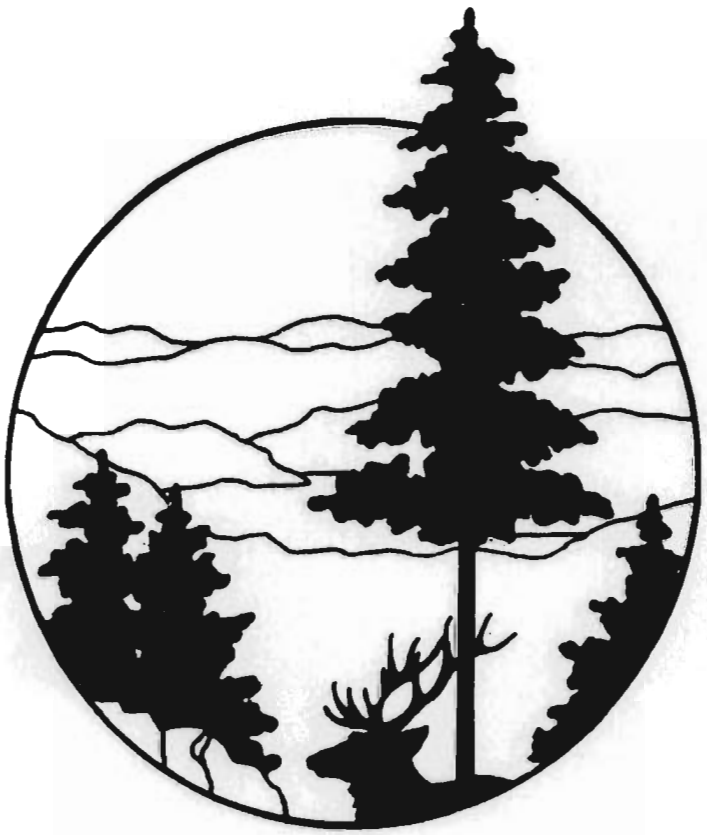
Pacific
Northwest
Region

MAY 1993

Umatilla National Forest
Forest Plan

Monitoring and Evaluation Report

FISCAL YEAR 1992



United States Department of Agriculture | Forest Service | Umatilla National Forest | 2517 S.W. Hailey Avenue Pendleton, OR 97801

Reply To: 1920

Date: May 27, 1993

Dear Reader:

The Umatilla National Forest has progressed through the second year of Forest Plan implementation which leads to our second annual Monitoring and Evaluation Report. I am pleased to share the Fiscal Year 1992 Report to keep you informed about the Forest's experience in monitoring and implementation.

Monitoring, in my view, continues to be the key in determining how well the Plan is being implemented and if goals, objectives, and Desired Future Conditions are being achieved. Monitoring and Evaluation help to identify corrections and adjustments needed to improve land management and to better serve the public.

In 1992, a number of major new and some ongoing events affected management of the Forest. A few of the principal impacts on programs are:

- Development of an ecological assessment and preparation of an initial restoration program to deal with declining Forest Health.
- Adoption of the national Ecosystem Management Policy.
- Listing of the Snake River Chinook and increasing concern about anadromous fish.
- Continued strong concerns about old growth (late successional stages) and dependent species.

Some shifts in funding, priorities, and people were made to deal with the changing programs. In spite of the impacts and changes, I believe that progress and improvements in monitoring were made during the year. Some monitoring and evaluation have surfaced additional challenges in meeting our land stewardship responsibilities. However, most monitoring activity indicates that the Forest has moved forward in meeting Plan requirements and Desired Future Conditions.

For 1993, I have identified monitoring as an emphasis item on the Forest. I am looking forward to continued progress in this area. The Forest has also been involved in cooperative efforts with neighboring National Forests to incorporate an ecosystem approach, gain efficiency, and reduce costs.

Your continued interest and involvement in the Forest Planning process is a direct way that you can be involved in the management of the Forest. Your comments are important to improving the Forest's monitoring program or other aspects of management. I invite you to call, write, or drop in to let us know your reaction to the Report and other matters of interest to you. Please contact Michael Hampton, 503-278-3915, in the Planning section at the Supervisor's Office for assistance. The addresses and phone numbers of each District office and for this office are listed below.

Sincerely,

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Forest Supervisor

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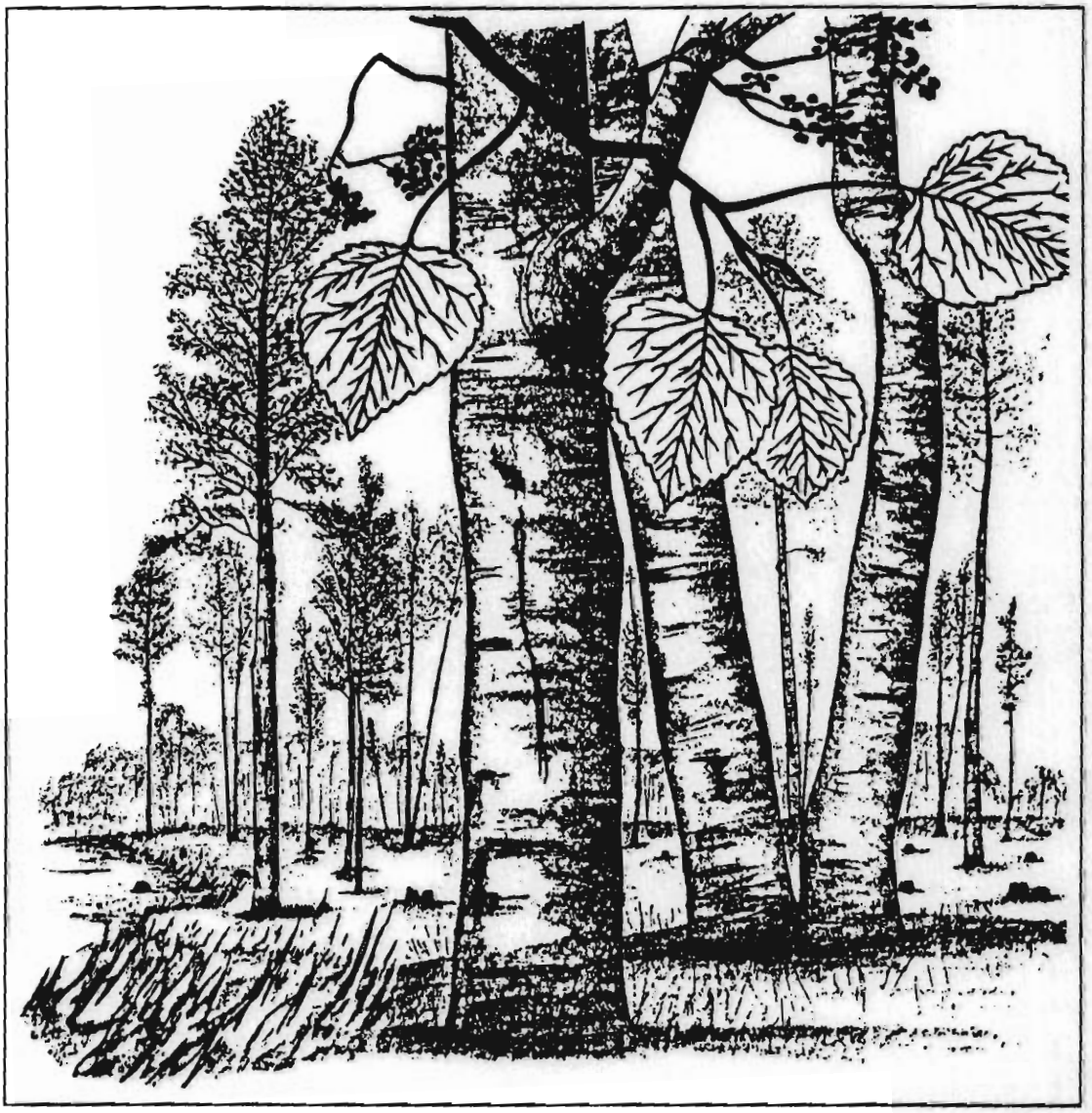
I. INTRODUCTION



INTRODUCTION

The Umatilla National Forest Fiscal Year 1992 Monitoring and Evaluation Report is the second one prepared by the Forest in support of Forest Plan implementation. The Regional Forester approved the Forest Plan on June 11, 1990 and the Forest began implementing the Plan on August 6, 1990. Monitoring and Evaluation is an important step in insuring that Plan implementation occurs as intended and that objectives are being met. This report documents our progress.

MONITORING AND EVALUATION

Monitoring consists of gathering data, making observations, and collecting and disclosing information. Monitoring is the means to measure progress in Forest Plan implementation, to determine how well objectives of the Forest Plan are being met, and to determine if management standards and guidelines are appropriate for meeting the Forest's outputs and environmental protection. Monitoring is also used to determine how well assumptions used in the development of the Forest Plan reflect actual conditions.

Evaluation is the process of analyzing data, information, and products resulting from monitoring. Evaluation determines if planned conditions or results are being attained and when they are within Plan direction. When a situation is identified as being outside the limits of acceptable variability, changes may need to occur. Therefore, evaluation serves two major functions: it initiates a change in management practices and provides a means to adjust the Forest Plan to keep it dynamic and responsive to changing conditions.

The three main types of monitoring are as follows:

-*Validation Monitoring* - tests the validity in initial planning data and assumptions. "Are the planning assumptions valid, or are there better ways to meet Forest Plan goals and objectives?"

-*Implementation Monitoring* - determines if plans, projects, prescriptions, and activities are being implemented as designed and in compliance with Forest Plan goals, objectives, and management direction. "Did we do what we said we were going to do?"

-*Effectiveness Monitoring* - collects the information to determine if plans, projects, prescriptions, and activities are effective in meeting the intent of the Forest Plan. "Are the management practices producing the desired results?"

MONITORING STRATEGY

On December 5, 1991 the Forest Supervisor signed the Umatilla Forest Plan Monitoring Strategy. The Monitoring Strategy is an extension of the Forest Monitoring Plan in chapter five of the Forest Plan.

The main purpose of the Umatilla's Monitoring Strategy is to ensure consistency in implementing the Forest Plan. The National Forest Management Act (NFMA), requires that forest plan implementation be evaluated to determine the effects of management practices, how well objectives have been met, and how closely management standards and guidelines have been applied. The Umatilla Monitoring Strategy is based upon the requirements set by the Forest Plan, the Regional Monitoring Strategy, and NFMA.

The Monitoring Strategy defines the items to be monitored. The Strategy contains the key monitoring questions, thresholds of variability (for change), proposed monitoring approaches, and assigned responsibilities. The strategy forms the cornerstone of the Monitoring and Evaluation Report.

The Umatilla is in the process of revising the Monitoring Strategy. The main focus of the revision will incorporate new changes in management direction i.e. Ecosystem Management, Forest Health, Federal listing of the Snake River Chinook Salmon, and coordinated monitoring efforts between the Blue Mountain National Forests and Regional direction for monitoring.

II. MONITORING RESULTS

A. SUMMARY OF RECOMMENDED ACTION

TABLE A-1
SUMMARY OF RECOMMENDED ACTION
Umatilla National Forest

May 27, 1993.

MI#/ PG#	MONITORING ITEM (MI)	1991 ACTION	CHANGE PRACTICE	FURTHER EVAL	AMEND FOREST PLAN	REMARKS
1 P.44	*GENERAL* MANAGEMENT AREAS	CP[1]				CONTINUE MONITORING.
2 P.48	STANDARDS AND GUIDELINES	CP			*	CONTINUE MONITORING. SITE SPECIFIC AMENDMENT MAY APPLY.
3 P.49	*RECREATION* ROADLESS AREA/SEMI. PRIMIT.	CM[2]				CONTINUE MONITORING.
4 P.50	OFF HIGHWAY USE	FE[3]				CONTINUE DEVELOPING MONITORING PROCESS WITH IMPLEMENTATION OF A&TM PLANS.
5 P.54	VISUAL	AP[4]		*	*	FOREST PLAN ACTIVITY SCHEDULE NEEDS ADJUSTMENT FOR VIEWSHED PLANS. NEED TO DO SOME FORMAL MONITORING.
6 P.52	DEVELOPED SITES	AP	*			SOME UPGRADE OF FACILITIES NEEDED. CONSISTENCY NEEDED IN VISITOR USE MONITORING.
7 P.55	*WILDERNESS* NON-CONFORMING USES	FE		*		INSUFFICIENT INFORMATION - UPGRADE MONITORING METHODS.
8 P.56	MANAGEMENT	FE	*			LAC PROCESS STILL NOT IMPLEMENTED.
9 P.32	*WILDLIFE* ELK AND DEER	FE/AP		*	*	AMEND PLAN FOR SALVAGE AND RESTORATION.
10 P.35	OLD GROWTH	FE/AP		*	*	NEED TO COMPLETE INVENTORY OF ALL OLD GROWTH BEFORE AMENDMENT.
11 P.38	DEAD AND DEFECTIVE TREES	CP	*		*	RETAIN ADDITIONAL DEAD AND DOWN TO MEET FOREST PLAN STANDARDS. NEED FOREST PLAN AMENDMENT.
12 P.40	PILEATED WOODPECKERS	CM				EXPAND MONITORING TO OTHER PARTS OF THE FOREST.
13 P.41	PINE MARTEN	CM				CONTINUE MONITORING.

1 CP = Change Practices (Management).

2 CM = Continue Monitoring - item w/in threshold.

3 FE = Further Evaluation to Determine Action Needed.

4 AP = Amend or Revise the Forest Plan.

TABLE A-1
SUMMARY OF RECOMMENDED ACTION
Continued...

May 27, 1993.

MI#/ PG#	MONITORING ITEM (MI)	1991 ACTION	CHANGE PRACTICE	FURTHER EVAL	AMEND FOREST PLAN	REMARKS
14 P.41	NORTHERN THREE TOED	CM				INITIATE MONITORING PROCESS FOREST WIDE.
15 P.42	THREATENED AND ENDANGERED	CM			*	CONTINUE MONITORING AND CONSULTATION PROCESS FOR SALMON.
16 P.43	*DIVERSITY*	CM				COMPLETE DEVELOPMENT OF MONITORING METHODS.
17 P.27	*PLANTS* THREATENED AND ENDANGERED	FE				CONTINUE MONITORING.
18 P.5	*RIPARIAN/WATER* EFFECTS OF FOREST MGT.	FE		*		INITIATE BMP FORMAL REVIEWS.
19 P.7	*WATER* WATER QUANTITY	FE		*		EVALUATE AVAILABLE INFORMATION.
20 P.7	EFFECTS ON WATER QUALITY	FE		*		EVALUATE AVAILABLE INFORMATION.
21 P.30	*FISH* ANADROMOUS AND RESIDENT	FE		*	*	CONTINUE MONITORING - SEE MI 15 . COMPLETE DFC (PIG) PROCESS AND AMEND PLAN
22 P.8	*WATER/FISH* EFFECTS STREAM TEMP.	CP	*	*		NO NEW TIMBER SALE DECISIONS HAD AN EFFECT ON WATER TEMPERATURE. SEE MI 25 FOR GRAZING EFFECTS.
23 P.9	STREAM SEDIMENTATION	FE		*		EVALUATE AVAILABLE INFORMATION.
24 P.10	STREAM CHANNEL MORPH.	FE		*		INFORMATION INDICATES DEGRADED STREAM CONDITION - PARTICULARLY ON SOUTH END.
25 P.14	*WATER/FISH/ RIPARIAN* RIPARIAN VEGETATION	CP		*		CONTINUE ACTIONS REDUCING SHRUB IMPACTS. FURTHER EVALUATION OF WILDLIFE IMPACTS IS NEEDED.
26 P.4	*SOIL* SOIL PRODUCTIVITY	CP		*		CURRENT PRACTICES REDUCING IMPACTS. SOME PAST IMPACT RESTORATION IS NEEDED.
27 P.15	*RANGE* CONDITION AND TREND	CP/FE		*		IMPROVEMENTS OCCURRING ON UPLANDS. RIPARIAN AREAS STILL A PROBLEM.
28 P.57	ALLOTMENT PLANNING	AP			*	NEED TO UPDATE FOREST PLAN ACTIVITY SCHEDULE.
29 P.57	RANGE OUTPUTS	CM				CONTINUE MONITORING.
30 P.17	FORAGE USE RIPARIAN AND UPLAND	CP		*		SEE MI 25.

TABLE A-1
SUMMARY OF RECOMMENDED ACTION
Continued...

May 27, 1993.

MI#/ PG#	MONITORING ITEM (MI)	1991 ACTION	CHANGE PRACTICE	FURTHER EVAL	AMEND FOREST PLAN	REMARKS
31 P.18	NOXIOUS WEEDS	CM	*			CONSIDER MORE ASSERTIVE CONTROL PROGRAM.
32 P.58	RANGE IMPROVEMENTS	CM				CONTINUE MONITORING.
33 P.20	*TIMBER* SILVICULTURE HARVEST METHOD	FE		*	*	CHANGE IN HARVEST RX DUE TO FOREST HEALTH AND ECOSYSTEM MANAGEMENT.
34 P.21	SIZE/DISPERSION AND CREATED OPENINGS	FE/AP			*	AMEND PLANS FOR ONGOING FOREST HEALTH SITUATION .
35 P.22	NATURAL REGENERATION	CM		*		CONDUCT ACTIVITY REVIEW.
36 P.23	ARTIFICIAL REGENERATION	CM		*		CONDUCT ACTIVITY REVIEW.
37 P.24	PONDEROSA PINE REGENERATION	FE				CONTINUE MONITORING . FOREST HEALTH MAY AFFECT.
38 P.24	GENETICS	FE				CONTINUE MONITORING. FOREST HEALTH MAY AFFECT.
39 P.25	PRECOMMERICAL THINNING	CM				CONTINUE MONITORING.
40 P.59	SUITABLE LANDS	CP/FE		*		CONTINUE MONITORING VIA PROJECTS.
41 P.60	MANAGED YIELD	FE		*		NEED TO UPDATE YIELD TABLES.
42 P.60	EMPIRICAL YIELDS	FE		*		NEED TO UPDATE YIELD TABLES.
43 P.61	TIMBER OFFERED	CM		*	*	FOREST HEALTH AND THREATENED SALMON EFFECTS ON VOLUME.
44 P.62	*FUELWOOD* AVAILABILITY OF FIREWOOD	CM				CONTINUE MONITORING.
45 P.63	*MINERALS* DEVELOPMENT AND REHAB.	CM				CONTINUE MONITORING.
46 P.64	MINERALS ACCESS	CM				CONTINUE MONITORING.
47 P.65	*TRANSPORTATION* ROADS	FE				CONTINUE MONITORING. UPDATE DATA.
48 P.66	OPEN ROAD DENSITY	FE				CONTINUE MONITORING. UPDATE DATA.
49 P.67	TRAILS	FE				CONTINUE MONITORING.

TABLE A-1
SUMMARY OF RECOMMENDED ACTION
Continued...

May 27, 1993.

MI#/ PG#	MONITORING ITEM (MI)	1991 ACTION	CHANGE PRACTICE	FURTHER EVAL	AMEND FOREST PLAN	REMARKS
50 P.68	*PROTECTION* FIRE - PROGRAM EFFECTIVENESS	CM				CONTINUE MONITORING.
51 P.25	FIRE - EFFECTS	CM				CONTINUE MONITORING.
52 P.3	AIR QUALITY	CM				CONTINUE MONITORING .
53 P.13	FIRE - EFFECTS WATER AND SOILS	CM				MONITOR WHEN INTENSE FIRE OCCURS.
54 P.28	INSECT AND DISEASE CONTROL	AP				CONTINUE MONITORING.
55 P.69	CULTURAL RESOURCES	CP/FE	*			INITIATE NEW MONITORING PLAN. COMPLETE CONSULTATION PRIOR TO PROJECT INITIATION.
56 P.71	*SPECIAL INTEREST AREAS - BOTANICAL*	CM				CONTINUE MONITORING.
57 P.71	*RESEARCH NATURAL AREAS*	CM	*			CONTINUE MONITORING - NEED PLANS.
58 P.80	*ECONOMICS* FOREST BUDGET	CM				CONTINUE MONITORING.
59 P.83	COST AND VALUES OF FOREST PLAN	FE		*		ANALYSIS NOT DONE; SHIFT IN COSTS / OUTPUTS DUE TO FOREST HEALTH.
60 P.72	*ADMINISTRATIVE* NEPA/NFMA	CP	*			MONITOR ON ALL FOUR DISTRICTS.
61 P.75	*COMMUNITY EFFECTS* CHANGES IN INCOME	FE				CONTINUE MONITORING.
62 P.75	CHANGES IN LOCAL POPULATION AND INCOME	FE				CONTINUE MONITORING.
63 P.77	PAYMENTS TO COUNTIES	FE			*	CORRECT FOREST PLAN PROJECTIONS.
64 P.79	CHANGES IN ATT., LIFESTYLES, ETC.	FE				CONTINUE MONITORING.
65 P.80	CHANGES IN FOREST CONTRIBUTIONS	FE			*	ADJUST PLAN. SEE MI 43.
66 P.26	*VEGETATIVE MANAGEMENT* MITIGATION MEASURES	CP	*			USE VEG. MGT. CHECKLIST FOR ALL PROJECTS.

B. PHYSICAL RESOURCES

A. AIR

MONITORING ITEM 52: AIR QUALITY

Forest Goals, Desired Future Condition, and Outputs: Maintain air quality at a level adequate for protection and use of natural forest resources and meet or exceed applicable federal and state standards and regulations.

Monitoring Question(s): 1. What is the amount of fuel (Tons) consumed by prescribed burning? 2. What are the total emissions from prescribed burning annually for all management activities?

Threshold of Variability: All burning will be in compliance with state smoke management plans. Smoke management measures will be used to reduce emissions from prescribed burning, as directed by the "Managing Competing and Unwanted Vegetation" Final Environmental Impact Statement (Region Six, USDA-Forest Service 1988).

Results/Findings: A variety of prescribed burning activities were conducted on the Forest including: broadcast burning of harvest created slash, pile burning, for natural fuel reduction, and underburning for wildlife forage enhancement. Based on fuel types and acres burned, tons of total suspended particulate and total fuels consumed are estimated. All prescribed burning was done in compliance with state smoke management plans.

TABLE B-1
AIR QUALITY - 1992
Umatilla National Forest

FOREST TOTALS[1]	*FUEL CONSUMED TONS*	*PARTICULATE PRODUCED TONS*
FY 1992 Forest Total	156,436	2,268
FY 1991 Forest Total	178,811	2,593[2]

Evaluation: Compared with the FY 1991 levels of 2,593 Tons of particulate produced, FY 1992 represents a decrease of 12.5 percent.

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1 Forest Plan projected an annual average of 3,030 Tons of particulate produced.

2 Correction for 1991 calculations. Multiple entries were found in the 1991 accomplishment report from the State of Oregon, Smoke Management.

B. SOIL

MONITORING ITEM 26: SOIL PRODUCTIVITY

Forest Goals, Desired Future Condition, Outputs: Manage the soil resource of the Forest by using management practices that will maintain or enhance its productive properties.

Monitoring Question(s): 1. Are management practices/projects resulting in conditions that comply with Forest-wide Standards and Guidelines for the management of the soil resource? 2. Do Forest-wide Standards and Guidelines adequately protect long-term site productivity.

Threshold of Variability - 1. Exceeding Forest Plan (Regional Guidelines) for soil compaction, displacement, puddling, and erosion. 2. Indication of long-term trends in reduction of site productivity due to nutrient or organic matter reductions.

Results/Findings: Nine units were intensively sampled in 1992: four on Heppner, three on Walla Walla, and two on Pomeroy Districts. Extensive monitoring was conducted by the Forest Soil Scientist. One ecosystem productivity site has been selected and two fertilization study sites per district have been established as a basis for long-term site productivity monitoring. One additional site on the Heppner district was assessed while establishing the long term growth study.

On timber harvest units that have been harvested and site-prepared incorporating the latest logging systems and treatment techniques, monitoring indicates a much reduced disturbance level (from earlier methods) and a continuing trend toward greater site protection and less disturbance. General observations by the Soil Scientist indicate that there are still some instances where site damage occurs that could and should be avoided.

Monitoring further indicates that traditional tractor-based harvest and site preparation methods (eg. random skidding, tractor piling) have left some harvest units with high compaction and displacement levels. While these types of operations are nearly phased out, there are a considerable number of acres of plantations suffering, to varying degrees, from these impacts.

Monitoring and observation indicates that erosion (and sedimentation) is generally not a large problem except in isolated cases. There are still some instances where breakdowns in the layout or contract administration phases of projects are creating unnecessary erosion which threatens site productivity and may affect live streams. Sedimentation problems continue to be largely connected to the transportation system and grazing; there is little erosion where timber harvest operations have properly used Best Management Practices.

Evaluation: Results of 1992 transect work on site specific timber projects indicate that implementation of soil protection Best Management Practices (BMPs) are effective in reducing impacts. Clauses in timber sale contracts reflect concern for soil protection and are now effective in keeping disturbance levels within Forest Plan standards (or better). Most new operations are meeting Plan standards, except where impact remain from prior activity. Close adherence to contract specifications by conscientious operators is enabling operations to proceed with much better results.

Monitoring also shows that past tractor based activity has created compaction and displacement problems. Some soil restoration is needed. Soil rehabilitation methods (primarily sub-soiling) have been used in recent contracts to offset compaction and improve water infiltration on high-traffic areas (eg. skid trails and landings) in the south-end districts. Soil treatment is needed not only for active operations, but as part of an overall strategy to provide rehabilitation for older activity areas where treatment is feasible.

Further monitoring and evaluation is needed to determine the implementation and effectiveness of BMP's on roads. Improved road maintenance, road closures and obliteration, and improved drainage systems continue to reduce road related sedimentation. Difficulty in re-vegetating road cutbanks continues to be a problem in some areas.

Planning documents and analyses continue to improve with site assessment of soil conditions and concerns becoming more common, showing a greater awareness of the need for limiting soil disturbances.

C. WATER

MONITORING ITEM 18: EFFECTS OF FOREST MANAGEMENT ACTIVITIES ON RIPARIAN/WATER RESOURCES

Forest Goals, Desired Future Condition, and Outputs: Maintain or enhance water quality. Create or maintain a diverse, well distributed pattern of riparian habitats for all species of fish and wildlife within riparian areas.

Monitoring Question(s): 1. Is project implementation in riparian areas resulting in attainment of desired future conditions for riparian areas? 2. Are Best Management Practices (BMPs), and other practices implemented as designed, effective in meeting water quality goals?

Threshold of Variability - Non-attainment of Forest Plan standards and guidelines for riparian area management.

Results/Findings: Determining the effects of Forest management activities on riparian and water resources (for this item) involves baseline monitoring and project site reviews and monitoring (before, during, and after activities).

Specific monitoring attention has been focused on timber sales, livestock grazing, fish habitat, watersheds, and restoration projects. The specific results of baseline (and some projects) monitoring for water and fish are discussed under Water and Fish sections (Monitoring Items 19, 20, 22, 23, and 24). Results of projects related to monitoring (primarily grazing) are discussed in Riparian Vegetation and Range sections (Monitoring Items 25, 27, and 30).

A DFC Index assessment process for riparian areas has been developed for the Forest. The process provides a vehicle for assessing existing conditions and changes through time. The process has not yet been accepted as a standard for the Forest. Some adjustment may be needed, based on suggestions from the area Ecologist who serves the Umatilla, Malheur, and Wallowa-Whitman National Forest.

Implementation monitoring of BMPs occurred at different levels on the Forest. Monitoring focused mainly on timber sale projects during Timber Sale inspections by Timber Sale Officers (TSOs). TSOs utilized contract specifications and requirements to ensure that BMPs were being implemented as required. The implementation of BMPs was verified in contract logs (daily diaries). Specific BMPs, such as water bars and stabilization seeding, were being implemented. No effectiveness monitoring of BMP's was conducted during FY 1992.

Evaluation: In-stream and riparian conditions have been noted in other monitoring items; results show some particular concerns about and problems with stream temperature, stream sediment, channel morphology, and riparian shrub utilization.

A number of actions have been initiated to help restore and improve riparian areas and water resources. Such actions include (but are not limited to) riparian fencing, revegetation, grazing management, closing or obliterating roads in riparian areas, and using "buffer" areas in timber harvest projects.

Further monitoring and evaluation to determine additional actions is warranted. The Forest needs to complete the riparian DFC assessment process as a means to address specific actions and assess recovery in riparian resources. A better process for documenting, summarizing, and evaluating administrative reviews of BMP implementation needs to be developed. Monitoring and assessment of the effectiveness of BMP's also

needs to be initiated. BMP implementation and effectiveness monitoring is recommended as a major emphasis area for 1993. Two Forest Interdisciplinary Team (IDT) formal reviews, one on the north and one on the south-end districts is needed. This formal review should use a watershed approach versus the traditional project level review.

MONITORING ITEM 19: EFFECTS OF FOREST MANAGEMENT ACTIVITIES ON WATER QUANTITY, LOW FLOWS, AND TIMING OF WATER YIELDS

Forest Goals, Desired Future Condition, and Outputs: "...Provide high quantities of water to off-Forest users while maintaining or enhancing water quality..."

Monitoring Question(s): 1. Are management activities significantly affecting the volume of water yield from Forest watersheds? 2. Are management activities significantly affecting the timing of water yield from Forest watersheds? 3. Are management activities significantly affecting the magnitude of summer low flows from Forest watersheds?

Threshold of Variability - 1. Any decline in water yield in critical drainage not attributable to natural causes. 2. Any decline in water yield or flow rate during critical late season periods not attributable to natural causes. 3. Any change in timing of spring snowmelt which would cause detrimental impact to stream channel stability or deleterious effect to downstream water users.

Results/Findings: During 1992, monitoring continued at the eleven water quantity sites established on the Forest. Flow information was collected. Monitoring of the Umatilla Barometer Watershed continued during the year. In addition, a South-End Hydrologic Study Area and gauging stations were established on the Heppner Ranger District to help assess the affects of forest management activities on water yields.

Evaluation: Although water quality data was available for this report, the information has not yet been evaluated. A full report from the Umatilla Barometer Watershed (High Ridge) Study is expected in 1995. Results from the South-End Study should be completed when sufficient data is collected and evaluated to provide meaningful baseline information.

MONITORING ITEM 20: EFFECTS OF FOREST MANAGEMENT ACTIVITIES ON WATER QUALITY

Forest Goals, Desired Future Condition, and Outputs: "Meet or exceed state water quality standards...Maintain or improve beneficial uses...Improve water quality in stream reaches effected by past mining activities."

Monitoring Question(s): 1. Are Forest management activities or other factors affecting water quality parameters in Forest streams? 2. What is the long term trend in water quality?

Threshold of Variability: Exceeding state water quality standards or Forest water quality goals.

Results/Findings: The purpose of this monitoring item is to determine baseline water quality on the Forest and help establish numeric objectives. 102 temperature, 31 sediment and turbidity, and 13 flow stations have been established Forest wide to help in the assessment. Currently, this item is addressed in Monitoring Items 22 and 23 and results are discussed there.

No monitoring of historic (1862 to 1942) mining activity was conducted on the Forest during the year.

Evaluation: See the following Monitoring Items 22 and 23 for evaluation discussion.

MONITORING ITEM 22: EFFECTS OF FOREST MANAGEMENT ACTIVITIES ON STREAM TEMPERATURE

Forest Goals, Desired Future Condition, and Outputs: "Meet or exceed State water quality standards for stream temperature...stream temperature regimes are well-moderated...well within tolerance of aquatic organisms..."

Monitoring Question(s): 1. Is project implementation in riparian areas resulting in attainment of desired future conditions for stream surface shading and/or in-stream water temperature? 2. What are the cumulative effects of Forest management activities on stream temperature? 3. What are the long-term changes and trends in stream temperatures?

Threshold of Variability: Non-attainment of Forest Plan standards and guidelines for stream surface shade and/or in-stream water temperatures

Results/Findings: Water temperatures are being measured with thermographs at established baseline stations on the Forests principal streams (Figure 1). During FY 1992, a few present and proposed timber sale project sites on the North Fork John Day Ranger District and a grazing exclosure at Heppner Ranger District were also monitored.

On the south half of the Forest (Heppner and North Fork John Day Ranger Districts), 1991 summer low flow water temperatures were consistently found to be in the 70 to 80 degrees F range. Streams monitored on the north half of the Forest were in good to excellent condition with cool, summer low flow temperatures in the 50 to 60 degrees F range.

Results reported from project monitoring on the North Fork John Day District indicate that 20 tributary streams of the 27 monitored had summer temperatures in excess of state standards.

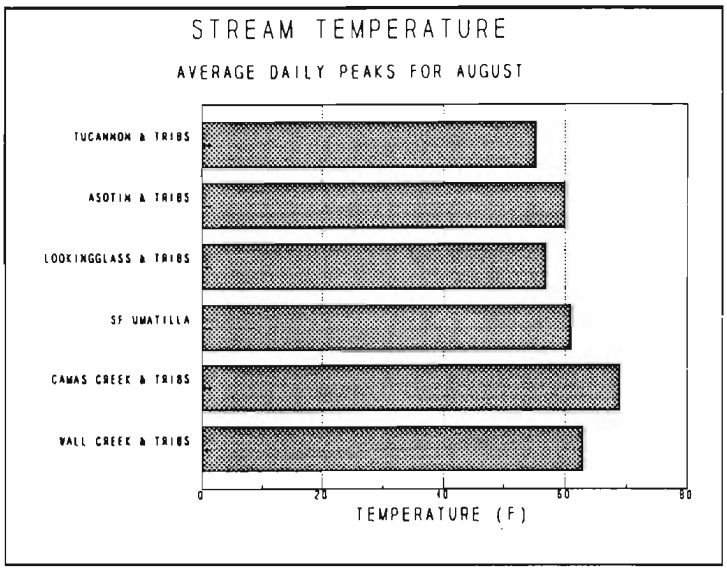

Figure 1.

Evaluation: This baseline monitoring confirms that water temperature is the major water quality concern on the Forest, particularly on the South half.

The baseline results also substantiate findings from 1991, although the findings from the two years are not strictly comparable since additional streams were incorporated into the 1992 data.

As noted in Monitoring item number 20 , a number of restoration activities are being implemented to address the high stream temperatures. Continued monitoring is needed to help establish trends and determine effects of practices.

MONITORING ITEM 23: STREAM SEDIMENTATION

Forest Goals, Desired Future Condition, and Outputs: Meet or exceed state water quality standards related to stream sedimentation. Produce high levels of anadromous and resident fish habitat. Maintain sediment in Forest streams within the range and frequency adapted to by indigenous aquatic populations.

Monitoring Question(s): 1. Are Forest streams meeting state water quality standards? 2. How are Forest management activities and/or natural events affecting the rate of stream sedimentation or potentially impacting beneficial uses? 3. Is stream sedimentation impacting the productivity of aquatic ecosystems? 4. What is the cumulative impact of changes in stream sedimentation on water quality and fish habitat?

Threshold of Variability: 1. Exceeding State water quality standards. 2. Measurements of in-stream sediment sensitive fish habitat parameters exceed values representative of natural functioning aquatic systems. 3. Population levels of sediment sensitive macro-invertebrate species are below expected values for high quality stream ecosystems.

Results/Findings: Sediment and turbidity data continues to be collected at 31 sites during FY 1992, but the information has not been fully evaluated. Sediment data collection also continued at the High Ridge Evaluation Area and was initiated at the new South-end Hydrologic Study (Heppner Range District), both barometer watersheds. Analyses have not been completed for these studies.

Of the 322.6 miles of stream (78 streams) surveyed in 1992, 136.5 miles (42%) exceeded the current standard for cobble embeddness. 48 of the streams had sections exceeding the standards. About 50 percent of the surveyed miles on the south end and 36 percent of the surveyed miles on the north end exceeded the standard. In this survey, 35 percent or more of the spaces in between the gravel and cobble were filled with fine material, the standard was exceeded.

Evaluation: Streams with high cobble embeddness would be candidates for intensive stream sedimentation monitoring. Conversely, the streams reported as not embedded should be monitored to document land management practices that are consistent with healthy streams and watersheds.

Preliminary analysis of the sediment data indicates that "gaps" or missing information is a problem in determining stream and basin suspended sediment and bed loads. To compare the evaluation and continue the monitoring process for assessing sediment, this problem needs to be corrected.

Further evaluation is needed. Preliminary visual observations and earlier Barometer watershed publications tend to indicate that stream sedimentation is a lesser problem than initially believed. A more detailed survey of cobble embeddness may indicate otherwise.

MONITORING ITEM 24: STREAM CHANNEL MORPHOLOGICAL FEATURES

Forest Goals, Desired Future Condition, and Outputs: "...channel forming/maintenance processes continue to operate without substantial long-term or watershed-wide modifications..."

Monitoring Question(s): 1. Are management activities in riparian areas allowing channel forming processes to operate resulting in relatively large, well-distributed pools, and meeting stream potential for the fisheries habitat desired future conditions?

Threshold of Variability: 1. Non-attainment of expected stream channel pool frequency. 2. Non-attainment of expected in-stream large wood levels.

Results/Findings: In 1992, 169 miles of stream inventory were completed on the south half of the Forest. Large wood levels and channel pool frequency were examined. Large woody debris that measured 20 inches in diameter or greater and at least 35 feet long were inventoried. Small woody debris and brush was also documented and added to the large wood to form a category of wood per mile. Large wood was not abundant in many cases.

The range of frequency per mile was from no large wood to 202 pieces per mile, with an average of 44 pieces per mile. This figure is somewhat inflated because large standing trees, with the potential to enter the stream sometime in the future were included in the survey.

Casual observations by biologist and technicians on the southern districts indicate that the insect epidemic is beginning to influence stream habitat. They have observed additional wood from dead trees contributing to stream habitat. Follow-up surveys on baseline streams will be needed to confirm the observations.

Stream survey data was collected on the south-half of the Forest during late summer low flow conditions (Figure 2). Pools identified contribute low flow fish habitat. Potential winter pool habitat or spring high flow pools were not identified. Pool frequency ranged from 0 (low) to 13 (high) pools per mile with the average being 5.6 pools per mile.

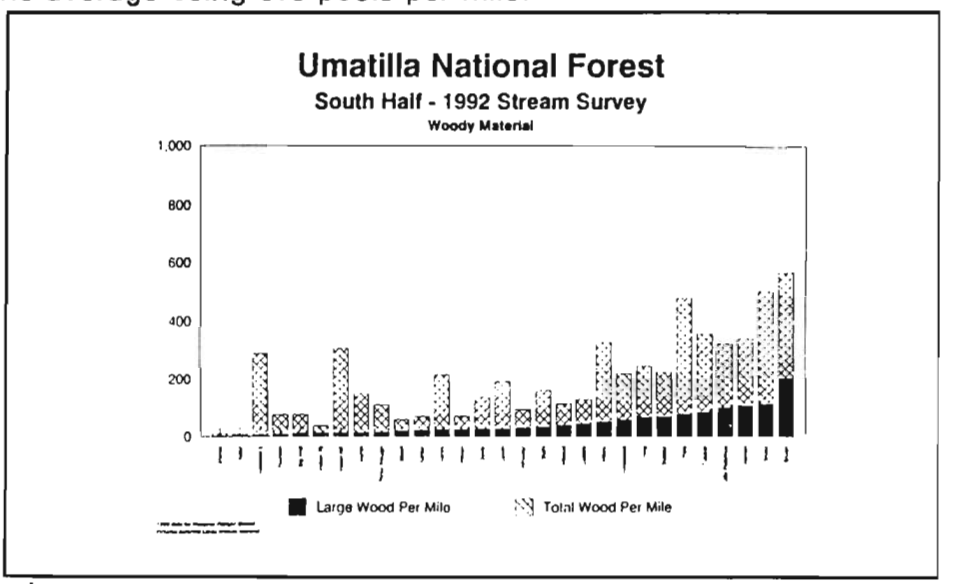

Figure 2.

199 miles of stream survey was completed in FY 1992 on the north half of the Forest (Figure 3). Large wood and pool frequency were calculated in this survey. The large wood ranged from 0 to 209 pieces per mile, with an average of 42 pieces per mile.

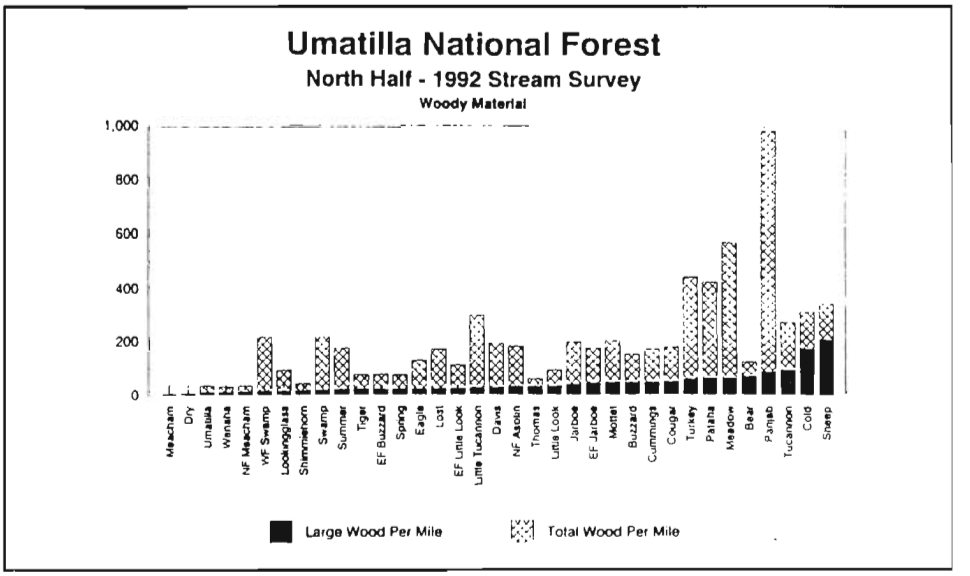

Figure 3.

The pool frequency ranged from 2 to a high of 77.5 pools per mile in the Lookingglass. On the north half of the Forest, 1992 stream survey data, showed 18.6 pools per mile on average.

Evaluation: Baseline information from the surveys indicates apparent deficiency in fish habitat pools, and small and large woody material on most of the streams inventoried. Pool shortages are primarily on the southern end of the Forest. The deficit described for these two stream parameters is based on standards currently being considered for desired fish habitat. Results from FY 1992 further confirm findings from FY 1991.

Additional study will be needed to determine how to effectively correct the deficiencies. With further study, the effects of management activities conducted under the Forest Plan can be compared to this baseline. Some additional monitoring is needed. Pool and woody material parameters need to be addressed on a watershed basis. Healthy stream conditions need to be evaluated as a baseline, to establish potentials against which recovery of degraded streams can be evaluated.

MONITORING ITEM 53: FIRE EFFECTS - WILDFIRE ON WATER AND SOILS

Forest Goals, Desired Future Condition, and Outputs: "Provide and execute a fire use program that is responsive to land and resource management goals and objectives. Maintain or enhance ecosystem functions...provide...long-term integrity...productivity of biological communities."

Monitoring Question(s): 1. How many acres (percentage) of each subwatershed have sustained high intensity burns per 3-year period? 2. Is visible, accelerated erosion occurring within a subwatershed because of past burns?

Threshold of Variability: Five percent of subwatershed impacted by high intensity fires within three year period.

Results/Findings: Within the last three years, the Forest has not experienced any fires or combination of fires that have resulted in high intensity burning of five percent or more of any watershed. Soil scientists, hydrologists, fisheries biologists, and others have not noted any visible accelerated erosion that was due to past burns.

Evaluations: Monitor when large, intense fire(s) or numerous smaller fires occur on the Forest. One proposal is to monitor the effects and recovery of the North Fork John Day Wilderness (and adjacent area) fires that occurred in 1986 and 1987.

C. BIOLOGICAL RESOURCES

A. VEGETATION MANAGEMENT

MONITORING ITEM 25: RIPARIAN VEGETATION

Forest Goals, Desired Future Condition, and Outputs: "...vegetation will generally be dense and diverse...and be contributing to stable streambanks and complex fish habitat..."

Monitoring Question(s): 1. Are management activities in riparian areas resulting in stable or improved riparian vegetation condition and trends for attainment of desired future conditions and Forest Plan objectives for riparian areas?

Threshold of Variability: 1. Non-attainment of Forest Plan standards for riparian area management. 2. Non-attainment of Forest Plan standards for stream surface shade. 3. Riparian vegetation trends moving away from the attainment of desired future conditions.

Results/Findings: During the past two years, monitoring of riparian vegetation has focused on shrub utilization. The intent is to achieve riparian vegetative improvement and stream shading through shrub and hardwood recovery. (Also see Monitoring Item 18 and 30). In Fiscal Year 1992, the two southern districts expanded shrub utilization monitoring. Riparian shrub utilization was measured at 36 sites on 28 streams. The Forest Plan utilization objective of 40 percent or less was exceeded at 29 of the 36 monitoring sites (80 percent). Two of these sites were excluded from livestock grazing in 1992. Utilization measurements were between 40.1 percent to 80 percent, thus consistently exceeding the Forest Plan Standards.

It has been extremely difficult to meet shrub utilization standards late in the grazing season. Grass utilization was often not monitored. Limited monitoring of riparian grass utilization was conducted in 1992. Generally, over utilization on shrubs occurred prior to over utilization of grasses. Therefore, utilization measurements on shrub vegetation directed decisions and changes in grazing management.

The existing two way exclosures (exclude domestic livestock/allow wildlife use) on Fivemile Creek (North Fork John Day Ranger District) showed utilization at or exceeding utilization standards [38 and 46 percent] for shrubs). The riparian livestock exclosures on Little Wall and Wilson Creek (Heppner Ranger District) received 62 and 55 percent utilization. Big game use is extensive and in some cases, wildlife use on shrubs exceeded the standards prior to livestock being released into the unit, especially when livestock entry occurred after mid July.

On the north half of the Forest, the standards and guidelines for riparian utilization of shrubs were generally met. In the 11 riparian areas measured on the Pomeroy Ranger District, shrub utilization was between 8 and 25 percent. One riparian area on Walla Walla exceeded Forest Plan standards.

Evaluation: Initial results from FY 1991 monitoring indicated a problem with utilization of shrubs and grasses in riparian areas. The more intensive monitoring conducted this year showed a continuing problem, with utilization of shrubs exceeding Forest Plan standards on the south half of the Forest, at 80 percent of the sites surveyed.

As a result of the FY 1991 results, the Forest took a number of specific actions to reduce the impact to shrubs and initiate riparian recovery. One of the key strategies is livestock management. Other restoration activities are noted under Monitoring Item 18. Continued monitoring is needed to determine the effectiveness of these actions.

Actions needed to reduce the impact of big game and other wildlife will take further evaluation. As noted, wildlife use is an important part of the overall problem; cost effective means for reducing wildlife impacts have yet to be determined.

MONITORING ITEM 27: RANGE CONDITION AND TREND(C&T)

Forest Goals, Desired Future Condition, and Outputs: "Areas of suitable primary and secondary range, including riparian areas, are in satisfactory condition with a stable or upward trend..."

Monitoring Question(s): 1. Are range vegetation conditions on suitable primary and secondary range being improved to and maintained at a satisfactory condition? 2. Are range vegetative conditions within riparian areas being improved to and maintained at a satisfactory condition level?

Threshold of Variability: By the year 2000, at least 85 percent of suitable primary and secondary range is in satisfactory condition with no more than five percent of the allotments classified as PD. Accomplishment will be monitored annually to determine degree of attainment.

Results/Findings: Most of the range condition monitoring was focused on the riparian areas; some upland condition and trend surveys were conducted in FY 1992. One condition and trend study was completed on the Hardman C&H Allotment (Heppner Ranger District). 16 permanent utilization/growth studies and 15 permanent photo points (channel profiles) were established on the district. Three riparian ecosystem monitoring points were also established in existing three way exclosures to compare species composition

changes between different types of ungulate use.

Four photo point transect's were re-taken (North Fork John Day Ranger District) on the Hidaway, Western Desolation, and Matlock allotments. The photo point transect's combined for a total of 44 photo points (photo's were taken throughout the 1980's and early 1990's) and all were located within riparian areas on the allotments. Also, a total of five condition and trend clusters (a cluster is composed of 3 to 4 transect's) established in the 1960's were re-established and interpreted in Klondike, Lucky Strike, Texas Bar, F.G. Whitney, (Round Meadows) and Hidaway Allotments (Dry Camas).

Two photo point transect's on the Eden C & H Allotment (Walla Walla Ranger District) were read in FY 1992 but the data was not analyzed this year. Two riparian transect's were established in the Tucannon River area in Fiscal Year 1992 on the Pomeroy Ranger District and one riparian transect in Jarboe Meadow on the Walla Walla Ranger District was established.

Data and results from the 1991 condition and trend studies, and photo point transect on the uplands (primarily Heppner District) read in 1991[1], indicate that a majority of the uplands are in an improving condition and are responding positively to adjustments in grazing levels. Due to increased vegetation, less erosion is evident than identified in past transect and photo point results. Riparian areas have mixed results. At Heppner, riparian areas are still displaying signs of continued overuse in key areas (see Monitoring Item 25 and 30).

However, a summary of results from "short-term" photo point survey (10 years old or less) on the North Fork John Day Ranger District show:

- There is less bare soil and more ground cover observed on stream banks (with a few exceptions created by natural events or installation of fish habitat structures).
- In some cases, plant composition shows more wet sedges replacing drier kentucky bluegrass; other sites do not show a change in plant composition.
- Most sites exhibit no change in shrub density or cover; others show an increase but are not yet providing shade.
- Stream shade has been impacted by spruce budworm defoliation and past timber harvest (lodgepole salvage). Pine regeneration along some streams is beginning to provide shade.

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[1] No analysis was done in 1992. The 1991 stated that 13 C&T were surveyed with no analysis. This information has been analyzed and is being reported in this report.

A summary of conclusions from the "long-term," 1960s re-established photos on five North Fork John Day allotments includes:

- A significant reduction in bare soil area in meadows compared with the baseline measurements.
- In general, wet sedge and grass species are replacing drier kentucky bluegrass sites, indicating higher ground water levels and meadow recovery.

Evaluation: Based on photo points, and condition and trend cluster transect monitoring, vegetative condition is at least being maintained and improvement is occurring in some riparian conditions (stream banks, trapping sediments, sedges in stream channels etc.). Long term, conditions have improved, significantly on uplands. Overall, there is still a need for more improvement at a more rapid pace.

A riparian classification system needs to be completed to help determine the definition of "satisfactory conditions."

A number of management actions and techniques are being employed to achieve recovery, as noted in Monitoring Items 18 and 25.

MONITORING ITEM 30: LEVEL OF UTILIZATION IN RIPARIAN, UPLAND, AND TRANSITORY

Forest Goals, Desired Future Condition, and Outputs: All allotments implement the Forest Plan utilization standards through allotment management plans (AMPs).

Monitoring Question(s): 1. Are Forest Plan utilization standards being implemented through the Allotment Management Plan (AMP) and being enforced on the ground? 2. Are actual use levels within the Forest Plan utilization standards for riparian zones, for uplands, and for transitory range?

Threshold of Variability: More than 10 percent of the allotments reviewed experience utilization by any species of animal exceeding the Forest Plan or allotment plan standards by more than five percent as average of use in key areas of an allotment.

Results/Findings: Forest Plan standards and guidelines are currently being implemented through the Annual Operating Plans, which are part of the grazing permit system.

Utilization was measured on 10 allotments at Heppner, seven on the North Fork John Day, six at Walla Walla, and five at Pomeroy Districts. See Monitoring Items 25, 18, and 27. As noted in the other monitoring items, the Forest intensively monitored big game and livestock use in riparian areas

and uplands, particularly on the south end of the Forest. Various types of utilization checks were conducted prior to release of livestock, during the grazing season, and post grazing.

In summary, for the upland, at Heppner, forage utilization was light, ranging from 10 to 20 percent. North Fork John Day District (primarily on the F.G. Whitney Allotment) reported use within Forest Plan standards with generally light to moderate use on most grasses, and a few grasses (such as orchard grass) with moderate to high use. Upland use of grasses on the Pomeroy District was generally less than 40 percent. Shrub use on North Fork John Day and Walla Walla Districts also varied by species but was generally moderate to high, with extreme levels of shrub use at some sites. This use exceeded standards at some sites.

For transitory range, standards for utilization are higher than other areas. On the North Fork John Day District, range conservationists did not observe any measurements that exceeded standards.

In riparian areas monitored, shrub use generally exceeded Forest Plan utilization standards on the Heppner, North Fork John Day, and Walla Walla Districts (see Monitoring Item 25 for discussion).

Evaluation: Additional monitoring of shrub use in uplands and transitory range needs to be completed to gain a more complete picture of vegetation use for possible management adjustment.

As noted in several other monitoring items, adjustments in riparian management practices and other mitigation has been initiated in order to meet Forest Plan standards. Further evaluation is needed to determine how the impacts of big game (and cattle) on riparian vegetation can be reduced and recovery of shrubs achieved. Condition and Trend studies in the riparian areas need to be performed to measure the effectiveness of the utilization standards.

MONITORING ITEM 31: NOXIOUS WEEDS

Forest Goals, Desired Future Condition, and Outputs: "...controlled in accordance with the Region Six "Managing Competing and Unwanted Vegetation - Environmental Impact Statement (EIS) and mediated agreement..."

Monitoring Question(s): 1. Are noxious weed infestations being treated in accordance with the Managing Unwanted or Competing Vegetation Environmental Impact Statement, Forest Plan direction, and applicable State/Forest Service Memorandums of Understanding? 2. Are noxious weed populations decreasing or remaining stable, and are they being prevented from infesting adjacent private lands?

Threshold of Variability: Assigned targets are not met by 20 percent or more.

Results/Findings: Each District on the Forest has located and mapped all known locations of noxious weed populations. The locations were placed in the GIS database for future referencing. The inventory indicates that the a variety of noxious weeds is increasing across the Forest. The inventory also located a number of new sites. For example, on the Walla Walla Ranger District, an additional 75 sites have been located.

TABLE C-1
NOXIOUS WEED INVENTORY - 1992
Umatilla National Forest

DISTRICT	*ACRES INVENTORIED*
HEPPNER	1,858
NORTH FORK JOHN DAY	1,447
POMEROY	1,385
WALLA WALLA	3,533
FOREST TOTAL	**8,223**

Noxious weeds are being treated in accordance with the Managing Unwanted or Competing Vegetation Environmental Impact Statement (EIS) and mediated agreement as required.

The Forest has accomplished 339 acres of noxious weed eradication by using "hand pulling and chemical application." These noxious weeds are predominately yellowstar thistle, knapweed, and tansy ragwort.

Preliminary data from inventories reveal the "hand pulling" method has mixed results for keeping population levels in check. It has not always been effective for long-term control. A concern has also been raised that increasing levels of noxious weeds on the Forest could affect private lands. This concern is based upon long-term inventories conducted by local county officials.

Evaluation: With expanding populations of a number of different noxious weeds, the Forest needs to expand control efforts. The Forest also needs to consider additional use of herbicides as part of an integrated pest management program.

Continued monitoring is required to assess trends in populations and the effectiveness of control efforts.

MONITORING ITEM 33: SILVICULTURAL HARVEST METHOD

Forest Goals, Desired Future Condition, and Outputs: Ensure compliance with management objectives contained in the Plan; evaluate assumptions used in the Forest Plan.

Monitoring Question(s): 1. Is the harvest method implemented on the ground as portrayed in the Plan? Reported by silvicultural method and acres treated.

Threshold of Variability: Variance from planned method of more than 25 percent on an annual basis, 15 percent on a decade basis. Compare actual levels by method to Table 4-1 of the Forest Plan.

Results/Findings: Forest Practices regarding silvicultural harvest methods are changing due to: forest restoration and salvage projects, and implementation of ecosystem management guidance. The following Table shows the harvest methods completed on the Forest in 1992.

TABLE C-2
HARVEST METHOD - 1992
Umatilla National Forest

HARVEST METHOD	PLANNED OUTPUT (ACRES)	ACTUAL '92 OUTPUT (ACRES)	% OF PLANNED OUTPUT
CLEARCUT	4,000	3,119	78%
SHELTERWOOD	2,600	3,684[1]	142%
OVERWOOD REMOVAL	1,500	5,693	380%
UNEVEN-AGE	900	142	16%

In June of 1992, the Chief of the Forest Service announced that Ecosystem Management would be initiated on National Forests including a reduction of clearcutting by much as 70 percent from 1988 levels.

In the late summer of 1992, the Umatilla Forest Leadership Team (FLT) discussed implementation of the Ecosystem Management direction during FLT review trips on the North Fork John Day, Pomeroy, and Walla Walla

[1] Includes 1,552 acres of seedtree.

Ranger Districts. On the Walla Walla District retaining overstory from shelterwoods is often practiced as a means of achieving ecosystem benefits including wildlife refugia and stand structural diversity. The Pomeroy District is developing silvicultural prescriptions for existing shelterwoods that involve at least partial retention of overstory trees. Additional work on the development of silvicultural prescriptions which meet ecosystem management direction is ongoing.

Evaluation: Clearcut acres are within the threshold of variability of 25% on an annual basis. Although the Forest is still harvesting many timber sales prepared prior to release of the Forest Plan, the amount of clearcutting is being reduced. Total clearcut acres is down from Forest Plan level (-22 percent).

While shelterwood harvest acres exceeded the annual threshold of variability, when added to last year's 54%, the average is near the Forest Plan projected annual output acres over a two year period. Overwood removal exceeds the threshold for the second consecutive year. However, this is still the result of harvesting sales that were planned and sold prior to Forest Plan implementation (about 2/3 of the harvest).

The acres of uneven-age management projected in the Forest Plan were not met in FY 1992. However, they were met in FY 1991. This will also need to be re-evaluated to determine if the decade goal can be met.

Due to changes in the forest health situation, changes in harvest methods are expected and need to be re-evaluated. A large increase in seed tree and shelterwood harvest is highly probable. The need to retain green tree replacements for future snags and other ecosystem requirements will also influence the need for a Forest Plan adjustment.

MONITORING ITEM 34: SIZE AND DISPERSAL OF CREATED OPENINGS

Forest Goals, Desired Future Condition, and Outputs: Achieve unit sizes that fall within the acceptable legal desired ranges.

Monitoring Question(s): 1. Are unit sizes complying with direction in the Forest Plan, National Forest Management Act (NFMA), and Regional standards?

Threshold of Variability: Maximum unit size (and average) exceeds size standards by more than 10 percent. Where exceptions allow, unit sizes meet Environmental Assessment (Regional) requirements.

Results/Findings: Of those units harvested in Fy 1992, only a few exceeded the 40 acre guideline. Those units are shown in the following Table.

TABLE C-3
CREATED OPENINGS - 1992
Umatilla National Forest

DISTRICT	HARVEST METHOD	ACRES TREATED
HEPPNER	CLEARCUT	-
	SHELTERWOOD	-
	SEEDTREE	-
NORTH FORK JOHN DAY	CLEARCUT	43
		43
	SHELTERWOOD	-
	SEEDTREE	51
POMEROY	CLEARCUT	45
	SHELTERWOOD	45
		55
	SEEDTREE	-
WALLA WALLA	CLEARCUT	-
	SHELTERWOOD	46
		48
		55
		72
		143
	SEEDTREE	-

In FY 1992, the only created opening which was outside the Threshold of Variability was the 51 acre seed tree harvest on the North Fork John Day Ranger District. All others had regional office approved exceptions to exceed the Forest Plan standards.

Evaluation: Continue Monitoring. The Forest Plan needs to be reviewed and possibly amended to control the larger opening sizes in areas of large scale insect mortality.

MONITORING ITEM 35: STAND MANAGEMENT - NATURAL REGENERATION

Forest Goals, Desired Future Condition, and Outputs: Ensure successful reforestation to at least minimal stocking consistent with standards and guidelines.

Monitoring Question(s): 1. How many acres were treated using natural regeneration? 2. How many years did it take these areas to meet at least minimal stocking levels?

Threshold of Variability: 1. Greater than 15 percent deviation from Plan level for acres treated (Table 4-1, Forest Plan) during a 5 year period. 2. Greater than a 10-year lag between time of harvest and attainment of at least minimum stocking levels.

Results/Findings: During 1992, a total of 2,388 acres of natural regeneration was accomplished. The total includes 1,733 acres of natural regeneration without site preparation, certified as stocked, and includes 655 acres of site

preparation for natural seeding. In 1992, 3,062 acres of natural regeneration with site preparation were also certified.

Evaluations: The planned output was 3100 acres (Table 4-1, Forest Plan). In FY 1992, the Forest accomplished 77 percent of the planned level based on the Regional process. As noted in the thresholds, several more years of accomplishments are needed prior to complete evaluation. The FY 1992 acres reflect harvesting and regenerating sales that were planned prior to Forest Plan implementation.

Further evaluation is needed. A reforestation activity review is needed to better define reforestation status, to help determine natural regeneration lag time (time between harvest and certification) and to assist in developing updated yield tables.

MONITORING ITEM 36: STAND MANAGEMENT - ARTIFICIAL REGENERATION

Forest Goals, Desired Future Condition, and Outputs: Ensure successful reforestation to at least minimal stocking levels consistent with standards and guidelines.

Monitoring Question(s): 1. How many acres were (successfully) reforested using artificial regeneration practices? 2. How many acres were stocked at least to minimum levels within three growing seasons after the reforestation period began?

Threshold of Variability: 1. Greater than 15 percent deviation from the Plan level for acres treated (Table 4-1, Forest Plan) during a 5 year period. 2. Less than 90 percent of the acres at least minimally stocked after three growing seasons.

Results/Findings: For monitoring question number one, in FY 1992, 5,826 acres of artificial regeneration were accomplished on the Umatilla. A total of 5,186 acres were certified (monitoring question two) in FY 1992 as meeting or exceeding minimum stocking standards. These represent acres that were reforested prior to implementation of the Forest Plan.

Evaluations: The planned artificial regeneration output (Table 4-1, Forest Plan) was 4,400 acres. Thus, in FY 1992 the Forest exceeded the planned output by 32 percent.

This item will require further evaluation based on several more years of accomplishment to test against threshold levels. Also, the impact of salvage activities and associated reforestation in the insect affected areas will tend to increase the need for higher planting levels.

In the FY 1994 Monitoring Report we will be able to begin reporting the percentage of the acres reforested after Plan Implementation which achieved at least minimum stocking in three growing seasons.

MONITORING ITEM 37: STAND MANAGEMENT - PONDEROSA PINE REGENERATION

Forest Goals, Desired Future Condition, and Outputs: To identify the amount of ponderosa pine being reestablished and potential change to more seral species on the Forest.

Monitoring Question(s): 1. How many acres were reforested with ponderosa pine by either natural or artificial regeneration practices?

Threshold of Variability: If after 10 years pine is reforested on less than 35 percent of the acres regenerated.

Results/Findings: The number of acres planted with ponderosa pine in FY 1992 was 2,940.

Total acres regenerated in FY 1992 (artificial regeneration plus natural regeneration) was 8,214. Thus ponderosa pine plantings accounted for 36 percent of all acres regenerated in FY 1992.

Evaluation: With current trends, the threshold can be met. However, with long-term ecosystem sustainability concerns particularly in the insect affected areas, (see Monitoring Item 54) reforestation is planned to emphasize seral species. Therefore, the threshold of variability should be reviewed for applicability.

MONITORING ITEM 38: REGENERATION WITH GENETICALLY IMPROVED TREE STOCK

Forest Goals, Desired Future Condition, Outputs: Determine if the level of planting with genetically improved stock is consistent with the level assumed in the Plan and managed yield tables.

Monitoring Question(s): How many acres have been reforested with genetic stock, that is, stock of certification level Subclass B (SB) or higher?

Thresholds of Variability: More than 10 percent reduction from levels assumed in the Forest Plan over a 5-year period.

Results/Findings: The total number of acres planted with genetic stock in FY 1992 was 2,494 acres. This represents 43% of the total planted acres (5,826).

Evaluation: The accomplishment is consistent with levels assumed in the Forest Plan.

MONITORING ITEM 39: STAND MANAGEMENT - PRECOMMERICAL THINNING

Forest Goals, Desired Future Condition, Outputs: Accomplish the planned amount of stocking level control on the Forest.

Monitoring Question(s): 1. How many acres were treated with stocking level control? 2. How many of the acres needing stocking level control were treated?

Threshold of Variability: 1. Greater than 20 percent deviation from planned levels as indicated in the Forest Plan Table 4-1 Projected Resource Outputs and Effects. 2. Less than 80 percent of the acres needing stocking level control actually received.

Results/Findings: The amount of pre-commercial thinning accomplished on the Forest in FY 1992 was 2,326 acres. The planned amount is 2,900 acres. Thus, the FY 1992 accomplishment represents 80 percent of the planned output, which meets the threshold of variability for this item (20% deviation).

All of the acres needing stocking level control, as reported in the NEEDS[1] Report, were treated in FY 1992.

Evaluation: Acres of stocking control for FY '91 and FY '92 are slightly below the Plan levels but are within the Threshold of Variability.

MONITORING ITEM 51: FIRE EFFECTS - PRESCRIBED FIRE

Forest Goals, Desired Future Condition, and Outputs: Provide and execute a fire program that is responsive to land and resource management goals and objectives

Monitoring Question(s): 1. Are the prescribed fire treatments meeting Forest Plan residue (materials left on site) and resource objectives? 2. What are the (understory) vegetative responses in the prescribed burned area?

Threshold of Variability: Prescriptions not being met by 20 percent or more of areas.

Results/Findings: Monitoring plots were established for prescribed burning project areas during FY 1992 on three of four Districts. As stated in the Forest Plan (Forest Plan chapter 5 p. 5-23), monitoring plots will be established to monitor the ecological effects of prescribed fire. Six photo

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[1] An annual report which estimates current and future needs for silvicultural projects.

points were established and preliminary data collection has begun. Permanent files have been developed to track the photo points which will need to be followed for the next several years. Additional plot establishment will be done in FY 1993.

Evaluation: Monitoring has just been initiated and needs to continue and expand. Therefore, no evaluation has occurred to date.

MONITORING ITEM 66: MITIGATION MEASURES - VEGETATION MANAGEMENT

Monitoring Question(s): Was the checklist for the "Managing Competing and Unwanted Vegetation" Final Environmental Impact Statement - November, 1988 used as intended?

Results/Findings: During FY 1992, the checklist for Planning and Conducting Vegetation Management Practices was used by one of four Districts. The checklist was used primarily on timber sale projects. However, evaluation of vegetation management was completed on all four Districts in compliance with the mediated agreement in 1992.

The projects completed in FY 1992 (includes: timber sales, IRA's, restoration/salvage, and noxious weed [yellowstar thistle project on Pomeroy]), met the requirements of the "Managing Competing and Unwanted Vegetation" Final Environmental Impact Statement" and mediated agreement.

In 1992 the Walla Walla and North Fork John Day Ranger Districts developed detailed vegetation management plans on Lower Tiger, Palmer, Turner-Otter, and Windy Springs projects. The plans evaluated the need for vegetation management, treatment thresholds, alternative treatment methods, and complete analysis of treatment effects associated with the select treatments. It should be noted the plans are more detailed than that of the checklist.

Evaluation: The checklist and other evaluation tools still need to be used for range, wildlife, recreation, tree improvement, and engineering projects that fall within the jurisdiction of the Vegetation Management FEIS and the mediated agreement.

According to the FY 1991 Monitoring and Evaluation Report, a statement for the Thresholds would be developed. In FY 1992, a preliminary draft of the Thresholds of Variability, Forest Goals, etc. was developed. Changes to this element should be approved in FY 1993.

B. PLANTS

MONITORING ITEM 17: THREATENED, ENDANGERED, AND SENSITIVE SPECIES

Forest Goals, Desired Future Condition, and Outputs: Conserve existing populations and habitats for sensitive plant species.

Monitoring Question(s): 1. Is adequate protection afforded the documented sensitive plant species of the Forest?

Threshold of Variability: Any deviation from recommended mitigation provided in the Biological Evaluation for the Threatened/Endangered/Sensitive survey site.

Results/Findings:

TABLE C-4
PLANTS - 1992
Threatened, Endangered, and Sensitive Species
Umatilla National Forest

DISTRICT	ALPHA CODE	POPULATION BY SPECIES /DISTRICT	POPULATION SIZE (NO. PLANTS)	TREND INDICATOR (NO. PLANTS)
HEPPNER	MIWA	(9:9) DIST	33,156	STABLE
POMEROY	ASAR3 CYFA RIOXC	(1:1) DIST (1:1) DIST (1:9) DIST	158 2 7	NO CHANGE UP - 1 UP - 2
NORTH FORK	BOMI	(1:1) DIST	51	UP - 4
WALLA WALLA	SPDES	(4:4) DIST	183	UP - 2

For the nine populations of sensitive plant species that were informally monitored during the 1992 field season, recommended mitigation measures appear to have been followed, and the population trends appear to be stable to slightly increasing. Except for Walla Walla District, permanent population markers were placed on all known Threatened/Endangered/Sensitive populations during the 1992 field season.

Evaluation: Continue monitoring.

C. INSECT AND DISEASES

MONITORING ITEM 54: INSECT AND DISEASE CONTROL

Forest Goals, Desired Future Condition, and Outputs: "Protect resources and values from unacceptable losses due to destructive pests ... Monitor levels and activity of forest pests...identify or predict when and where they will hinder the attainment of management objectives."

Monitoring Question(s): 1. Are destructive insect and disease organisms threatening land management objectives?

Threshold of Variability: Evidence of insect or disease buildups at or above epidemic levels.

Results/Findings: During FY 1992, the Regional Office continued to conduct annual aerial pest surveys to determine the extent and trend of forest pest damage. The Districts also continued ground based sampling, crown sampling, and pheromone trapping to assess trends in specific insect populations.

The Western Spruce Budworm and associated insects have had a major impact on the Forest, particularly on the southern Districts. The Forest contains many acres of insect killed stands. However, on the Forest, 1992 saw some significant changes in the damage levels for several of the major insects. New or additional Spruce budworm defoliation and associated damage levels were down substantially from FY 1991 levels. The acreage with new levels of very low or low dropped by almost 50 percent, while the quantity of moderate or high damage declined by almost 90 percent. A decline in budworm damage was particularly apparent on the southern half of the Forest (Heppner and North Fork John Day Ranger Districts) which probably reflects a dwindling food supply for the budworm. Budworm damage actually increased slightly on the Walla Walla Ranger District.

The acres affected by Douglas-fir beetle and western pine beetle increased from FY 1991 levels, whereas damage levels for fir engraver and mountain pine beetle declined. Other insects causing damage during FY 1992 included pine engraver beetles, sawfly in the true firs, and balsam woolly aphid, a tiny sucking insect that affects small firs. Table C-5 shows the acres that have been affected since 1990 to 1992.

TABLE C-5
INSECT SURVEY
1990 - 1992
Umatilla National Forest

INSECT	*RANGER DISTRICT*	*1990 ACRES*	*1991 ACRES*	*1992 ACRES*
BUDWORM (very low/low)	HEPPNER POMEROY NORTH FORK WALLA WALLA	25,000 42,000 180,000 118,000	65,000 77,000 227,000 232,000	6,000 52,000 7,000 242,000
BUDWORM (moderate/ high)	HEPPNER POMEROY NORTH FORK WALLA WALLA	62,000 0 154,000 0	81,000 0 176,000 4,000	18,000 2,000 11,000 4,000
DOUGLAS-FIR BEETLE	HEPPNER POMEROY NORTH FORK WALLA WALLA	13,000 4,000 77,000 4,000	404 1,000 9,000 2,000	7,000 862 19,000 3,000
FIR ENGRAVER	HEPPNER POMEROY NORTH FORK WALLA WALLA	5,000 94,000 4,000 31,000	1,000 44,000 129 42,000	2,000 0 2,000 775
MOUNTAIN PINE BEETLE	HEPPNER POMEROY NORTH FORK WALLA WALLA	46 234 128 54	278 127 147 1,000	414 3 96 37
TOTALS		**813,462**	**963,085**	**377,187**

Many different diseases are affecting the forest resources of the Umatilla National Forest. During FY 1992, Pomeroy Ranger District implemented a sanitation project to control laminated root rot on 51 acres. A small project to control black stain root disease was also completed in a ponderosa pine plantation on Ables Ridge. Efforts to control Armillaria root disease are occurring throughout the Forest, normally during implementation of other management activities. Annous root disease is also being treated, often by requiring timber purchasers to apply borax to fresh fir stumps. Results of these treatments have not been analyzed.

Evaluation: The declines in additional insect affected areas were a primary reason why the Forest recently decided to reconsider a proposed project to suppress budworm populations by applying an insecticide in FY 1993. Continued monitoring of insects and diseases is needed.

D. FISH

MONITORING ITEM 21: ANADROMOUS AND RESIDENT FISHERIES

Forest Goals, Desired Future Condition, and Outputs: Provide and maintain a diverse, well-distributed pattern of habitats for viable fish populations.

Monitoring Question(s): 1. Are the population trends for Management Indicator Species stable to improving? 2. Are Forest Plan goals for anadromous fish being achieved? 3. Is fish habitat capability improving as projected in the Forest Plan?

Threshold of Variability: 1. A declining trend in population over a period of five or more years in a drainage for a specific species. 2. A decrease of 10 percent or greater in fish habitat capability in a subwatershed.

Results/Findings: Preliminary information from the Oregon Department of Fish and Wildlife on the North Fork of the John Day River system indicates that for the fourth year in a row, the steelhead trout redd (gravel bed egg deposit site) counts for index streams were below the spawning escapement goal of 8.6 redds per mile on average within the North Fork John Day River system. The Forest has four index streams: Indian, Owens, Wall, and Wilson creeks.

However, three out of four of the index streams on the Forest were above the 5-year average for the streams. Only Owens Creek was below its 5-year average of 2.8 redds per mile; in 1992 it was only 2.0. Indian Creek was appreciably above its 5-year average of 7.9 redds per mile, with 14.5 in 1992.

Bull trout inhabit the streams in the North Fork of the John Day River system. This species is listed as sensitive and is proposed for listing under the Endangered Species Act as threatened. Preliminary data indicates population trends are declining; however, no intensive bull trout surveys have been completed.

All four North Fork John Day spring chinook index streams were surveyed by Oregon Department of Fish and Wildlife for redds. The 1992 data shows a slight reversal of the downward trend in spawning counts that has been documented since the inventory began in 1964. The North Fork Wilderness count was the highest since that index began, at 28.1 redds per mile.

The redd inventory for the Umatilla River steelhead conducted annually by the Confederated Tribes of the Umatilla showed 4.4 redds per mile. Streams within the Forest boundary also averaged 4.4 redds/mile. The average 1992 redds per mile count for the Umatilla system was higher than the median count since 1985 (for years in which data was collected). In addition, Umatilla river adult steelhead counts also showed some increase in 1992 and a slight reversal of the downward trend, occurring since 1985.

The Tucannon river, a tributary of the Snake River, contains habitat for chinook salmon, currently listed as a threatened species. Smolt capability for the Tucannon system and its tributaries upstream of Cummings Creek (primarily within National Forest boundaries) in their current condition is estimated at 37,009 smolts. In 1991, an estimated 71 percent of the spring/summer chinook salmon redds were located from Cummings Creek upstream. For the Tucannon, Washington Department of Fisheries redd and smolt production estimates are displayed in Table C-6.

TABLE C-6
TUCANNON RIVER CHINOOK
Observations and Estimates - 1992
Umatilla National Forest

YEAR	NUMBER OF REDDS	% OF 1986	OUT MIGRATION YEAR	NUMBER OF SMOLTS	% OF BASE YEAR
1986	199	100	1988-89	58,236	100
1987	185	93	1989-90	44,023	76
1988	117	59	1990-91	37,484	64
1989	106	53	1991-92	25,862	44
1990	180	90	1992-93	-*	-
1991	90	45	-	-	-
1992	200	100	-	-	-

* Data not available.

Funding for the implementation of the Columbia River Anadromous Fish Habitat Policy began in 1992. Habitat capability and management objectives are currently being established through the implementation of the policy process.

Evaluation: Listing of the Snake River Salmon and the petition of the Bull trout, will require the Forest to continue monitoring land management activities, current stream conditions and their relation to population trends. Habitat capability and management objectives (smolts per stream) need to be established as per Columbia River Basin Policy Implementation Guide. See discussion in chapter VI about Plan Amendment.

E. WILDLIFE

MONITORING ITEM 9: ELK/DEER HABITAT AND ESTIMATED POPULATIONS

Forest Goals, Desired Future Condition, and Outputs: Maintain habitat capability to support potential big game populations identified in the Forest Plan.

Monitoring Question(s): 1. Are the populations being maintained as predicted in the Plan? 2. Are the standards and guidelines being followed as required to meet habitat effectiveness index levels established for the allocation zone or management area? 3. Are the assumptions pertaining to the prediction of cover resulting from harvest and silvicultural activity valid? 4. Are the assumptions relating elk habitat effectiveness to elk populations valid? 5. Are the assumed interrelationships between cover spacing, cover quality, and open roads valid?

Threshold of Variability: 1. Elk habitat effectiveness indices, including discounts for open roads, are more than 10 percent below the objective in any given allocation zone or management area at any given point in time. 2. Population of a herd unit or winter range unit is more than 20 percent below state population index values as measured by total populations, bull/buck components, and cow/calf or doe/fawn ratios for a three year period.

Results/Findings: Post season elk population data has been summarized for both Oregon and Washington big game units and is displayed in Table C-7.

TABLE C-7
ELK/DEER POPULATIONS - 1992
Umatilla National Forest

ELK AND DEER	OREGON*		WASHINGTON*		TOTAL NATIONAL FOREST
	ALL UNITS	UMATILLA NATIONAL FOREST	ALL UNITS	UMATILLA NATIONAL FOREST	
ELK POPULATIONS					
SMO	21,050	16,570	5,700	4,486	21,056
EST. POPULATION	21,795	17,152	4,020	3,164	20,316 -4%
DEER POPULATIONS					
SMO**	45,100	35,493	4,100	3,227	38,720
EST. POPULATION	40,780	33,915	2,200	1,730	33,825 -7%
NO. BULLS/100 COWS***					
SMO	7.0	7.0	15.0	15.0	-
EST. POPULATION	7.5	7.5	13.9	13.9	-
NO. CALVES/100 COWS**					
SMO	44.0	44.0	45.0	45.0	-
EST. POPULATION	34.2	34.2	19.7	19.7	-

* Includes population in all management units within and adjacent to the National Forest for each State and the Forest portion of the total management unit number (percent as estimated by State biologists during MO establishment).
** State Management Objective as shown in the Forest Plan.
*** Elk only.

As in 1991, post season elk and deer population data have been summarized from State Wildlife Agency statistics. However, a change was made from the way Elk and Deer numbers were reported in the 1991 Annual Monitoring Report. In 1992, the Forest is also reporting post season numbers of animals for all State Big Game Management Unit areas in addition to the National Forest Portion (based on the National Forest portion of the total acres in each big game unit).

By also reporting figures for the state units, the 1992 data can also be

By also reporting figures for the state units, the 1992 data can also be compared to the State Wildlife Agency Management Objectives for the larger area.

Figure 4 has been developed to graphically display the trend in elk numbers relative to State Management Objectives (SMOs) through time.

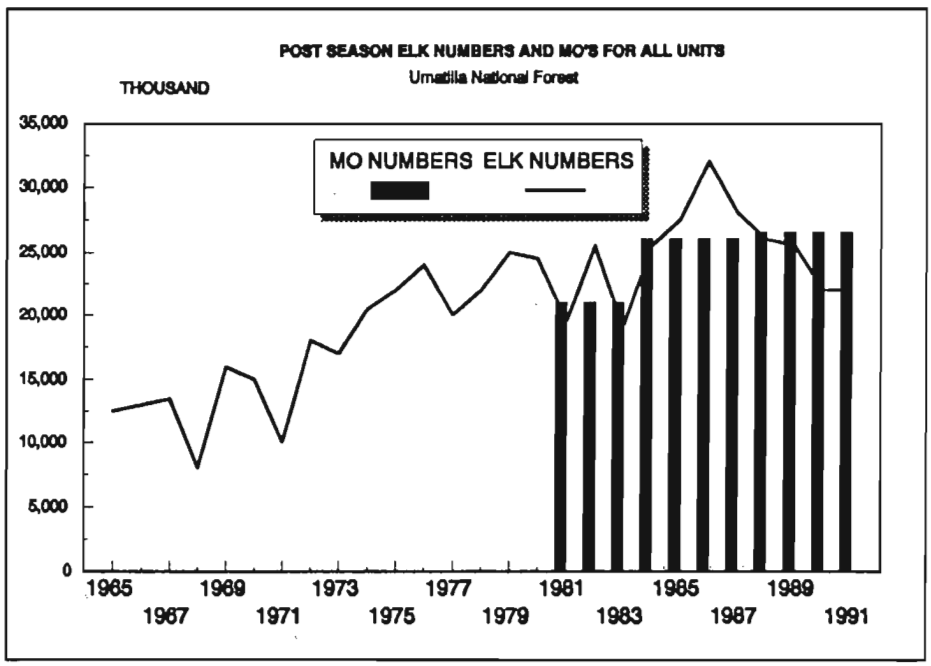

Figure 4.

Table C-7 and Figure 4 reflect the current situation and trend for elk numbers over time. Currently, Forest-wide elk numbers are four percent below State Management Objectives (SMO - shown in the Forest Plan) and have been below for the previous three years. However, elk populations have increased from the 1991 level; continued monitoring will be needed to see if the 1992 population is a reversal of the downward trend that has occurred over the last five years. Current bull ratios are approximately at Management Objective (MO) levels. However, calve ratios still remain low for both States; average 40 percent below MO's in 1992.

Compared with 1991, the 1992 data for deer populations varies significantly between years. Either problems exist with the basic population information, the Forest calculations of populations, or major population increases have actually occurred. Additional review of the past years data is needed to validate change or correct errors.

Forest Plan standards for Habitat Effectiveness Index (HEI) levels were met in all project planning activities on both the Pomeroy and Walla Walla Ranger Districts. On the south half of the Forest, neither the North Fork John Day or Heppner Ranger Districts were able to meet HEI standards in all timber sale planning efforts. Insects combined with seven years of drought, have reduced crown closures an estimated 60 percent over much of the area. A number of measures, such as reducing road densities and adding "security areas", have been used. However, only partial mitigation has been implemented for loss of cover in these situations.

During 1992, continued testing and use of methods (described in the 1991 Monitoring Report) for addressing implementation monitoring on big game habitat in a healthy forest was not done. An additional year or two of harvest activity on a subwatershed basis is needed to test if Habitat Effectiveness Index (HEI) standards are being met in management areas.

One should note that on the Ukiah, Desolation, Heppner, and Fossil units, big game populations have been near or above the SMO for the past three years. This has occurred over the south half of the Forest where HEI values have fallen below Forest standards (see reasons stated above). On the North Half of the Forest the situation is reversed, HEI levels meet Forest standards, yet elk population are below SMO levels and continue to decline. Why this is happening can only be answered with effectiveness monitoring of all factors affecting elk populations. Results of research on the Starkey project should help answer this question in the next few years.

Evaluation: As noted in the results section, additional monitoring will be needed to assess trends in populations for possible change and to determine why the elk population/HEI anomalies are occurring. The data for deer population also needs review.

The Forest expects to continue testing to determine if HEI and cover standards are being met at the management area level during FY 1993. In addition, some monitoring of cover recovery assumption is needed to validate the correctness of assumptions used in project analysis.

MONITORING ITEM 10: OLD GROWTH TREE HABITAT

Forest Goals, Desired Future Condition, and Outputs: " Maintain the number, size, and distribution of old growth tree habitat...Provide sufficient dedicated mature/old growth tree habitat to maintain...pileated woodpeckers...pine marten...and...northern three-toed woodpeckers..."

Monitoring Question(s): 1. Are the dedicated old growth units suitable for pine marten, and pileated and northern three-toed woodpecker habitat? 2. Are the dedicated old growth habitat units identified as "capable" habitat progressing as predicated toward "suitable" old growth tree habitat? 3. Are the standards and guidelines (including the number, size, and spacing of units) being followed as required to meet habitat levels established for the allocation zone or management area? 4. Are the dedicated old growth units being used by the indicator species, if they are suitable? 5. Are sufficient numbers and diameter classes being left adjacent to the designated old growth habitat units as feeding habitat for pileated woodpeckers?

Threshold of Variability: 1. All designated sites meet the specifications identified in the Plan and the components that provide effective habitat fall below levels. 2. Estimated populations are more than 10 percent below the Plan objective for a five year period. 3. The old growth acreage remaining or the amount being converted in a five year period deviates from the planned amount by more than 10 percent.

Results/Findings: In 1991, approximately 50 percent of the Old Growth Management Areas (MA C1) on the Forest were surveyed to evaluate the appropriate size, quality of habitat, and encroachment (roads, harvest activities etc.) of designated units. In 1992, about 38 percent of the C1 Dedicated Old Growth and 36 percent of the C2 Managed Old Growth Management Areas were field verified.

TABLE C-8A
1992 OLD GROWTH MONITORING MA C1
Umatilla National Forest

DISTRICT	TOTAL # C-1 UNITS SURVEYED	NUMBER OF UNITS		REMARKS
		SUITABLE	CAPABLE	
HEPPNER	26	-[1]	-	SOME INSECT DEFOLIATION IN UNITS
NORTH FORK JOHN DAY	13	11	1	ONE UNIT LOST DUE TO INSECT ATTACKS
WALLA WALLA*	-	-	-	-
POMEROY	15	-	15	ONE C-1 AREA LESS THAN 300 ACRES
TOTAL	54	11	16	-

Total Number of C1 Management Areas equals 143.

* 20 Old Growth Units were surveyed in 1990 and Habitat Quality confirmed in the Pileated Woodpecker Monitoring conducted in 1992.

[1] Evaluation of surveyed data to determine suitability has not yet been completed.

TABLE C-8B
1992 OLD GROWTH MONITORING MA C-2
Umatilla National Forest

DISTRICT	TOTAL # C-2 UNITS SURVEYED	NUMBER OF UNITS		REMARKS
		SUITABLE	CAPABLE	
HEPPNER	7			ALL CAPABLE DUE TO AGE CLASS OF STANDS (UNDER 60 YEARS)
NORTH FORK JOHN DAY	6	0	6	
WALLA WALLA	-	-	-	
POMEROY	2	2	0	UNITS LESS THAN 75 ACRES
TOTAL	15	2	6	-

Total Number of C2 Management Areas equals 44.

Progress of "capable" habitat units toward "suitable" habitat is assumed and has not yet been measured. At this time, it is not possible to say with certainty that all "capable" C1 and C2 MA's on the south half of the Forest, are progressing as planned. The wide spread catastrophic losses of white and Douglas-fir tree species, as a result of 10 years of spruce budworm activity and drought, continues to seriously affect old growth units. Continued monitoring of the MA's will be necessary to meet Forest Plan old growth standards.

Effectiveness monitoring, to determine if the indicator species are using the acres as intended, was carried out on 20 C1 MA's at Walla Walla (see results discussion under pileated woodpecker MI 12). No other formal monitoring of this type was conducted on the Forest. Informal observations have noted foraging pileated woodpeckers and sign in C1 areas on all Districts. Some presence of three-toed woodpeckers has also been noted. Some monitoring was conducted for pine marten and wolverine (see result discussion under pine marten and wolverine MI 13).

The designation of 300 acres of foraging habitat for each C1 MA has not been fully implemented Forest-wide. Limited field sampling, to determine if feeding area requirements are being met, has been initiated on two Districts (North Fork John Day and Walla Walla). Preliminary data indicates that standing dead and down wood is in excess of Forest Plan standards.

Evaluation: As a result of surveys on all Districts, a range of proposals is being developed to adjust individual units (most Districts) to make changes in the Old Growth network (at Heppner Ranger District). Early indications are that adjustments, such as substituting units, adding acres, and adjusting boundaries, can be made through a Forest Plan correction. Changes in the existing network will require an amendment to the Forest Plan.

The 1991 Monitoring Report indicated that proposals developed from monitoring findings, would result in some changes in the Forest Plan. However, changes were not made and an Old Growth Forest Plan amendment was put on hold until more intensive surveys are completed. Additional study was initiated in areas where wide spread catastrophic losses were occurring due to the Western Spruce Budworm and associated insects. In addition, recent scientific information on Old Growth indicates that the current size of units may be inadequate to meet species requirements. This is being evaluated by the Forest for possible Forest Plan adjustment. This item is recommended as a major emphasis area for 1993. Complete field verification of dedicated old growth units and Forest Plan inventoried old growth is needed.

MONITORING ITEM 11: DEAD AND/OR DEFECTIVE TREE HABITAT

Forest Goals, Desired Future Condition, and Outputs: "Maintain the number, size, and distribution of dead and/or defective trees (snags and logs) to meet habitat capability objectives..."

Monitoring Question(s): 1. 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? 2. Are the management indicator species (primary cavity excavators) occupying the habitat as predicted and in the anticipated numbers?

3. Are sufficient numbers, size classes and distribution of green replacement trees and down logs being left following all management activities?

Threshold of Variability: 1. More than 10 percent of the surveyed areas have less than 90 percent of the prescribed tress, snags, and logs present. 2. Expected primary cavity excavators are absent from more than 10 percent of the surveyed sites, or are 80 percent less than predicted numbers.

Results/Findings: During 1992, Districts conducted various snag - dead tree and/or green tree replacement monitoring. Five timber sale projects on the Pomeroy Ranger District, two at Heppner, and twenty units at Walla Walla were monitored for snag and down tree (or logs) densities remaining after harvest was completed.

On the North Fork John Day Ranger District this monitoring item was discussed at a Forest Leadership Team (FLT) field trip. Two harvest units were reviewed on the Beetle Timber Sale. In one unit the FLT agreed that in order to meet the standards for standing and down tree habitat, the proposed overstory removal harvest should not be implemented. In the second unit which had a clearcut prescription, standing snag and replacement trees were found to be deficient. Down logs were abundant, but the number of large down logs was deficient. As a result, the FLT agreed that in order to satisfy wildlife and ecosystem management direction the Districts generally should not harvest overstory from shelterwoods (see also Monitoring Item 33).

Not all data has been analyzed. However, early indications show mixed results. Pomeroy's monitoring indicated that adequate small snags were available, but snag numbers greater than 20 inches in diameter were significantly below Forest Plan standards. Results are similar to that of last year's monitoring report. Results from Walla Walla showed that the Forest Plan standards were met for standing snags in most cases and down logs exceeded standards, ranging from four to eight logs per acre.

One test of fire wood cutting was conducted at Heppner to determine the effectiveness of a 14 inch diameter limit in protecting larger snags. Despite the diameter limit, most of the material removed occurred in the 14 to 20 inch diameter range. Data was analyzed from the Managed Stand Survey for down logs and snags. This survey of 173 plots was conducted across the forest in stands regenerated 15 or more years ago (both even and uneven aged). Down logs averaged .6 per acre compared to the forest wide standard of 2 per acre. Snags greater than 20 inches in diameter average .18 per acre. Snags between 10 and 20 inches average .66 per acre. Live trees (potential future snags) averaged 1.05 per acre in the 20+ inch class and 4.3 in the 10 to 20 inch class.

No effectiveness monitoring was conducted on the Forest to determine the status (presence and desired numbers) of primary cavity excavators within harvested stands and if they are using their habitat as predicted. Regional protocol is being developed which will direct the monitoring of cavity excavators.

Evaluation: On some Districts, additional attention to the retention of dead and down trees (logs) is needed to insure that Forest Plan standards are met.

On the south half of the Forest, the extensive number of dead and dying trees (primarily white and Douglas fir), resulting from the devastating insect epidemic, is assumed to provide more than adequate numbers of available

snags in the short term. Concern has been expressed that a deficiency of green trees (replacement) for future snags and down logs will occur.

In addition, recent research findings indicate that additional snags and replacement trees may be needed to meet species requirements. This is also being reviewed by the Forest and is likely to be another area of Forest Plan adjustment.

MONITORING ITEM 12: PILEATED WOODPECKER POPULATIONS

Forest Goals, Desired Future Condition, and Outputs: Maintain sufficient mature/old growth tree habitat and adjacent feeding areas to provide for viable populations of pileated woodpeckers.

Monitoring Question(s): 1. Are pileated woodpeckers using the provided old growth habitat and feeding areas as projected? 2. What are the trends in population estimates?

Threshold of Variability: 1. Greater than 10 percent variances from expectations in pileated woodpecker occupancy, use, or production within a five year average. 2. Populations are on a downward trend.

Results/Findings: Under a challenge cost-share agreement with the National Audubon Society, twenty C1 Dedicated Old Growth Management Areas (MA) were evaluated using the Effectiveness Monitoring Protocol developed in 1991. For 1992, all the work was conducted on the Walla Walla Ranger District. Results showed that adult pileated woodpeckers were using all 20 MA's for breeding and feeding habitat. Funding was not available to conduct additional monitoring on other Districts or to determine if successful reproduction was occurring in the areas monitored. A separate report is on file and provides the specific results of the monitoring project[1]. The study also demonstrated that habitat was suitable for pileated habitat occupancy.

Although systematic monitoring for pileated woodpeckers was not conducted on the other Districts; pileated woodpeckers and foraging signs were noted in many of the old growth areas during the field verification process.

Evaluation: The protocol was effective in determining use of old growth habitat by pileated woodpeckers. Monitoring will be continued and expanded to eventually provide data to develop population trends, given adequate funding. Additional monitoring will be needed to document

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[1] Bull, Evelyn and Carter, Bernie. "Summary of Pileated Woodpecker Monitoring in Eastern Oregon, 1992. Jan, 1993.

successful replacements and survival of the young to breeding age to determine sustainability of the population over time.

MONITORING ITEM 13: PINE MARTEN POPULATIONS

Forest Goals, Desired Future Condition, and Outputs: Maintain no less than viable populations of pine marten.

Monitoring Question(s): 1. Are the dedicated old growth habitats, subalpine forest, and lodgepole pine areas suitable and utilized by pine marten as projected in the Plan? 2. Are the reproductive parameters and population demographics of pine marten indicative of a stable or improving habitat condition?

Threshold of Variability: 1. More than 10 percent of the identified pine marten habitat is unused with the expected distribution and use zones. 2. More than a 20 percent variance from accepted norms for reproductive parameters. More than 20 percent variance from anticipated distributions.

Results/Findings: Guidelines for monitoring wolverine and lynx were developed for the Blue Mountain Forests in 1992, involving winter track surveys. Similar techniques are applicable for marten and other furbarers. Winter surveys for pine marten (and wolverine) began in January, 1992. Approximately 300 miles of snowmobile routes were traveled throughout the winter to detect both pine marten and wolverine tracks. Bait stations were also established in or near the survey routes to monitor for pine marten and wolverine. No evidence of pine marten or wolverine activities were noted at the stations.

Only one pine marten track (located near the North Fork John Day Wilderness) was observed. No other evidence was found on the North Fork John Day Ranger District. No sign was noted on Heppner, Pomeroy, and Walla Walla (no wolverine tracks were observed during the surveys).

Evaluation: Monitoring will continue on the Forest in 1993. Several years of data will be needed to determine population trends using the current monitoring procedure.

MONITORING ITEM 14: NORTHERN THREE-TOED WOODPECKER POPULATIONS

Forest Goals, Desired Future Condition, and Outputs: Maintain no less than viable populations of three-toed woodpecker on the Forest.

Monitoring Question(s): 1. Are the designated old growth tree habitats and lodgepole pine areas suitable and being used by three-toed woodpeckers as projected? 2. Is the "managed" old growth lodgepole pine concept providing adequate habitat with adequate sizes of snags and distribution to provide viable populations?
Threshold of Variability: 1. Populations of three-toed-woodpeckers are more than 20 percent below values expected in the Plan on a five year average. 2. The number of larger diameter dead lodgepole pine is more than 15 percent below the objective in any given allocation zone at any point in time. 3. Populations are on a downward trend.

Results/Findings: During 1992, no monitoring was conducted on the Forest for this species.

Evaluation: The monitoring protocol developed for pileated woodpecker will also be used for the Northern Three-Toed woodpecker. Monitoring is expected to be initiated on the Forest for this species during FY 1993.

MONITORING ITEM 15: THREATENED/ENDANGERED/SENSITIVE SPECIES WILDLIFE POPULATIONS/HABITAT

Forest Goals, Desired Future Condition, and Outputs: "Protect, provide, and/or manage suitable habitat for the population and recovery of bald eagles and peregrine falcons...Identify and manage any winter roost sites or potential sites...winter feeding areas and food sources...Protect, provide, and/or maintain suitable habitat for all sensitive species..."

Monitoring Question(s): Bald Eagles: 1. Are potential habitats, including nest sites, communal roosts, and associated foraging habitats being identified to assure species recovery? 2. Are wintering populations stable or increasing? Peregrine Falcons: 1. Are nesting and associated foraging habitats being identified? 2. Are potential nest habitats identified and being managed to maintain suitability? Sensitive Species: 1. Are potential habitats being identified and/or protected to maintain identified species and to ensure that management standards are being met?

Threshold of Variability: 1. Any nest or roosting sites compromised as a result of Forest Service management activities. 2. Any delays in developing individual site management plans for reintroduction sites for active nests.

Results/Findings:

A. Bald Eagles: During 1992, winter bald eagle surveys were continued in the John Day basin with emphasis on monitoring roosting sites. Bald Eagle monitoring is a cooperative effort with the Oregon Cooperative Wildlife Research Unit. Results of the surveys indicate that wintering populations are stable. No monitoring was conducted for Bald Eagles on the Walla Walla or Pomeroy Ranger Districts.

B. Peregrine Falcons: Aerial surveys for peregrine falcon were conducted in June, 1992 on the south half of the Forest in cooperation with the Oregon Department of Fish and Wildlife. None of the potential peregrine nest sites were found to be occupied. No monitoring was conducted for peregrines on the north half of the Forest.

C. Sensitive Species: Wolverine - Snowmobile routes totaling 157 miles throughout Heppner, North Fork John Day, and Walla Walla Ranger Districts were used to determine presence of wolverine. In addition, bait stations to attract wolverine were established on all Districts. No wolverine were detected anywhere on the Forest. Ferruginous Hawk - Three hundred acres of potential habitat was monitored for presence of this species on the North Fork John Day Ranger District. None were found. Preble's Shrew - During 1992, continued inventory of potential habitat was accomplished for Preble's Shrew on the North Fork John Day, Heppner, and Walla Walla Districts. Although many shrews were confirmed through the inventory process, none were identified as Preble Shrews.

D. Snake River Chinook Salmon: Listed as threatened under the Endangered Species Act in the spring of 1992. See Monitoring Item 21 and discussion in chapter IV about Plan Amendment.

Evaluation: Monitoring will continue during FY 1993 (and beyond) to continue to determine presence for some species and population/habitat trends for others.

F. DIVERSITY

MONITORING ITEM 16: PLANT AND ANIMAL DIVERSITY

Results/Findings: Development of the monitoring questions and approach to monitoring this item was to be accomplished in the spring of 1992. A preliminary draft of questions and approach has been developed. However, before incorporating into the Forest Monitoring Strategy, the Forest Interdisciplinary Team needs to review and approve the proposed recommendations.

Evaluation: In FY 1993, this monitoring item will be incorporated into the Forest Monitoring Strategy and results will be reported next year. Discussion with other Blue Mountain National Forests is ongoing regarding consistency and coordination for monitoring this item.

D. RESOURCES SERVICES TO PEOPLE

A. FOREST PLAN IMPLEMENTATION

MONITORING ITEM 1: MANAGEMENT AREAS

Forest Goals: Management practices will result in achievement of Management Area desired future conditions.

Monitoring Question(s): 1. Are project plans consistent with the intent of the management areas within which they are being planned and implemented? 2. Are the management areas, progressing toward their desired future conditions through implementation of management activities?

Threshold of Variability: Noncompliance or changes in the management areas and associated standards and guidelines.

Results/Findings: During FY 1992, the Forest utilized the Forest Implementation Checklist to assist in project plan development and to ensure consistency with the overall goals, objectives, and DFC's of the Forest Plan management areas. The checklist was used both in planning and project implementation.

Heppner Ranger District:

On the Heppner Ranger District, comparison of existing and desired future conditions, were evaluated for management areas during the Integrated Resource Analysis (IRA) process. This analysis was conducted for the Potamus, Swale, Wilson, and Yellowjacket planning areas.

The following are some specific projects which were monitored through the Forest Plan Monitoring Checklist or other review methods (i.e. field trip review, etc).

Tupper Timber Sale: For this project the loss of wildlife habitat due to the defoliation of tree canopy was considered. The alternatives were designed to reflect the values of big game cover in the short-term as well as providing big game cover to meet future demands. In addition, Dedicated Old Growth (MA-C1) was evaluated and boundary modifications were proposed to improve management of the old growth resource.

Monitoring Trip of the Flatiron Salvage Sale: An old growth survey across 2/3 of the Heppner Ranger District identified three stands with old growth components in proposed Flatiron Salvage Sale units. A decision was made to defer harvest of these stands to enable evaluation as potential C1 future replacement stands. The inventory showed that some dedicated Old Growth (C1) areas do not meet many of the criteria for old growth conditions. These areas have been identified as capable, not suitable old growth.

Due to spruce budworm defoliation and past harvest activities, few options exist for old growth replacement stands.

The District recommended a road maintenance corridor including adjustment for hazard trees, be considered in a plan amendment adjusting some MA-C1 boundaries.

East End Salvage and Restoration Project: A Heppner Interdisciplinary Team (IDT) used the monitoring checklist to evaluate alternatives in the Draft Environmental Impact Statement (DEIS), to assure consistency with Forest Plan management area goals, objectives, and DFC's. The results indicated that all alternatives would result in movement toward the DFC but at different time periods.

Pomeroy Ranger District:

Reforestation and Timber Projects: Reforestation and timber stand improvement were accomplished in management areas allocated for timber production. Projects moved stands from under-stocked or over-stocked conditions to recommended stocking levels. The projects were found to be consistent with Forest Plan management area standards and guidelines.

Timber sales scheduled for sale in 1992 were checked against management area standards and guidelines. Findings of Consistency with the Forest Plan were issued for each sale.

Fire: Fire has not been allowed to perform a natural role in the Wilderness. A process for preparing a Wilderness Fire Management Plan has been initiated on the Forest. Writing of the Wenaha-Tucannon Wilderness Fire Management Plan is scheduled to begin in 1994. Wilderness fires will continue to be managed as wildfires and suppression action taken until a Wilderness Fire Management Plan is in place.

Wildlife and Fish: Fish and wildlife projects were found to be consistent with the intent of the management area in which they were planned and implemented. Vegetative management projects implemented in C4 and E2 areas have been planned to maintain or increase Elk Habitat Effectiveness, maintain adequate snags and protect riparian areas. In management area C1 (Dedicated Old Growth) not all stands are satisfactorily meeting the needs of wildlife species at this time.

North Fork John Day Ranger District:

Windy Springs Salvage and Rehabilitation Project: On this project a District IDT used the Forest Plan Implementation Checklist and found several problem situations. The Team found conflicts between MA A4 Visual standards and guidelines, and existing conditions due to catastrophic insect damage. The District also recognized that past harvesting has created straight line conditions in an otherwise unbroken landscape. Although, these harvest areas have been reforested, they still present a negative visual impact.

The IDT also found that insect damage has left very few large diameter trees for future resource wildlife habitat. In Management Area C4-Wildlife Habitat and E2-Timber and Big Game, the insect damage has created a situation where habitat cover requirements cannot be met. Although the MA standards and guidelines allow exceptions for catastrophic situations, requirements are not expected to be met for future needs for at least 30 to 50 years. In the Management Area C1 Dedicated Old Growth and C3 Big Game Winter Range the natural fuel levels have exceeded the 12 tons per acre standard. Included in the project Decision Notice was a site specific Forest Plan Amendment due to catastrophic conditions for:

- C3 Big Game Winter Range. For Habitat Effectiveness Index (HEI) and satisfactory cover standards.
- C4 Wildlife Habitat (summer range). Exemption from HEI, satisfactory cover, total wildlife cover, and for successional stage distribution standards.

In each of these cases, the project was found to be consistent with the goal of movement toward the Management Area desired future condition.

Turner Otter Salvage and Rehabilitation Project: This project involved salvage and rehabilitation in a catastrophic insect damaged area and included a site specific, non-significant Forest Plan Amendment for the following management area standards and guidelines:

- C3 Same as Windy Springs.
- C7 Special Fish Management Area. Exemption from satisfactory and total wildlife cover standards and from dispersion constraint of more than 25 percent of the C7 area (portion within the planning area) will be in stands of the 0 - 20 age class.

These site specific, non-significant Forest Plan Amendments were approved in order to move the management areas toward their desired future conditions more rapidly than not taking action.

Walla Walla Ranger District:

Lower Tiger Timber Sale: The Walla Walla Ranger District used the Forest Monitoring Checklist on the Lower Tiger Timber Sale. Several management concerns were noted. First, because of past management practices in the area, a problem with meeting some of the visual guidelines existed in the A3 Visual Management Area. Second, minor problems occurred in meeting the standards and guidelines for Range utilization. And finally, a conflict was identified in meeting the MA C4 Wildlife Habitat five seral stages guideline. This guideline is not attainable while meeting other Forest Plan standards and guidelines.

The Walla Walla Ranger District has developed an implementation planning process which serves as a bridge between the Environmental Analysis and on-the-ground implementation of projects. The process involves development of a project monitoring plan. The Buzzard Draft Environmental Impact Statement (DEIS) was the first project on the Walla Walla Ranger District to use this process. A similar process is being used for the Lower Tiger Timber Sale.

Evaluation: A total of 10 Decision Notices were signed after project Environmental Assessments (EAs) were completed. Of these EAs, only five were timber, salvage and/or rehabilitation projects. In the 1991 Monitoring Report a commitment was made to use the Forest Monitoring Checklist on all "major" projects. The checklist was used on the five timber sales and the Heppner Access and Travel Management Plan. Decision Notices on the other four projects were signed prior to the expanded emphasis on use of the Monitoring Checklist.

All major projects conducted in FY 1992 were found to be consistent with the goal of achieving desired future conditions for Management Areas. Two projects involved site specific, non-significant Forest Plan Amendments. For 1993, continue monitoring all major projects through the use of the Forest Plan monitoring checklist. See also Forest Plan Amendment section.

MONITORING ITEM 2: STANDARDS AND GUIDELINES

Forest Goal: All activities conducted on the Forest will either be consistent with Forest wide and Management Areas Standards and Guidelines, or in the case where catastrophic conditions exists, identified procedures will be followed for possible site specific Plan Amendment needs.

Monitoring Question(s): 1. Are Forest Plan standards and guidelines being implemented as designed? 2. Do they meet the stated goals and objectives of the Plan?

Threshold of Variability: 1. Selected projects judged not in compliance with the Plan standards and guidelines. 2. Deviation from stated goals and objectives.

Results/Findings: The Umatilla is currently analyzing the effects of a proposed minor Forest Plan amendment. This amendment would modify specific Forest Plan Standards and Guidelines where catastrophic levels of insect damage has changed the appropriateness of the Standards and Guidelines.

The Ranger Districts have used the Standard and Guideline checklist to assist in determining if the Forest Plan Standards and Guidelines are being implemented as designed. The checklist has been used both in the planning and project initiation phases. The results overlap findings from Monitoring Item no. 1 and a number of others. Additional discussion includes the following:

Heppner Ranger District:

Based on use and review of the checklist, the Heppner District has concluded that the standards and guidelines are being implemented as designed. The following are specific projects in which the checklist was used to monitor Plan consistency:

East End Salvage and Restoration Project: A review of the project checklist results identified a potential conflict between alternative development and the standard and guidelines for Water. The existing condition of many subwatersheds within the 80,000 acre project area presently exceed several water quality standards (including temperatures) for riparian and stream conditions. The IDT believed that the environmental analysis of the proposed project could identify a significant effect on the watershed condition and water resource. Thus, a Draft Environmental Impact Statement (DEIS) was prepared and made available to the public in September, 1992.

Monitoring Review of Dry Swale/Ditch and Flatiron Salvage Sales: A monitoring review of the Dry Swale/Ditch Salvage Sale occurred during logging operations. Topics of discussion were: soil compaction resulting from timber harvest activities, minimizing the impacts on the soil; constructing effective road closures through timber sale contracts; and the problems associated with whole tree yarding which included loss of biomass; large landings, and the soil sterilization resulting from burning the landing debris. The reviews showed the importance of using the appropriate contract clauses to achieve land management objectives.

The District also conducted a review of units scheduled for harvest within the Flatiron Salvage Sale. The marking and layout was evaluated to determine if the objectives set out within the Environmental Assessment, Standard and Guidelines, and the silvicultural prescriptions had been met. The conclusion was that the sale layout met objectives.

In addition to Management Area Standard and Guidelines and the site specific Forest Plan Amendment described in Monitoring Item Number 1, an exemption was also allowed in the Windy Springs project for the Forest-wide Standards regarding the dispersion constraints (not more than 30 percent of a subwatershed in the 0 to 10 year age class at one time). All other projects monitored were found to be in compliance with most Forest-wide and management area standard and guidelines.

Evaluation: Continue monitoring in 1993. Focus more monitoring effort on completed or ongoing projects versus recent environmental analysis. Also, conduct more District and Forest reviews and improve documentation of those reviews.

B. RECREATION

MONITORING ITEM 3: AMOUNT OF PRIMITIVE AND SEMI-PRIMITIVE RECREATION OPPORTUNITY SPECTRUM AND NUMBER OF ROADLESS AREAS ENTERED

Forest Goals, Desired Future Condition, and Outputs: "...provide semi-primitive and primitive opportunities...meet demand for primitive and semi-primitive opportunities found in wilderness, unroaded, etc..."

Monitoring Question(s): 1. Are the identified roadless areas or parts thereof managed as the Forest Plan allocated or prescribed? 2. Are the primitive and semi-primitive recreation opportunities available as shown in the Plan?

Threshold of Variability: Greater than 10 percent of management acres (of primitive/semi-primitive recreation opportunity) not in compliance with Forest Plan direction.

Results/Findings: The Umatilla National Forest has 22 Roadless Areas totaling 281,000 acres. Roadless Areas have been managed in accordance with the Forest Plan. To date, no harvesting and/or road construction has occurred within the Roadless Areas with one exception.

Within the Jaussuad Corral Roadless Area some road construction has occurred. This project was implemented to improve public safety, eliminate existing resource damage, move traffic more efficiently, move traffic away from the Wenaha-Tucannon Wilderness boundary, and obliterate access to certain existing roads. A total of 1.7 miles was constructed; work was completed in October of 1992.

Currently, the Forest is providing forest users with primitive and semi-primitive opportunities in all Roadless Areas. In August of 1992, the Buzzard DEIS was released which presents alternatives for implementation of the Sunset Strategy (see Forest Plan p. 4-161) and management activities within the Jaussaud Corral Roadless Area.

Evaluation: Continue monitoring. Further projects in Roadless Areas require development of Environmental Impact Statements.

MONITORING ITEM 4: LOCATION, TYPE, AMOUNT OF USE; CONFLICTS

Forest Goals, Desired Future Condition, and Outputs: "Manage for a broad spectrum of recreation opportunities and experiences...roads, trails, and facilities needed to accomplish land and resource management...objectives ...road closures will respond to elk habitat requirements, dispersed recreation needs, soil, water, and economic criteria. Conflicts between Off Highway Vehicle (OHV) use, other recreation users, and big game will require adjustments in OHV use..."

Monitoring Question(s): 1. What areas and facilities are available for Off Highway Vehicle users (OHV)? 2. How much and where is OHV use occurring? How well are access and travel management plans working for OHV's? 3. How are OHV use(s) affecting other Forest resources? 4. How much conflict between recreation users is occurring?

Threshold of Variability: 1. Less than 100,000 acres of semi-primitive motorized Recreation Opportunity Spectrum. 2. Resource effects which are beyond limits of acceptable change or judged to be unacceptable. 3. User conflicts which are recurrent. 4. Safety hazards which pose threat greater than appropriate for Recreation Opportunity Spectrum objectives.

Results/Findings: The current situation on the Forest regarding availability of areas and facilities for Off Highway Vehicle use varies from one District to another.

The following is the list of the current situations on Forest:

- The Heppner Ranger District currently does not have any facilities available for OHV users. However, with their implementation of the Access and Travel Management Plan/Program, an area west of Forest Service Road 22 will be made available for cross-country travel. East of this road, OHV use is restricted to designated routes year round.

- The Pomeroy Ranger District is in the current process of developing their Access Travel Management Plan. Once it is completed and implementation begins, the District will be able to monitor this item more effectively.

- The North Fork John Day Ranger District has approximately 80 miles of OHV trails designated. The Winom Campground has been designed specifically as an OHV complex to accommodate OHV use. Currently work is underway to provide maps, signs, and public information for the use and implementation of this complex. A proposal to adjust this trail complex is currently being analyzed.

- Currently, the Walla Walla Ranger District indicates that it is lacking OHV facilities. The District is in the process of developing an Access and Travel Management Plan. Once this plan is approved and implemented monitoring can occur.

The Forest does not have a monitoring program to fully track OHV use and how it affects other Forest resources. Although motorized use is known to affect big game, the Access Travel Management Plans and Forest Plan Standards and Guidelines have been designed to reduce this conflict between motorized users and wildlife.

In cases of known conflicts between OHV users and non-users, steps have been taken to mitigate the conflict. For example, on the Walla Walla Ranger District during busy weekends (July and August) conflicts between hiker, horse, mountain bike, and motorcycle use on the South Fork of the Walla Walla River do occur. Steps are also being taken to limit the conflict between winter recreation and big game winter range on Forest road 65 in the Tiger Creek area. Winter recreation conflicts are being reduced in the Tollgate area with increased patrols by the sheriff's office and greater participation of snow machine clubs. Because use is low to moderate, resource damage is limited.

Evaluation: Completion of ATM plans on two Districts in 1993 should provide more information and resolution for this element. Better definition of monitoring methods is needed.

MONITORING ITEM 6: CAPACITY, OCCUPANCE RATE, SATISFACTION

Forest Goals, Desired Future Condition, and Outputs: "Manage for a broad spectrum of recreation opportunities and experiences on the Umatilla National Forest...Winter sports, growing in popularity, will be accommodated..."

Monitoring Question(s): 1. How much use and what occupancy rate is occurring at each recreation site? 2. How much overnight camping capacity is available at Forest campgrounds managed at different development levels (1 through 5)? 3. Are recreation sites adequate to meet demand and to provide customer satisfaction?

Threshold of Variability: 1. Greater than 60 percent occupancy rate at any site for three consecutive years. 2. Frequent or recurring customer complaints at given recreation sites. 3. Significant damage to site facilities and environment due to heavy use.

Results/Findings:

***Heppner Ranger District*:**

Bull Prairie Campground: Use is moderate to heavy at this campground. Weekends, especially holiday weekends, receive heavy use and sites are often full. In addition, this site is near capacity during the weeks of big game hunting seasons and is full during these weekends. Occupancy rate is 57% for the season (May 15 - Oct. 15)

Penland Lake Campground: Use is moderate at this site, with heavy use occurring during holiday weekends and big game hunting seasons. Occupancy rate is 107% due to limited size of the site and available camp units. At least 2 user-made sites have been created at this campground.

Fairview Campground: Use is low to moderate. This campground is used as a rest stop on Oregon State Highway 207 resulting in moderate day use. However, it is generally filled to capacity during the big game hunting seasons. Occupancy rate is 44%.

Both Penland Lake and Bull Prairie are in need of facility upgrade. Penland Lake needs to be expanded to a full service campground which would include road and site design. This would better meet public demand and satisfaction. Fishing docks, accessible toilets, and waterfowl nest boxes are a few of the potential enhancements that could be made at these two sites. Fairview needs an accessible toilet facility.

North Fork John Day Ranger District:

Use levels on several of the larger and most accessible campgrounds is moderate throughout the spring, summer, and fall beginning with mushroom hunters in the spring. Demand for camping space is especially high during big game hunting seasons. Because of the District's relative remoteness and local traditions, use of dispersed camp sites remain high.

Pomeroy Ranger District:

Occupancy rates are within standards, except for the Tucannon campground; it reaches capacity on holiday and peak season weekends. Conditions at all sites are substandard. There is a need to repair and replace facilities in poor condition. The Pomeroy District is currently developing a method to reliably and consistently collect use information.

Walla Walla Ranger District:

In 1992, the Walla Walla Ranger District experienced an array of visitor use at various recreational locations. For example, at the Jubilee Lake Campground, a total of 35,788 Recreation Visitor Days (RVDs) were calculated with an occupancy use rate of 82 percent during the weekends and 37 percent during weekdays. Woodward Campground received a total of 3,094 RVDs with an occupancy rate of 30 percent. Target Meadows totaled 3,948 RVDs with an occupancy rate of 20 percent in the campground. Occupancy rates in all campgrounds were lower in 1992 than in 1991. Spout Springs Ski Area received a totaled of 5,000 skier visits during the ski season and Ski Bluewood received a total of 49,137 visits.

Jubilee Lake: Facilities are adequate, especially with the new barrier-free facilities that have been developed in the campground and around the lake. At the other campgrounds on the District, numerous facility upgrades are needed.

Vegetation Management plans need to be prepared and implemented at all developed sites to maintain long-term visitor satisfaction.

Evaluation: As stated in the 1991 Monitoring Report, a consistent means of (between Districts) tracking and reporting use in developed campgrounds still needs to be implemented. Thresholds have been exceeded regarding facility conditions at some sites. Continue monitoring.

C. VISUAL

MONITORING ITEM 5: EXISTING VISUAL CONDITION

Forest Goals, Desired Future Condition, and Outputs: "Over 21 percent of the Forest, or about 325,000 acres, will be managed to provide pleasing settings emphasizing a natural to slightly altered appearance...Many management areas will remain substantially unchanged, except for subtle revegetation changes."

Monitoring Question(s): 1. Are visual quality objectives being met during project execution for the various management areas? 2. What are the effects of land use on the visual resource? 3. Are location, shape, and size of timber regeneration units meeting standards and guidelines?

Threshold of Variability: 1. Greater than 10 percent of the analysis area not in compliance with visual quality objective. 2. Less than 325,000 acres of the Forest meet retention or partial retention visual quality objective.

Results/Findings: The Visual Quality Objectives (VQOs) for the various management areas are being met during project execution. However, tree mortality resulting from the spruce budworm infestation has led to challenges in meeting these objectives in the management areas emphasizing visual quality.

The location, shape, and size of the timber regeneration units are meeting the standards and guidelines on the Heppner Ranger District. Regeneration units planned within the 92 fiscal year totaled less than 40 acres. Created openings were separated by blocks of land or areas which were not considered to be created openings. Consideration was given to natural openings during unit location. Techniques such as feathering units, reducing size of units, manipulating the shape of the units, deferring harvest, and/or transplanting trees have helped to lessen the visual impact of regeneration harvest activities. However, the VQO is often not met in spite of these efforts and may not meet the objectives for some time into the future, particularly for salvage projects.

Many areas on the North Fork John Day Ranger District do not meet VQO's prior to project execution, so projects are designed to improve visual quality and move towards Desired Future Condition.

All of the Walla Walla District project plans were reviewed before implementation and were judged to meet or exceed Forest Plan Standards.

The Pomeroy District database and GIS are being updated to enable calculations of existing visual conditions for comparison with VQO.

Evaluation: No VQO's or viewshed corridor plans were revised or developed in 1992. Assurance that visual standards and guidelines have been met through implementation is not evidenced by available monitoring results, therefore formal review of projects along scenic corridors is recommended for 1993 monitoring emphasis.

D. WILDERNESS

MONITORING ITEM 7: LOCATION, KIND, AMOUNT, EFFECTS OF NONCONFORMING USES

Forest Goals, Desired Future Condition, and Outputs: "...measures to increase the amount of primitive recreation opportunity to desired levels..."

Monitoring Question(s): 1. Are the kind and amount of nonconforming uses acceptable and are wilderness standards being met? 2. What is the effect of grazing by wild and domestic animals? What is the effect of mining on the wilderness resource? 3. Are the effects of prior existing rights (mining, grazing, water rights, etc) minimized?

Threshold of Variability: 1. Refer to Limit of Acceptable Change standards and guidelines for each wilderness. 2. Any increase of nonconforming uses. The amount of nonconforming use is in a downward trend. No thresholds of variability have been crossed.

Results/Findings: In the North Fork John Day Wilderness, authorized uses which are under permit are conducted in a manner which minimizes impacts. The District is working on Limits of Acceptable Change (LAC) surveys and gathering information about wilderness use. Low budget levels preclude timely completion of LAC. Grazing effects have not been documented. Some mining is occurring; most effects are minimized through project design.

In the North Fork Umatilla Wilderness, several nonconforming uses were noted. These included: 10 cases of littering, two permanent structures, four cases of mountain bike use, one motorcycle, and one use of a fire during a fire closure. Grazing is permitted in this Wilderness, but livestock grazing did not occur in 1992.

No photo plots were established within any of the Wilderness areas for monitoring grazing effects and existing mining operations. No information was reported for the Wenaha Tucannon Wilderness in FY 1992.

Evaluation: Begin reporting any observed incidence of non-conforming use in the Wenaha-Tucannon and North Fork John Day Wilderness. Use information from permit administration to report effects of grazing, minerals, and other activities in all Wildernesses.

MONITORING ITEM 8: LIMIT OF ACCEPTABLE CHANGE (LAC) AND AMOUNT OF PRIMITIVE WILDERNESS RESOURCE SPECTRUM (WRS)

Forest Goals, Desired Future Condition, and Outputs: "...measures to increase the amount of primitive recreation opportunity to desired levels...meet demand for primitive and semi-primitive opportunities..."

Monitoring Question(s): 1. What is the general condition of the wilderness? 2. What effect is visitor use having on the wilderness resource? 3. Are standards being met for the WARS classes designed for each wilderness? 4. Is fire allowed to play its natural role?

Threshold of Variability: 1. Refer to LAC standards and guidelines for each wilderness. 2. Any reduction of amount of planned primitive WRS.

Results/Findings: Limits of Acceptable Change have not been developed and implemented to adequately evaluate this monitoring element. Significant improvement has been made in reducing the structures and caches at campsites in the Wenaha-Tucannon Wilderness. Encounter standards are regularly exceeded during the hunting season in several areas. Group-size standards are occasionally exceeded during the hunting season.

Large scale tree mortality is occurring throughout the North Fork John Day Wilderness. Most trails are logged out once each year, but little other maintenance occurs due to lack of funds. Use on main trails and trail heads is deteriorating those facilities faster than maintenance capability, due to limited budgets. Continued intrusions by motor vehicles occur primarily during the mushroom and hunting seasons; lack of law enforcement is due to funding limitations.

Fires in all Wilderness areas were controlled. Current direction is to suppress all wildfires in the Wilderness areas until completion of the Fire Management Plans authorizes an alternative approach. A process has been initiated to develop Wilderness Fire Management Plans. Plans for the North Fork John Day and North Fork Umatilla Wilderness area are currently in the early stages of development. The Wenaha-Tucannon Wilderness Fire Plan is scheduled for analysis in 1994.

Evaluation: The LAC process needs to be completed and initiated in all Forest Wildernesses. Further monitoring and evaluation is needed to determine answers to monitoring questions number two and three. This item is recommended as a monitoring emphasis area for 1993.

E. RANGE

MONITORING ITEM 28: ALLOTMENT PLANNING

Forest Goals, Desired Future Condition, and Outputs: All allotments have developed and implemented allotment management plans (AMPs) that fully meet the standards and guidelines of the Forest Plan by the end of the first decade.

Monitoring Question(s): 1. Are allotments containing significant areas of unsatisfactory condition range, and/or allotments, classified as PC or PD, receiving priority emphasis for development and implementation of allotment management plans? 2. Do AMPs fully meet Forest Plan standards and guidelines? 3. Are AMPs being implemented on the ground in a manner that meets Forest Plan direction?

Threshold of Variability: 1. AMP planning schedule, as developed (and amended) by the Forest Supervisor, varies by more than two years for 10 percent or more of the Plan. 2. Any of the AMPs approved following approval of the Forest Plan fail to contain objectives and standards that fully implement the Forest Plan. 3. More than five percent of the annual operating plans and annual budget requests, Knutson-Vandenberg (KV) sale area improvement plans, etc., are not supported by standards or development schedules from allotment management plans.

Results/Findings: During FY 1992, no Allotment Management Plans (AMPs) were prepared or reviewed on the Forest. The priority for use of limited funds has been on administration of existing grazing permits. Since approval of the Forest Plan, no AMPs have been completed. Twenty four AMPs were scheduled for completion by the end of FY 1993. During 1993, range funding was received to complete range inventories and analysis, and to initiate planning. To date, AMPs have not been adjusted to include utilization standards; the standard and guidelines are incorporated into and implemented through Annual Operating Plans (AOPs) according to Regional direction.

Evaluation: The Forest Plan will need to be adjusted in two areas: 1) Amending the Plan schedule for AMP development and 2) amending the Plan to assure standard and guideline implementation through AMPs.

MONITORING ITEM 29: COMPARISON OF PRODUCED VS. PLANNED OUTPUT

Forest Goals, Desired Future Condition, and Outputs: Within the constraints imposed by basic plant and soil needs, provide forage for utilization by wildlife and permitted domestic livestock.

Monitoring Question(s): 1. Are the outputs for permitted domestic livestock (Animal Unit Months [AUMs]) being achieved as projected in the Forest Plan?

Threshold of Variability: Annual outputs (AUMs) for permitted domestic livestock increase more than three percent above or fall more than 10 percent below Forest Plan levels.

Results/Findings: Table D-1 shows the actual use (grazing) on the Forest for FY 1992.

TABLE D-1
Actual Use - 1992
Umatilla National Forest

DISTRICT	ACTUAL (AUMS)	PERMITTED (AUMS)
HEPPNER	9,243	15,974
POMEROY	6,608	6,960
NORTH FORK	18,749	21,296
WALLA WALLA	7,688	9,937
TOTAL	**42,288**	**54,167**

The Forest Plan annual permitted grazing outputs is 58,000 AUMs. As shown in Table D-1, in FY 1992 an estimated 42.3 M Aum's were achieved, about 73 percent of the Forest Plan level. The 1992 output is an 18 percent decrease from the 1991 level.

Evaluation: Several factors affected the Forest's non-achievement of Forest Plan projections. These factors include: temporary reduction of livestock use on allotments to provide environmental rest from grazing, by "sending livestock home" early due to drought conditions and/or utilization standards exceeded, and suspension and cancellation of permits. Although the accomplishment falls below the threshold of variability, no changes are needed at this time.

MONITORING ITEM 32: RANGE IMPROVEMENT ACCOMPLISHED AS PLANNED

Forest Goals, Desired Future Condition, and Outputs: Allotment management plans (AMPs), based on the Forest Plan, provide for a full development schedule (using all available funding sources) that contributes to satisfactory range conditions.

Monitoring Question(s): 1. Are range improvements specified in Allotment Management Plans, or other development plans such as Sale Area Improvement Plans or Annual Operation Plans, being accomplished? 2. Are these improvements contributing to meeting Forest Plan objectives?

Threshold of Variability: Accomplishments of annual range improvement targets fall more than 10 percent below the assigned output.

Results/Findings: Items shown in the following Table D-2 have been completed and will contribute toward meeting the Forest Plan objectives.

TABLE D-2
RANGE ACCOMPLISHMENTS - 1992
Umatilla National Forest

DISTRICT	*NONSTRUCTURAL IMPROVEMENTS*	*STRUCTURAL IMPROVEMENTS*	** BPA FUNDED STRUCTURES*
HEPPNER	10,240	13	24
NORTH FORK JOHN DAY	524	15	-
POMEROY	2,094	15	-
WALLA WALLA	592	14	-
FOREST TOTAL	13,450	57	24

* Bonneville Power Administration structures include 9.5 miles of fence, two cattle guards, and 3 three way exclosures.

Evaluation: Continue monitoring this item; no additional actions are needed, at this time.

F. TIMBER

MONITORING ITEM 40: IDENTIFICATION OF LANDS SUITABLE FOR TIMBER MANAGEMENT

Forest Goals, Desired Future Condition, and Outputs: Examine lands to determine suitability for timber production with greater resolution. Add or subtract land into the timber suitability base as confirmed by on-the-ground determinations, or more accurate estimates.

Monitoring Question(s): 1.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)? 2.Should lands, identified as suitable in the Plan, be more accurately classed as unsuitable?

Threshold of Variability: More than 5 percent change in the suitable land base.

Results/Findings: As Districts complete the environmental analysis for proposed projects, suitability is evaluated for the project area. Results of the evaluation are then disclosed in the decision document for the project, and are incorporated in one or more of the data layers contained in the District's Geographical Information System. No decision documents were approved during FY 1992 that specifically disclosed suitability changes. Analysis of GIS data on a forest-wide basis will not be completed until the five year "checkpoint" effort, in FY 1995.

Evaluation: Continue monitoring on a project basis.

MONITORING ITEM 41: MANAGED YIELD PROJECTION

Forest Goals, Desired Future Condition, and Outputs: Determine if yield projection assumptions are consistent with actual managed stand growth.

Monitoring Question(s): 1.How does actual growth in a managed stand compare to that modeled in the managed yield tables?

Threshold of Variability: Deviations likely to effect timber yields by more than 15 percent.

Results/Findings: Managed stand surveys were completed in FY 1991. The data from these surveys was entered into a computer database. It is now ready for use in developing new yield tables for managed stands.

Evaluation: The Forest needs to initiate an update of the yield tables in 1993 for use in comparison with Forest Plan yield assumptions.

MONITORING ITEM 42: EMPIRICAL YIELD PROJECTION

Forest Goals, Desired Future Condition, and Outputs: Determine if yield projections are consistent with the most recent inventory.

Monitoring Question(s): 1.How do projected yields, based on new inventory data, compare to the empirical yield tables used in the FORPLAN model?

Threshold of Variability: Deviations likely to effect timber yields by more than 15 percent.

Results/Findings: During the 1992 field season, the Tri-Forest Inventory Coordinator (Malheur, Umatilla, and Wallowa-Whitman National Forests) completed remeasurement of a sample of 1981 inventory plots. The objective of the remeasurement was to determine the magnitude of vegetation changes occurring between 1981 and 1992, many of which resulted from budworm defoliation or other insect and disease problems.

The plot remeasurements have been completed. Analysis of the resultant data is on-going.

Evaluation: This item was not evaluated in FY 1992. Work on the development of new yield tables is scheduled to begin during FY 1993.

MONITORING ITEM 43: TIMBER OFFERED FOR SALE

Forest Goals, Desired Future Condition, and Outputs: Provide for production of wood fiber consistent with Forest Plan objectives.

Monitoring Question(s): 1.Is the Forest offering the volume of timber necessary to achieve the estimated Timber Sale Program Quantity (TSPQ) stated in the Plan? 2.Is the Forest offering the volume of chargeable timber established by the Plan's ASQ? 3.What is the level of ponderosa pine sawlog timber being offered?

Threshold of Variability: 1.Greater than 10 percent +/- deviation from planned volume of Total Sale Plan Quantity. 2.Deviation greater than +five percent or -20 percent of planned Allowable Sale Quantity. 3.Greater than 25 percent +/- deviation from planned volume of ponderosa pine sawlogs. Thresholds mentioned above apply to the running average measured annually.

Results/Findings: Table D-3 shows the 1992 Timber Program output for the Forest in FY 1992:

TABLE D-3
TIMBER PROGRAM - 1992
Umatilla National Forest

	PLANNED OUTPUT (MMBF)	ACTUAL OUTPUT (MMBF)	PLANNED OUTPUT (MMCF)	ACTUAL OUTPUT (MMCF)
TIMBER SALE PROGRAM QUANTITY	159	61.5	28.4	10.8
ALLOWABLE SALE QUANTITY	124	45.9	22.2	8.1
PONDEROSA PINE INCLUDED IN ASQ	24	5.4	4.2	.9
CHIP MATERIAL	20	10.8	3.6	1.9
FIREWOOD	15	4.8	2.6	.8

Refer to Table 4-1 of the Land Resource Management Plan p. 4-17; planned output is based on the first decade after plan implementation.

Only 38 percent of the Total Sale Program Quantity and 36 percent of the Allowable Sale Quantity was offered for bid in Fiscal Year 1992.

The recent decline in forest health has necessitated a change in the planned sale offerings that would have occurred according to the Forest Plan. Program emphasis on the North Fork John Day and Heppner Ranger Districts has changed from green sawlog timber sales to salvage. This change in emphasis has required the adjustment of the sale program on the south half of the Forest. Current direction is to salvage the spruce budworm host species (white fir and Douglas fir) and leave the seral species (ponderosa pine and western larch).

The Forest did not offer the planned ASQ because of delays caused by reprogramming and the change in emphasis. The principal reasons for the delays were: 1) additional analysis required for listed Threatened and Endangered species including biological evaluations and consultation with the National Marine Fisheries Service (Salmon). 2) Public and Forest Service concerns about cumulative effects of salvage harvest on water quality and wildlife habitat existing conditions, which in many cases are currently below Forest Plan standards. These concerns resulted in the need for more extensive environmental analysis including preparation of Environmental Impact Statements (EIS).

Evaluation: Recommend amending Forest Plan for catastrophic conditions and potential adjustment of Allowable Sale Quantity due to lost standing volume and cumulative effect concerns.

MONITORING ITEM 44: AVAILABILITY OF FIREWOOD

Forest Goals, Desired Future Condition, and Outputs: To provide fuelwood necessary to meet local demand.

Monitoring Question(s): 1.How much firewood is being provided? 2.Is sufficient fuelwood being offered to the interested public?

Threshold of Variability: Demand exceeds supply.

Results/Findings: The Forest Plan predicted an annual average output of 15 MMBF (Million Board Feet). In 1992, actual output of firewood was 6.8 MMBF. This is a 55 percent decline from Forest Plan projection. In addition, the firewood fell 23 percent from the 1991 output level of 8.8 MMBF. Since implementation of the Forest Plan, the average decline (1990 to 1992) in firewood output is approximately 47 percent. Table D-4 shows the firewood program from 1989 to 1992.

TABLE D-4
FIREWOOD PROGRAM -1992
Umatilla National Forest

FISCAL YEAR	FREE USE PERMITS		CHARGE PERMITS		TOTAL PERMITS	
	NUMBER	MBF	NUMBER	MMBF	NUMBER	MMBF
1989	29	22	4,794	12.4	4,823	12.4
1990	63	80	3,871	8.0	3,934	8.1*
1991	44	55	3,792	8.7	3,836	8.8
1992	0	0	2,838	6.8	2,838	6.8

* This is a correction from 4.1 MMBF (1991 Monitoring Report) due to a mathematical error.

Public concern about the program has primarily focused on accessibility, increases in permit prices, and high fire precaution levels.

Evaluation: The Forest anticipates a surplus of firewood in the next few years, particularly on the south end Districts. This increase is due in part to the insect-killed timber. Firewood demand is projected to level off or decline slightly within the next several years.

G. LANDS AND MINERALS

MONITORING ITEM 45: MINERAL DEVELOPMENT AND REHABILITATION

Forest Goals, Desired Future Condition, and Outputs: To provide for exploration, development, and production of a variety of minerals in coordination with other resources.

Monitoring Question(s): 1.Are the standards and guidelines being implemented correctly? 2.Are the standards and guidelines for mineral operations reasonable and effective?

Threshold of Variability: 1.Are the standards and guidelines unreasonable or ineffective in meeting goals? 2.Are the standards and guidelines being implemented correctly?

Results/Findings: The standards and guidelines for minerals and energy are being implemented on the Forest.

The North Fork John Day Ranger District had 47 claims with Plans of Operation or NOI for the 1992 season. 23 claimants filed notices to work during 1992. Monitoring was completed on all active claims and 100 percent of the operators followed their Plans of Operation, meeting Forest Plan objectives. Site reclamation occurred on 11.5 acres within the 23 active mining claims. The Walla Walla District has no claims or lease sites

operational and the Pomeroy District did not report any mineral activity for 1992. In addition, Walla Walla sold and administered one contract for fifty cubic yards of rock from an existing quarry. The Heppner Ranger District processed two Notices of Intent (NOI) for mineral exploration. Both NOIs were limited to geochemical sampling. The District has no new mineral development or rehabilitation.

Inspections of rock sources from ongoing timber sale road construction did not reveal any threshold violations on the Forest. The standards and guidelines appear to be reasonable and effective for the limited District work load. Inspections indicate all Decision Notice stipulations were met and conditions are within the thresholds of the Forest Plan.

Evaluation: As indicated by mineral inspections and reclamation reviews, standards and guidelines are being met. Continue monitoring active claims and permits for compliance with operating plans.

MONITORING ITEM 46: ACCESSIBILITY TO CLAIM AND LEASE SITES

Forest Goals, Desired Future Condition, and Outputs: To provide for exploration, development, and production of a variety of minerals in coordination with other resources.

Monitoring Question(s): 1. Is potential vehicle access to mining claims or oil and gas lease sites being restricted?

Threshold of Variability: Reduction in lands open to mineral activities is greater than two percent.

Results/Findings: The Access and Travel Management Plans completed to date, for the North Fork John Day and Heppner Districts, plan for reduced open road densities. Although a significant reduction in open roads is planned, the scoping process used to develop the Access and Travel Management Plans did not identify claim accessibility as a major issue.

Claimants operating within the district boundary have not expressed concerns regarding claim accessibility. However, in some cases, permits were issued for the purpose of accessing claims on closed roads.

Evaluation: Continue monitoring access to mineral claims and oil/gas lease sites.

H. TRANSPORTATION

MONITORING ITEM 47: FOREST ROAD SYSTEM

Forest Goals, Desired Future Condition, and Outputs: Provide and manage the road system needed to accomplish the land and resource management and protection objectives of the forest.

Monitoring Question(s): 1. Are the total miles of road, and those useable by passenger cars and high clearance vehicles, within Forest Plan projections?

Threshold of Variability: Threshold has yet to be developed. It was scheduled to be completed in FY 1992, however it has not be accomplished.

Results/Findings: During FY 92, the Forest began implementing a new transportation resource system, the Transportation Management System (TMS). It is a corporate database that provides for storage, retrieval, analysis, and geographical display of transportation information, including Road Management Objectives (RMOs), and road use management status. Table D-5 shows the Forest Road System for FY 1992:

TABLE D-5
FOREST ROAD SYSTEM - 1992
Umatilla National Forest

MAINTENANCE LEVEL	ROAD SYSTEM	ACTUAL ROAD MILES
1	CLOSED ROAD	2,229*
2	HIGH CLEARANCE	1,613*
3	PASSENGER CAR	431*
4	PASSENGER CAR	223*
5	PASSENGER CAR	126*
	TOTAL OPEN	2,311**
	TOTAL ROAD	5,314**
	ROAD SYSTEM (MILES)	FOREST PLAN PROJECTION (MILES)
TOTAL PASSENGER CAR	780	900
TOTAL HIGH CLEARANCE VEHICLE	1,613	2,530

* Some include other jurisdiction (i.e. county, state, private)

** Totals reflect only those roads of Forest Service jurisdiction.

The information presented in Table D-5 was taken from TMS. The completion of the Access and Travel Management plans and updated TMS information on road status will facilitate a more complete and accurate answer to this monitoring item question.

The Districts are in various phases of implementing or planning Access and Travel Management (ATM) plans . The plans determine passenger car, high clearance vehicle use, and road clearance and obliteration needs. During FY '92, Heppner Ranger District completed an ATM Environmental Assessment (EA) . This program was implemented on one third of the district. The North Fork John Day Ranger District Motorized ATM plan is complete. The ATM plan has been implemented on approximately half of the district. District Motorized Access and Travel Management plans are being developed at Pomeroy and Walla Walla. This will provide updated, base line information on the status of roads useable by passenger cars and high clearance vehicles.

Evaluation: Comparison with FY 1991 monitoring results indicates that the miles of closed road have increased by 289 miles, high clearance vehicle open road miles have decreased 885 miles, and passenger car roads have increased by 10 miles. Road closures changes are primarily in response to District Access and Travel Management Plans. The total miles in each category continues to be lower than Forest Plan projections.

MONITORING ITEM 48: OPEN ROAD DENSITY

Forest Goals, Desired Future Condition, and Outputs: Maintain the densities of roads and access that meet the objectives of serving the public and of integrated resource management on the Umatilla National Forest.

Monitoring Question(s): 1. Are open road densities within planned access and travel management levels? 2. Are standards and guidelines being met for management areas where motorized use is a concern?

Threshold of Variability: +/- 10 percent of planned access and travel management direction (by District) on an area basis.

Results/Findings: As noted in Monitoring Item 47, the Districts are in various phases of the Motorized Access and Travel Management planning process. Compliance with ATM direction and designated road closures has been improving yearly. On the North Fork John Day District, compliance was over 90 percent (effective closures). A more formal process for tracking compliance will be used during FY 1993. On all Districts, the Motorized Access and Travel Management plans, when fully implemented, should reduce open road densities to the Forest Plan expected level. The two

northern Districts are in the planning phase of ATM projects and expect to complete plans during FY 1993.

Open road densities are being tracked and analyzed through project NEPA documents to help insure that management area objectives and standards are being met. Where particular problems were identified, project adjustments were made to reduce densities through planned actions or mitigation.

Evaluation: Continue monitoring the effects of project implementation and Motorized Access and Travel Management Plans.

MONITORING ITEM 49: MILEAGE, LOCATION, CONDITION OF TRAILS

Forest Goals, Desired Future Condition, and Outputs: "Provide and manage...trails...needed to meet user needs and future demand...accomplish land and resource management and protection objectives...Existing trails will be retained and reconstructed."

Monitoring Question(s): 1. What is the amount, type, and condition of trails managed? 2. How much trail construction and reconstruction has been accomplished? 3. Have any trails been abandoned or obliterated without replacement? Any planned? 4. Do existing trails meet appropriate trail management objectives? 5. Are the user needs being met?

Threshold of Variability: 1. Less than 80 percent managed at standard service level. 2. Less than 80 percent of trail target accomplishment. 3. High level of user complaints or expressed concerns about trails.

Results/Findings: Table D-6 shows the trail accomplishments for FY 1992.

TABLE D-6
TRAIL SYSTEM MILES - 1992
Umatilla National Forest

	1992 ACCOMPLISHMENTS (MILES)	*FOREST PLAN ANNUAL AVERAGE (MILES)*
TOTAL INVENTORY	1,155	735
STANDARD LEVEL	778	735
MOTORIZED	241	529*
NON MOTORIZED	637	394
WILDERNESS	423	355
MAINTAINED	626	400
RECONSTRUCTED	14	24
NEW CONSTRUCTION	1	6

* Combined Snowmobile and All Terrain Vehicle.

During Fy 1992, no trails were abandoned or obliterated. In the Access and Travel Management planning process, identification of trail needs and development of trail management objectives are being completed.

Evaluation: Continue monitoring with an emphasis on maintenance. Some concerns have been expressed that the Forest is not keeping up with needed maintenance.

I. FIRE PROTECTION

MONITORING ITEM 50: FIRE - PROGRAM EFFECTIVENESS

Forest Goals, Desired Future Condition, and Outputs: "Provide and execute a fire protection program that is cost effective and responsive to land and resource management goals and objectives..."

Monitoring Question(s): 1. What is the number of fires, by causes and acres burned, plus the actual suppression dollar cost?

Threshold of Variability: Cost effective plans for the prevention of human-caused fires will be aimed at specific risks.

Results/Findings: In 1992, the Forest expected a severe fire season due to low fuel moisture's after a winter that provided little snow pack. The season was a continuation of the drought in Eastern Oregon and Washington that began in 1985. Fire season began earlier than normal but with the aid of additional fire fighting resources and funding, the Forest was able to manage all fire situations with few acres burned. Table D-7 displays the 1992 Fire Program for the Forest.

TABLE D-7
FIRE PROGRAM - 1992
Umatilla National Forest

HUMAN CAUSED:	TOTAL NUMBER OF FIRES TOTAL ACRES ESTIMATED COST	53 156 $137 M DOLLARS	
LIGHTNING CAUSED:	TOTAL NUMBER OF FIRES TOTAL ACRES ESTIMATED COST	137 279 $483.5 M Dollars	
FOREST TOTALS	TOTAL NUMBER OF FIRES		190
	TOTAL ACRES		435
	LARGEST FIRE - ACRES		92
	ESTIMATED TOTAL COST		$620,000

Evaluation: The number of wildfires is above the 10 year average (1982 to 1991) of 137 fires and the 1991 total of 145.

Acreage burned is less than the 10 year average (1982 to 1991) of 3,092 but higher than the FY '91 total of 78 acres. (Note: the 10 year average acre figures were skewed by the 1986 and 1987 fires, which totaled 29,161 acres).

J. CULTURAL AND HISTORIC RESOURCES

MONITORING ITEM 55: PROTECTION OF SITES

Forest Goals, Desired Future Condition, and Outputs: "...determined eligible or potentially eligible for the National Register of Historic Places (NRHP)...retain those characteristics which (may) qualify..."

Monitoring Question(s): 1. Are the National Register of Historic Places characteristics of unevaluated and eligible cultural resource properties being protected? 2. Is appropriate stabilization or rehabilitation of damaged sites that are eligible for inclusion in the National Register of Historical Places being undertaken?

Threshold of Variability: No acceptable variability. Issue is tied to Federal law and

Threshold of Variability: No acceptable variability. Issue is tied to Federal law and regulation.

Results/Findings: Heritage Resource standards and guidelines in the Forest Plan require the Forest to conduct the heritage resources program in accordance with law and regulation. The four distinct elements of the Heritage Resources program are: inventory, evaluation, protection and enhancement. The Forest continues to have varying success in meeting these objectives. A Forest monitoring plan for heritage resources was completed in FY 1992 and will be implemented in FY 1993.

Some projects continue to be implemented without completion of Section 106 consultation on all of the Districts. Typically, these projects are small with limited potential to have a major effect on heritage properties. One District continues to have problems with small timber sales being conducted out of compliance, and all of the Districts are conducting scheduled road maintenance projects without cultural resource clearance. These programs will be monitored in order to bring them into compliance with the Forest Plan.

One historic property was destroyed during the past fiscal year (Walla Walla District). A 1930 fire lookout "crows nest" tree, was cut down during a hazard tree removal project along timber haul routes. Although it was preferable to have the tree remain in place, the Forest will install interpretive signs on the site to explain early fire prevention and detection at the location.

During road maintenance activities designed to prohibit the use of certain roads, at least one prehistoric site was narrowly missed. In addition, a wooden culvert system thought to predate World War II was removed.

A prehistoric site was disturbed during the construction of a parking lot at the North Fork John Day Ranger District. Although this project was out of compliance, the area of potential disturbance had been surveyed previously, and the site was not visible on the surface.

In addition to the above examples of heritage property disturbance and near misses, six known sites were discovered to have been disturbed by previous timber sales.

Evaluation: Road maintenance activities will now be reviewed for compliance before they are conducted, and the possible effect to cultural resource sites will be considered before the activity is implemented.

A procedure has been implemented on the Forest which should prevent historical sites in timber sales from being damaged in the future. Cultural resource consultation on all projects needs to be completed prior to project initiation.

K. SPECIAL INTEREST AREAS

MONITORING ITEM 56: EFFECTS OF FOREST MANAGEMENT ACTIVITIES ON SENSITIVE AND UNIQUE POPULATIONS AND LANDFORMS

Forest Goals, Desired Future Condition, and Outputs: "Protect and manage sensitive/unique plant populations and special landforms...Ensure that permissible management activities...do not compromise the special interest area."

Monitoring Question(s): 1. Are the provisions and conditions for the Special Interest Areas (SIA) being met?

Threshold of Variability: 1. Any population or landform compromised as a result of Forest Service management activities or public use. 2. Any delays in developing management plans for individual areas.

Results/Findings: In 1992, monitoring of this element was focused on botanical areas. Monitoring activities, working in partnership with the Native Plant Society, were conducted for the Ruckel Junction Special Interest Area and Woodward Campground SIA in June of 1992.

The remaining three botanical SIAs (Charley Creek, Teal Spring, and Shimmiehorn Canyon) will be monitored as time and funding are available. This monitoring item includes all A9 Special Interest and A8 Scenic Management Areas. This will include geological, cultural/historical, and scenic areas.

Evaluation: Conduct and develop monitoring efforts to encompasses A9 and A8 Management Areas. Continue Monitoring.

L. RESEARCH NATURAL AREAS

MONITORING ITEM 57: RESEARCH NATURAL AREAS (RNAs)

Forest Goals, Desired Future Condition, and Outputs: Manage areas for research, observation, and study of undisturbed ecosystems.

Monitoring Question(s): 1. Are provisions and conditions for Research Natural Areas being met?

Threshold of Variability: Any deviation from RNA management intent and standards and guidelines.

Results/Findings: The development of establishment reports for six candidate Research Natural Areas is yet to be completed and is dependant upon budget and prioritization. Formal monitoring plans for each of these candidate RNA's are a component of the management plan which accompanies the official establishment report. During 1992, vegetative maps for all eight of the Forest's established and candidate RNA's were printed from GIS system. Ground verification of plant associations and compilation of plant species were completed on five of the eight areas. Although not officially monitored, the five areas visited during the 1992 field season (Rainbow Creek RNA, Elk Flats candidate RNA, Birch Creek Cove candidate RNA, Vinegar Hill candidate RNA, and Kahler Creek Butte candidate RNA) appeared to be in natural condition and the "protected" vegetative cells within them appeared not to be impacted by management activities occurring in surrounding areas.

Evaluation: There are no threshold conflicts. Conduct and initiate formal monitoring with completion of the establishment reports.

M. ADMINISTRATIVE

MONITORING ITEM 60: NATIONAL ENVIRONMENTAL PROTECTION ACT (NEPA)/NATIONAL FOREST MANAGEMENT ACT (NFMA) COMPLIANCE

Forest Goals, Desired Future Condition, and Outputs: "Comply with the National Environmental Policy Act...National Forest Management Act...during project-level decision making."

Monitoring Question(s): 1. Are project level decisions made using appropriate NEPA and NFMA procedures including analysis of cumulative effects? 2. Are project level decisions tiered to, and in accord with, the Forest Plan? [This Question is dealt with under monitoring items "Management Areas" and "Standards and Guidelines."]

Threshold of Variability: Failure to use appropriate procedures defined in Forest Service NEPA Handbook (including documentation) or to meet requirements of Forest Plan implementation. (100% of projects should be consistent with Forest Plan unless site specific Plan Amendments are appropriately developed).

Results/Findings: In 1992, all Ranger Districts made an overall improvement in compliance with NEPA and NFMA procedures. From reviews of NEPA projects and response to appeals, the following causes were identified as weaknesses in compliance:

1) A lack of understanding of the NEPA regulations and procedures particularly related to smaller projects, resulting in no NEPA documentation. 2) Some project managers failed to give adequate time to complete the planning process which resulted in inadequate public scoping and/or conflicts with contract advertisement and appeal period time lines.

The quality of the Environmental Assessments and the analysis file documentation improved substantially from 1991. Of the six Environmental Assessments which were appealed, all were upheld. Some weaknesses were identified during the appeal review. There were some cases where statements within the EA were not substantiated by sufficient documentation within the analysis file.

From the Heppner Ranger District four draft Environmental Assessments were presented to the Forest Supervisor and his Staff for review and comment. These included the Bald Mountain. Salvage Sale, I&D Salvage Sale, DF Salvage Sale, and Access & Travel Management. The District found this to be an effective process which helped the IDT members improve the quality of the NEPA documents. In addition, the review provided the Deciding Officer the opportunity to be more actively involved in the planning process. Once the reviews for the three salvage sales were completed, it was recognized that the potential cumulative effects of the salvage program may be significant. A decision was made to complete an Environmental Impact Statement (EIS) on the three salvage sales. They were combined into the East End Salvage and Restoration Project DEIS.

The Draft EIS for East End Salvage was evaluated by the Forest IDT for NEPA and NFMA compliance. The majority of concerns and questions which were generated during this review were to be incorporated into the final EIS. The District felt the comments received were specific and extremely helpful in resolving document weaknesses.

NEPA/NFMA compliance reviews were also conducted by the Forest Interdisciplinary Team on the Walla Walla and North Fork John Day Ranger Districts. Efforts were made to schedule a review on Pomeroy Ranger

District, but the District did not feel it was a high priority compared to project work and consultation efforts with the National Marine Fisheries Service regarding the Snake River (Threatened) Salmon.

On the Walla Walla District a post project review was conducted for the 1991 Western Spruce Budworm Spray Project. The EA wa generally considered to be well done and consistent with Umatilla Forest and Forest Service NEPA direction. Specific recommendations for future projects included: 1) develop a stronger tie to Forest Plan Management Area direction for pest management, 2) include further analysis of economic viability of alternatives, and 3) improve the information flow between the Forest, the regional office pest management group, LaGrande Research Lab, and to the public. Results of analysis for the need to spray are often not available until after the due date for completion of the next years project EA. Improvement was made in this regard for the 1993 budworm treatment planning effort. Finally, for future projects better coordination between past spray projects, a short-term solution, and longer-term treatments such as harvest thinning or underburning, was recommended.

A formal monitoring review was also conducted for the Turner Otter project on the North Fork John Day Ranger District. A number of excellent project design ideas identified by the District IDT had not been clearly documented in the EA or at least the rationale was lacking. After the review, a number of specific recommendations were included in the EA before signing of the decision notice. Additional recommendations were made for inclusion with future salvage and restoration projects on the district. Improved understanding of forest health, salvage and restoration direction between Districts and forest IDT members was a major benefit from the review.

Evaluation: Substantial improvement was made in the area of NEPA and NFMA compliance in 1992. Continued formal monitoring by the Forest IDT is recommended for a minimum of one project for each District per year.

E. ECONOMIC

A. ECONOMIC PAYMENTS AND INCOME

MONITORING ITEM 61: CHANGES IN INCOME LEVELS

Forest Goals, Desired Future Condition, and Outputs: Monitor changes in local incomes.

Monitoring Question (s): 1. What changes are occurring in local per capita income that can be analyzed for the impacts of Umatilla National Forest operations?

Threshold of Variability - Plus or minus 15 percent in 3 years

Results/Findings: The period 1987 to 1989 was identified in the 1991 monitoring report as the base period for comparing future income levels. For the base period, the inflation adjusted average per capita income level for each county was compared with 1990 per capita levels, the most recent information available. All counties, with the exception of Wheeler County in Oregon, were within the established variability threshold of +/- 15 percent. Wheeler County exceeded the threshold by 0.6% percent. For the Oregon counties, the average percentage change from the period 1987-89 to 1990 was +9.2 percent. For Washington counties the average was +3.7 percent.

Evaluation: All changes in per capita income for the Umatilla National Forest ten county area were within the threshold. Continue monitoring.

MONITORING ITEM 62: CHANGES IN LOCAL POPULATIONS AND EMPLOYMENT

Forest Goals, Desired Future Condition, and Outputs: Promote human resources and community and economic development within the zone of influence.

Monitoring Question(s): 1. What changes are occurring in local populations and employment that can be analyzed for impacts due to Umatilla National Forest operations?

Threshold of Variability: Plus or minus 20 percent for each factor in 3 years (corrected for inflation as needed).

Results/Findings: The 1980's saw a number of counties lose population in response to changing economic conditions and lifestyle choices. Of the six counties in Oregon, four lost population during the 1980's despite an overall increase in the state population of over 8 percent.

Two out of the four counties in Washington lost population, compared with an almost 18 percent increase in the state population.

Table E-1 shows percent change in non-agricultural wage and salary employment from 1990-92 for Oregon counties and from 1989-91 for Washington counties. Four counties in Oregon show a decrease in total wage and salary employment while three of the four Washington counties show a decrease. For the six Oregon counties as a whole, the only sectors to increase employment were services and government, while only the non-manufacturing sector (excluding services and government) showed an increase for the Washington counties as a whole.

TABLE E-1
Percentage Change in Employment by Category:
Oregon Counties 1990 to 1992; Washington Counties 1989 to 1991[1]

COUNTIES	Total Wage and Salary2	Manufacturing	Lumber and Wood3	Non Manufacturing	SERVICES4	GOVERNMENT
Oregon:						
Grant	+1.0%	+12.9%	+13.6 %	-2.2%	+36.2%	+9.2%
Morrow	-8.6%	-17.4%	-12.5%	-2.8%	+75.2%	+11.7%
Umatilla	-5.8%	-4.0%	-0.3%	-6.4%	+7.6%	+6.6%
Union	-1.2%	-3.8%	-4.8%	-0.8%	-8.0%	+0.4%
Wallowa	+2.2%	-5.8%	-9.5%	+4.6%	0.0%	+8.9%
Total	**-4.0%**	**-4.4%**	**-1.8%**	**-3.9%**	**+5.7%**	**+5.6%**
Washington:						
Asotin	-5.4%	+18.3%	NA	-7.2%	+16.8%	+6.7%
Garfield	-5.2%	NA	NA	-5.2%	0.0%	-8.3%
Columbia	-5.3%	-4.3%	NA	-5.7%	-6.4%	-3.4%

TABLE E-1
Percentage Change in Employment by Category
Continued...

COUNTIES	Total Wage and Salary2	Manufacturing	Lumber and Wood3	Non Manufacturing	SERVICES4	GOVERNMENT
Washington:						
Walla Walla	+2.4%	-2.3%	NA	+3.6%	-10.8%	-1.1%
Total	+0.7%	-1.5%	NA	+1.2%	-6.3%	-0.8%

1. Source: Oregon counties: (a) State of Oregon, Employment Division, Department of Human Resources, Labor Trends, various issues, 1992; (b) Pendleton Office: Grant, Morrow, Umatilla and Wheeler counties; (c) La Grande Office: Wallowa, Union counties. Washington counties: (a) Washington State Employment Security Department, Annual Demographic Information 1992, Service Delivery X; (b) Washington State Employment Security Department, Employment and Payrolls in Washington State by County and Industry, 1991 Annual Averages, No. 187, December 1992.
2. Includes non-agricultural wage and salary employment only.
3. Included in manufacturing total
4. Included in non-manufacturing total.

Evaluation: Since 1990, all counties have shown a population increase except Colombia County in Washington state, which has decreased 0.6 percent since 1990. All counties are within the variability threshold of +/- 20 percent change. Continue Monitoring.

MONITORING ITEM 63: CHANGES IN PAYMENTS TO COUNTIES

Forest Goals, Desired Future Condition, and Outputs: Promote community and economic development. Monitor changes in the levels of payments to counties resulting from Umatilla National Forest receipts.

Monitoring Question(s): 1. What changes are occurring in the levels of payments to local counties (consider the 10 county area) surrounding the Umatilla National Forest operations?

Threshold of Variability: Failure to meet Plan predicted or anticipated payment levels by 20 percent.

Results/Findings: Table E-2 shows Payment to Counties for the period 1990-92. For the ten counties as a whole, the Forest Plan projection for 1992 was $7,042,100 (in 1992$). Actual payments were $5,199,400, a

decrease of 26 percent from Plan projections. Compared with Forest Plan projections, the average of the actual annual payments for the last three years (in 1992$) was 36 percent lower despite actual 1992 payments being 41 percent higher than 1991 payments. Consequently, the variability threshold of +/- 20 percent is exceeded for this monitoring item.

TABLE E-2
PAYMENTS TO COUNTIES - 1992
Umatilla National Forest

County	*1990*	*1991*	*1992*	*3-year average (1992$)*	*Forest plan projections[2] (1992$)*
Oregon:					
Umatilla	$1,130.3	$983.7	$1,388.9	$1,201.7	$1,880.0
Morrow	$432.6	$376.5	$529.9	$459.4	$719.6
Grant	$935.5	$814.2	$1,145.8	$993.4	$1,556.0
Union	$301.4	$262.3	$378.3	$323.1	$501.3
Wheeler	$121.8	$106.0	$149.2	$129.4	$202.6
Wallowa	$372.9	$324.5	$456.7	$396.0	$620.2
Baker	$.010	$.007	$.011	$.010	$0
Totals	**$3,294.4**	**$2,867.3**	**$4,048.7**	**$3,502.9**	**$5,479.6**
Washington:					
Asotin	$162.4	$141.3	$198.9	$172.5	$270.1
Colombia	$481.5	$419.1	$589.8	$511.3	$800.9
Garfield	$288.2	$250.8	$353.0	$306.0	$479.4
Walla Walla	$7.4	$6.4	$9.0	$7.8	$12.2
Totals	**$939.5**	**$817.7**	**$1,150.7**	**$997.6**	**$1,562.6**
Forest totals	**$4,234.0**	**$3,684.9**	**$5,199.4**	**$4,500.5**	**$7,042.1**

1. Source: (a) 1992 data: Umatilla National Forest Supervisors Office, Pendleton OR.; (b) 1990-1991 data: Forest Plan Monitoring and Evaluation Report, Fiscal year 1991. Umatilla National Forest, May 1992.
2. Umatilla Land and Resource Management Plan, Table 4-1, p.4-18 (adjusted to 1992 dollars).

Evaluation: The threshold of variability of +/- 20 percent is exceeded for this monitoring item. The Forest Plan projection payment to counties is in error. An update with corrections need to be accomplished.

MONITORING ITEM 64: CHANGES IN LIFESTYLES, ATTITUDES, BELIEFS, VALUES, AND SOCIAL ORGANIZATIONS

Forest Goals, Desired Future Condition, and Outputs: Monitor changes in local lifestyles, attitudes, beliefs, or values.

Monitoring Question(s): 1. What changes are occurring in local attitudes toward Forest Service programs and activities? 2. How are local lifestyles changing, and are values and beliefs changing? 3. How are social organizations being affected by the Forest?

Threshold of Variability: Established trend toward Forest-Community conflicts or identification of issues and problems and major changes in lifestyles influenced by the Forest.

Results/Findings: Techniques to monitor changes in lifestyles, attitudes, beliefs, and values in 1992 continued to involve informal methods such as interviews of key contacts and opinion leaders, sensing walk-in customers, telephone and written inquiries, observations and comments by employees and meeting attendees. Other methods include reviewing newspaper and magazine articles, videotaping documentaries, specials, and news spots, and recording radio spots for review and assessment.

During 1992, several uncertainties were observed throughout the year. Groups and individuals expressed concerns for the lagging economy, job loss, reduced federal timber supply, and effects of the Endangered Species Act listing of the Snake River salmon. Also, shifts in language use were noted to indicate value changes. This includes: Timber Harvest to Ecosystem Management; Salvage to Forest Health; Forest Health to Forest Restoration; Products to Values; Mono-culture to Diversity or Biodiversity; reduced use of the term Clearcutting, and significant increase in the use of No ClearCutting; and Multiple Use to Multiple Values.

Evaluation: Continue monitoring.

MONITORING ITEM 65: CHANGES IN FOREST CONTRIBUTIONS TO FOREST PRODUCTS INDUSTRY

Forest Goals, Desired Future Condition, and Outputs: Promote community and economic development within the Forest zone of influence.

Monitoring Question(s): 1. What changes are occurring in the contributions of the Forest to the local forest products industries within the zone of influence?

Threshold of Variability: Change in Umatilla National Forest percent or failure to meet Plan objectives for raw materials to industry.

Results/Findings: In 1991, the total amount of wood products offered from the Umatilla National Forest was 72.4 MMBF or 46 percent of the Forest Plan projected level. In 1992, the total amount of wood offered for sale was 61.5 MMBF which is 39 percent of the Forest Plan projection. A number of timber sales planned for 1993, are currently involved in the consultation process regarding threatened species listing of Snake River Chinook Salmon. The Forest Plan projected level for timber production is not likely to be met in 1993 for this and other reasons. Three straight years of production well below projected levels, is beginning to result in raw material shortages to the local timber industry. A greater dependency on raw materials from private timber landowners has resulted.

Evaluation: Recommend adjustment of Forest Plan TSPQ and ASQ projections.

B. FOREST BUDGET

MONITORING ITEM 58: FOREST BUDGET

Forest Goals, Desired Future Condition, Outputs: Full funding of all resource programs and activities including monitoring.

Monitoring Question(s): 1. Are the annual programs and budgets needed to implement the Forest Plan being realized?

Threshold of Variability: Budget deviates more than 20 percent from the Forest Plan three year average.

Results/Findings:

TABLE E-3
FOREST BUDGET - 1992
Umatilla National Forest

FUNDING CODE	*1992 EXPENDITURES (M Dollars)*	*FOREST PLAN PROJECTION (1992 M Dollars)*	*PERCENTAGE OF FOREST PLAN*
MINERALS AREA MANAGEMENT	142	167	85
REAL ESTATE MANAGEMENT	50	0	-
LANDLINE LOCATION	154	181	85
FACILITIES MAINTENANCE	222	311	71
COOPERATIVE LAW ENFORCEMENT	26	-	-
ROAD MAINTENANCE	826	1,335	62
TRAIL MAINTENANCE	128	332	39
TIMBER SALE ADMINISTRATION/ MANAGEMENT	4,117	1,763	234
REFORESTATION AND TSI	1,300	3,081	42
RECREATION USE**	620	1,500	41
WILDLIFE*	355	460	77
FISH*	924	444	208
RANGE MANAGEMENT AND T&E	423	376	113
SOIL/WATER/AIR MANAGEMENT*	261	324	81
CULTURAL RESOURCE* INVENTORY	338	111	305
GENERAL ADMINISTRATION	2,379	2,673	89
TOTAL NFS	***12,265***	***13,058***	***94***

TABLE E-3
FOREST BUDGET - 1992
Umatilla National Forest

FUNDING CODE	*1992 EXPENDITURES (M Dollars)*	*FOREST PLAN PROJECTION (1992 M Dollars)*	*PERCENTAGE OF FOREST PLAN*
CONSTRUCTION:			
FACILITIES	69	309	22
RECREATION	366	272	35
FOREST ROAD	759	0	-
TRAILS	178	345	28
TOTAL CONSTRUCTION	*1,372*	*1,226*	*112*
OTHER FUNDS:			
FOREST FIRE PROTECTION	1,224	1,121	109
LAND ACQUISITION	0	0	-
RANGE BETTERMENT	35	37	95
BRUSH DISPOSAL	786	1,073	73
TIMBER PURCHASER ROAD CONSTRUCTION	1,557	3,506	44
TIMBER SALVAGE SALES	6,991	4,079	171
KV-REFOR\TSI\OTHER	2,879	3,317	87
COOPERATIVE WORK-OTHER	354	790	45
TOTAL, OTHER FUNDS	*13,826*	*13,926*	*99*
FOREST TOTAL	*27,463*	*28,210*	*97*

* Includes funding for support to timber management, but not support to timber salvage sales.
** Includes Wilderness Management.

The Forest budget is monitored by comparing the Plan projections against actual expenditures. This comparison serves two purposes.

First it provides the information needed for assessing the validity and efficiency of the current budget and secondly, it identifies those areas of shortfall in accomplishing and monitoring programs.

Evaluation: If the current pattern of lower funding levels continues, a Forest Plan Amendment will be needed by 1995.

MONITORING ITEM 59: COSTS/VALUES OF FOREST PLAN

Monitoring Question(s): 1. Are the major costs and values used in projected in the Forest Plan analysis in line with actual implementation costs, and are present values being realized? 2. Are the values used in the Plan analysis being proven by experience?

Threshold of Variability: 1. Twenty percent difference between actual expenditures and those projected in the Plan. 2. Twenty percent difference between actual resource values and those projected in the Plan.

Results/Findings: This monitoring item has not been evaluated.

Evaluation: Conduct new analysis in FY 1993 and measure it against Forest Plan projections.

III. ACCOMPLISHMENTS

Table III-1 displays the Forest's accomplishments in FY 1992. This table identifies the essential resource area, the unit of measure, Forest Plan projections, Regional assigned targets, and the percentage of the accomplishment measured against the projected output from the Plan.

TABLE III-1
FOREST ACCOMPLISHMENTS - 1992
Umatilla National Forest

RESOURCE	*UNIT OF MEASURE*	*FOREST PLAN PROJECTION*	*REGION ASSIGNED TARGET*	*FOREST OUTPUT*	*% FOREST PLAN*
RECREATION					
RECREATION RESOURCE ADMIN\MAINT.	M PAOT	255	307	307	120
TRAIL CONSTRUCT\ RECONSTRUCT.	MILES	30	3.6	15.9	53
TRAIL MAINT.	MILES	400	---	626.9	157
RANGE					
NOXIOUS WEED CONTROL	ACRES	---	40	40	---
NON-STRUCT. IMPROVEMENT	M ACRES	---	27	27	---
STRUCTURAL IMPROVEMENT	STRUCT.	---	11	10	---
PERMITTED GRAZING	M AUM'S	58.0	---	42.3	73
WATER					
WATERSHED IMPROVEMENT	ACRES	454	25	25	6

TABLE III-1
FOREST ACCOMPLISHMENTS - 1992
Continued...

RESOURCE	*UNIT OF MEASURE*	*FOREST PLAN PROJECTION*	*REGION ASSIGNED TARGET*	*FOREST OUTPUT*	*% FOREST PLAN*
MINERALS					
LEASES AND PERMITS	CASES	240	250	250	104
FIRE					
FIRE PROTECTION	M $'S	779	724	721	93
FUEL TREATMENT					
NATURAL	M ACRES	3.4	1.6	2.7	79
ACTIVITY	M ACRES	5.8	7.6	9.1	157
TIMBER					
TIMBER OFFERED FOR SALE					
TOTAL TIMBER	MMCF	28.4	---	10.8	38
OFFERED (TSPQ)	MMBF	159	180	61	38
REFORESTATION	M ACRES	7.5	6.4	8.2	109
TIMBER STAND IMPROVEMENT	M ACRES	2.9	1.3	1.3	45
LANDS					
PROPERTY BOUNDARY LOCATION	MILES	37.5	34	30.8	82

TABLE III-1
FOREST ACCOMPLISHMENTS - 1992
Continued...

RESOURCE	UNIT OF MEASURE	FOREST PLAN PROJECTION	REGION ASSIGNED TARGET	FOREST OUTPUT	% FOREST PLAN
FISH:					
ANADROMOUS: FISH HABITAT IMPROVEMENT	ACRES	---	115	105	---
FISH HABITAT STRUCT. IMPROVEMENT	STRUCT.	---	45	45	---
FISH HABITAT INVENTORY	M ACRES	---	5.5	5.5	---
INLAND: FISH HABITAT IMPROVEMENT	ACRES	---	3	3	---
TRANSPORTATION					
ROAD CONST/RECON.	MILES	---	.1	.8	---
TIMBER PURCH/CONST.	MILES	---	30	50.6	---
WILDLIFE:					
HABITAT NON-STRUCTURAL IMPROVEMENT	M ACRES	10	1.4	1.4	14
HABITAT STRUCTURAL IMPROVEMENT	STRUCT.	75	133	133	177

TABLE III-1
FOREST ACCOMPLISHMENTS - 1992
Continued...

RESOURCE	*UNIT OF MEASURE*	*FOREST PLAN PROJECTION*	*REGION ASSIGNED TARGET*	*FOREST OUTPUT*	*% FOREST PLAN*
THREATENED, ENDANGERED, SENSITIVE:					
HABITAT STRUCTURE IMPROVEMENT	STRUCT.	---	11	6	---
HABITAT INVENTORY	M ACRES	---	11.7	12.5	---

IV. FOREST PLAN AMENDMENTS

FOREST AMENDMENTS

In March of 1992, the Forest presented through the public scoping process a proposal for a non-significant Forest Plan Amendment related to forest salvage and restoration activities. This proposal would amend some standard and guidelines for wildlife habitat and watershed conditions where criteria for catastrophic conditions exist.

By fall of 1992, two circumstances developed which to date still hinder completion of an Environmental Assessment (NEPA) for this amendment. First, substantial concern has been raised that the proposed amendment could be significant (NFMA), since it has potential to, "affect land and resources throughout a large portion of the planning area" (Forest Service Manual 1922.52 [2]). Secondly, analysis of environmental effects of the proposed action and alternatives has proven to be more complicated that originally thought.

In 1992, limited progress on habitat capability objectives and "DFC" by subwatershed was made regarding incorporating the Columbia River Basin Policy Implementation Guide. Current progress on developing the objectives is occurring. A Plan Amendment to incorporate this is expected early in FY 1994.

Site Specific Forest Plan Amendments:

In FY 1992, two salvage and restoration projects were approved with a site specific project plan amendments ([see Monitoring Item 2] Windy Springs Forest Plan Amendment #4 and Turner/Otter - Forest Plan Amendment #5). Currently, ongoing analysis for Environmental Impact Statements, one each on Heppner and North Fork John Day Ranger Districts include: proposals for site specific plan amendments for restoration and salvage projects.

Existing Proposals for Forest Plan Corrections:

Proposals were made for boundary refinements to C5 Riparian Management Areas on four timber sales on the Walla Walla Ranger District (Andies, Palmer, Finley, and Little Big Hole). Due to appeals and consultation with the National Marine Fisheries Service (threatened Snake River Salmon) final decisions have not yet been made on three of these sales. Proposals have also been made from Heppner, North Fork John Day, and Walla Walla Ranger

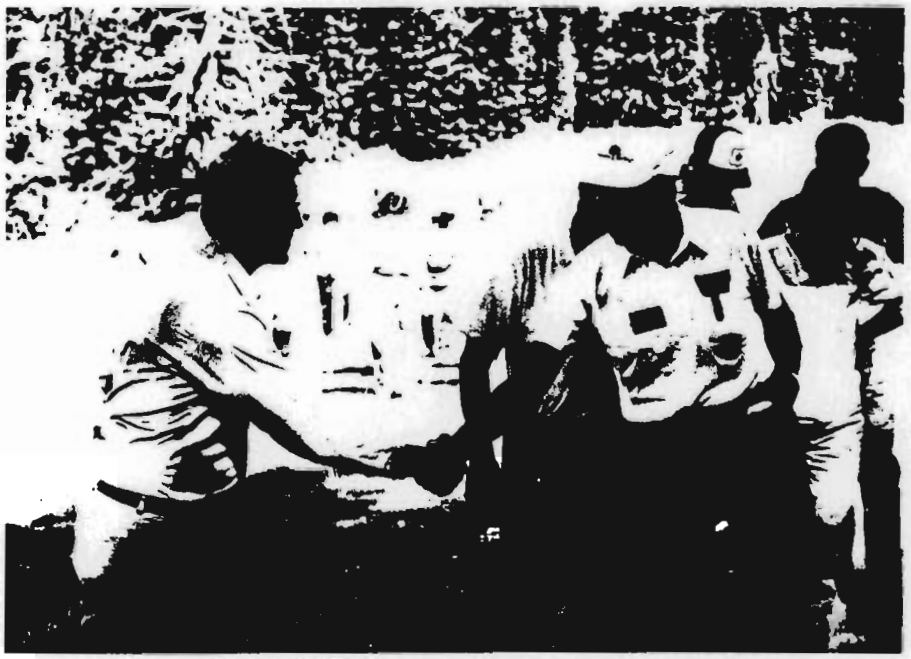
Districts for boundary refinements to C1 Dedicated Old Growth Areas. All of these proposals are within the Forest Plan direction and intent for these Management Areas. A Forest Plan correction is anticipated in 1993 for minor boundary refinements for these proposals.

Also in 1993, a Forest Plan correction is needed for the seral stage standard for C4 and E2 Management Areas. This standard is intended to assure horizontal vegetative diversity across the forest landscape. However, as currently written, the percentage of vegetative seral stages cannot be sustained. A more implementable distribution of age classes (seral stages) is needed.

Other Plan Amendment Proposals (Management Area Changes):

The Heppner Ranger District proposed expanding the A4 Viewshed 2 Management Area along Forest Road 21 as part of the analysis of the Tupper Timber Sale. This proposal was reviewed by the Forest Interdisciplinary Team. The same proposal had been considered during the final development of the Forest Plan and deemed inappropriate at that time. Since no new information or additional public issues were identified beyond those considered during development of the Forest Plan, the proposed Amendment was not implemented.

V. COOPERATION WITH OTHERS



COOPERATION WITH OTHERS

In 1992, the Forest in cooperation with State, private organizations, and volunteers conducted an array of monitoring projects on the Forest. The Umatilla greatly appreciates their efforts and we would like to recognize them for their outstanding contributions in monitoring. And they are:

- *Rick and Bonnie Ross* - Rick and Bonnie volunteered their services on the North Fork John Day Ranger District in establishing, revisiting, and measuring range utilization plots.

- *National Audubon Society - Washington State Office:* The Audubon Society surveyed twenty C1 Dedicated Old Growth Management Areas on the Walla Walla Ranger District for pileated woodpeckers. Also, the Audubon Society conducted inventories of old growth stands across nearly two-thirds of the Heppner Ranger District.

- *Oregon Cooperative Wildlife Research Unit* - Conducted winter bald eagles surveys in the John Day River basin with emphasis on monitoring roosting sites.

- *Umatilla County Weed Control Department* - In cooperation with the Forest, the Umatilla County Weed Control Department assisted in surveying noxious weed populations along portions Blue Mountain Scenic By-Way.

- *Blue Mountain Native Plant Society of Oregon* - assisted with surveys on three botanical areas and donated paper for the Umatilla National Forest Wildflower Coloring Book.

- *Oregon Department of Fish and Wildlife and Washington Department of Fish and Game* - Supplied monitoring information relating to big game and fisheries.

- *Elaine Urban* - Manuscripted GIS maps for the noxious weed data layer.

- *Jessica Ford* - Summarized stream survey, water quality, and fish data.

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