Colville National Forest
Forest Plan Monitoring and Evaluation Report: 1994

The purpose of this report is to provide the results of monitoring the implementation of the Colville National Forest Land and Resource Management Plan (Forest Plan) Forest Plan during Fiscal Year 1994 (10/1/93 - 9/30/94) to the Forest Supervisor, the Regional Forester, and the public.

This report focuses on the monitoring and evaluation process described in Chapter V of the Forest Plan. It is not intended to be a complete overview of the many accomplishments and activities on the Colville National Forest during the past year.

TABLE OF CONTENTS

CHAPTER 1 EXECUTIVE SUMMARY

This section of the report presents an executive summary of findings, trends, and recommended actions to be taken for those monitoring items reported during FY94. More detailed discussions of monitoring findings and recommendations may be found in the full monitoring report.

EXECUTIVE SUMMARY OF MONITORING FINDINGS AND TRENDS

The following is a brief summary of findings and trends compiled from monitoring and evaluation on the Colville National Forest during FY94

MONITORING ITEM	FINDINGS AND TRENDS
1-Compliance with NEPA	Five timber sale decisions were made. Two were appealed and upheld at Regional Office reviews. One range decision was not upheld in review.
2-Standard and Guidelines	Further evaluation of KV funding and riparian impacts noted as concerns.
3-Recreation User Experience	Visitor/user satisfaction is good. Maintenance/reconstruction of developed recreation sites falling behind.
4-Trail use	Trail use within ROS criteria. Winter trails/improvements need more attention.
5-Semiprimitive Setting	ROS criteria being met.
6-Off Road Vehicle Use	Some resource damage occurring but still at acceptable levels. Increasing use of four wheel vehicles on trails intended for single track vehicles observed. Need standards of acceptable level of resource impacts due to ORV use.
7-Visual Quality Objectives	Generally, VQO's being met with the exception that mitigation measures for trail corridors not always being included in timber sale EA's and VQO's in some Modification areas not being met.

8-Wilderness	Draft Limits of Acceptable Change standards are being met or exceeded.
9-Potential Wild and Scenic Rivers	No management activities were planned or occurred.
10-Deer & Elk Winter Range	Availability of snow intercept thermal cover was not monitored during FY 94. The distribution and distance between cover units exceeded Forest Plan standards. Cover/forage ratio objectives are being met. However, sale layout with respect to winter range objectives needs more attention. Open road density objectives are being met.
11-Primary Cavity Nesters	Sixty-four percent of the total acres monitored were within standards and guidelines with respect to snag availability. Post-sale firewood cutting was found to be a major factor contributing to snag availability.
12-Old Growth Dependent Species	Requirements for old growth dependent species are being met.
13-Management Indicator Species	Forest Plan direction is being followed with respect to establishing buffers around raptor nests during timber sale planning. However, effectiveness results were inconclusive. Track surveys indicated the presence of marten on the Kettle Falls and Republic Ranger Districts, but not lynx. Additional monitoring may be needed.
14-Threatened, Endg, & Sens. Species	No monitoring of caribou was reported for FY 94. While there was monitoring of road closure effectiveness within the grizzly bear recovery area, no results were reported. No nesting bald eagles were discovered on Forest Service lands during FY 94. Investigation of reported wolf sightings produced inconclusive results. Requirements regarding sensitive species lists and biological evaluation for sensitive species are being met. Monitoring of know sensitive species sites is

	becoming increasingly difficult as the number of know sites increases.
15-Fisheries	While standards and guidelines for fisheries are being applied to timber sales, concerns include accelerated sediment production, accumulated stream sediment and sources of large organic debris.
16-Range Improvements	Quality of construction good. More involvement of permittees needed.
17-Livestock Permitted	Permitted AUM's are 3% below the threshold of variability established in the Forest Plan.
18-Utilization of Forage	Overall monitoring results indicate that we are meeting or exceeding Forest Plan Standards and Guidelines.
19-Riparian and Range Conditions	Not monitored
20-Restocking of Lands	Of the 4,253 acres harvested with final removal in FY93, 52% were certified as satisfactorily stocked and the remaining acres expected to be certified in FY95 and FY96 as a result of natural regeneration.
21-Timber Yields	Not monitored in 1993.
22-Land Suitability	Management direction met.
23-Size and Dispersal of Harvest Units	Harvest unit layout is consistent with Forest Plan standards.
24-Silvicultural Practices	Harvest by silvicultural method is below Forest Plan projection for all methods. Plan direction is being followed.
25A-Water Quality	Elevated fecal coliform bacteria levels were recorded in some watersheds. Need to continue to monitor the difference between grazed and ungrazed watersheds.
25B-Watershed Best Management Practices	Best Management Practices are being implemented as planned and are

	effective at the time of implementation. There is a need to monitor again after 2-3 years for maintenance.
26-Riparian Areas	Riparian areas in general are being maintained for the benefit of riparian dependent resources.
27-Soils	Detrimental soil disturbance varied from 1 to 21% on the units monitored. There was a wide variation in results due to season, soil type and harvest method used. Need to continue monitoring.
28-Transportation System Management	Forest Plan Standards are being met. Constructed, reconstructed, passenger car and closed road mileage is decreasing The backlog of roads maintained by appropriated funding continues to increase as a result of declining funds.
29-Insect and Disease Populations	Defoliator populations decreased significantly. Forest structure and composition unchanged with much of Forest still at high risk. Douglas-fir dwarf mistletoe and root rots are still primary disease agents.
30A-Heritage Resource Protection	Although harvest and other undertakings are avoiding direct impact to significant properties, they are being adversely impacted through vandalism and natural deterioration.
30B-Heritage Resource Compliance Activities	Compliance-generated archaeological surveys were conducted on approximately 20,000 acres; 110 new cultural properties were documented. While compliance standards are being met, there is concern regarding fieldwork and reporting quality.
31-Actual and Planned Costs	Not monitored in 1994.
32-Economic Effects	Returns to Government are less than 40 percent of Plan projections. Payments to States are less than 40 percent of Plan projections.

33-Coordination with Adjacent Landowners	Direction being met.
34-Modeling Assumptions	Not monitored in 1994.
35-Minerals	Management direction is being followed.
36-Community Effects	Stevens county employment increased by 28 percent; unemployment dropped to 8.7 percent. Ferry county employment decreased by 13 percent; unemployment decreased to 12.1 percent. Pend Oreille county employment increased by 4 percent; unemployment dropped to 11.2 percent. Average per capita income for the tri-county area for 1992 (the most recent data available) was $14,744...$7.500 less than the state average. Out of 39 counties, the rankings of Stevens, Pend Oreille, and Ferry counties with respect to per capita income are 37th, 38th, and 39th, respectively.

SUMMARY OF RECOMMENDED ACTIONS

Table 1.1 displays a summary of the recommended actions for each item monitored during FY94. The recommended actions referenced in Table 1.1 have been broadly categorized as follows:

RESULTS ACCEPTABLE/CONTINUE TO MONITOR

Results are within the threshold of variability listed in Forest Monitoring Guide or indicate that more data is needed to evaluate results. .

CHANGE OR CLARIFY MANAGEMENT PRACTICES

Results are outside the threshold of variability listed in the Forest Monitoring Guide and an evaluation of the situation indicates the need to change practices to comply with the Forest Plan.

FURTHER EVALUATION/DETERMINE ACTION

Results are inconclusive indicating that additional monitoring and evaluation, or a change in monitoring practices is needed.

INITIATE ADJUSTMENT OF THE FOREST PLAN

Results are inconsistent with the Forest Plan or the Forest Plan direction is unclear. Follow-up action is to initiate the Forest Plan Adjustment process.

Table 1.1 Summary Of Recommended Actions

Monitoring Item	Results Accept/Cont. to Monitor	Change or Clarify Mgmt Practices	Further Evaluation Needed	Initiate Forest Plan Adjustment
1-NEPA Compliance	X			
2-Standards And Guidelines	X			
3-Recreation Experience	X			
4-Recreation Trail Use	X			
5-Semiprimitive Recreation	X			
6-Off-Road Vehicle Use			X	
7-Visual Quality Objectives		X		
8-Wilderness	X			
9-Potential Wild Scenic Rivers	X			
10-Deer and Elk Winter Range				
I-1			X	
I-2			X	
I-3	X			
I-4	X			
11-Primary Cavity Nesters		X		
12-Old Growth Dependent Species	X			
13-Management Indicator Species				
I-2			X	
I-4			X	
E-2	X			
14-T.E.S. Species				
I-2	X			
I-3	X			
I-4	X			
I-5	X			
I-6	X			
E-2			X	
15-Fisheries:				
I-1	X			
I-2			X	
I-3	X			
I-4	X			
16-Range Improvements	X			
17-Livestock Permitted		X		
18-Utilization Of Forage			X	
19-Riparian & Range Condition		X		
20-Restocking of Lands	X			
22-Land Suitability	X			
23-Dispersal of Units	X			
24-Silvicultural Practices	X			
25A-Water Quality	X			
25B-Watershed BMPs	X			
26-Riparian Areas	X			
27-Soil Productivity Changes	X			
28-Transportation System	X			
29-Insects and Disease	X			
30A-Heritage Resource Protection		X		
30B-Heritage Resource Compliance	X			
32-Economic Effects			X	
33-Cood W/ Adjacent Land Owners	X			
35-Minerals	X			
36-Community Effects	X			

CHAPTER 2 MONITORING RESULTS AND EVALUATION

This section summarizes the results of monitoring and evaluation conducted during fiscal year 1994, which ran from October 1, 1993 to September 30, 1994. In 1990, the Forest developed a detailed Forest Plan Monitoring Guide consisting of monitoring instructions and a monitoring schedule. Not all items identified in the Forest Plan are scheduled to be monitored every year.

MONITORING ITEM 1
Compliance With The National Environmental Policy Act

Forestwide Goal
The analysis and documentation developed for all projects will meet the requirements of the National Environmental Policy Act.

Purpose of Monitoring
To ensure the conditions of NEPA are being met.

Standard
All project environmental analysis and documentation must meet Federal, agency, and Forest standards for NEPA compliance.

Summarized Results
Two out of 5 Forest Supervisor NEPA decisions made to authorize timber sales were appealed during FY94 (East Curlew Area EIS and Drummond). A District decision to authorize a new Allotment Management Plan was reversed during appeal (Tonata AMP). Other decisions for mineral withdrawal of seed orchard, small salvage sales were not appealed. One timber sale decision was withdrawn following screening (Deer).

Appeal regulations were changed at the beginning of 1994, requiring a draft EA comment and notice period, and eliminating the appeal exemption for salvage sales.

Evaluation
Analysis and documentation for projects is meeting the requirements of the National Environmental Policy Act. Further work is needed to meet requirements for allotment management plans.

Recommended Action
Results Acceptable/Continue to Monitor. District staff has met with Regional Office staff to discuss NEPA compliance requirements for the Tonata Allotment Management Plan.

MONITORING ITEM 2
Standards And Guidelines

Forestwide Goal
Forest Plan standards and guidelines are implemented where appropriate and result in the desired future condition described in the Forest Plan.

Purpose of Monitoring
To determine if Forest Plan standards and guidelines are implemented and meet the objective of protecting the resource values identified in the Forest Plan.

Standard
Forest Plan standards and guidelines and management area prescriptions should be implemented and the actual on the ground results should approximate predicted results in the Forest Plan.

Summarized Results
The Forest Leadership Team reviewed three Forest Supervisor authority projects as well as general Forest Stewardship in various locations. The Ranger Districts also reviewed 1 or 2 timber sale projects to monitor compliance with a variety of resource standards. Specific areas or resources monitored included:

1) soil and water resource protection as related to dispersed recreation in Chewelah Creek,
2) compliance with the Interim Management Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales for the Ruby/Rufus Timber Sales,
3) grazing allotment management on the North Fork Chewelah Creek Allotment,
4) fisheries habitat improvements in the North Fork of Chewelah Creek, and
5) detrimental soil conditions, wildlife snag retention, and downed log retention on the Squirrel Meadows Timber Sale.

Key findings included observations of ORV-caused soil disturbance and streamcourse damage in the North Fork of Chewelah drainage, healthy riparian vegetation (approximately 50% grass utilization and very little shrub utilization) and soil conditions in allotment pastures following completion of the seasonal grazing, soil compaction and severely burned soils over 31% of one sampled area on the Squirrel Meadows Timber Sale. An area of concern is the use of KV funding for non-required improvements.

Evaluation
Monitoring indicated that Standards and Guidelines are being met. The areas monitored for detrimental soil conditions exceeded the 20% maximum prior to follow-up soil restoration treatment.

Recommended Action
Results Acceptable/Continue to Monitor. Consistent with Forestwide Standards and Guidelines, restoration treatment with a winged subsoiler is recommended for areas where detrimental soil conditions are present. Once this treatment activity is complete, additional follow-up monitoring is recommended. Additional monitoring of ORV use is also recommended to more accurately determine the magnitude and extent of damage to soil and water resources resulting from this activity.

MONITORING ITEM 3
Recreation User Experience And Physical Setting

Forestwide Goal
To ensure a spectrum of dispersed and developed recreation opportunities are provided on the Forest, as described in the Forest Plan management area descriptions.

Purpose of Monitoring
To determine if the Forest is meeting recreation opportunity spectrum (ROS) guidelines regarding site conditions and user satisfaction.

Standard
Desired physical, social and managerial settings for each ROS class should be met.

Summarized Results
Visual observation, personal contacts, fee collection records and random sample surveys were completed for all fee sites on the Forest and approximately 30% of the non-fee and dispersed sites. The Forest identified specific days for districts to collect visitor use information for developed and dispersed recreation with varied results across the Forest. User satisfaction surveys through trail registration cards and personal contacts were completed for most developed sites and trailheads on the Forest.

Generally, weekend use for campgrounds reaches 80-100% of capacity with most developed sites near the Spokane area reaching 100% on most weekends. Campground use during holiday or extended weekends is consistently at 100% of capacity. Use of the campground reservation system is increasing beyond the holiday periods. Dispersed recreation continues to increase. Numerous dispersed sites are experiencing resource damage, some sites require extensive rehabilitation. A continuing problem is the conflict between snow plowing for winter logging and groomed snowmobile trails. Cooperative efforts with the timber sale purchaser has in some cases resolved these situations.

Evaluation
Results for the most part showed visitor/user satisfaction to be good. Most comments were positive and indicated that user satisfaction was aligned with expectations of the users. The replacement of existing vault toilets with new, accessible facilities is being noticed and appreciated by the public as is the need for reconstruction of facilities at Pierre and Swan Lake. The physical, social and managerial settings for the roaded

natural recreation opportunity spectrum class appears to have exceeded guidelines and site conditions.

Other ROS class monitoring appear to be within variability limits. The physical, social and managerial settings for these other ROS classes appear to meet guidelines and site conditions to provide a broad spectrum of ROS settings.

The Forestwide objective of bringing developed sites up to standard is progressing slowly due to a shortage of funding for this work. Reports of deteriorating structures, water lines and vault toilets are on the increase. Weekend capacity of many developed sites is being exceeded. Heavy maintenance of improvements is being accomplished on some districts as budgets allow. Major replacement and reconstruction of recreation sites is falling behind due to the lack of capital improvement program funding. Improvements to signing, host sites, accessibility, and interpretation have been made when opportunities and funding are available. More dispersed recreation sites are showing the signs of heavy recreation use.

Recommended Action
Results Acceptable/Continue to Monitor. Results of site-specific monitoring and recreation reports indicate further evaluation is needed. Inventories, evaluations and management strategies need to be developed to address numbers and types of users, resource damage and user conflicts. Specific areas include Middle Fork Calispel, Tacoma Creek, North Fork Chewelah Creek, and No Name Lake.

MONITORING ITEM 4
Recreation Trail Use

Forestwide Goal
To provide for a spectrum of recreational experiences and trail development within each recreation opportunity spectrum (ROS) class.

Purpose of Monitoring
To determine if the Forest Plan standards and guidelines are being met and to assess the effects of trail use.

Standard
Capacity of each ROS class should be within 90 percent of the physical, social and management setting criteria.

Summarized Results
Monitoring consisted of visual inspections, trail counters and visitor contacts. Trail use was found to be within 90 percent of the ROS class criteria. Trail counters were located on various trails across the Forest. All Districts reported that trail registration card comments indicated that users had a positive experience. Non-system trails such as the Divide and Mystic trails are receiving use.

Trail use has increased on virtually every trail on the Forest. Winter use also continues to increase, especially within the Kettle Crest.

Evaluation
Monitoring indicates that Forest Plan Standards and Guidelines are being met.

Recommended Action
Results Acceptable/Continue to Monitor. Future trail planning should be focused on winter recreation trails and maintenance of existing heavily-used trails.

Continue to develop and implement a system across the Forest for assessing non-system trails like the Divide and Mystic trails (both of which are currently being assessed in conjunction with timber sale analyses) for the purpose of determining future additions to the Forest Trail System.

MONITORING ITEM 5
Semi-Primitive Setting

Forestwide Goal
To manage these areas to protect the existing natural character and provide opportunities for dispersed, nonmotorized and motorized recreation experiences.

Purpose of Monitoring
To ensure the desired physical, social, and managerial setting for each recreation opportunity spectrum (ROS) class is achieved and that these areas remain in an unroaded condition.

Standard
The desired physical, social, and managerial setting for the ROS class should be achieved.

Summarized Results
Monitoring was conducted through the use of observations and trail counts. Several trail counters were installed along various trails. Trail registration cards indicated visitor satisfaction with the recreation experience.

Evaluation
Observations and trail counts that were completed indicate that ROS class criteria are being met. The use in the area and trail maintenance met requirements for Semi-Primitive Non-motorized Recreation.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 6
Off-Road Vehicle Use

Forestwide Goals
To ensure off road vehicles (ORV) are used on the Forest in an appropriate manner, compatible with other Forest uses, and as prescribed in management area objectives.

Purpose of Monitoring
To determine if Forest Plan standards and guidelines are being met and to assess the effects of ORV use.

Standard
Off-road vehicle (ORV) use will meet appropriate Forest Plan Standards and Guidelines.

Summarized Results
Over 150 motorcycles and ATV's were observed in Middle Fork Calispel and Tacoma Creek drainages on holiday weekends. Of the users checked, 90% were not in compliance with State and Federal Laws including spark arrestors and required permits. There are no facilities for these users in this area and use is occurring in dispersed sites, within riparian areas, and on roads.

Trails created by ORV use within the LeClerc Creek area, Old West Branch Campground, and Muddy Creek Powerline area are causing some resource damage.

Evaluation
ORV use within dispersed sites, on roads, and within riparian areas is creating a safety hazard in some areas and is also resulting in varying degrees of resource damage. Resource damage in the LeClerc Creek, Old West Branch Campground, and Muddy Creek Powerline areas is apparent. Damage is becoming unacceptable and will soon require mitigation. An increasing problem on some multi-purpose trails is the use of 4-wheel drive vehicles on existing trails designed for single track vehicles.

Recommended Action
Further Evaluation/Determine Action. Although monitoring indicated that some resource damage is occurring, the results are inconclusive due to a lack of consistency in defining acceptable levels of resource damage specifically attributed to ORV use. It is recommended that the monitoring procedures pertaining to the effects of ORV use on other resource values be evaluated and that additional monitoring be conducted.

MONITORING ITEM 7
Visual Quality Objectives

Forestwide Goal
To maintain or enhance scenic qualities on the Forest, with emphasis on scenic viewsheds and foreground and middleground areas seen from sensitive view areas as prescribed by the Forest Plan.

Purpose of Monitoring
To ensure the Forest Plan visual quality objectives are being met.

Standard
Forest Plan Standards and Guidelines for meeting visual quality objectives.

Summary of Results
Ocular observations were made for several current timber sales. Mitigation measures for protecting trails are not consistently being included in timber sale environmental assessments. Management within foreground and middleground areas is in most cases meeting or exceeding visual quality objectives. In some cases, visual quality objectives within modification areas are not being met.

Evaluation
Forest Plan visual quality objectives are generally being met with the exception of management activities within some areas with a modification visual quality objective.

Recommended Action
Change or Clarify Management Practices. Management direction regarding how to achieve visual quality objectives for trail corridors within or near harvest areas requires clarification. Review and begin implementation of the Trail Management Guidelines developed as a result of the 1993 Monitoring Report's recommendations during the summer of 1995.

Recommend that the Forest Landscape Architect provide training on the Forest by winter FY96 to increase understanding of how to meet visual quality objectives for modification areas.

MONITORING ITEM 8
Wilderness

Forestwide Goal
To preserve the wilderness characteristics of the Salmo-Priest wilderness in conformance with existing legislation.

Purpose of Monitoring
To ensure the wilderness is being protected or enhanced.

Standard
Forest Plan Standards and Guidelines/Minimum limits of acceptable change.

Summarized Results
Two wilderness rangers completed monitoring of the standards for resource and social indicators set forth in the draft LAC/WIS Plan (Limits of Acceptable Change/Wilderness Implementation Schedule). Campsite density, condition and solitude standards have not yet approached the variability threshold. The standard for solitude while traveling was not met during the 4th of July weekend but is being met during other periods.

Evaluation
Monitoring the standards and guidelines outlined in the draft Limits of Acceptable Change for the Salmo-Priest Wilderness during 1994 indicated that standards are being met or exceeded.

Recommended Action
Results Acceptable/Continue to Monitor. Monitoring in 1994 should be used to evaluate the appropriateness of the draft LAC standards and Wilderness Implementation Plan which are expected to be finalized in 1995.

MONITORING ITEM 9
Wild And Scenic Rivers

Forestwide Goal
To protect the outstanding remarkable values of the Kettle River that contribute to its eligibility as a potential Wild and Scenic River.

Purpose of Monitoring
To determine if the Forest Plan standards and guidelines for protection of the Kettle River are being met.

Standard
Resource condition or level of activities should not lower the potential for Wild and Scenic River designation and must meet or exceed the Forest Plan standards and guidelines.

Summarized Results
No management activities occurred or were planned during FY 94 within the Kettle River corridor.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 10
Deer and Elk Winter Range

Forestwide Goal
To manage habitat to meet big game management objectives per Management Prescriptions 6 and 8, pertinent Forest Plan Standards and Guidelines, Desired Future Conditions, and Forest Plan Appendix B.

Purpose of Monitoring
To determine if:

I-1 Cover units on managed winter ranges are maintained as defined in Management Prescriptions 6 and 8 (30% of cover stands west of Kettle Crest and 20% of cover stands east of Kettle Crest to be maintained in snow intercept thermal cover);
I-2 Distances between cover units are being maintained an average of 600 feet or less:
I-3 Winter ranges are being maintained toward cover/forage ratios of 50:50;
I-4 Open road densities are being maintained below the prescribed levels on Management Areas 6 and 8 (Road densities not to exceed 0.4 mi/mi^2 on all elk winter range and mule deer winter range in Ferry County. Road densities not to exceed 1.5 mi/mi^2 on the rest of deer winter range areas).

Standard
Habitat condition and trend will not be allowed to deteriorate for more than 3 years or more than 5% in any one Wildlife Management Unit (Resource Shed).

Summarized Results

I-1 Availability of snow intercept thermal cover
No monitoring of thermal cover was reported during Fiscal Year 1994.

I-2 Distribution and distance between cover units
One timber sale (Squirrel Meadows Timber Sale, Newport Ranger District) was monitored. Post-sale distances between cover units was reported to range from 500 to 750 feet. No average distance was reported.

I-3 Cover/forage ratios
The Squirrel Meadows Timber Sale (Newport Ranger District) was monitored to assess pre and post sale cover/forage ratios. Pre-sale cover/forage ratio was reported to be approximately 60:40. The post-sale ratio was reported to be 59:41. Improvement of 1,216 acres of existing deer and elk forage resources (prescribed burning, browse planting, hardwood pruning, control of conifer encroachment in meadows) was also conducted across the Forest (all Ranger Districts).

I-4 Open road densities

The Newport Ranger District monitored open road densities on winter range areas used by the U.S. Air Force Survival School. Cooperation between the District and the Air Force insured that the desired open road density was met. In addition, the Colville and Kettle Falls Ranger Districts completed 43 road closures to reduce open road densities within winter range. No pre or post-treatment road densities were reported however.

Evaluation

I-1. N/A

I-2. Distances between some cover units in the Squirrel Meadows Timber Sale apparently exceeded the Forest Plan standard of 600 feet. Forage located more than 300 feet from cover is considered to be of lower value to deer and elk. Although this sale reportedly increased overall forage availability in the area, some of this increase may not be effectively used by big game.

I-3. The reported result of the Squirrel Meadows Timber Sale indicate that the Newport Ranger District met the objective of moving toward a 50:50 cover/forage ratio in the area. Some concern has been expressed that the new forage created through this sale may not be as useable by big game as desired. As stated above, some distances to cover exceed 300 feet, and in some cases sale unit shape, aspect, and final crown closure reportedly allow too much snow to accumulate, restricting big game access to the forage during severe winters.

I-4. Monitoring results indicate that Districts are working toward reducing road densities within winter range areas, and are successfully meeting the standards in some areas.

Recommended Action

I-1. Further Evaluation/Determine Action. To better assess big game habitat conditions, Districts need to evaluate and report the availability of snow intercept thermal cover, as well as total cover, when monitoring winter ranges.

I-2. Further Evaluation/Determine Action. Although the reported sample size was small, there are indications that better unit design needs to be used in future timber sales. Greater attention needs to be paid to actual unit location on the ground. Measuring and projecting distances to cover from maps and/or aerial photos may not be sufficient in all cases.

I-3. Results Acceptable/Continue to Monitor. Continue to emphasize design of timber sale units that will provide forage that is actually available for big game use during winter months. Unit design needs to consider slope, aspect, and prevailing wind direction to provide areas fully accessible by deer and elk during expected winter conditions.

I-4. Results Acceptable/Continue to Monitor. Efforts to reduce road densities should continue. Additional monitoring regarding road closure effectiveness is also needed.

MONITORING ITEM 11
Primary Cavity Nesters

Forestwide Goal
To maintain standing dead and defective trees and down trees for habitat for primary cavity excavators as provided in the Forest Plan.

Purpose of Monitoring
To determine whether or not snags or defective trees that provide suitable habitat for primary cavity excavators are being maintained as prescribed by the Forest Plan within timber harvest units, and if these densities are being maintained throughout the harvest rotation of these stands.

Standard
Maintain sufficient standing dead and defective and down dead trees to support at least 60% of the potential populations of primary cavity excavators. (Note - timber sales initiated after August, 1993 must provide sufficient dead/defective trees to provide for 100% of potential cavity excavator populations.)

Summarized Results
Post-harvest evaluations of snag availability were conducted on 4 completed timber sales during Fiscal Year 1994. Three of these sales (Brown Camel, Cooked, and Gold) were located on the Republic Ranger District, and one sale (Squirrel Meadows) was on Newport Ranger District. Twenty-four timber sale units were monitored on the Republic District. Of these, 16 units, representing 64% of the total acreage monitored, met Forest Plan standards.

Eight timber sale units (36% of the total acreage) did not. On the Newport District, the number of sale units monitored was not reported, however, the sale as a whole did not meet the standard for snag retention. Loss to snags to firewood gathering was reported as the reason the Squirrel Meadows sale did not meet standards at the time monitoring was conducted. Newport District also monitored pre-sale snag densities on the Upper Ruby/Rufus Timber Sale for eventual comparison to post-harvest snag levels.

Evaluation
Available information indicates that Districts are prescribing and marking sufficient snags and replacement trees during timber sale planning to meet the applicable standards. In addition, Districts continue to use created snags and/or nest boxes, to supplement natural snag availability across the Forest. In Fiscal Year 1994, a total of 1281 created snags and/or nest boxes were created on the Forest. However, post-harvest losses of snags to firewood gathering continues to be a problem over most of the Forest, making it difficult for Districts to maintain sufficient snag densities.

Recommended Action
Change or Clarify Management Practices. This is the third consecutive year that monitoring has indicated problems between current firewood gathering policies and the ability of the Forest to meet snag retention standards. Changes in firewood gathering policy are needed to provide for greater retention of natural snags. Without changes, the Forest will not be able to consistently meet the newly revised standard of providing for 100% of potential population levels of primary cavity excavators within future timber harvest units, and will continue to lose snags within existing harvest units.

MONITORING ITEM 12
Old Growth Dependent Species

Forestwide Goal
To ensure essential habitat is being provided for wildlife species that require old-growth forest components, and diversity of such wildlife habitats and plant communities is maintained in accordance with Forest Plan direction.

Purpose of Monitoring
To determine whether or not old-growth habitat is being managed in sufficient quantity and quality to maintain viable populations of old growth dependent species and to meet management objectives for the barred owl indicator species.

Monitoring reports for marten and pileated woodpeckers have been moved from Management Indicator Species (Monitoring Item 13) to this Monitoring Item. This was done to provide a more comprehensive analysis and assessment of monitoring for old-growth dependent species.

Standard
MA-1's (and associated foraging areas), and pileated woodpecker and marten MR's are maintained as described in the Management Prescription and Forest-wide Standards and Guidelines.

Summarized Results
Analysis of 4 MA-1 areas and 6 MR areas was conducted during Fiscal Year 1994. Two MA-1 areas (one each on Colville and Republic Ranger Districts) were relocated to place these old-growth retention areas in better habitat.
The area on the Republic District was relocated because the Copper Butte fire destroyed the old-growth habitat values of the existing site. Information regarding the condition of two MA-1 areas examined on the Kettle Falls Ranger District was not reported.

Evaluation
Available information indicates that Districts are following Forest Plan direction regarding location and management of MA-1 and MR areas by placing them in the best available areas within the constraints of the grid system prescribed in the Forest Plan. Examination and evaluation of MA-1's and MR's usually occurs during timber sale or other planning efforts within an area to insure that areas best meeting Forest Plan criteria are retained when management activities are prescribed.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 13
Management Indicator Species

Forestwide Goal
To manage habitat in compliance with Forest Plan standards and guidelines for pileated woodpecker, northern three-toed woodpecker, Franklin's grouse, blue grouse, raptors and great blue heron, northern bog lemming, marten, and unique habitat components.

Purpose of Monitoring
To monitor the amounts of habitat for the management indicator species and to evaluate the effectiveness of these habitats through utilization and population trends.

Standard
Defined management objectives and Standards and Guidelines must be met.

Summarized Results

I-1. Marten, Pileated and Three-toed Woodpecker Habitat
See Old-Growth Dependent Species section of this report.

I-2. Franklin's Grouse/Lynx Habitat
Lynx habitat conditions were analyzed in conjunction with analysis efforts for the Nine/Thirteenmile Creek Watershed Analysis Report (Republic Ranger District) and the Sherman Basin (Kettle Falls Ranger District)

I-3. Blue Grouse Habitat
None of the Districts reported any monitoring for implementation of blue grouse standards.

I-4. Raptor and Great Blue Heron Habitat
Several known raptor nest sites were monitored in Fiscal Year 1994. The Colville Ranger District reported monitoring a red-tailed hawk nest located in the No Smacks Timber Sale. The prescribed buffer area around the nest was marked and retained during the sale. However, the monitoring occurred at the wrong time of the year to determine nest occupancy or success. In addition, it was reported that the top of the nest tree had fallen, even though the nest was still present. It is unknown how the loss of the tree top affected nest use. The Kettle Falls Ranger

District monitored a nest on the Crown Timber Sale. This nest was inactive, however, prescribed nest buffers had been maintained. The Republic Ranger District updated nest histories on known goshawk, great gray owl, and golden eagle nests. Buffer areas were identified to protect recently discovered goshawk nests on the Colville and Sullivan Lake Ranger Districts.

E-2. Lynx/Marten Track Surveys
Track surveys were completed on Kettle Falls and Republic Ranger Districts. In addition, Kettle Falls Ranger District used infra-red camera in an attempt to detect marten, lynx, or other forest carnivores. Marten were located, however, no lynx were detected in any of the surveys conducted in Fiscal Year 1994.

Evaluation

I-4. Raptor and Great Blue Heron Habitat
Available information indicates that Districts are following Forest Plan direction regarding establishment of required buffer areas around raptor nests during timber sale planning, and that these buffers are being maintained throughout the sale. However, the sample size is too small to draw any conclusions regarding their effectiveness.

E-2 Lynx/Marten Track Surveys
Snow track surveys continue to provide limited information about the presence and distribution of many wildlife species. Additional monitoring efforts (cameras, more track routes, etc.) may be needed to reliably locate lynx and other rare animals on a regular basis.

Recommended Action

I-2. Franklin's Grouse/Lynx Habitat
Further Evaluation/Determine Action. The Washington Department of Fish and Wildlife has completed delineation of primary lynx range in the State into lynx management units. These units are drawn on a watershed basis and approximate the home range size of a female lynx. A preliminary vegetative classification, based on satellite imagery has also been completed and will be ground-checked in 1995. The Forest should incorporate these management unit boundaries into on-going and planned watershed assessments and timber sale plans to provide consistency in management efforts toward this species.

I-4 Raptor and Great Blue Heron Habitat
Further Evaluation/Determine Action. Sample sizes of evaluated nests continues to be small, and further information is needed before a full evaluation of buffer area effectiveness can be made. Districts need to schedule monitoring activities during periods when nest success can be assessed with a minimum of disturbance.

E-2. Lynx/Marten Track Surveys.
Results Acceptable/Continue to Monitor.

MONITORING ITEM 14
Threatened, Endangered and Sensitive Species

Forestwide Goal
Habitats for threatened, endangered, and sensitive species will be protected and managed as provided for by Forest Plan Standards and Guidelines. Assess whether the above direction is providing the anticipated and desired results.

Purpose of Monitoring
to determine whether:

I-1 Habitat for caribou is being managed to provide seasonal components to support the Forest's portion of a fully recovered population.
I-2 Habitat for grizzly bear is being managed as directed in the Interagency Grizzly Bear Guidelines and the Forest Plan.
I-3 Habitat for bald eagles is being managed in accordance with national policy, Recovery Plan, and Forest Plan.
I-4 Any occurrences of gray wolves, peregrine falcons, or other T&E species are being documented, their activities monitored, reported to other responsible agencies, and essential habitats are being managed in compliance with recovery plans.
I-5 Sensitive species lists for the Forest are current and updated as new information becomes available. Pertinent information is being collected and submitted to the proper agencies.
I-6 Pertinent Biological Evaluations, consultations, etc. are being conducted and they include the required information to ensure Forest activities do not adversely affect the status or survival of TES species.

Standard
No reduction in population is acceptable. No more than 2% reduction in modeled habitat suitability.

Summarized Results
I-1 Caribou Habitat
Only Sullivan Lake Ranger District has designated caribou habitat. No activities were reported regarding caribou monitoring

I-2 Grizzly Bear Habitat
Although all Ranger Districts assess grizzly bear habitat suitability during Biological Evaluations, only Sullivan Lake Ranger District has designated recovery habitat for this species. Road closure effectiveness within the grizzly bear recovery area was monitored through the use of 17 traffic counters and Forest patrols during summer holiday weekends and hunting seasons. No results were reported.

I-3 Bald Eagle Habitat
Bald eagle surveys were conducted along the Colville, Columbia, Sanpoil, and Kettle Rivers. Project effects to a nearby bald eagle nest were monitored on the Newport Ranger District. No negative effects were associated with the project (Campbell Slough Wildlife Habitat Improvement Project).

I-4 Wolf Reports Being Investigated
Follow-up monitoring of 13 wolf sighting reports was conducted in Fiscal Year 1994. None of these reports revealed conclusive presence of wolves.

I-5 Maintenance of Sensitive Species List & Distribution of Information
Sensitive species lists (animals and plants) were maintained to provide current information on species occurrence across the Forest, and all pertinent information was shared with other appropriate State and Federal agencies. The Forest is consistently 100% in compliance with this monitoring item.

I-6 Biological Evaluation Being Conducted as Prescribed
Sixty-two Biological Evaluations were completed in Fiscal Year 1994. All were in compliance with established direction.

E-2 Number of Sensitive Species Sites Monitored
The Forest completed revisits of 49 sensitive plant sites. This comprised 19% of the sites known to occur on the Forest at the start of the Fiscal Year. No effectiveness monitoring of sensitive animal sites was reported.

Evaluation

I-2 Grizzly Bear Habitat
Monitoring road closure effectiveness is necessary to determine if sufficient seclusion habitat is being provided for grizzly bears. The Sullivan Lake Ranger District is being very proactive in some of its monitoring methods.

I-3 Bald Eagle Habitat
Although no nesting bald eagles have been located on National Forest System lands, all Ranger Districts are conducting surveys and monitoring effects if activities are located near known nests.

I-4 Wolf Reports Being Investigated
Investigation of reported wolf sightings continued during Fiscal Year 1994, but results remain inconclusive. To date, the presence of resident wolves on the Colville National Forest has not been documented.

I-5 Maintenance of Sensitive Species List & Distribution of Information
The Forest continues to maintain a current and up-to-date listing of sensitive plants and animals.

I-6 Biological Evaluation Being Conducted as Prescribed
All Districts continue to provide Biological Evaluations as required. Most Biological Evaluations receive rapid concurrence from the U.S. Fish and Wildlife Service when required.

E-2 Number of Sensitive Species Sites Monitored
The Forest continues to monitor known plant sites to assess management impacts and/or population trends of these species an unmanaged sites. This requirement is becoming more difficult to meet each year as the number of known sites increases.

Recommended Action

I-2 Grizzly Bear Habitat
Results Acceptable/Continue to Monitor. Data concerning road closure effectiveness has been collected for a number of years. The Forest needs to conduct a better review of this information and make adjustments in road closures if warranted in any locations.

I-3 Bald Eagle Habitat
Results Acceptable/Continue to Monitor.

I-4 Wolf Reports Being Investigated
Results Acceptable/Continue to Monitor. Until further evidence is available, efforts to follow-up on reported wolf sightings and the wolf howling surveys conducted by Ranger Districts will provide the most efficient means of determining wolf presence on the Colville National Forest.

I-5 Maintenance of Sensitive Species List & Distribution of Information
Results Acceptable/Continue to Monitor.

I-6 Biological Evaluation Being Conducted as Prescribed
Results Acceptable/Continue To Monitor.

E-2 Number of Sensitive Species Sites Monitored
Further Evaluation/Determine Action. As the number of known sensitive plant sites grows, it will become increasingly difficult to split available funds between site revisits and new surveys needed to support project work. The requirement to monitor 25% of the known plant sites each year does not always provide meaningful management information. Alternative monitoring strategies should be considered. One option would be to monitor plant sites which are at known risk or which could be potentially affected by management activities more frequently than undisturbed, presumably stable plant sites.

MONITORING ITEM 15
Fisheries

Forestwide Goal

To manage fish habitat and populations, as directed in the Forest Plan, to meet the projected "desired future condition" and projected habitat improvements.

Purpose of Monitoring

I-1 To determine if fisheries Standards and Guidelines are being applied to timber sales;
I-2 To determine if the timber sale program on the Forest is helping to achieve the desired future condition for fisheries habitat;
I-3 To determine if fish habitat improvement projects are being planned, funded, and implemented as described in the Forest Plan;
I-4 To determine if fish habitat capability is improving in streams where habitat improvement projects are being implemented.

Standard
Habitat condition should not vary more than 50 percent from what was expected in the project analysis.

Summarized Results
I-1 & I-2
The Rocky 92 Timber Sale (Colville RD) and Squirrel Meadows Timber Sale (Newport RD) and other sales on the Kettle Falls RD were monitored in FY94 to determine if fisheries standards and guidelines were applied and to determine if the sales were helping to achieve the desired future condition for fisheries habitat.

No road crossings were implemented across fish-bearing streams on the Rocky 92 Timber Sale. Road crossings on Squirrel Meadows Timber Sale and on the sales monitored on the Kettle Falls RD were designed in accordance with established Best Management Practices to be passable by fish and/or to address fisheries habitat concerns.

Silvicultural prescriptions for the Rocky 92 Timber Sale were designed to protect and develop large tree stems which will provide a source of large organic debris to stream channels. No harvest units on the Squirrel Meadows Timber Sale were located within riparian zones.

Accelerated sediment production from all sources, including timber sales, continues to be of concern as related to potential effects on fisheries habitat. Some stream segments, according to Hankin/Reeves stream surveys, are at or above 35% embeddedness (a measure of accumulated sediment) which represents a threshold of concern for fisheries habitat quality.

Maintenance and improvement of available sources of large organic debris to maintain habitat complexity within stream channels was also noted during monitoring as a continued future concern.

I-3 & I-4
The Forest accomplished a total of 42 instream fisheries structures - all on Calispell Creek of the Newport Ranger District. Seventy-nine acres of habitat improvement were also accomplished through tree and shrub planting.
This work was accomplished through the use of funds collected through the Knutsen-Vandenburg Act (KV Funds), appropriated fisheries funds, and volunteer time and money donated by outside partners through the Challenge Cost Share program.

The planned objective of the Calispell Creek project was to 1) increase the pool-riffle ratio from 39:61 to 60:40; and 2) plant conifer and shrub species to stabilize streambanks and provide shade to the stream. Restrictions on chainsaw use during fire season and Forest Service Crew downtime due to firefighting efforts resulted in only partial completion of the project. The remaining work on the project is scheduled to be completed during FY95.

Evaluation

I-1 All timber sales reported were in compliance with Forest Plan Standards and Guidelines.

I-2 The Rocky 92 and Squirrel Meadows Timber Sales both assisted in meeting desired future conditions for fisheries habitat (as described in the Forest Plan) through a combination of riparian protection and silvicultural prescriptions that promoted the development of large tree stems which provide a source of large organic debris to stream channels in the future. During the monitoring of these projects, it was noted by District biologists that monitoring Item I-2 may not be providing a complete assessment of the condition of fisheries habitat quality.

I-3 & I-4(E-1). Appendix B of the Forest Plan (p. B-1) structures (check dams, boulder placement, etc.) describes the estimated annual accomplishment of both structural and nonstructural fisheries habitat improvement work for the Forest for the planning decade. The FY94 accomplishment of 42 structures and seventy-nine acres of habitat improvements is 45% and 343% respectively of the estimated annual accomplishment in the Forest Plan and 105% and 100% respectively of the assigned target accomplishment for the Forest through the annual program budget.

Recommended Action

I-1 Results Acceptable/Continue to Monitor.

I-2 Further Evaluation/Determine Action. To better determine if the timber sale program is helping to achieve the desired future condition for fisheries habitat, a more comprehensive description of desired future condition needs to be developed. Some items which may be included are embeddedness, pool:riffle ratios, streambank stability, large organic debris, and particularly effects of sedimentation - all of which should be monitored in an ecosystem context along with other management goals for riparian areas. Continue fisheries biologist and hydrologist efforts at resolving questions about the effects of sedimentation on aquatic habitat in different landscape and riparian settings.

I-3 Results Acceptable/Continue to Monitor. Continue to emphasize preparation of the outyear program for fisheries improvement work, including cost estimates for budget purposes.

I-4 (E-1). Results Acceptable/Continue to Monitor. Forest fisheries biologist(s) and hydrologist(s) need to continue to be involved in project design.

MONITORING ITEM 16
Range Improvements

Forestwide Goal
All range improvements planned and financed shall be constructed to Forest Service standards and maintained as described in the annual Permitted Plan instructions.

Purpose of Monitoring
To ensure that utility, safety, and aesthetic values are protected in construction of improvements and that economic requirements are met and maintained measured in miles and number of improvements monitored.

Standard
All construction is expected to meet the established standards as set forth in Forest Service Handbook 2209.22. All prescribed maintenance is to be performed.

Summarized Results
All improvements implemented during FY94 were monitored by the Districts during installation to insure conformance with standards provided in Range Improvement Handbook or other standard practices for projects not covered in the FSH. Copies of the Range Improvement Data Sheet, FS-2200-127 are contained in the files.

Evaluation
Monitoring results indicate that range improvements are in conformance with standards although there are some situations where the goal of achieving permittee involvement is still not being met. Last year's monitoring report recommendation of developing a technology process for sharing information pertaining to construction of improvements was not implemented due to other priorities.

Recommended Action
Results Acceptable/Continue to Monitor. All new construction and reconstruction should conform to the standards in effect with permittees invited to participate in the process.

Develop a technology sharing process for information pertaining to construction of improvements to ensure compliance with FSH 2209.22 standards.

MONITORING ITEM 17
Livestock Permitted

Forestwide Goal
The Forest will permit 35,000 animal unit months (AUMs) annually, plus or minus 10 percent.

Purpose of Monitoring
Determine the ability of the Forest and the permit system to meet the output level of the Plan.

Standard
Permitted AUMs should not fall more than 10 percent below the desired level.

Summarized Results
Permitted AUMs of grazing use for FY94 were the same as FY93. In total, 29,726 AUMs of grazing were authorized by the Colville National Forest under term permit and 790 AUMs were authorized under temporary permit for a total of 30,516 AUMs.

A total of 684 AUMs of authorized non-use was granted and in addition several allotments are currently vacant due to recent cancellations, and a sheep allotment has been vacant for some time.

Evaluation
The monitoring results show that 1994 AUMs of grazing are 3% (984 AUMs) below the threshold of variability (10%) established for this monitoring item.

Recommended Action
Change or Clarify Management Practices. Initiate action to fill vacant allotments by accomplishing forage analysis and allotment management planning on vacant allotments which have potential capacity.

MONITORING ITEM 18
Utilization Of Forage

Forestwide Goal
The Forest's forage resource will be used according to Forest Plan standards and guidelines.

Purpose of Monitoring
To meet proper use standards in the Forest Plan ensuring that the forage resource is maintained in a healthy and productive state.

Standard
Forage utilization should not exceed what is prescribed in the Forest Plan standards and guidelines. The Colville National Forest Monitoring Guide contains a schedule determining when a specific allotment should be monitored.

Summarized Results
Table 2.1 summarizes forage utilization estimates based on field sample points. The last two columns in the table show the sample points that met the utilization standards in the Forest Plan and those which did not meet those standards.

Table 2.1 Forest Utilization Results by Allotment

Allotments by District	Methods Used	Pts Meeting S&Gs	Pts Not Meeting S&Gs
Colville			
N. Fk. Mill Cr.	Ht/Wt	Acceptable	
Twelve Mile	Ht/Wt	Acceptable	
S. Fk. Mill Cr.	Ht/Wt	Acceptable	
Kettle Falls			
Elbow	Ht/Wt	15	
Deep Cr.	Ht/Wt	15	
Lt. Boulder	Ht/Wt	15	
Bulldog	Ht/Wt	10	
Newport			
Cusick/Gardner	Cage	1	5
Republic			
Day Creek	Cage/Ocular	8	
Lane Ranch	Cage/Ocular	10	
Quartz	Cage/Ocular	10	2
S. Fk. St. Peters	Cage/Ocular	8	1
Vulcan	Cage/Ocular	8	1
Sullivan Lake			
Lost Creek	Ocular	Acceptable	
Tiger	Ocular	Acceptable	
LeClerc Cr.	Ocular	Acceptable	

Evaluation
Overall, monitoring indicates that forage utilization is meeting or exceeding Forest Plan Standards and Guidelines. In some cases, such as on the Cusick/Gardner Allotment, ocular estimates that utilization standards were being met was not consistent with cage measurements which indicate otherwise. District personnel attributed this apparent inconsistency to the fact that cages were placed in isolated, high use areas resulting in an incomplete sample.

Recommended Action
Further Evaluation/Determine Action. The current method of sampling forage utilization is inconclusive and needs to be evaluated and modified. The present procedures of locating sample points, which often results in samples being concentrated in areas of high use, is not providing reliable monitoring information on the amount and distribution of forage utilization at the pasture or allotment scale. It is

suggested that monitoring procedures be modified to allow a more complete sample of forage utilization within larger scale areas while still recognizing the need to sample areas receiving high use. Forest and District range personnel have scheduled meetings to address this issue during FY95.

MONITORING ITEM 19
Condition Of Riparian And Range Resources

Forestwide Goal
To ensure that range ecosystem types, within all range allotments, are in satisfactory condition. Satisfactory condition is defined as being at least fair condition with an upward trend based upon site potential.

Purpose of Monitoring
To provide evidence that management activities are effective and the resource is capable of producing forage on a sustained yield basis without deterioration of the resource.

Standards
No range type within an allotment or unit may be in less than satisfactory condition.

Summarized Results
This item was not monitored in 1994 due to funding constraints.

Evaluation
N/A.

Recommended Action
Change or Clarify Management Practices. Initiate full vegetative analysis on allotments according to the revised Allotment Management Planning schedule. Resume monitoring frequency to at least one allotment per District in 1995.

MONITORING ITEM 20
Restocking of Lands

Forestwide Goal
The National Forest Management Act (NFMA) requires that regeneration of harvested units must occur within 5 years. Tree stocking should be sufficient to meet Forest Plan yield projections.

Purpose of Monitoring
To determine if harvested lands are being restocked in a timely manner with the proper number, type, and species of trees to meet National Forest Management Act restocking of lands requirements and Forest Plan projections of future yields.

Standard
Stocking levels are measured against two standards. One standard is the NFMA stocking standard which is based on meeting minimum stocking standards within a five year timeframe. The second standard is based on stocking levels tailored to timber outputs projected in the Colville National Forest LMP.

Summarized Results
Eighty-seven percent of plantations harvested five years ago have been certified as meeting NFMA stocking standards. In 1989, final removal harvest occurred on 4253 acres. By the end of FY94, 3712 of those acres (87%) had been certified as satisfactorily stocked. The remaining 541 acres are expected to be certified in FY95 and FY96.

After a unit is planted, the success of the planting is monitored, at a minimum, the first and third year after the seedlings are planted. Survival, as well as stocking levels (trees per acres) is monitored. Survival and growth results for 1994 showed an average of 79% survival the first year following planting and an average of 82% survival the third year following planting (see table). 1994 was an exceptionally hot, dry year and this contributed to the low first year survival. Stocking to meet Forest Plan yield projections was met on 52% of the third year units. Forest Plan stocking levels are higher (require more trees per acre) than NFMA minimum stocking levels.

Table 2.2 Plantation Survival and Growth

First Year	Acres	Percent
Total area planted	4,839	100
Average survival		79
Survival by species:		
Ponderosa pine		73
Western larch		76
Douglas-fir		85
Englemann spruce		88
Lodgepole pine		83
Western white pine		81
Third Year	**Acres**	**Percent**
Total Sampled	4,366	100
Average survival		82
Survival by species:		
Ponderosa pine		79
Western larch		68
Douglas-fir		89
Englemann spruce		91
Western white pine		88
Certified as restocked with one treatment (planting)		86

In 1994, 4839 acres were planted and 2436 acres were regenerated using natural regeneration methods. Over one million seedlings were planted including Douglas-fir, western larch, ponderosa pine, western white pine, Englemann spruce, and lodgepole pine. Planting was accomplished April through June. Natural regeneration occurred with and without site preparation. Site preparation methods included prescribed burning and machine piling.

Evaluation

This is the second year that stocking success five years after harvest has been reported. This new reporting requirement, along with the recent implementation of an activity tracking database, will enable Districts to more closely monitor, and achieve stocking within a five-year timeframe.

One reason that stocking levels sufficient to meet Forest Plan yield projections are low is that fewer trees per acre are being planted due to less intensive site preparation. Less intensive site preparation creates fewer planting spots in a harvest unit. The Forest is preparing fewer sites and using less intensive site prep methods so that more downed woody debris can remain on the site and to lessen reforestation costs. Stocking levels are expected to increase over time due to ingrowth of seedlings which naturally seed into harvest units. It is not known at this time, however, whether this ingrowth will bring stocking levels up to LMP stocking levels.

Recommended Action

Results Acceptable/Continue to Monitor.

MONITORING ITEM 21
Timber Yields

Forestwide Goal
To ensure yields from harvested lands are sufficient to meet Forest Plan projections.

Purpose of Monitoring
To validate whether actual yields resulting from harvest are meeting Forest Plan projections.

Standard
Actual yields should be within 5 percent of projected yields.

Summarized Results
This item is scheduled to be monitored coincident with proposed Forest Plan revision or significant amendments pertaining to timber yields.

MONITORING ITEM 22
Land Suitability

Forestwide Goal
To ensure harvest activities are scheduled only on lands meeting the timberland suitability criteria displayed in Appendix B of the Final EIS.

Purpose of Monitoring
To ensure programmed harvest activities are only taking place on suitable lands.

Summarized Results
During the timber sale planning process, all proposed harvest units are evaluated for suitability. No harvest units during FY94 were planned on unsuitable ground.

Evaluation
The timber sale planning process is the proper vehicle for evaluating suitability of proposed harvest units. Lands are being identified and withdrawn from timber harvest when appropriate. The effect of these withdrawals on the overall land base available for timber management is not known.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 23
Size and Dispersal of Harvest Units

Forestwide Goal
Harvest unit layout, with respect to size and dispersal of openings, will adhere to the Forest Plan standards and guidelines.

Purpose of Monitoring
To ensure projects are meeting Forest Plan standards and guidelines and that any proposals for exceptions to unit size limitations follow the notice and review requirements on the National Forest Management Act regulations.

Summarized Results
In FY94, no requests were made to exceed the 40-acre size limitation for regeneration harvests. Forest and District reviews of planned activities indicate that the Districts are adhering to Forest Plan standards and guidelines related to size and dispersal of openings.

Evaluation
Harvest unit layout has been consistent with Forest Plan guidelines.

Recommended Actions
Results Acceptable/Continue to Monitor.

MONITORING ITEM 24
Silvicultural Practices by Management Area

Forestwide Goal
To ensure that areas treated on the Forest are consistent with the Forest Plan projections presented in table 4.10 of the Forest Plan.

Purpose of Monitoring
To ensure that treatments are consistent with the Forest Plan. This is the third year that this monitoring item was evaluated by the timber sales through gate 6 in STARS, or, sales which have been *awarded*. In previous years, this item was evaluated by acres *harvested*. Acres harvested in FY94 contain timber sales sold both before and after Plan implementation. Sales sold prior to Plan implementation were not designed under the current management guidelines and therefore were not be included in the monitoring results.

Summarized Results

Table 2.3 Timber Sale Acres Awarded By Management Area (MA)

	Forest Plan Projection			Actual Award Acres		
Mgmt Area	**EAM**	**UEAM**	**Total Acres**	**EAM**	**UEAM**	**Total Acres**
2	200	100	300	0	0	0
3A	0	100	100	2	428	430
5	1700	1100	2800	298	329	627
6	500	400	900	117	77	194
7	5200	0	5200	2167	520	2687
8	1600	0	1600	432	170	602
Total	9200	1700	10900	3016	1524	4540
Percent of Project Acres				33%	90%	

EAM = even-aged management
UEAM = uneven-aged management

Of the 3016 acres of even-aged treatment, 192 acres (6%) are planned to be Clearcut. The largest planned clearcut unit is 21 acres. Half of the planned units are less than 6 acres in size. All planned units will have green trees retained for snag replacement trees. Of the timber sales sold and awarded in 1994 that had acreage in management areas 2, 3A, 5, and 6 (see above table), 66% of the planned harvest is uneven-aged. In management area 7, where all harvest methods are permitted, 19% of the harvest is uneven-aged management and 81% is even-aged. In management area 8, even-aged management is preferred and 72% is even-aged and 28% is uneven-aged.

Evaluation

Timber production and harvesting was a major issue in the development of the Forest Plan. As a response to this issue, standards and guidelines were developed for harvest methods in the different management areas. Unevenaged management is emphasized in management areas 2, 3A, 5, and 6. Harvest by silvicultural method is below Forest Plan projections for all methods.

Recommended Action

Results Acceptable/Continue to Monitor. This is the third year this item has been measured against acres awarded. In both years, the acreages have been lower than Forest Plan projections. If this trend continues, projected managed stand yields for future rotations will not be met

MONITORING ITEM 25A
Water Quality, Including Cumulative Effects

Forestwide Goal

To ensure that current Forest water quality meets established Washington State water quality criteria.

Purpose of Monitoring
To determine if implementation of the Forest Plan results in maintaining or improving water quality within established standards and guidelines.

Standard
Water quality will meet or exceed Washington State Water Quality Criteria.

Summarized Results
Water quality data was collected at 30 sites on the forest for the following parameters: fecal coliform levels; specific conductance; dissolved oxygen; pH; water and air temperature; turbidity and aesthetic values. Data collected from 21 selected baseline sites indicated little change from previous years. Washington State water quality criteria are being met. Elevated fecal coliform levels were recorded adjacent to grazing allotments.

Three watershed characterization sites were monitored for flow and suspended sediment during spring runoff. No unusual data were recorded and analysis of the data is ongoing.

Water temperature was monitored at several locations with submersible thermographs. High temperatures were within the normal range for the location.

Evaluation
Water quality data indicated that there were no unusual conditions at the selected locations. The monitoring focus was on the characterization sites and following conditions throughout the summer season.

Recommended Action
Results Acceptable/Continue to Monitor. Elevated coliform bacteria levels during the summer continue to indicate the need to manage the grazing program to disperse the impacts on the water resource.

MONITORING ITEM 25B
Watershed Best Management Practices (BMPs)

Forestwide Goal
To comply with State requirements in accordance with the Clean Water Act for protection of the waters of the State of Washington through planning, application, and monitoring of Best Management Practices (BMPs).

Purpose of Monitoring
To ensure that Forest Plan standards and guidelines are being met during project implementation through application of appropriate Best Management Practices.

Standard
Forest Plan Standards and Guidelines for selecting and implementing Best Management Practices (see Chapter 4, Forest Plan).

Summarized Results
In 1994, timber sale and road construction project NEPA documents, contract provisions, and on-the-ground implementation were monitored using ocular observations to track the implementation and effectiveness of BMPs. Best Management Practices monitored included: erosion control measures on skid trails, streamcourse protection, revegetation of areas disturbed by harvest activities, protection of unstable lands, and limitations on the operating period of timber sale activities.

All of these projects had appropriate BMPs in place in the NEPA documents and all BMPs were implemented on the ground. At times, it was difficult to discern which contract provisions were being used to implement specific BMPs. Some BMPs, although 100% effective at the time of implementation, appeared to have lost some of their effectiveness due to subsequent factors. For example, as in FY93, the BMPs of revegetating road fill slopes were not functioning as effectively as when first installed due to the fact that the erosion control grasses had not fully occupied exposed soil surfaces. Similarly, in some cases surface drainage structures (waterbars/drain dips) had been partially breached by vehicle travel subsequent to the completion of the project.
On Smackout creek, a sandy road crossing fill was treated with slash to provide immediate protection of the new erosion control seeding and also to discourage cattle activity. This was a highly effective treatment and is being recommended elsewhere.
The Copper Butte fire area was closely evaluated for BMPs needed to minimize the effects of the fire and subsequent fire control activities. These were installed in a timely manner and appear to be effective.

Evaluation
Forest Standards and Guidelines designed to implement the State requirements in accordance with the Clean Water Act for protection of the waters of the State of Washington through planning, application, and monitoring of Best Management Practices (BMPs) are being met. As observed in FY93, although BMPs are being implemented and are effective at the time of implementation, some loss in BMP effectiveness is occurring after 2-3 years, especially for fillslope revegetation and surface drainage structures.

Recommended Action
Results Acceptable/Continue to Monitor. Since this is the second year that some loss in effectiveness of BMPs has been observed, additional monitoring of several projects that were implemented 2-3 years ago should be accomplished during FY95.

MONITORING ITEM 26
Riparian Areas

Forestwide Goal
Provide and manage riparian plant communities that maintain a high level of riparian dependent resources.

Purpose of Monitoring
To determine if Forest Plan standards and guidelines are being followed to ensure riparian area characteristics are maintained or improved through the implementation of projects, thereby protecting the riparian ecosystem.

Summarized Results
Riparian areas were monitored using ocular observations at the same time as the Best Management Practices (Monitoring Item 25B). Monitoring of timber sale areas near or adjacent to riparian areas showed that the riparian protection measures in the timber sale screening process are being implemented.

Evaluation
Overall, riparian area standards and guidelines are being met. Timber harvest activities did not appear to have any observable impact on riparian ecosystems, especially where harvesting in the riparian area was avoided due to implementation of the screening direction.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 27
Changes In Soil Productivity

Forestwide Goal
Soil productivity is maintained or enhanced over time. NFMA requires monitoring of changes on productivity of the land (36 CFR 219.12).

Purpose of Monitoring
To determine if the Forest is meeting standards and guidelines and to assess the effectiveness of soil management and conservation practices.

Standard
The total acreage of all detrimental soil conditions should not exceed 20 percent of the total acreage with the activity area including landings and system roads. Consider restoration treatments if detrimental conditions are about 20 percent or more of the activity area.

Summarized Results
Various harvest units across the forest were monitored to determine the percentage of detrimental soil conditions within each activity area. The following timber sales (TS) were monitored:

Colville District:

Hound TS-	Unit 4, 22 acres, 19% detrimental soil conditions
Rocky TS-	Unit 18, 93 acres, pre-harvest 1% detrimental soil conditions

Kettle Falls District:

Bailey TS-	Unit 3, 51 acres, 18% detrimental soil conditions
	Unit 18, 33 acres, 6% detrimental soil conditions

Newport District:

Squirrel Meadows	TS-Out of 12 units monitored, 5 exceeded the 20% detrimental soil condition standard. But when the total area of the sale is considered, only 21% is in a detrimental soil condition.

Evaluation
In each of the units monitored, the area in landings, skid trails and system roads made up a large percentage of the detrimental soil conditions within the activity area. In most cases the detrimental soil condition identified was compaction. There were other areas of displacement, puddling, and severely burned soils represented, but the percentage of the area was small. On the Newport District, season, soil type and harvest treatment appeared to affect the amount of soil compaction. Summer season operations on rocky outcrop complexes and sandy loams seemed to have increased compaction. In a similar vein, harvesting with processor harvesters (feller/bunchers) tended to result in more soil compaction than more traditional tree falling done with chainsaws.

Recommended Action
Results Acceptable/Continue to Monitor. Consistent with Forestwide Standards and Guidelines, restoration treatment with a winged subsoiler is recommended for temporary roads, landings, and skid trails within harvest activity areas where detrimental soil compaction has occurred. Prior to treating skidtrails within the interior of harvest units, a hydrologist or soil scientist should be consulted to ensure that the restoration treatment does not result in increased soil displacement or loss of soil productivity.

Current soil conditions should be assessed during the sale planning process to determine current condition and modify treatments to prevent further detrimental impacts during harvest. Further evaluation of the monitoring procedure is recommended to resolve field-level questions regarding the use of the transect method and to ensure that consistent monitoring methodology is utilized.

MONITORING ITEM 28
Transportation System Management

Forestwide Goal
To determine if total open road mileage meet objectives established in the Forest Plan.

Purpose of Monitoring
To measure the effectiveness of closing new roads and to calculate miles of open road.

Standard
The total miles of roads open to public travel should not exceed mileage listed on page 4-30 of the Forest Plan.

Summarized Results
Table 2.4 Road Mileage by Type and Year.

Road Maintenance	Forest Plan	FY 91	FY 92	FY 93	FY 94
Passenger Car	849	801	716	683	683
High Clearance	2500	2409	2350	2299	2286
Total	3349	3210	3066	2982	2969

Evaluation
Forest Plan standards are being met. Due to a significant decrease in the number of timber sales being sold, the number of constructed, reconstructed and closed road miles is decreasing. The reduction in the number of timber sales has reduced the number of miles of road maintained by timber purchasers resulting in increased road maintenance accomplishment through appropriate funding which is also declining. Resizing of the Forest transportation system will continue. Some roads are no longer maintained for passenger cars or are being closed to prevent further roadbed deterioration and resource damage, thus continuing the downward trend of the last three years of decreasing Forest access, especially for passenger cars

Recommended Action
Results Acceptable/Continue to Monitor. If future monitoring agrees that the downward trend in appropriated road maintenance funding is declining as the timber sale program is once again on the rise an adjustment in management direction is needed to elevate the resizing of roads on the Forest and use of alternate funding for road maintenance.

MONITORING ITEM 29
Insects and Disease Populations

Forestwide Goal
To prevent major losses to insects and disease pathogens.

Standard
To maintain insect and disease populations at endemic levels.

Summarized Results
Monitoring was based on acres of mortality. Concerns regarding insect and disease activity remain high on the Forest. Most projects include a forest health alternative that proposes treating high risk areas, and many projects are proposed because of insect

and disease activity. The two categories that are of highest concern are dwarf mistletoe in Douglas-fir and root diseases. These pathogens are very active on the Forest.

Defoliators: Spruce budworm activity has fallen off dramatically in 1993 due primarily to climatic factors. 5,300 acres were defoliated in 1993 as compared to 146,600 in 1992.

Bark Beetle/Root Disease: Activity from bark beetles in Douglas- fir and grand fir affected 1,500 acres in 1993. Mountain pine beetle infested 7,700 acres of lodgepole pine in 1993, up from 3,400 and 3,800 acres in 1991 and 92 respectively.

Dwarf Mistletoes: Mistletoe infections in Douglas-fir are of particular concern on the west half of the Forest.

Evaluation

Defoliators: The area entomologist cautions however that population reductions of spruce budworm this year does not mean epidemic, or near epidemic, populations will not return. Forest structure and composition is essentially unchanged, with a large proportion of the Forest still identified as high risk (P. Flanagan, 1995 personal communication).

Bark Beetle/Root Disease: This year's level of bark beetles in Douglas-fir and grand fir has been relatively constant over the last few years. In most instances on this Forest, bark beetle activity occurs in root disease centers. Forest structure and composition indicate high risk to losses from these agents in certain areas. Again, alternatives prioritizing treatment of these areas are included in most timber sale planning .

Mountain pine beetle activity in lodgepole pine is a future concern, due to expansive areas across the Forest created from burns in the 1920's and 30's. This concern was addressed in the recently completed CROP report. The focus is to treat these areas and break up areas of uniform susceptibility.

Dwarf Mistletoes: Stand structures and composition have developed that favor rapid spread of this agent. Silvicultural treatments focused at reducing mistletoe spread continue to be proposed. The other species of most concern across the Forest is western larch dwarf mistletoe. Mistletoe infections on other species appears to be of local concern, but not a widespread concern.

Recommended Actions
Results Acceptable/Continue to Monitor. Continue to focus timber harvest activities in areas that are high risk to insects and diseases. Monitor acres of high risk areas treated, or proposed for treatment in individual projects. Establish patterns of historical variation for each pest/pathogen category, and determine whether current activity is outside this range of variation. Continue monitoring spruce budworm populations through larval sampling.

MONITORING ITEM 30A
Heritage Resource Protection

Forestwide Goal
Protection of significant archaeological and historical properties by monitoring annually 5% of documented sites on the Forest.

Purpose of Monitoring
To ensure management prescriptions for these sites are being accomplished. To document instances of property destruction due to human-caused or natural deterioration.

Summarized Results
Approximately 35 previously-documented properties were visited to ascertain changing site conditions due to vandalism, natural forces, and project effects, and to determine the need for protection. Site documentation records were updated with the resulting data. All monitoring actions were performed by HRP specialists or technicians on all units and compiled by the Forest Archaeologist. Tabulation of monitoring results are contained within the Forest HRP files.

The number of properties monitored represents about 3% of the total number of sites recorded on the Forest. The monitoring goal is 5% of the total number of sites per year.

Evaluation
Monitoring results confirm the conclusions made by past monitoring efforts. Properties located within or adjacent to on-going or recently completed timber harvests areas are being vandalized in spite of being protected from direct harvest activities. Also, significant sites are being compromised by unmitigated natural deterioration. At the present rate (5% per year), documented properties would only be monitored every 20 years.

Other cultural properties monitored included those within areas receiving a fairly high level of public use (such as developed and dispersed campsites, along trails and roads, etc.). Sites within this category generally were found to have had noticeable levels of adverse change due to erosion, natural deterioration (of historic structures), and a certain amount of vandalism.

The varying quality of unit monitoring activities and reports indicates the need for more training and education to standardize results.

Recommended Action
Change or Clarify Management Practices. Monitoring priorities need to be focused on significant properties which are receiving a high level of public use and are undergoing adverse change. It is suggested that the Forest: 1) clarify accountability for monitoring; and 2) consider using public volunteers or partnerships to perform monitoring activities (this approach is already being investigated during FY95).

The inventory of 1100 Forest properties includes hundreds of unevaluated sites which we are required to manage as if they were significant, thus adding to our monitoring workload. The truly significant properties need to be sorted out from the hundreds of sites which do not offer educational or recreational potential. However, at this time we lack the larger historic contexts to evaluate the significance of many properties and make this selection. A suggested solution is to complete context studies for a number of important historic site themes on the Forest. Several theme studies are already in process but time and expenses need to be allocated to meet this need. Mining history context studies were completed on the Kettle Falls and Republic Ranger Districts during FY94. As documented in past monitoring reports, monitoring results confirm the need to complete individual site management plans for each significant heritage property.

MONITORING ITEM 30B
Heritage Resource Compliance Activities

Forest-Wide Goal
Monitor all project documents for completion of heritage resource management compliance requirement.

Purpose of Monitoring
Ensure all compliance mandates are being met in a consistent and timely manner.

Summarized Results
Monitoring was performed by tracking of all Forest project compliance activities through the use of established program procedures, documented on standardized forms. All monitoring actions were performed by the Forest Archaeologist. See Forest HRP file for monitoring documents.

Compliance-generated archaeological surveys were conducted on about 20,000 acres; 110 new cultural properties were documented.

Evaluation
Compliance flowline mechanisms which have been established should allow for the timely completion of all NEPA and NHPA mandates for planned project undertakings. The Forest has improved its ability in allowing for sufficient lead time to complete compliance activities. There is still concern about the level of training for District archaeologists/Cultural Resource Technicians who perform this work.

Compliance fieldwork and reporting varied in quality but compliance standards are being met.

Recommended Action
Results Acceptable/Continue to Monitor. As documented in last year's report, it is recommended that the Forest investigate alternatives for improving compliance. In addition, it is recommended that the Forest Archaeologist prepare a Heritage Program Management Plan to clarify program procedures and compliance actions and conduct additional training of Cultural Resource Technicians.

MONITORING ITEM 31
Comparison Of Actual And Planned Implementation Costs

A comparison of actual and planned costs was not performed for FY94. The 1992 monitoring report contained a recommendation to evaluate further by incorporating a unit cost analysis into the Five-year Forest Plan review which resulted in the determination that revision of the Forest Plan would not be considered until completion of the Eastside EIS.

MONITORING ITEM 32
Economic Effects Of Plan Implementation

Forestwide Goal
To produce Forest goods and services in the most cost-efficient way consistent with providing net public benefits.

Purpose of Monitoring
To note significant changes in payments to counties and returns to the U.S. Treasury from Forest Plan projections in dollars.

Standard
Variations of more than plus or minus 15% will be explained or reconciled.

Summarized Results
Returns to Government
The Forest Plan estimated that under full implementation of the Plan (including the harvest of 123.4 MMBF of allowable sale quantity), total revenue or total returns to government would be $12.4 million (1982 dollars). Actual returns to government for FY 1994 was $4.5 million (1982 dollars).

Payments to States
The Forest Plan also estimated that full implementation of the Plan would produce $3.1 million in payments to states (1982 dollars). Actual payments to states during fiscal year 1994 were $1.1 million (1982 dollars) due to less than full implementation of the Forest Plan. Payments to states is approximately 25 percent of the revenues received from timber, recreation, minerals, range, and land stewardship programs.

Evaluation
Forest Plan estimates of revenues and payments to states will not be realized until timber revenue per MBF is $99.92 (1982 dollars) and total timber harvest is 123.4 MMBF, and the revenue from all other resources is $70,000 (1982 dollars). According to the planning models used during the planning process, the returns to government related to timber would be roughly $12.33 million (1982 dollars), which reflects an average revenue per MBF of $99.92. Revenue values used in the Forest Planning model, FORPLAN, were developed using 1977 to 1982 average values for the Forest, but using Regional Office guidelines and formulas.

However, the actual average revenue from timber harvested on the Forest from 1977 to 1982 was $83.7 per MBF (1982 dollars). The expectation that timber values would continue to increase at 1977 to 1982 rates did not occur until FY94. For FY94, the revenue per MBF from timber harvested was $106.57 (1982 dollars or $163.77 in 1994 dollars).

Recommended Action
Further Evaluation/Determine Action. Due to increasing demands for eastside timber, stumpage bidding prices have increased dramatically during FY94. Recent stumpage bidding prices are averaging close to $300 per MBF (1994 dollars). It now appears that stumpage values will surpass the values used in FORPLAN. Even so, harvest volumes in the near future are not likely to reflect full Plan implementation. Therefore, returns to government and payments to states as predicted by the Forest Plan still may not materialize.

MONITORING ITEM 33
Coordination With Adjacent Landowners

Forestwide Goal
Determine if effects of Forest activities are affecting adjacent landowners.

Purpose of Monitoring
Meet the requirements of the National Forest Management Act by ensuring the effects of National Forest management on land, resources, and communities adjacent to the National Forest are considered.

Standards
The analysis of proposed Forest activities should include consideration of effects on adjacent landowners.

Summarized Results
This item is required as part of NEPA compliance for any new project. Districts and the Supervisor's Office maintains mailing lists which are updated periodically. Districts review county assessor records to compile lists of adjacent landowners on projects.

Evaluation
Requirements are being met.

Recommended Action
Results Acceptable/Continue to Monitor.

MONITORING ITEM 34
Planning Modeling Assumptions-Primarily FORPLAN

No monitoring of modeling assumptions was performed during FY 1994.

MONITORING ITEM 35
Minerals

Forestwide Goal
Provide opportunities for mineral exploration and development, while integrating those activities with the planning and management of other forest resources, protecting surface resource values and meeting area objectives.

Purpose of Monitoring
To determine if the Forest is meeting standards and guidelines as provided in the Forest Plan.

Standards
Forest Plan Standards and Guidelines for mineral exploration and development.

Summarized Results
In addition to district monitoring reviews, the Forest mining geologist visited 10 sites on the forest for the purpose of monitoring operation and reclamation compliance. Those reviews and District reports indicate that 100 percent of the land disturbed by mineral operations has been reclaimed as prescribed within 2 years.

A complete review of District mineral files shows that 36 CFR 228(A) time frames were met on 19 of 22 processed cases or 86 percent of the time. Wildfire emergency caused the delay of one of the cases for which the timeframe was not met.

Mitigation measures were generally accepted by mineral proponents. One case of non-compliance involving the unauthorized construction of a short length of road required administrative action. A letter of non-compliance was issued and the operator was

required to reclaim part of the disturbance and post a bond for the remainder. No administrative appeals were received for minerals projects during FY 1994.

Evaluation
The results of minerals monitoring for 1994 show that all but one threshold criteria were successfully met. We met response time frames in 86 percent of 36 CFR 228(A) cases instead of the threshold 90 percent. This downfall resulted from emergency wildfire priorities. While minerals is not specifically noted as an ICO in the Forest Plan, this monitoring item is supportive of issues involving the management of amenity resources and communities economics.

Recommended Action Results Acceptable/Continue to Monitor.

MONITORING ITEM 36
Community Effects

Forestwide Goal
Produce Forest goods and services in the most cost efficient way consistent with providing net public benefits.

Purpose of Monitoring
To track various economic characteristics and report any noticeable relationships between the economic health of the surrounding economies and Forest Plan implementation.

Standards
Variations beyond plus or minus 15% will be explained or resolved.

Summarized Results
Economic characteristics of the area most influenced by the Colville National Forest, specifically Ferry, Stevens, and Pend Oreille counties were included in the monitoring. Spokane and King County and Washington State data was included for comparison purposes. Spokane was included because it is the closest metropolitan area. King County was included because of its considerable influence on the state economy.

Table 2.5 displays annual calendar year averages of population, labor force, total employment, unemployment rate, median income and per capita income. Table 2.6 displays annual calendar year averages of total covered employment by industry.

Table 2.5 Socioeconomic and Demographic Characteristics for Selected Counties and State - Annual Averages by Calendar Year.

County	Ferry	Pend Oreille	Stevens	Spokane	King	State
Population 1/						
1985	6,000	8,900	30,100	354,300	1,346,400	4,384,100
1990	6,295	8,915	30,948	361,364	1,507,319	4,866,692
1993	6,900	10,100	33,400	383,600	1,587,700	5,240,900
1994	7,000	10,500	34,500	39,200	1,599,500	5,334,400
Labor Force 2/						
1985	2,570	3,670	11,110	159,000	722,800	2,091,000
1990	3,321	3,299	12,229	172,217	895,817	2,517,008
1993	3,213	3,703	12,957	186,150	901,408	2,646,200
1994	2,799	3,778	16,114	189,320	913,150	2,729,700
Employment 2/						
1985	2,210	3,080	9,580	146,400	676,900	1,921,000
1990	3,008	2,831	11,038	162,217	863,175	2,383,358
1993	2,819	3,233	11,517	174,158	844,483	2,443,075
1994	2,459	3,356	14,719	179,700	865,250	2,559,010
Unemployment Rate 2/						
1985	14.0	16.1	13.8	7.9	6.4	8.1
1990	9.4	14.1	9.7	5.8	3.7	5.3
1993	12.3	12.7	11.1	6.5	6.3	7.7
1994	12.1	11.2	8.7	5.1	5.2	6.3
Income (1994 Dollars) Median Family 3/						
1985	23,408	20,792	26,162	29,605	40,345	35,388
1990	31,228	25,573	28,527	30,384	42,762	36,658
1991	31,353	25,223	28,463	30,489	43,262	36,943
1992	29,345	24,938	28,475	31,628	45,057	38,369
Per Capita 1/						
1985	11,806	12,532	13,514	16,927	23,940	19,378
1990	13,558	14,643	14,439	18,248	26,638	21,086
1991	13,410	14,872	14,523	18,209	26,829	21,087
1992	14,109	14,999	15,125	18,918	29,073	22,289

Source:

1/ Washington State Office of Financial Management, "Population Trends for Washington State." 1989-1994. Washington State Employment Security Department, "Annual Demographic Information," 1989-1994.

2/ Employment includes agricultural and nonagricultural. Source is monthly Washington State Employment Security "Labor Market" publications, 1989-1994. All employment related data is from revised reports unless otherwise noted.

3/ Washington State Office of Financial Management, "Population Trends for Washington State", 1989-1994.

4/ Washington State Employment Security Office, "Annual Demographic Information", 1988-1991.

Table 2.6 Annual Average Covered Employment by Industry and County.

Industry / County	Agriculture Forestry & Fishing	Mining	Const.	Manufact.	Transport. & Public Utilities	Trade	Finance Insurance Real Estate	Services	Gov't	Other	Total
FERRY											
1984	**	**	23	258	16	172	15	114	419	106	1,123
1990	29	367	0	229	13	273	22	227	595	43	1,798
1992	22	327	23	227	30	303	na	186	682	25	1,825
1993	6	240	15	190	5	250	15	193	730	159	1,801
PEND OREILLE											
1984	15	na	50	936	25	220	30	214	667	17	2,174
1990	23	0	76	394	75	310	44	160	760	14	1,857
1992	25	14	76	386	65	325	60	177	904		2,032
1993	15	0	73	136	20	322	41	190	961	409	2,164
STEVENS											
1984	48	184	210	1,979	161	1,241	152	1,194	1,598	na	6,767
1990	140	124	258	1,945	325	1,314	190	1,410	1,986	0	7,691
1992	138	142	160	2,094	251	1,381	200	1,569	2,226		8,161
1993	99	0	209	1,512	219	1,311	169	1,710	2,400	1,020	8,648
SPOKANE											
1984	472	245	6,311	17,464	5,784	35,764	7,571	29,763	20,937	na	124,311
1990	1,001	346	6,831	19,344	6,912	40,321	8,617	38,388	24,530	0	146,289
1992	1,162	270	8,134	18,902	7,068	41,358	8,875	43,675	26,283		155,727
1993	1,282	234	9,057	17,689	5,644	42,184	9,512	44,252	26,830	3,001	159,685
KING											
1984	na	na	na	na	na	na	na	na	na	na	0
1990	9,119	393	48,488	171,349	60,481	222,313	65,796	228,118	117,303	0	923,360
1992	9,232	412	46,528	161,362	60,842	220,720	64,550	236,752	125,668		926,066
1993	8,475	366	44,114	149,272	60,068	222,003	65,216	250,095	127,608	123	927,340
STATE											
1984	na	na	na	na	na	na	na	na	na		0
1990	82,480	3,671	112,400	365,954	105,879	511,904	114,092	471,993	375,145		2,143,518
1992	83,765	3,329	112,788	342,768	106,851	527,051	116,815	511,417	400,881	4,139	2,209,804
1993	86,048	3,166	112,559	336,422	107,393	533,185	119,393	541,630	407,449	0	2,247,245

Notes:

** Not reported to avoid disclosure of information about single (or a few) firms.

na Not available.

Covered employment is recorded for those firms etc. whose employees are covered by the Washington Employment Security Act (does not include self employed). .

Source:

1) Washington State Employment Security Department, "Employment and Payrolls in Washington State by County and Industry", Annual Averages and Quarterly Reports, 1989-1994.

Data was provided for 1984 because the economic data reported in the EIS is for 1985. Implementation of the Forest Plan began in 1989, but assuming at least a one year lag between implementation and the time that impacts, if any, were first noticed, 1990 data was reported to provide comparisons over time. The most current information was provided whenever possible.

Evaluation

Table 2.5 shows that for the tri-county area, Pend Oreille county experienced the highest rates of growth in population between 1993 and 1994, while Ferry county had the lowest growth rate. During the same period Stevens county experienced the greatest increase in labor force, 24 percent, employment, 28 percent, and the lowest unemployment, 8.7 percent. Of the three counties, Ferry county continues to experienced the poorest gains with respect to jobs. Ferry county's employment decreased by 13 percent. However, their unemployment rate decreased slightly to 12.1 percent.

Table 2.5 also shows median household (the point at which half of all households have more income and half have less) and per capita (average per person) income information. Between 1991 and 1992, Ferry county had the greatest increase in Per capita income, 5 percent, while Pend Oreille had the lowest, 1 percent. The average per capita income for the tri-county area for 1992 was $14,744...$7,500 less than the state average. Out of 39 counties, the rankings of Stevens, Pend Oreille, and Ferry counties with respect to per capita income are 37th, 38th, and 39th, respectively. Spokane county ranked 19th and King county ranked 1st.

Median incomes for Pend Oreille and Stevens counties remained relatively unchanged from 1991 to 1992. Ferry county experienced an decrease in median income of 6 percent. The average median income for the tri-county area is almost $11,000 less than the state average.

Table 2.6 displays annual average covered employment by industry and by county for the tri-county area. For all three counties, the services and government sectors were the only sectors that did not lose jobs. The government sector produced the greatest number of jobs in all three counties during 1993. Individually, the Stevens county construction sector was the only other sector in all three counties that also gained jobs. Employment in the Stevens county construction sector went up by 31 percent. For the tri-county area as a whole, the manufacturing sector, which includes logging and lumber mills, lost the most number of jobs, 869, during 1993. The second most hardest hit sector was mining. In Stevens and Pend Oreille counties, mining employment dropped to zero.

Recommended Action
Results Acceptable/Continue to Monitor.

CHAPTER 3 ACCOMPLISHMENTS

Table 3.1 shows comparisons of actual verses planned accomplishments for important Forest-wide outputs, environmental effects, activities and costs.

Table 3.1 Outputs, Environmental Effects, Activities And Costs: Planned vs. Actual.

Outputs, Effects, Activities and Costs	Unit of Measure	Forest Plan Ann Avg	FY 1989	FY1990	FY1991	FY1992	FY1993	FY1994
Developed Recreation Use	MRVD	365	357	341	398	406	409	na
Non-Wilderness Dispersed Rec (Includes WFUDs)								
Roaded	MRVD	725	782	282	609	910	836	na
Unroaded	MRVD	119	194	68	169	196	219	na
Wilderness Use	MRVD	2.4	5.9	2.8	2.9	1.2	1.2	1.2
Trail Construction/Reconstruction	Miles	26	23	22	25	7	12	7.5
Developed Site Construction/Reconstruction	PAOT	354	240	220	270	60	155	130
Wildlife Habitat Improvement								
Acres	Acres	1,925	496	1,147	2,707	3,110	641	na
Structures	Structures	1,140	38	703	520	727	186	na
Fish Habitat Improvement								
Acres	Acres	11	7	125	36	39	16	0
Structures	Structures	84	30	170	116	124	20	45
Range-Permitted Grazing	AUMs	35	35.1	34.8	33.9	33.3	30.5	30.5
Range-Structural Improvements/Fences	Miles	5	10	6	9	10	10	6.25
Range-Structural Improvements/Water Developments	Number	10	5	12	10	14	14	6
Range-Nonstructural Improvements	Acres	1,127	300	235	556	160	34	175
Timber-Allowable Sale Quantity (offered for sale) 1/	MMBF	123.4	121	127	96	26	13.5	45.1
Timber Harvested	MMBF	na	135.0	95.0	114.0	82.0	72.2	41.4
Fuelwood 1/	M Cords	17.9	12.8	12.6	6.9	7.8	3.0	10
Reforestation: 2/								
Planted	M Acres	4.2	4.0	5.2	5.0	4.3	5.2	4.8
Natural	M Acres	2.8	0.1	0.7	0.3	1.7	0.8	2.4
Timber Stand Improvement	M Acres	2.7	1.4	1.7	2.2	3.3	2.6	1.9
Improved Watershed Condition	Acres	12	23	30	15	20	23	25

na...not available
"RVDs" denotes "Recreation Visitor Days"; "WFUDs denotes "Wildlife & Fish Users Days"; "AUMs" denotes "Animal Unit Months"; "BTUs" denotes "British Thermal Unit".
NOTE: Recreation use for FY 1990 was estimated for FY 1991, the new system produced usage data that was known to be invalid using a new sampling and recording system. Therefore, recreation use for FY 1991 was estimated based on past trends. This produced RVD and WFUD counts and subsequent employment and income impact estimates, which can not be compared to previous years.

Table 3.1 Continued

Outputs, Effects, Activities and Costs	Unit of Measure	Forest Plan Ann Avg	FY 1989	FY1990	FY1991	FY1992	FY1993	FY1994
Minerals 3/	Operating Plans	150	74	76	69	50	74	60
Energy Minerals 4/	Billion BTUs	0	0.013	0	0	0	0	0
Non-Energy Minerals (1982 dollars) 4/	MM$	4.6	0.0	3.2	7.5	2.7	4.5	0.8
Arterial and Collector Road Reconstruction	Miles	10	5	4.3	5	3	16	0
Bridges	Structures	1	0	1	0	0	1	0
Timber Purchaser Road Construction/Reconstruction	Miles	98	94	119	79	22	108	5.87
Roads Suitable for Public Use 5/								
Passenger Car (current 849)	Miles	849	899	866	789	716	683	683
High Clearance Vehicle Only (current 2500)	Miles	2,500	2,528	2,671	2,407	2,350	2,299	2,286
Roads Closed to Public Use (current 396) 10/	Miles	1,126	339	360	736	930	1,024	518
Total Forest Road (current 3745)	Miles	3,745	3,938	3,898	3,941	3,996	4,006	4,016
Total National Forest Budget (1982 Dollars) 6/	MM$	17.5	11.3	11.6	13.3	13.6	12.6	11.2
Returns to Government (1982 Dollars)	MM$	12.4	9.2	6.3	7.4	6.3	6.0	4.5
Change in Jobs 7/	Change In Number	578	769	88	482	280	156	(757)
Change in Income (1982 Dollars) 7/	Change In MM$	8.8	11.5	1.9	7.2	3.3	1.4	(10.3)
Payments to States (1982 dollars) 8/	MM$	3.1	1.9	1.4	1.7	1.6	1.4	1.1
Acres Harvested by Prescription 9/								
Clearcut	M Acres	4.6	3.6	2.7	3.0	2.6	2.1	1.5
Shelterwood	M Acres	2.3	2.6	1.6	1.8	1.0	1.8	1.1
Uneven-aged Management	M Acres	1.7	0.0	0.1	0.8	0.6	0.3	0.4

FOOTNOTES:

1/ Figure for the plan represents estimate of supply available. Does not represent amount demanded or collected.

2/ Acres of reforestation also includes natural regeneration that occurs after scarification of site by timber sale operators during logging and subsequent slash disposal.

3/ Includes operating plans, Notice of Intent, prospecting permits, material sales, free-use permits, and leases that involve locatable, leasable, and salable minerals.

4/ These figures are relative values based upon minerals accessibility and are not intended to be accurate estimates of mineral production.

5/ The days available for public use would vary even though the miles do not.

6/ Does not include budget for Job Corps Center.

7/ Changes in number of jobs are presented as change from the BASE scenario to the first decade of PLAN implementation or to the current fiscal year.

8/ Does NOT include portion of Kaniksu N.F. admin by Idaho Panhandle N.F. that is Washington State.

9/ Does not include the Final Removal cut of shelterwood prescriptions or the overstory removal on Remove Now and Remove Next condition classes.

10/ 3745 miles is a correction of a typing error which occurred in the Plan. The mileage stated in the Plan is 4745.

CHAPTER 4 FINANCIAL REPORT

This section of the Monitoring and Evaluation report describes financial characteristics for the Colville National Forest for fiscal year 1994. This section includes a description of the sources and uses of Forest's funds and a comparison of the proposed Forest Plan budget (described in the Environmental Impact Statement) to actual fiscal year expenditures.

Table 4.1a presents the sources and uses of funds, for each program, by the Forest for FY94. An annual summary (FY1989-1994) of the same information is provided in Table 4.1b.

Table 4.1a Sources and Uses of Funds for Fiscal Year 1994 (1994 Dollars), Colville National Forest.

	Program							
	Timber 3/	Recreation	Wildlife	Water & Soil	Minerals	Range	Land Stewardship	Total 2/
Revenue 1/								
Regular Program	6,780,179	94,654	-	-	343	44,381	7,257	6,926,814
Reimb./Coop Work								-
Operations/Maintenance Costs	5,721,670	644,344	271,401	270,899	84,845	344,734	535,103	7,872,996
Allocation of Capital Improvements								
Structural Imp	-	290,072	128,033	-	-	87,795	-	505,900
Nonstructural Imp	-	-	80,858	-	-	3,064	-	83,922
Roads	536,973	1,341,598	-	-	-	-	64,741	1,943,312
Trails	-	70,405	-	-	-	-	-	70,405
Buildings & Facilities	22,596	1,108,902	-	-	-	-	-	1,131,498
Other Imp	-	-	-	-	-	-	-	-
Total Improvements	559,569	2,810,977	208,891	-	-	90,859	64,741	3,735,037
Total Oper,Maint,Imp	6,281,239	3,455,321	480,292	270,899	84,845	435,593	599,844	11,608,033
General Administration 4/	1,703,346	453,384	86,340	43,827	13,586	77,135	106,498	2,742,247
Net Cash Flow	(1,204,406)	(3,814,051)	(566,632)	(314,726)	(98,088)	(468,347)	(699,085)	(7,423,466)
Payments To States	1,644,220	23,664	-	-	86	11,095	1,814	1,680,879

1/ Revenues also include monies from special-use permits.
2/ Total Forest general administration and cash flows are greater than the sum of the individual program general administration costs and cash flows. General administration costs which could not be allocated to the various resource programs were added to the Forest Total.
3/ All timber data is from TSPIRS.

NOTE:

a) TSPIRS doesn't include the cost of Law Enforcement or Land Management Planning, so it is not included above.
b) 25% fund is based on regular collection.

Table 4.1b Summary of Annual Sources and Uses of Funds (1994 dollars).

	Program Level							
	Timber	Recreation	Wildlife	Water & Soil	Minerals	Range	Land Stewardship	Total
Revenue								
1989	13,962,396	95,587	14,196	0	2,157	46,814	5,993	14,127,143
1990	9,511,947	77,022	3,976	0	129	49,672	7,378	9,650,124
1991	11,266,353	80,853	0	0	130	52,374	9,149	11,408,858
1992	9,797,031	90,934	0	0	152	48,163	4,663	9,940,943
1993	9,026,300	102,593	0	0	226	43,509	7,122	9,179,750
1994	6,780,179	94,654	0	0	343	44,381	7,257	6,926,814
Operations/Maintenance Costs								
1989	6,637,552	690,248	247,771	86,399	73,082	193,747	699,840	8,628,639
1990	5,395,879	693,077	288,082	26,180	89,040	204,456	489,191	7,185,905
1991	6,568,825	691,038	252,651	111,007	100,068	213,586	498,221	8,435,395
1992	7,447,729	689,777	228,005	51,350	95,970	263,637	649,551	9,426,019
1993	9,128,696	798,441	351,247	108,177	65,830	314,082	599,837	11,366,309
1994	5,721,670	644,344	271,401	270,899	84,845	344,734	535,103	7,872,996
Capital Improvements								
1989	628,367	416,691	250,514	39,224	2,133	127,613	1,536	1,466,079
1990	413,924	461,833	368,629	50,294	926	51,709	1,160	1,348,475
1991	762,053	520,927	302,268	45,387	391	43,945	86,792	1,761,763
1992	664,636	453,156	211,704	28,770	104	59,523	79,476	1,497,368
1993	606,896	2,206,279	159,272	59,389	3,473	90,133	124,648	3,250,089
1994	559,569	2,810,977	208,891	0	0	90,859	64,741	3,735,037
General Administration								
1989	1,352,341	168,631	78,413	19,201	11,455	49,304	104,700	2,201,254
1990	1,545,258	163,958	90,552	10,795	12,883	37,500	69,836	2,308,142
1991	1,574,422	337,511	78,054	3,361	12,485	35,232	52,464	2,324,488
1992	1,765,668	231,227	64,935	6,858	10,122	42,037	50,608	2,305,566
1993	1,480,997	312,927	68,577	15,447	8,731	53,330	72,686	2,157,377
1994	1,703,346	453,384	86,340	43,827	13,586	77,135	106,498	2,742,247
Net Cash Flow								
1989	5,344,136	(1,179,983)	(576,698)	(144,824)	(84,513)	(323,850)	(800,082)	1,816,976
1990	2,156,886	(1,241,846)	(747,263)	(87,269)	(102,720)	(243,993)	(553,203)	(1,196,768)
1991	2,361,053	(1,468,622)	(632,974)	(159,754)	(112,814)	(240,389)	(628,328)	(1,112,787)
1992	(81,003)	(1,283,227)	(504,644)	(86,978)	(106,044)	(317,033)	(774,972)	(3,288,010)
1993	(2,190,289)	(3,215,054)	(579,095)	(183,013)	(77,808)	(414,036)	(790,049)	(7,594,025)
1994	(1,204,406)	(3,814,051)	(566,632)	(314,726)	(98,088)	(468,347)	(699,085)	(7,423,466)
Payments to States								
1989	3,138,107	23,897	0	0	628	11,703	1,499	3,175,835
1990	2,340,799	19,255	0	0	0	12,418	1,745	2,374,218
1991	2,655,635	20,213	0	0	32	13,093	2,287	2,691,261
1992	2,428,974	22,734	0	0	38	12,041	1,166	2,464,952
1993	2,147,761	25,648	0	0	56	10,877	1,780	2,186,123
1994	1,644,220	23,664	0	0	86	11,095	1,814	1,680,879

The presentation format of the above financial information has changed slightly from that of previous years. Because payments to states is not a cost, just an income redistribution, it is no longer part of the net cash flow calculation.

Operations/maintenance costs, capital improvements, and general administration, are subtracted from the revenue to give the net gain or loss. The net cash flow for the Forest for FY 1994 was a negative 7.4 million dollars.

Total Forest revenue decreased by 25 percent from FY 1993 to FY 1994. The decrease in Forest revenue was mostly due to the decrease in timber harvested during FY 1994. Timber harvested during FY 1994 was down 30.8 MMBF, or 43 percent, from the previous year (see Table 3.1 in Chapter 3 Accomplishments).

Timber revenues reflect current commercial market prices. Revenues from the recreation, wildlife and fish, and range programs are collected from user and permit fees which are determined by policy and not by the market. User and permit fees such as these do not cover the full costs of program management. The revenues collected from the water and soil, minerals, and land stewardship programs are also not intended to cover costs.

FY 1991 was the last year the timber program resulted in a net gain ($2.4 million) before payments to states. During FY 1994, the net gain for the timber program was 1.2 million dollars, down from a net loss of 2.2 million dollars for FY 1993 (for more detail, see the TSPIRS reports).

Table 4.2 shows a comparison of the projected FY 1994 budget, the actual FY 1994 budget and the projected Forest Plan budget. Excluding General Administration, the range, water/soil/air, and wilderness programs were funded at or above projected levels during FY 1994. Funding for the recreation and lands programs was just under 1994 projections. The cumulative expenditures from 1989 to 1994 for all programs is 42 percent of the Forest Plan 10-year total. This percentage would have been 60 percent if all programs were funded at Forest Plan levels since Plan implementation. Given the budgets of the last 6 years, not one program seems to be within the possibility of meeting Forest Plan direction, with the exception of law enforcement.

However, the above conclusion can only truly be valid if unit or activity costs (cost per unit of output, e.g., harvest administration cost per MBF harvested) in the Forest Plan were estimated accurately. If the actual cost of doing business on the Colville National Forest were much different than those assumed by the Forest Plan, then it would not be possible to make any strong conclusions regarding Plan implementation based solely on funding levels.

Table 4.2 Comparison of Forest Plan Budget With Fiscal Year 1994 Projected and Actual. Expenditures Are Summarized By Program Level (1994 Dollars).

Program Area	Forest Plan Ten Year Total	Projected FY 94 Budget	Actual FY 94 Budget	Actual as Percent of Projected	Cumulative for Decade	Cumulative for Decade as Percent of Program 10 Yr Plan Level	Cumulative for Decade as Contribution to 10 Yr Plan Level
Timber	126,962	10,364	7,103	69%	56,108	44%	20.9%
Insect & Disease	0	0	5	na	8	na	0.0%
Facilities	49,598	3,636	2,201	61%	14,675	30%	5.5%
General Administration	26,001	2,399	3,324	139%	14,683	56%	5.5%
Fire Protection	17,528	1,572	1,143	73%	7,822	45%	2.9%
Wildlife & Fish	16,237	809	490	61%	3,192	20%	1.2%
Recreation	11,545	1,380	1,292	94%	6,414	56%	2.4%
Lands	7,793	623	613	98%	4,089	52%	1.5%
Range	5,878	435	444	102%	2,006	34%	0.7%
Water/Soil/Air	4,424	154	278	181%	1,140	26%	0.4%
Minerals	2,494	181	88	49%	520	21%	0.2%
Wilderness	272	30	31	102%	136	50%	0.1%
Law Enforcement	200	249	114	46%	1,261	631%	0.5%
Planning 1/	na	0	52	na	1,396	na	0.5%
Human Resources 2/	na	na	na	na	na	na	na
Forest Total 1994 $	268,931	21,832	17,175	79%	113,451	42%	42%
Forest Total 1982 $	175,006	14,207	11,177	79%	73,828	42%	42%

1/ The Forest Plan budget included Planning expenditures with all other programs.
2/ Human resources programs have been excluded from this data base because funding is provided through agencies other than US Department of Agriculture.

CHAPTER 5 COOPERATION WITH OTHERS

Monitoring Item	Cooperators
Deer and Elk Habitat and Population	WA Dept. of Wildlife
Management Indicator Species	WA Dept. of Wildlife
Threatened, Endangered and Sensitive Species	WA Natural Heritage Program WA Dept. of Wildlife U.S. Fish and Wildlife Service
Insects and Disease Populations	Regional Office, USFS
Heritage Resources	State Historic Preservation Office
Fisheries: I-3	Trout Unlimited: Spokane Falls Chapter

CHAPTER 6 AMENDMENTS AND FOREST PLAN ADJUSTMENTS

There were no new Forest Plan Amendments in fiscal year 1994. The following amendments have been issued for the Colville Forest Plan since implementation began in February 1989:

Amendment	Date	Nature of Amendment
1	11/30/90	Clarifies Forestwide standards and guidelines for wild and scenic rivers, including the Kettle River or any other streams found to be eligible for inclusion in the wild and scenic river system.
2	1/8/92	A site-specific modification to open road densities in the Golden Harvest Creek area on the Republic Ranger District, developed in response to concerns raised by recreationists.
3	9/24/92	A site-specific adjustment of the Management Area 1 boundaries in the Gatorson Planning Area on the Kettle Falls Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.
4	12/7/92	A site-specific adjustment of the Management Area 1 boundaries in the Lost Tiger/Granite Planning Area on the Sullivan Lake Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.
5	1/28/93	A site-specific adjustment of the Management Area 1 boundaries in the Kelard Planning Area on the Republic Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.
6	5/26/94	THIS AMENDMENT WAS WITHDRAWN when the implementing action, the Deer timber sale EA, was withdrawn on this date. A site-specific adjustment of the Management Area 1 boundaries in the Deer Planning Area on the Kettle Falls Ranger District, was designed to locate the MA-1 in more suitable habitat to better meet the needs of old growth dependent species.
RF1	5/27/94	Regional Forester's Forest Plan Amendment Number 1 amends Forest Plans on eastside forests by

		changing standards to be applied to timber sales. This amendment is titled Continuation of the Interim Management Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales; also known as "eastside screening".
7	6/17/94	A site-specific adjustment of the Management Area 1 boundaries in the Whiteman Planning Area on the Sullivan Lake Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.

Based on the conditions of the Forest as reflected by the annual Monitoring Reports, the demands of the public, and the fact that new information will soon become available once the Interior Columbia Basin Ecosystem Management Project is completed, the Forest Supervisor determined that a Forest Plan revision is not appropriate or needed at this time. This determination will be reviewed when the Eastside EIS is complete and the Record of Decision issued.