

# **Colville National Forest Forest Plan Monitoring and Evaluation Report: 1996**

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) during Fiscal Year 1996 (10/1/95 - 9/30/96) 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

<b>CHAPTER 1</b>	<b>EXECUTIVE SUMMARY</b>	<b>5</b>
	<b>SUMMARY OF MONITORING RESULTS AND EVALUATION</b>	<b>5</b>
	<b>SUMMARY OF RECOMMENDED ACTIONS</b>	<b>11</b>
<b>CHAPTER 2</b>	<b>MONITORING RESULTS AND EVALUATION</b>	<b>13</b>
ITEM 1	COMPLIANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT	13
ITEM 2	STANDARDS AND GUIDELINES	14
ITEM 3	RECREATION USER EXPERIENCE AND PHYSICAL SETTING	15
ITEM 4	RECREATION TRAIL USE	19
ITEM 5	SEMI-PRIMITIVE SETTING	22
ITEM 6	OFF-ROAD VEHICLE USE	24
ITEM 7	VISUAL QUALITY OBJECTIVES	26
ITEM 8	WILDERNESS	27
ITEM 9	WILD AND SCENIC RIVERS	28
ITEM 10	DEER AND ELK WINTER RANGE	29
ITEM 11	PRIMARY CAVITY NESTERS	30
ITEM 12	OLD GROWTH DEPENDENT SPECIES	32
ITEM 13	MANAGEMENT INDICATOR SPECIES	33
ITEM 14	THREATENED, ENDANGERED AND SENSITIVE SPECIES	34
ITEM 15	FISHERIES	36
ITEM 16	RANGE IMPROVEMENTS	40
ITEM 17	LIVESTOCK PERMITTED	41
ITEM 18	UTILIZATION OF FORAGE	42
ITEM 19	CONDITION OF RIPARIAN AND RANGE RESOURCES	43
ITEM 20	RE STOCKING OF LANDS	44
ITEM 21	TIMBER YIELDS	46
ITEM 22	LAND SUITABILITY	46
ITEM 23	SIZE AND DISPERSAL OF HARVEST UNITS	47
ITEM 24	SILVICULTURAL PRACTICES BY MANAGEMENT AREA	47
ITEM 25A	WATER QUALITY, INCLUDING CUMULATIVE EFFECTS	48
ITEM 25B	WATERSHED BEST MANAGEMENT PRACTICES (BMPs)	50
ITEM 26	RIPARIAN AREAS	51
ITEM 27	CHANGES IN SOIL PRODUCTIVITY	51
ITEM 28	TRANSPORTATION SYSTEM MANAGEMENT	53
ITEM 29	INSECTS AND DISEASE POPULATIONS	54
ITEM 30A	HERITAGE RESOURCE PROTECTION	55
ITEM 30B	HERITAGE RESOURCE COMPLIANCE ACTIVITIES	56
ITEM 31	COMPARISON OF ACTUAL AND PLANNED IMPLEMENTATION COSTS	58
ITEM 32	ECONOMIC EFFECTS OF PLAN IMPLEMENTATION	58
ITEM 33	COORDINATION WITH ADJACENT LANDOWNERS	59
ITEM 34	PLANNING MODELING ASSUMPTIONS-PRIMARILY FORPLAN	59
ITEM 35	MINERALS	59
ITEM 36	COMMUNITY EFFECTS	61

**CHAPTER 3 ACCOMPLISHMENTS 59**

---

**CHAPTER 4 FINANCIAL REPORT 62**

---

**CHAPTER 5 COOPERATION WITH OTHERS 66**

---

**CHAPTER 6 AMENDMENTS AND FOREST PLAN ADJUSTMENTS 67**

---

## CHAPTER 1 EXECUTIVE SUMMARY

This section of the report presents an executive summary of results, evaluation, and recommended actions to be taken for those monitoring items reported during FY96. Details of monitoring results and recommendations are found in Chapter 2.

### SUMMARY OF MONITORING RESULTS AND EVALUATION

<u>MONITORING ITEM</u>	<u>RESULTS AND EVALUATION</u>
1-Compliance with NEPA	Standards for NEPA compliance are being met. Fifty-two District Ranger decisions were made for a variety of small projects and permits. There were 13 Supervisor's decisions made. Four were not appealed, and two were appealed and resolved. Seven other decisions were appealed and upheld in the Regional review. One appealed decision is being litigated (Eagle Rock Ecosystem Restoration Project). Most of the appealable decisions made were green timber sales.
2-Standard and Guidelines	Standards and guidelines are being met on timber sale activities, wildlife habitat, and other activities monitored in 1996. Further evaluation needed on Orient impoundment.
3-Recreation User Experience	Visitor/user satisfaction is good. Maintenance/reconstruction of developed recreation sites continues to fall behind schedule. Resource damage is increasing in high-use dispersed recreation areas.
4-Trail use	Trail use within ROS criteria. Visitor/user satisfaction is good.
5-Semiprimitive Setting	ROS criteria being met.

6-Off Road Vehicle Use

Resource damage continues to occur with this type of use. 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 being mitigation measures for trail corridors not always being met.

8-Wilderness

Limits of Acceptable Change standards are being met or exceeded (doing better than the minimum requirement).

9-Potential Wild and Scenic Rivers

No management activities were planned or occurred.

10-Deer & Elk Winter Range

Existing (pre-treatment) conditions in several areas of the Forest are improving, but do not yet provide the desired levels and distribution of forage and cover. Open roads not under Forest Service control occasionally prevent attainment of desired road densities. However, timber sale planning, direct habitat improvements, and road closures during Fiscal Year 1996 all contributed toward protecting existing winter big game habitat and achieving the Forest Plan objectives over the long term.

11-Primary Cavity Nesters

Timber sale planning and marking activities continue to address the need for snag retention and green replacement trees to provide for cavity nesting wildlife and meet Forest Plan objectives. However, post-harvest monitoring continues to show that these efforts to maintain snags and green replacement trees over time are not effective, and the Forest Plan snag requirements are not being met in many areas. Snag falling during the sale to address safety requirements, and post-harvest activities (site preparation and public firewood cutting) continue to be the primary reasons for snag losses.

12-Old Growth Dependent Species

Existing (pre-treatment) conditions are not yet providing the desired levels and distribution of old growth habitats across the Forest. However, Districts are meeting Forest Plan direction to provide for these habitats over the long term by identifying and protecting the best available habitats within the constraints of the grid system established in the Forest Plan.

13-Management Indicator Species

Forest Plan direction to provide for Management Indicator Species is being followed. Additional emphasis on post-harvest monitoring to evaluate the effectiveness of treatment prescriptions is recommended.

14-Threatened, Endr, & Sens. Species

Forest Plan direction regarding protection of habitat for threatened, endangered and sensitive species is being met. During Fiscal Year 1996, the Forest completed 77 separate project-level Biological Evaluations and continued progress in streamlining the process required to assess and document the effects of projects on TES species. Additional work is needed to revise the direction regarding sensitive plant site monitoring.

## Chapter 1 Executive Summary

15-Fisheries	Forest Plan direction is being met with the application of fisheries standards and guides on timber sales.
16-Range Improvements	Construction of improvements meets Forest Plan direction. However, more involvement of permittees needed.
17-Livestock Permitted	Permitted AUM's were 34,500 for FY 1996.
18-Utilization of Forage	Overall monitoring results indicate that we are meeting Forest Plan Standards and Guidelines. Some allotments surveyed may not be in compliance with standards and work is being implemented on most to correct problems.
19-Riparian and Range Conditions	Overall Forest Plan Standards and Guides for riparian and range conditions are being met. There are localized problem areas where mitigation measures are being implemented.
20-Restocking of Lands	In 1991, final removal harvest occurred on 5587 acres. By the end of FY96, 5390 of those acres (96.5%) were certified as satisfactorily stocked. Ten of the 5587 acres are not adequately stocked, and will receive no further treatment. The remaining 187 acres are expected to be certified in FY97and FY98.
21-Timber Yields	Not monitored in 1996.
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 acres by silvicultural method are below Forest Plan projection, for all methods, due to less than full implementation of the Forest Plan (harvest of 123.4 MMBF).

## Chapter 1 Executive Summary

25A-Water Quality	Data collected from 21 selected baseline sites, during the summer months, indicated little change from previous years. Washington State water quality criteria are being met. Sampling revealed the presence of elevated fecal coliform levels adjacent to grazing allotments.
25B-Watershed Best Management Practices	Best Management Practices are being implemented as planned and are effective at the time of implementation.
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.
28-Transportation System Management	Forest Plan Standards are being met. Constructed, reconstructed, passenger car and closed road mileage is decreasing.
29-Insect and Disease Populations	Defoliator populations decreased significantly. Forest structure and composition are unchanged with much of Forest still at high risk. Douglas-fir dwarf mistletoe and root rot 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.

## Chapter 1 Executive Summary

30B-Heritage Res Compliance Activities	Compliance-generated archaeological surveys were conducted on approximately 18,000 acres; 19 new heritage properties were documented. While compliance standards were met, compliance fieldwork and reporting varied in quality. A new Programmatic Agreement next fiscal year will change the way compliance requirements are met on the Forest.
31-Actual and Planned Costs	Not monitored in 1996.
32-Economic Effects	Returns to Government are 37 percent of Plan projections. Payments to States are 34 percent of Plan projections.
33-Coordination with Adjacent Landowners	Direction being met.
34-Modeling Assumptions	Not monitored in 1996.
35-Minerals	Management direction is being followed.
36-Community Effects	Community effects were not reported for fiscal year 1996.

## **SUMMARY OF RECOMMENDED ACTIONS**

Table 1.1 displays a summary of the recommended actions for each item monitored during FY96. 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.

Chapter 1 Executive Summary

**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		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			
21-Timber Yields-not monitored in 96				
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			
33-Cood W/ Adjacent Land Owners	X			
32-Economic Effects			X	
35-Minerals	X			

## **CHAPTER 2 MONITORING RESULTS AND EVALUATION**

This section summarizes the results of monitoring and evaluation conducted during fiscal year 1996, which ran from October 1, 1995 to September 30, 1996. 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**

Thirteen Forest Supervisor decisions were made. Four were not appealed, two were appealed and resolved in the informal disposition meeting between the Forest Supervisor and the appellants. Seven were not resolved in the informal disposition meeting and were reviewed by the Region. All were upheld in review. One decision is being litigated, the Eagle Rock Ecosystem Restoration Project. There were no appealable District Ranger decisions, mainly because the small District salvage sales were signed under the Recission Salvage legislation which did not allow for appeals under environmental issues.

##### **Evaluation**

Analysis and documentation for projects is meeting the requirements of the National Environmental Policy Act.

##### **Recommended Action**

Results Acceptable/Continue to Monitor.

## **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 several Forest Supervisor authority projects as well as general Forest Stewardship in various locations. Projects monitored by the Forest Leadership Team included noxious weed and essential reforestation KV work for a timber sale, grazing utilization in an upland homestead meadow, treatment of noxious weeds, travel management, sensitive plant management, salvage timber harvests, and a riparian restoration along Sullivan Creek.

The Ranger Districts also reviewed projects to monitor compliance with a variety of resource standards. Specific areas or resources monitored included:

- 1) Addy Salvage Timber Sale
- 2) Parker Timber Sale
- 3) San Poil Fish Habitat Project
- 4) Manhattan Thinning
- 5) Lambert Salvage Sale
- 6) Copper Butte Salvage/Marcus Trailhead
- 7) Longsnake Wildlife Burn
- 8) Wildlife Feeding Station, Sullivan Lake
- 9) Exposure/Snyder Timber Sale
- 10) Totem Timber Sale,
- 11) Lower Cedar Timber Sale.
- 12) North Sherman Timber Sale
- 13) Thomas Mountain Quarry
- 14) Orient Water Impoundment, and
- 15) Eagle Rock Timber Sale.

Monitoring on these activities showed that Forest Plan standards and guidelines were being met. A review of Manhattan Thinning and Lower Cedar Timber Sale showed more monitoring of soil compaction effects to ensure that Forest Plan standards were being met is desired.

**Evaluation**

Monitoring indicated that Standards and Guidelines are being met. Further monitoring needed on soil compaction effects. This monitoring is needed on specific soil types and after winter over-the-snow logging to determine compaction. Further evaluation is needed on the Orient impoundment to address community need to replace the existing structure.

**Recommended Action**

Results Acceptable/Continue to Monitor on all activities, except Further Evaluation/Determine Action needed on Orient impoundment.

**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**

<b>Monitoring Methods Used</b>	Visual observation, personal visitor contacts, fee collection records, random sample surveys, and site inspections were the general methods used for monitoring or evaluating site condition and user satisfaction. Visitation reports from concessionaire and ski area operations, as well as trailhead registrations, and the sign-in logs for the Sullivan Lake airstrip, were also used.
--------------------------------	--

Generally, weekend use at developed campgrounds continues to reach 80-100% of capacity, with use generally at 100% of capacity during holiday or extended weekends. Use of the Nationwide campground reservation system, while increasing in many areas of the country, has not proved an effective tool for meeting the needs of the average user of Colville National Forest camping facilities. There were 5 reservation campgrounds on the Forest during the 1996 season. Concessionaire operations continue to be an effective tool for addressing operation and maintenance needs at our high use facilities. Newport District has 4 campgrounds still under concessionaire agreement, and Sullivan Lake District has entered into a concessionaire agreement covering 3 Permit Areas, that include 7 campgrounds.

Dispersed recreation use is significant and continues to increase, with numerous sites experiencing resource damage. Formal monitoring continues to indicate these sites are filled on extended weekends and during the fall hunting season. Most of the sites monitored are established along creeks in major drainages. Dispersed sites were visited by Forest Service personnel to explore options for improving riparian habitat to meet INFISH requirements, as well as addressing other developing resource conflicts. Less funding is being applied towards meeting Recreation Standards on Forest, therefore, it is becoming increasingly difficult to formally monitor many non-fee and dispersed camping facilities.

**Colville RD** The campground host program continues at Gillette and Big Meadow Lake campgrounds, and provides valuable assistance to visitors. Movies were shown at the Lake Gillette amphitheater from Memorial Day to Labor Day, with attendance averaging from 80 to 100 per showing. The 49 Degree North Ski Area is continuing work on the commercial thinning area, and has made lodge improvements, including partial roof replacement, installation of outdoor stairs from the parking area to the lodge, erosion control around the lodge, and installation of storage cubicles. The 5<sup>th</sup> grade student program provided ski and snowboard instruction for schools in Stevens, Pend Oreille, and Spokane counties (approximately 450 students participate annually). The Special Use Permit for the Ski Area was re-issued for another 20 years due to a change in ownership.

**Kettle Falls RD** There were many positive comments regarding Pierre Lake Campground and Lake Ellen West site improvements. The District had requests to restore Summit Lake to a developed campground status. Condition surveys were completed at Canyon Creek Campground, and minor deficiencies were scheduled for repair or replacement in FY 97. Vandalism has increased at most developed sites for reasons unknown.

The Sherman Pass Sno-Park partnership with Washington State Dept. for Winter Recreation and the Kettle Range Ski Club project was accomplished.

Kettle Falls/Colville Ranger District hosted the 6<sup>th</sup> annual fishing derby for kids at Lake Ellen.

**Newport RD** The installation of new toilets at Brown's Lake, and at the picnic/interpretive site at Pioneer Park has greatly improved conditions at these locations, but similar improvements are needed at other camping facilities. The Brown's Lake water

system once again failed in 1996, and other options for providing water at this facility will need to be looked at, or the system will need to be closed and water not provided. Vandalism continues to be a valid and significant concern, and nightly/seasonal gate closures at developed sites are considered necessary to protect improvements.

Rehabilitation of the No Name Lake dispersed sites continued in 1996. The work included: reconstruction and rocking of the access road, creating a loop road with parking areas; closing the road to the Lake, and constructing a foot trail to limit vehicle access; and construction of a boat portage trail on the other side of the Lake. This work has been viewed positively by the public in most cases. Human waste and vandalism of signs within the area are still problems that need to be addressed.

### **Republic RD**

Use at Swan Lake was up 50% (based on fees collected) over 1995. Use at Long Lake was up 20% over last year. Overall use at fee sites was 80% of capacity, with holiday use exceeding capacity. Ferry Lake and 10-Mile campgrounds remain non-fee, pack-in/pack-out facilities. No formal District monitoring of dispersed camping sites or non-fee sites was accomplished this year. Feedback from users remains good regarding recreational experience at developed sites. Facility condition decline continues to be a concern, especially toilets at Swan, Long and Ferry lakes. Cattle continue to enter the campground when gates are left open.

Due to concerns about predator fish (i.e. bass) in Swan lake, the State Dept. of Fish and Wildlife treated the Lake with Rotenone. No adverse effects (such as dead fish on shorelines) were observed. Recreational experience may be detrimentally impacted in 1997 due to fewer fish (also fewer large fish) being caught at Swan Lake.

The annual Fishing Festival (May 14) and the fall Mtn. Bike Fest were held, with a total of 225 participants.

**Sullivan Lake RD** Use of a concessionaire for much of the operation and maintenance of developed facilities has resulted in Forestwide Standard #9 being met at a higher level than in the past. Monitoring of these sites was done with the General Manager for the concessionaire. Use has been affected by flooding at Crescent Campground and Day Use Area (site closed until Sept. 15, 1996).

Visitor contacts were made at the dispersed campsites along Sullivan Creek to explain rock placement and site rehabilitation to meet requirements of INFISH.

District personnel feel current conditions are within the threshold of variability for this item.

### **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 continuing across the Forest. These changes and improvements are being noticed and appreciated by the public. There is still need for rehabilitation and reconstruction of facilities at several trailheads and campgrounds. Generally, the physical, social and managerial settings for the Recreation Opportunity Spectrum (ROS) class of Roaded Natural appears to have met or exceeded (better than minimum requirement) guidelines and site conditions. Where facilities have been upgraded, through replacement or reconstruction, Forestwide Standards and Guidelines are being met.

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 and vandalized structures, water lines and vault toilets are on the increase. Weekend demand of many developed sites is greater than supply, and while the Forestwide Standards and Guidelines (#15) allows for new or additional facilities under the current conditions, funding options are limited. Heavy maintenance of improvements is being accomplished on districts as budgets allow. Major replacement and reconstruction of recreation sites is falling behind schedule due to the lack of capital improvement program funding. Improvements to signing, host sites, accessibility, and interpretation have also been made when opportunities and funding are available.

While ROS classifications appear to be within variability limits, more dispersed recreation sites are showing the signs of heavy recreation use. Human waste in several areas may pose a threat to human health and safety, and is also visually offensive. While the physical, social and managerial settings still appear to provide a broad spectrum of ROS settings, we are falling behind in our efforts to implement Forestwide Standards and Guidelines. Monitoring indicates that use is significant in many areas across the Forest and increasing yearly.

Input to the new Infrastructure database (INFRA) continues at the Supervisor's Office. Inventories concentrate not only on quantity of use, but also on quality and degree of user satisfaction. The process continues to take a great deal of individual time from district and Supervisor Office personnel.

The decision was made to implement the Meaningful Measures management process, in an effort to provide better accountability, higher quality recreation opportunities, and better protection of the natural resources within the Colville National Forest. The operation and maintenance cost portion of the process, including task setting, has been

started for the developed recreation sites. Adoption of National Standards, within this process, are consistent with objectives identified in the Forestwide Standards and Guidelines. The prioritization portion of the process will occur during FY 97-98, for developed recreation sites, and the process will begin for dispersed recreation opportunities. The results of this process, and associated recreation facility information, will need to be coordinated with the INFRA database input.

**Recommended Action**

Further Evaluation/Determine Action. The Forest is currently meeting Standards and Guidelines for developed recreation; however, results of monitoring and recreation reports relative to dispersed recreation use indicate the threshold of variability may have been exceeded. Additional information is needed regarding site rehabilitation needs and the most effective way to respond to visitor needs. Inventories, evaluations and management strategies are still needed to address numbers and types of users, resource damage and user conflicts. More education and enforcement is needed than is currently available; however, public education is necessary to bring about a change in the attitudes of users. A coordinated effort between this Forest and the San Dimas Technology and Development Center is under way to evaluate public information and education methods. The results of this study would hopefully lead to voluntary compliance involving sanitation concerns at dispersed recreation sites. This study began as an effort to address loss of vegetation and sedimentation concerns at these sites, but will now look at techniques to manifest behavioral change. The Forest will also continue to implement the Meaningful Measures process.

**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**

<b>Monitoring Methods Used</b>	Monitoring consisted of field observations, trail counters, registration boxes/cards, GPS surveys, and visitor contacts.
--------------------------------	--

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

Trail use continues to grow on the Forest. Survey information indicates that hiking remains popular, with mountain biking and winter use of trails continuing to increase Forestwide. Trail use was found to be within 90 percent of the ROS class criteria.

**Colville RD**

Registration cards gathered at Abercrombie Trail and at the South Fork of Mill Creek indicate primarily non-snow activities such as hiking, horseback riding, off-road motorcycle riding, mountain bicycling, and hunting. Trail counters were located at South Fork Mill Creek trailhead and Springboard Trail. The counters were installed in June and removed in October. An infrared counter is installed at Frater Lake in November to record cross country skier visitation and is removed in April. The IAC trail ranger contacted visitors on trails and campgrounds. A GPS survey of all trail systems was initiated and will continue next year.

The North Fork Silver Creek Trailhead is complete. A loading ramp, four campsites, accessible restroom, and hitching posts were installed. The Inland Empire Backcountry Horse Group completed the loading ramp. Colville Ranger District employees completed a group fire ring, benches, and finish work for trailhead facilities for a District work day.

**Kettle Falls RD**

User satisfaction rated very high, with no negative comments. Construction began on Ryan Cabin Trail #30, with a Forest Service crew, and approximately 85% of the project was completed. Signing and construction is expected to be completed the spring of FY-97. Sherman Tie Trail #96 was reconstructed/relocated to meet accessibility standards, with grades less than 5% and a crushed rock surfacing.

The 1995/96 Snowmobile Grooming Program provided groomed trail on Albion Hill Road from Sherman Highway to Boulder Deer Creek Road on Bulldog-Cabin Road.

**Newport RD**

Bead Lake Trail continues to be heavily used by local Bead Lake residents for walking and skiing, and is also very popular with residents in the Spokane area for hiking and mountain biking. Use is estimated as being up from 1995 levels. Brown's Lake is used heavily by fishermen for lakeshore access, but also receives use from hikers and mountain bikers. The cedar grove, which is accessed by the trail, is a popular dispersed camping site. The fish interpretive site is a popular point on the Brown's Lake Trail, but has also been the target of vandalism. South Skookum Trail continues to be a popular trail, and use has increased with the recent improvements to the trail.

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

The use at Batey-Bould ORV Trail was approximately the same as 1995. This is most likely due to the reconstruction occurring with the large crews on the trail. With the improvements to the trail, use is expected to rise after 1996. The trail is also becoming popular with mountain bike enthusiasts and several groups have expressed interest in holding organized races on the trail in the near future.

Upper Wolf and Geophysical trails are showing increased use. The area is becoming more popular with mountain bikers, as well as nordic skiers.

**Republic RD**

All trails continue to show an increase in use on the District. Winter trails are receiving greater use even though there are fewer maintained winter trails than dry land trails. Mountain bike use continues to grow in the Kettle Range “single track” area. Hiking (short day hikes) continues to be the number one use of the trails. This use is mostly concentrated on Trail #13, north to Columbia Mountain Trail #24. Horseback riding is the least registered use of the trails on this District, with most of it occurring during the fall season.

**Sullivan Lake RD**

Trail registrations showed the greatest amount of use at the Mill Pond Flume Trail, which provides access for disabled persons to an interpretive and historical site. Other trails monitored include; Red Bluff, Noisy Creek, Salmo Basin, and Thunder Creek trails. The variable threshold has not been exceeded at these facilities.

**Evaluation**

Monitoring indicates that Forest Plan Standards and Guidelines are being met. Trail registration cards have not proved to be a consistent and effective means of monitoring trail use, as most users do not take the opportunity to complete the cards. When filled out, the cards do, provide a good summary of the people using the trails. Districts reported that trail registration card comments indicated that users were generally satisfied with their recreation experience, and complimentary of the trail maintenance. No major conflicts of use were reported, and district trail brochures and maps are well received.

Input to the new Infrastructure database (INFRA) continues at the Supervisor’s Office . Inventories concentrate not only on quantity of use, but also on quality and degree of user satisfaction. The process continues to take a great deal of individual time from district and Supervisor Office personnel.

The decision was made to implement the Meaningful Measures management process, in an effort to provide better accountability, higher quality recreation opportunities, and better protection of the natural resources within the Colville National Forest. The

operation and maintenance cost portion of the process, including task setting, has been started for trail facilities on the Forest. Adoption of National Standards, within this process, are consistent with objectives identified in the Forestwide Standards and Guidelines. The prioritization portion of the process will occur during FY 97-98. The results of this process, and associated recreation facility information, will need to be coordinated with the INFRA database input.

**Recommended Action**

Results Acceptable/Continue to Monitor. Future trail planning should be focused on maintenance of existing heavily-used trails. Continue with the trails maintenance contract where effective, and the promotion of partnerships for trail projects. Continue to seek funding opportunities through grants from organizations and other agencies for maintenance, the development of information brochures, and educational materials.

Continue to develop and implement a system across the Forest for assessing trail use and visitor needs. The Forest will also continue to implement the Meaningful Measures process.

**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, public contacts, and trail counts. Several trail counters were installed along various trails. Trail registration cards indicated visitor satisfaction with the recreation experience.

- Colville RD** Trail registration cards were unavailable this season due to re-location of the registration box.
  
- Kettle Falls RD** Contacts and user card comments had very high user satisfaction on semi-primitive non-motorized trails. Comments show few, if any, contacts with other trail users, which meets the ROS objective for social encounters. The ORV trails in Management Area 10 on the District are user maintained at this time.
  
- Republic RD** Use in the Management Area 11, Kettle Range Semi-Primitive Non-motorized Recreation Area, continues to grow in numbers and diversity of the users. Use is probably higher than we know, as only a small percentage register their use. Unauthorized use of motorized vehicles in this Management Area was reduced due to the law enforcement emphasis patrols during the hunting season. Some use still occurs on the Old Stage Trail #41, Thirteenmile Trail #23, and the Barnaby Buttes Trail #7. As in past years, visual contact of the perpetrators of these violations is never made. These incidences appear to be isolated in nature, and are normally during the beginning and end of the summer season. Additional signing of access routes, identifying which trails are open or closed to motorized use, was improved prior to the fall hunting season. Travel Plan maps remain as a strong tool for the Forest patrol.  
  
Snow Peak Multi-season shelter was completed in 1996 and will be placed under a reservation system in October 1997. Reconstruction/construction of the Columbia Mountain Loop Trail was initiated in late summer of 1996, and is scheduled for completion in 1997.
  
- Sullivan Lake RD** Recorded use falls below variable threshold. Flume Creek and Hall Mountain trails were monitored. Hall Mountain Trail was the only one that had people register at the trailhead.

### 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; however, problems still occur with unauthorized motorized use of trails. These reports are sporadic in nature and the use would be difficult or virtually impossible to stop, without a stronger emphasis towards meeting that

objective. Compliance with management objectives will continue to rely on distribution of the Forest Travel Plan Map for education, and on users to self patrol the area and notify the Forest of violators..

**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**

Monitoring was conducted through the use of field reviews, trail registrations, random sample surveys, observations, and trail counts. Several trail counters were installed along various trails.

Motorcycles and ATV use continues to increase in certain areas. Resource damage continues to occur, with the impacts coming from trails created by ORV use in areas not officially dedicated to ORV use. Less funding is being applied towards meeting Recreation Standards on Forest; therefore, ensuring compliance with regulations is increasingly difficult.

**Colville RD**

Random sample surveys were conducted on the Springboard, Rufus, and Little Pend Oreille ORV trails, showing over 50% of the use from motorcycles. Trail registration cards indicated requests for a four-wheeler riding area, more maps, and concern over the logging near Lake Sherry (DNR). A member of the public visited the District office to complain about a tracked vehicle using the ORV trails. User-built trail systems are posing hazards in the North Fork Chewelah Creek area.

**Kettle Falls RD**

Simple observation in dispersed areas has shown little use. There are designated travel routes at this time on the Forest Recreation Map. The ORV trails in Management Area 10 on the District are user maintained at this time.

**Newport RD** Consultation with Forest resource specialists occurred in the Middle Fork of Calispel drainage. The construction of the Combo ORV trail in the Middle Fork will hopefully encourage users to use existing trails instead of riding off trail through the meadow areas and causing resource damage to sensitive areas. The trail consists of three roads which will be linked by two connecting trails. The road closures are complete, but one connecting trail remains to be completed, and further road work needs to be done to finish installing berms and kelly humps for increased riding pleasure. An information board and trail registration box, along with brochures, has been installed. Reconstruction of the Batey-Bould system continues, and will be completed in FY 97. Rider satisfaction with the improvements to the trail is high, and comments have been very positive.

The Tacoma Creek area needs a developed area for ORV use. Riders are continuing to cause resource damage by riding in inappropriate areas. There is a need for a greater law enforcement presence to ensure compliance with regulations.

**Republic RD** No District monitoring of this element was accomplished this year.

**Sullivan Lake RD** On-going monitoring is done along the Salmo-Priest Wilderness, Le Clerc Creek area, and miscellaneous Forest roads. The Salmo-Priest Wilderness trailhead was visited during the winter via snowmobile to verify reports of snowmobile use in the Wilderness. No new activity was seen during that trip. Jon Almack, Washington State Dept. of Fish and Wildlife, noted tracks during overflights made for the purpose of counting Caribou. Monitoring of snowmobile activity and education of snowmobile users was at a reduced level from 1995.

ORV trails (dirt bike, 3-wheeler, and 4-wheeler), within the Le Clerc Creek area and Old West Branch Campground, are continuing to cause resource damage in the form of soil displacement, compaction, and removal of vegetation. The level of resource damage is considered acceptable for facilities dedicated to ORV use; however, none of the areas has been officially designated for that type of use. No action was taken in 1996 to close these user created trails at the Le Clerc site. At Old West Branch Campground, the concern is that trails have been created at random by ORV users. Some trails which tied through to roads closed by Forest Order to meet habitat needs for Threatened and Endangered species have been closed. New trails continue to be discovered. Trails in unacceptable

locations have been blocked with barriers under T & E habitat improvement projects.

The Le Clerc Creek site was visited during range management inspections and implementation of projects for riparian areas in connection with INFISH.

### **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.

Standards and Guidelines are being violated. And no comprehensive planning has yet been developed to address ORV use and public educational needs.

### **Recommended Action**

Further Evaluation/Determine Action. Although monitoring indicated that some resource damage is occurring, the results are still 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. Opportunities to educate all types of ORV users on the ethical use of the forest should be optimized. More education and enforcement is needed than is currently available; however, public education is necessary to bring about a change in the attitudes of users. A coordinated effort between this Forest and the San Dimas Technology and Development Center is under way to evaluate public information and education methods. The results of this study would hopefully lead to voluntary compliance involving not only sanitation concerns at dispersed recreation sites, but the loss of vegetation and sedimentation concerns as well.

## **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**

Forest monitoring trip results and field observations were made for several current timber sales.

### **Evaluation**

Forest Plan visual quality objectives are generally being met. Management within foreground and middleground areas, in most cases, is meeting or exceeding (doing better than the minimum requirement) visual quality objectives. Mitigation measures for protecting trails are not consistently being addressed in timber sale environmental assessments or in timber sale administration.

Forest Plan Visual Quality Standards were deviated from along the Sherman Pass Scenic Byway to allow for treatment of safety concerns regarding snags from the White Mountain Fire. Federal Highway Enhancement funds are being used by the Republic Ranger District over several years to mitigate the felling of snags.

The treating of overstocked stands along Sensitivity Level I and II roads is becoming increasingly difficult. The distance zone requirements for significant dispersed sites limit the treatment of over stocked stands, as well as restrictions on areas that are high priority for silvicultural treatment or the introduction of prescribed fire.

The Landscape Aesthetics Handbook covering the development of Visual Quality Objectives for forest planning, has been updated. Implementation of the Scenery Management System is intended for FY 1997 to include a broader constituent analysis and framework for determining scenic values.

### **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

Recommend that the Forest Landscape Architect provide training on the Forest to implement the Scenery Management System to increase understanding of how to meet visual quality objectives.

## **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**

The District is implementing the decision made by the Salmo-Priest Wilderness Standards and Guidelines Environmental Assessment, that was approved in 1995. The Colville and Idaho Panhandle National Forest Plans were amended to incorporate these Standards and Guidelines, there by providing detailed, measurable social and physical standards.

The Salmo-Priest Wilderness trailhead was visited during the winter via snowmobile to verify reports of snowmobile use in the Wilderness. No new activity was seen during that trip. Jon Almack, Washington State Dept. of Fish and Wildlife, noted tracks during overflights made for the purpose of counting Caribou. Monitoring of snowmobile activity and education of snowmobile users was at a reduced level from 1995.

### **Evaluation**

Snowmobile use in the Salmo-Priest Wilderness is violating Standards and Guidelines for Management Area 9. Opportunities to educate snowmobile users were not optimized due to decreased budgets. Signing was added to trailheads in 1995, informing users that the trails and Wilderness itself is closed to snowmobiles and other motorized/mechanized equipment, however monitoring for effectiveness was minimal.

Monitoring for the standards and guidelines outlined in the Limits of Acceptable Change for the Salmo-Priest Wilderness has indicated that other standards are being met or exceeded (better than the minimum requirement).

### **Recommended Action**

Results Acceptable/Continue to Monitor. Continue to implement the standards for resource and social indicators set forth in the LAC/WIS Plan (Limits of Acceptable Change/Wilderness Implementation Schedule).

## **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 (do better than the minimum requirement) the Forest Plan standards and guidelines.

### **Summarized Results**

No management activities occurred or were planned during FY 95 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 prescriptions for Management Areas 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  $0.4 \text{ mi/mi}^2$  on all elk winter range and mule deer winter range in Ferry County. Road densities not to exceed  $1.5 \text{ mi/mi}^2$  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**

Existing (pre-treatment) winter deer habitat conditions (availability and distribution of cover and forage, and open road densities) were evaluated within selected winter range areas on all Districts, in conjunction with efforts covering several large watershed analysis areas and timber sale planning areas, including Addy-Chewelah, Backlakes, New Moon, Vulcan, Gaffney, Totem, and Old Berry.

Winter range management activities (outside of timber sales) included 788 acres of prescribed burning, 110 acres of seeding and/or planting to improve shrub availability, 24 road closures, and over 8,000 acres of surveys to determine existing conditions and/or future project needs. The Rocky Mountain Elk Foundation continued to be a major partner, enhancing the Forest's ability to fund needed habitat improvements.

## Evaluation

### I-1 Availability and Distribution of Winter Cover

I-3 to I-3 In many areas, the existing (pre-treatment) habitat conditions do not meet the desired conditions described in the Forest Plan. In some areas, existing vegetative patterns and age of timber stands makes it difficult, if not impossible, to achieve the desired 50/50 forage/cover ratios, prescribed levels of snow intercept thermal cover, and/or distances between cover units during a single timber sale entry. The nature of this problem varies, with some areas severely lacking in cover, and other areas lacking sufficient forage. Treatments being prescribed indicate that some progress is being made, and in most cases, Districts are able to protect existing cover values and move toward achievement of Forest Plan objectives during timber sale planning.

I-4 As with cover/forage conditions, current open road densities in some areas still do not meet Forest Plan objectives, often due to the presence of roads not under Forest Service control. Road closure projects, often in cooperation with outside partners, continue to show progress toward meeting the desired conditions.

## Recommended Action

I-1 to I-3 Results Acceptable/Continue to Monitor. Through the timber sale planning process, Districts continue to recognize the need to improve deer and elk habitat conditions, and projects submitted for review show progress toward meeting Forest Plan objectives for winter big game habitat. However, additional emphasis is still needed on post-sale monitoring activities to insure planned forage and cover improvements and protection measures are being implemented as prescribed.

I-4 Results Acceptable/Continue to Monitor. Efforts to reduce open road densities need to continue in many areas, as should monitoring to determine the effectiveness of road closures.

## 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

## Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

Maintain sufficient standing dead and defective and down dead trees to support 100% of the potential populations of primary cavity excavators. (Note - This standard applies only to timber sales initiated after August, 1993. Sales initiated prior to this date must provide sufficient dead/defective trees to provide for 60% of potential cavity excavator populations.)

### **Summarized Results**

Districts reported that current timber sale planning and marking activities are in compliance with Forest Plan direction regarding retention of snags and green replacement trees. However, post-harvest monitoring conducted in 1996 (on Kettle Falls, Republic, and Sullivan Lake Districts) indicates that meeting Forest Plan standards regarding retention of snags within timber sale units (especially regeneration units) continues to be a problem. To help mitigate this problem, Districts must continue the costly practice of creating snags and/or placing nest boxes to provide habitat for cavity-nesting wildlife. Monitoring of past snag creation was conducted on Colville and Sullivan Lake Districts. As in previous years, results indicate that woodpecker use is occurring on created snags, but it generally takes two or more years before any nest holes are developed.

In addition to the monitoring summarized above, other management activities directed toward cavity nesting wildlife species included the creation of over 370 snags and 45 nest boxes and maintenance on 100 existing nest boxes.

### **Evaluation**

Available information indicates that Districts do prescribe and mark sufficient snags and replacement trees during timber sale planning to meet Forest Plan requirements. However, efforts to retain these snags during and after the timber harvest continue to be insufficient to provide the desired snag densities after the sale and through time. As in past years, many of the post-harvest units monitored failed to meet the Forest Plan requirements for snag retention. Cutting of snags for safety concerns and post-harvest losses to firewood cutting appear to be the main reasons these sale units failed to meet Forest Plan requirements.

### **Recommended Action**

**Change or Clarify Management Practices.** As stated in previous Monitoring Reports (1992-1995), the Forest is not meeting post-harvest requirements for snag retention. Snag falling to meet safety concerns and post-harvest firewood cutting effectively nullify most efforts to prescribe and mark trees for snag retention during timber sale planning. Changes in snag marking practices should be developed to address safety concerns, and tighter restrictions on post-harvest firewood cutting are needed.

## **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 MRs are maintained as described in the Management Prescription and Forest-wide Standards and Guidelines.

#### **Summarized Results**

Analysis of 3 MA-1 areas, 27 marten, and 5 pileated woodpecker MR areas was conducted during Fiscal Year 1996 in conjunction with timber sale area planning on 3 Districts. Actions taken on individual Districts are shown below:

Colville Ranger District: In conjunction with the Backlakes analysis, 5 pine marten areas were examined.

Kettle Falls Ranger District: One MA-1 area within the Deadman drainage was examined. This area does not currently meet desired conditions as described in the Forest Plan.

Sullivan Lake Ranger District: Within the Old Berry timber sale area, one MA-1 area was examined. Although the area does not currently meet Forest Plan desired conditions, the boundary was realigned to make it follow natural landscape features such as ridges and streams, and be more recognizable on the ground.

#### **Evaluation**

Available information indicates that Districts continue to identify and protect the best available habitat for MA-1, marten, and pileated woodpecker areas, within the confines of the grid system established in the Forest Plan. Therefore, Forest Plan direction is being met. However, this grid system was designed to eventually provide old-growth habitats uniformly distributed across the Forest. Because situations continue to arise where field examinations reveal that the designated areas do not, or can not, provide

the habitat conditions envisioned in the Forest Plan, the overall desired future condition described in the Forest Plan is not being met. This situation will require additional analysis during future Forest Plan revisions.

**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 was mapped and assessed in conjunction with analyses for the Backlakes and New Moon planning areas. Lynx habitat improvements were planned within the New Moon area. The Forest hosted a field trip for the Interagency Lynx Working Group to review research being conducted on snowshoe hare habitat use as it relates to lynx prey availability, and examine existing and potential lynx habitat within the New Moon Analysis Area. The Kettle Falls District reported incorporating lynx habitat needs into 220 acres of thinning, and conducting 60 miles of track transects in cooperation with the Washington Department of Wildlife. One set of lynx tracks was located during the survey. The Newport and Republic Districts conducted a combined total of over 7200 acres of survey for lynx with negative results. The Sullivan Lake District set up and ran remote cameras in an attempt to monitor for lynx and other forest carnivores. No lynx were detected in this effort, however pine marten, weasels and flying squirrels were photographed

I-3 Blue Grouse Habitat  
Twelve timber sale units on the Republic Ranger District (Longsnake and Spock timber sales) were assessed to determine if blue grouse winter roost standards were being met. Five of the units met the standard.

I-4 Raptor and Great Blue Heron Habitat

Approximately 24,500 acres of goshawk surveys were conducted across the Forest in 1996. Surveys detected 2 new nests on the Colville District and 2 new activity centers on the Kettle Falls District. Nest site buffers and Post-Fledgling Areas were established around 2 nests on the Colville District. Four existing nests on the Colville and Sullivan Lakes Districts were monitored to determine nesting success. Three of the nests were successful, and one appeared not to have been used in 1996.

Great Blue Heron activity was monitored on the Colville, Newport, and Sullivan Lake Districts in 1996. A total of 28 active nests were located, but the number of young fledged is unknown.

**Evaluation**

Results indicate that Districts are following Forest Plan direction with regard to planning to provide and/or protect habitat conditions for Management Indicator Species. Implementation monitoring (assessment of post-harvest conditions) is being conducted, however it continues to be treated as a lower priority than other projects, and it remains difficult to collect large enough sample sizes to draw conclusions regarding many management practices.

**Recommended Action**

Results Acceptable/Continue to Monitor. Additional emphasis on monitoring and assessing post-harvest habitat conditions is needed.

**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-1Habitat for caribou is being managed to provide seasonal components to support the Forest's portion of a fully recovered population.

I-2Habitat for grizzly bear is being managed as directed in the Interagency Grizzly Bear Guidelines and the Forest Plan.

I-3Habitat for bald eagles is being managed in accordance with national policy, Recovery Plan, and Forest Plan.

I-4Any 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.

## Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

- 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. The Forest participated in the transplant and subsequent monitoring of 19 Canadian caribou in cooperation with the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

#### 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 throughout the year. Monitoring included the use of inductive loop traffic counters on 14 roads, and physical inspections of closures on all roads, especially during the hunting season when 224 person-hours of weekend patrols were conducted. A total of 38 violations were documented with incident reports. The emphasis for the Forest road patrols was to educate visiting forest users about grizzly bear and caribou seclusion needs and the reasons for road closures.

Follow-up monitoring on 6 grizzly bear reports on 3 Districts also occurred during the Fiscal Year.

Grizzly bear habitat improvements included the reinforcement of 6 road closures, obliteration of 2 roads, and closure of another 4 roads.

#### I-3 Bald Eagle Habitat

Bald eagle surveys were conducted by the Kettle Falls Ranger District along the Columbia and Kettle Rivers. No eagles were located on National Forest lands.

An eagle nest located adjacent to National Forest lands was monitored in conjunction with other activities in the area. This nest fledged 2 young in 1996.

#### I-4 Wolf Reports Being Investigated

Follow-up monitoring of 5 wolf sighting reports was conducted by District wildlife biologists during Fiscal Year 1996. 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  
Seventy seven Biological Evaluations were completed in Fiscal Year 1996. Twenty three of these required informal consultation with the USFWS, and all were in compliance with established direction.
- E-2 Number of Sensitive Species Sites Monitored  
Surveys conducted over the past several years have resulted in significant increases in the number of known sensitive plant sites on the Forest. This increase, combined with a general lack of monitoring funds, is making it difficult to monitor or re-visit the required number of sites (25%) each year. The Forest has attempted to prioritize which sites to monitor based on known information and potential impacts to the site from management activities, to make the most effective use of limited resources, but the current management direction is not being met. Approximately 112,800 acres of new sensitive plant survey work was conducted in 1996 during project planning activities.

### **Evaluation**

The Forest is continuing to comply with existing direction regarding protection of habitat for threatened, endangered, and sensitive species. In addition to the species reported above, additional surveys for peregrine falcon, common loon, harlequin duck, and Townsend's big-eared bat were conducted by District personnel and/or volunteers. Biological evaluations are being completed for all projects, and District wildlife biologists continue to make progress to streamline the analysis and documentation process without compromising the quality of the results. Coordination and communication between the Forest and the USFWS remains excellent

### **Recommended Action**

Results Acceptable/Continue to Monitor. As time and funding permit, the Forest should continue to conduct periodic surveys for wolves, bald eagles, peregrine falcons, lynx, wolverine, etc. over broad land areas to maintain current baseline information, as well as project specific surveys for other less-mobile or sedentary species (bats, plants, etc.). The Forest also needs to further evaluate and revise the existing monitoring direction regarding sensitive plant species. In the interim, it should continue to prioritize sensitive plant sites for follow-up monitoring based on population risk and project information needs.

## **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

**Colville RD** Fisheries analysis for the Addy timber sale was reviewed for this item and detailed in Monitoring Item 2 of this year’s monitoring plan. Interim direction for riparian habitat limit the amount of activities that may occur within riparian habitat conservation areas. As such, little direct impacts to riparian areas have occurred as a result of this project.

**Kettle Falls RD** Yes. Timber sale planning has attempted to incorporate KV habitat improvement projects when possible. Stream crossings are being planned in accordance with established BMPs to address fisheries habitat concerns. Not all potential improvements identified fall within affected sale areas and therefore are not eligible for KV funding. District analysis of timber sales does indicate that each one will contribute additional sediment to streams. The effect this additional sediment has on fish habitat quality is uncertain. The timber sale program helps to achieve DFCs for fisheries by improving stand conditions adjacent to RHCAs to reduce the chance of catastrophic fire and disease, therefore protecting the trees that contribute bank stability, large woody debris, and shade to the streams.

**Newport RD** Parker Timber sale was reviewed. This sale was planned under the Forest Plan but implemented after the regional Forester’s Amendment #1. Of the 10 units reviewed, units 8, 23, and 29 had buffers along streams or lakes. In all cases, the buffer met or exceeded Regional Forester’s Amendment #1.

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

Moon Hill timber sale was monitored. Fisheries improvement opportunities (S&G F-1) are not being taken advantage of in this sale area, since the decision was made to stay out of the riparian zones at this time until more information is available on vegetation in the riparian zones. The fisheries standards and guidelines (S&G's F-2,3,6,&7) found in the Forest Plan are being applied to this sale. All stream crossings, on fish bearing streams, which have been affected by this timber sale are passable to fish (S&G F-4). Instream improvements have been identified for this sale.

This sale is helping to achieve the desired future condition for fisheries habitat found in the Forest Plan (page 4-63) and the DFC for fisheries habitat found in the project environmental analysis since stream crossings and road drainage were designed to minimize impacts to fish and their habitats. The timber sale achieved the desired future condition for the riparian zone and stream as shown in the Forest Land and Resource Management Plan and in the Project EA.

**Republic RD** No monitoring was conducted.

**Sullivan Lk. RD** No sales were monitored in 1996 since no sale activity occurred near fish bearing streams.

I-3

**Colville RD** Frequency and duration of monitoring item I-3: All fish habitat improvement projects completed in the previous year.

Fish Habitat structures (large woody debris) were installed in streams associated with two timber sales, Drummond and Butte Creek Riparian. Sale area improvements not identified as necessary mitigations may or may not receive funding for implementation, depending on bid premiums and priority status of project improvements.

**Kettle Falls RD** The district improved fisheries habitat by installing 11 fish structures on Sherman Creek.

**Newport RD**

<b>On Activity/Project Schedule for this fiscal year</b>	<b>KV</b>	<b>PM</b>
Structures	15	80
Acres	0	16
<b>Funded this fiscal year</b>		

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

Structures	15	80
Acres	0	16
<b>Completed this fiscal year</b>		
Structures	15	50
Acres	0	16

**Republic RD** No fish habitat enhancement was completed this year.

**Sullivan Lk. RD** No Fish Habitat Enhancement was completed this year.

I-4

**Colville RD** Frequency and duration of monitoring of item I-4: 25% of all projects completed in the previous year; 10% of all projects completed in the previous three years; and 5% of all projects completed in the previous 10 years.

No monitoring of this item occurred for fiscal year 1996 by district employees. It is recommended that this item be incorporated into the Forest Wide Hankin and Reeves inventory procedure to follow trends in fisheries habitat on the Forest.

**Kettle Falls RD** Habitat is improving. We monitored the fish structures on Sherman Creek. They trapped large amounts of sediment, increased stream sinuosity, created large pools and were inhabited by fish. Vegetation was establishing itself in the collected sediment.

**Newport RD** The Indian Creek project was designed to remove sediment from the streambed by moving existing logs that were in the stream or spanning the stream so that the waterflow would expose the cobble and gravel under the 2-4 inches of silt. The Browns Creek project was designed to create pool habitat for temperature regulation and winter habitat. The Indian Creek project improve stream flow and removed sediment from the streambed, it was successful. The Browns creek project did not complete all of the structures, the ones completed did create pools and add diversity to the stream. 30 additional logs will be placed in the stream in FY97.

**Republic RD** No projects were monitored this year.

**Sullivan Lk. RD** No projects were monitored this year.

**Evaluation**

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

- I-1 All timber sales reported were in compliance with Forest Plan Standards and Guidelines.
- I-2 On the Kettle Falls and Newport Ranger Districts, the timber sale program helps to achieve the DFCs for fisheries. The other districts did not monitor for this item.
- 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 FY96 accomplishment of 100 structures and 68 acres of habitat improvements met the assigned target accomplishment for the Forest through the annual program budget.

District	Structures	Acres
Colville	8	0
Kettle Falls	25	0
Newport	65	17
Republic	2	1
Sullivan Lake	0	50
Total	100	68

**Recommended Action**

- I-1 Results Acceptable/Continue to Monitor.
- I-2 Results Acceptable/Continue to Monitor. Site specific DFC’s have been developed for some watersheds through watershed analysis. Continue to use Inland Native Fish Strategy Riparian Management Objective’s as DFC to monitor our activities.
- I-3 Results Acceptable/Continue to Monitor.
- 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 and monitoring.

**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. The primary purpose of the range

improvements is to obtain proper distribution of permitted livestock as required by the allotment management plan. Monitoring of these improvements is necessary to insure resource protection.

**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**

The range permittees are provided a preseason inspection sheet of all allotment improvements. Range structures are maintained prior to turn out of the livestock in the spring. This assures that these improvements are working correctly. Maintenance and rebuilding of these improvements is a constant job. The Forest Service generally inspects 10% of these improvements annually. Most are found to be in a functioning condition and if necessary reconstruction needs are noted.

**Evaluation**

A lot of the range improvements are not in good shape, which then mean that more maintenance is then required by the holder of the grazing permit holder.

**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.

**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 FY96 were as follows: in total 34,100 AUMs of grazing were authorized by the Colville National Forest under term permit and 402 AUMs were authorized under temporary permit for a total of 34,500 AUMs.

A total of 132 AUMs of authorized non-use was granted. 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 1996 AUMs of grazing (34,500 AUMs) are within the threshold of variability (10%) established for this monitoring item.

**Recommended Action**

Continue to monitor.

**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 be greater than 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. During the summer of 1996, many more allotments were monitored. Grazing utilization was considered for the allotment as a whole, although within each allotment there are areas where utilization exceeds Forest Plan Standards and Guidelines.

**Summarized Results**

Table 2.1 summarizes forage utilization monitoring results for fiscal year 1996.

**Table 2.1** Forest Utilization Results by Allotment

Allotments	Predicted Compliance With Utilization Standard
<b>Colville RD</b> Middle Fork, Mill Cr. Twelve Mile N. Fk. Chewelah Cr.	In Compliance In Compliance In Compliance
<b>Kettle Falls</b> Bulldog Churchill Renner Lake Jasper	In Compliance In Compliance In Compliance In Compliance
<b>Newport</b> No report	
<b>Republic</b> Bamber Copper-Mires Swan Lake Trout Creek Tonata	In Compliance In Compliance In Compliance In Compliance In Compliance
<b>Sullivan Lake</b> LeClerc Creek Tiger Hill	In Compliance In Compliance

**Evaluation**

The monitoring results indicate that for the 1996 grazing season, utilization was in compliance with the Forest Plan Standards and Guidelines.

**Recommended Action**

Results acceptable, continue to monitor. Many allotments will have improvement work done on them. We will monitor this work for effectiveness. Continued training on range sampling methods is recommended.

**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 specifically monitored in the range analysis work that was completed in 1996, but the range types and condition were evaluated on many allotments. Some localized riparian reaches were found in 1995 to be functional at risk as defined by the Riparian Area Management guidelines TR 1737-9 Assessing Proper Functioning Condition. Mitigation measures were implemented in 1996 to improve conditions within many of these reaches.

### **Evaluation**

The range and riparian resource when looked at as a whole is in good condition and is sustainable in this condition. There are isolated conditions that are in need of mitigation work and much of this work is planned to be completed.

### **Recommended Action**

Results acceptable, continue to monitor. Long term monitoring of range and riparian areas needs to be implemented to determine if a trend exists. A potential solution would be to establish photo points at key areas.

## **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. To determine if stocking levels are sufficient to meet Forest Plan projections of future yields.

#### **Standard**

Stocking levels are measured against two standards. One standard is the NFMA stocking standard that is based on meeting minimum stocking standards within a five year time frame.

In past years another standard was used, one based on stocking levels tailored to timber outputs projected in the Colville National Forest LMP. This year however, this standard will not be measured. Forest Plan yield projections were based on full implementation of the LMP. Conditions have changed. The implementation of the Interim Management Direction establishing riparian, ecosystem and wildlife standards for timber sales, along with other changes in management direction, has caused a significant difference in the Forest's harvest practices. These changes in harvest

intensities have also affected reforestation stocking level intensity. Forest Plan stocking levels are higher (require more trees per acre) than NFMA minimum stocking levels.

**Summarized Results**

Ninety-six percent of plantations harvested five years ago have been certified as meeting NFMA stocking standards. In 1991, final removal harvest occurred on 5587 acres. By the end of FY96, 5390 of those acres (96.5%) had been certified as satisfactorily stocked. The remaining 187 acres are expected to be certified in FY97 and FY98. Ten of the 5587 acres are below minimum stocking, but are not planned for further treatment.

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) are monitored. Survival and growth results for 1996 showed an average of 85% survival the first year following planting and an average of 75% survival the third year following planting (see table). 1994 was an exceptionally hot, dry year and this contributed to the low third year survival.

**Table 2.2** Plantation Survival and Growth

First Year	Acres	Percent
Total area sampled	2221	100
Average survival		85
Survival by species:		
Ponderosa pine		82
Western larch		83
Douglas-fir		92
Englemann spruce		89
Lodgepole pine		65
Western white pine		89
Third Year	Acres	Percent
Total area sampled	4066	100
Average survival		75
Survival by species:		
Ponderosa pine		72
Western larch		73
Douglas-fir		82
Englemann spruce		77
Western white pine		74
Certified as restocked with one treatment (planting)		92

In 1996, 2221 acres were planted and 1971 acres were regenerated using natural regeneration methods. Around 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 fourth year that stocking success five years after harvest has been reported. This 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 time frame.

**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 FY96 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 FY96, no requests were made to go beyond the 40-acre size limitation for regeneration harvests. Forest and District review 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 monitoring item is evaluated by the timber sales through gate 6 in STARS, or, sales that have been awarded in FY96.

**Summarized Results**

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

Mgmt Area	Forest Plan Projection			Actual Award Acres		
	EAM	UEAM	Total Acres	EAM	UEAM	Total Acres
2	200	100	300	47	0	47
3A	0	100	100	405	0	405
5	1700	1100	2800	441	247	688
6	500	400	900	76	96	172
7	5200	0	5200	2435	363	2798
8	1600	0	1600	73	104	177
Total	9200	1700	10900	3477	810	4287
Percent of Project Acres	84%	16%	100%	81%	19%	100%

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

Of the 3477 acres of even-aged treatment, 0 acres are planned to be Clearcut with Reserve Trees. All planned harvest units will have green trees retained for snag replacement trees. The 405 acres of planned evenaged harvest in management area 3A are commercial thins. As are 378 of the 441 acres of planned evenaged harvest in management area 5; the remaining 63 acres are overstory removal harvests. In management area 7, 2323 acres of the 2435 acres of planned evenaged harvest are commercial thins; the remaining 112 acres are seed tree, shelterwood, shelterwood removal, and overstory removal harvests. In management area 8, the planned even-aged treatment is a commercial thin.

**Evaluation**

Timber production and harvesting were 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 fourth year this item has been measured against acres awarded. In all years, the acreage has 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 (do better than the minimum requirement) 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, during the summer months, indicated little change from previous years. Washington State water quality criteria are being met. Sampling revealed the presence of elevated fecal coliform levels adjacent to grazing allotments and from other sources. Submersible thermographs were used to collect continuous water temperature data. Four thermographs were located on Sullivan Creek to collect baseline data for the proposed FERC -licensed hydro-electric project. The data showed maximum temperatures were close to the upper limit of the State criteria, and concern was expressed about the potential effect of future low flows due to the project on maximum temperatures.

Bead Lake was monitored in 3 locations as part of a multi-year characterization study to determine possible changes in lake water quality as a result of the construction of a proposed boat launch and parking area. The lake was assessed to be oligotrophic at the present time with the current level of human activities and boating. Future characterizations will be compared to the 1996 study.

### **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. Elevated fecal coliform levels are still found as a result of natural conditions and livestock grazing.

### **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**

BMPs are being developed in an interdisciplinary manner as required by the Regional BMP process. Forestwide BMPs are being used to make consistent and implementable requirements. BMPs were reviewed for effectiveness during various field visits to land management activities on the forest. No reports were made of the failure to implement BMPs as required and indications are that the practices were effective at protecting water quality from accelerated sedimentation.

Filter windrows and sidecast slash blankets were used on new roads on some timber sales to implement BMPs PR-7 and PR-12, which require filtration of road runoff before it enters perennial streams. In fact, these structures were used to protect streams of all classes, and in some cases for on-site fillslope protection where stream water quality was not threatened. The filter windrows appeared to be highly effective in detaining the first year sediment produced from new roads. Sidecast slash was less effective since slash may or may not be placed at the outlets of drainage structures; it can, however, be used with some effect as a fillslope mulch or armor. Sidecast slash was judged to be an inadequate means of filtering road surface runoff unless there is a buffer of approximately 100' of intact forest ground between road and stream.

The Copper Salvage TS was reviewed to determine the effectiveness of various BMPs in a fire salvage area. Some of the units that were winter yarded had to be reentered in the summer due to additional mortality. The impacts of the harvest were close to those predicted in terms of protection of water quality. Debris scattering/mulching on skid trails and landings was found to be a very effective practice. Road closures and water quality monitoring were found to be effective.

#### **Evaluation**

In general, 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. With regard to fillslope protection and sediment retention in filter windrows, current practices appear to be highly effective. Future

projects utilizing landings within RHCA's should be closed to recreation and livestock impacts to prevent reduction of the benefits of the erosion control measures.

**Recommended Action**

Results Acceptable/Continue to Monitor. Culvert placements, older cutslope revegetation success, and intermittent/ephemeral stream crossing structures will continue to be monitored in 1997 to further evaluate the problems identified in 1996. Special erosion control materials will be tested in upcoming road construction projects in an attempt to promote more successful and rapid revegetation on new cutslopes.

**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 visually 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 and INFISH guidelines are being implemented and effective.

**Evaluation**

Overall, riparian area standards and guidelines are being met. Timber harvest activities did not appear to have any observable impact on riparian ecosystems, other than at road crossings. In most cases, harvesting in the riparian area was avoided due to implementation of the INFISH direction.

Although grazing, recreation and other impacts do need to be monitored, time and funding are limited. Therefore, monitoring efforts were focused on the activity or timber harvests with the greatest potential for impacts to riparian areas.

**Recommended Action**

Results Acceptable/Continue to Monitor.

**MONITORING ITEM 27  
Changes In Soil Productivity**

**Forestwide Goal**

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions
---

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 be greater than 20 percent of the total acreage within 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 were monitored:

<u>District</u>	<u>% disturbance</u>	<u>District</u>	<u>% disturbance</u>
<b>Colville</b>		<b>Newport</b>	
Hosmer#1	12.3	Johnson Mill South #1	20
Master Delux #10	15.9	Johnson Mill South #6	18
Dozer thin	8.6	Johnson Mill South #19	16
<b>Kettle Falls</b>		<b>Republic</b>	
Crown #3	13.9	Spock #1	70
Crown #13	17.5	Spock #3	57
		Spock #4	20
<b>Sullivan Lake</b>	No report		

**Evaluation**

In each of the units monitored, the area in landings and skid trails 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 and puddling represented, but the percentage of the area was small. Season of treatment, soil type and type of harvest treatment appeared to be the main factors that affected the amount of soil compaction. The process used to determine detrimental compaction on the Republic District appeared to differ from that used on the other districts. Two of the units exceeded the Forest Plan Standards and Guidelines. These same units had been harvested previously (15-20 years ago) and it is estimated that much of the detrimental impacts occurred then. These results, except for the Republic District, appeared to be consistent with similar monitoring results over the past eight years and fall within acceptable limits. There is a need for consistency in monitoring techniques in order to determine compliance with the Forest Plan Standards and Guidelines.

**Recommended Action**

Results Acceptable/Continue to Monitor. Prior to treating skid trails within the interior of harvest units by ripping to reduce compaction, a soil scientist or hydrologist should be consulted to ensure that the restoration treatment does not result in increased soil displacement or loss of soil productivity.

**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 be greater than 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	FY 95	FY 96
Passenger Car	849	801	716	683	683	681	676
High Clearance	2500	2409	2350	2299	2286	2242	2155
Total	3349	3210	3066	2982	2969	2923	2831

**Evaluation**

Forest Plan standards are being met. Due to an increase in the number of timber sales being sold, the number of constructed/reconstructed and closed road miles is increasing. The increase in the number of timber sales over the past year has increased the number of miles of road maintained by timber purchasers. An organized Forest wide effort to resize the road transportation system began in FY96. Resizing of the Forest transportation system will continue at a more rapid rate. Some roads are no longer maintained for passenger cars and are being moved toward high clearance roads, while high clearance roads are being closed to prevent further roadbed deterioration and resource damage, thus continuing the downward trend for the last three years of decreasing Forest access, especially for passenger cars.

### **Recommended Action**

Results Acceptable/Continue to Monitor. Monitoring results show that the level of appropriated maintenance funding is not keeping pace with maintenance funding needs. The Forest resizing effort began in 1996 and is expected to continue over the next 5 years.

## **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 estimates of mortality from aerial mapping surveys. 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 risk. The categories that are of highest concern are bark beetles, dwarf mistletoe in Douglas-fir and root diseases.

Defoliators: Spruce budworm activity remained at low levels since the dramatic population crash in 1993. No acres with defoliation were detected from aerial reconnaissance in 1996 compared to 146,600 acres in 1992.

Bark Beetles: Activity from mountain pine beetle was mapped on nearly 1,642 acres in 1996; 1,119 ac. in lodgepole pine, 5 acres in ponderosa pine, and 518 acres in western white pine. In lodgepole pine this is down from 15,100 acres in 1995, 7,700 acres in 1993, and 3,400 and 3,800 acres in 1991 and 92 respectively. Note that this comparison does not include 1994. Mapping that year was very sketchy due to smoke and flight restrictions associated with forest fires.

Root Disease: Bark beetle activity in Douglas-fir and true firs are nearly always associated with root disease. Activity was mapped on about 8 acres in 1996.

Dwarf Mistletoes: Mistletoe infections in Douglas-fir are of particular concern on the west half of the Forest. This agent can not be mapped from aerial surveys; but is estimated to cover roughly 100,000 acres.

### **Evaluation**

Defoliators: The area entomologist cautions that current population reductions of spruce budworm may be temporary. Epidemic, or near epidemic, populations may return. Forest structure and composition are essentially unchanged, with a large proportion of the Forest still identified as high risk (Paul Flanagan, personal communication).

Bark Beetle/Root Disease: In most instances on this Forest, bark beetle activity occurs in root disease centers. Forest structure and composition indicate a high potential for 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 is of primary concern, due to expansive landscapes of lodgepole pine 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 to break up these large landscapes of uniform susceptibility.

Dwarf Mistletoes: Stand structures and compositions 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 appear to be a widespread concern on the west half of the Forest.

### **Recommended Actions**

Results Acceptable/Continue to Monitor. Continue to focus timber harvest activities in areas that are high risk to insects and diseases. Monitor 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.

## **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 32 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 heritage 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 being implemented for FY96).

The inventory of almost 1300 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. Next fiscal year we will be required to perform such efforts. A major context document completed this year was in the Addy Chewelah Timber Sale area. 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 18,000 acres; 16 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. Next year a major change in compliance report generation will occur with the completion of a new Programmatic Agreement with SHPO.

## **MONITORING ITEM 31**

### **Comparison Of Actual And Planned Implementation Costs**

A comparison of actual and planned costs was not performed for FY96. 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 \$20.0 million (1996 dollars). Actual returns to government for FY 1996 was \$7.4 million (1996 dollars).

##### *Payments to States*

The Forest Plan also estimated that full implementation of the Plan would produce \$5.0 million in payments to states (1996 dollars). Actual payments to states during fiscal year 1996 were \$1.7 million (1996 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 the average timber revenue per MBF is \$161 (1996 dollars) and total timber harvest is 123.4 MMBF, and the revenue from all other resources is \$113,000 (1996 dollars). According to the planning models used during the planning process, the returns to government related to timber would be roughly \$19.9 million (1996 dollars). 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.

Even with an average timber revenue of almost \$200 per MBF for fiscal year 1996, the Forest would had to have harvested at least 100 MMBF of timber during the fiscal year to realize Forest Plan estimates of total returns and payments to states. That is 65 MMBF more than what was actually harvested.

**Recommended Action**

Further Evaluation/Determine Action. The Forest is scheduled to begin a Forest Plan revision effort during fiscal year 1998. Revisions of returns to government and payments to states will be made during the revision effort.

**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 1996.

**MONITORING ITEM 35  
Minerals**

**Forestwide Goal**

## Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

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 3 sites on the forest for the purpose of monitoring operation and reclamation compliance. Those reviews and District reports indicate that approximately 95 percent of the land disturbed by mineral operations on the Colville National Forest has been reclaimed as prescribed within 2 years. Reclamation of Echo Bay's Key West mine was reclaimed in large part during the fall of 1996.

A complete review of District mineral files shows that 36 CFR 228(A) time frames were met on 13 of 16 processed cases or 81 percent of the time. Two of the projects for which the timeframe was not met required common variety determinations.

Mitigation measures were generally accepted by mineral proponents. No administrative appeals were received for minerals projects during FY 1996.

### **Evaluation**

The results of minerals monitoring for 1996 show that all but one threshold criteria were successfully met. Response time frames were met in 81 percent of 36 CFR 228(A) cases instead of the threshold 90 percent. This downfall was due largely because two projects required common variety determinations prior to processing. The additional time needed for these reports delayed district reviews and analyses.

**Recommended Action** Results Acceptable/Continue to Monitor

**MONITORING ITEM 36**  
**Community Effects**

No community effects data was reported for fiscal year 1996. This data will not be reported until after the Forest Plan revision, scheduled to begin in 1998, is completed.

## Chapter 3 Accomplishments

### 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 (1996 dollars).

Outputs, Effects, Activities and Costs	Unit of Measure	Forest Plan Ann Avg	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Developed Recreation Use	MRVD	350	406	409	554	na	761
Non-Wild Disp Rec	MRVD	844	1,106	1,055	1,428	na	848
Wilderness Use	MRVD	2.4	1.2	1.2	1.2	na	3.9
Trail Construction/Reconstruction	Miles	26	7	12	8	15	37
Dev Site Const/Reconst	PAOT	354	60	155	130	29	60
Wildlife Habitat Improvement Acres	Acres	1,925	3,110	641	na	1,630	1,767
Wildlife Habitat Improvement Structures	Structures	1,140	727	186	na	576	469
Fish Habitat Improvement Acres	Acres	11	39	16	0	43	68
Fish Habitat Improvement Structures	Structures	84	124	20	45	69	100
Range-Permitted Grazing	AUMs	35.0	33.3	30.5	30.5	34.4	34.5
Range-Fences	Miles	5	10	10	6	na	na
Range-Water Developments	Number	10	14	14	6	42	46
Range-Nonstructural Improvements	Acres	1,127	160	34	175	31	1,929
Timber-ASQ (offered)	MMBF	123.4	26.0	13.5	45.1	60.3	48.1
Timber Harvested	MMBF	123.4	82.0	72.2	41.4	41.9	35.7
Fuelwood	M Cords	17.9	7.8	3.0	10.0	5.6	0.2
Reforestation: Planted	M Acres	4.2	4.3	5.2	4.8	2.9	2.2
Reforestation: Natural	M Acres	2.8	1.7	0.8	2.4	1.5	2.1
Timber Stand Improvement	M Acres	2.7	3.3	2.6	1.9	1.8	1.8
Improved Watershed Condition	Acres	12	20	23	25	20	20
Minerals	Operating Plans	150	50	74	60	56	58
Energy Minerals	Billion BTUs	0.0	0.0	0.0	0.0	0.0	na
Non-Energy Minerals	MM\$	7.42	4.29	7.29	1.26	0.31	0.03
Arterial and Collector Road Reconst	Miles	10	3	16	0	0	64
Bridges	Structures	1	0	1	0	1	0
Timber Purchaser Road Const/Reconst	Miles	98	22	108	6	65	101
Roads for Public Use Passenger Car	Miles	849	716	683	683	581	676
Roads for Public Use High Clearance	Miles	2,500	2,350	2,299	2,286	2,242	2,155
Roads Closed to Public	Miles	1,126	930	1,024	518	1,025	1,188
Total Forest Road	Miles	3,745	3,996	4,006	4,016	3,947	2,832
Total Forest Budget	MM\$	28.2	22.5	20.3	18.0	16.6	15.6
Returns to Government	MM\$	20.0	10.4	9.6	7.3	8.7	7.4
Payments to States	MM\$	5.0	2.6	2.3	1.8	2.0	1.7
Change in Jobs	Chng In Number	589	279	155	38	na	-168
Change in Income	Change In MM\$	14.3	5.4	2.3	-2.3	na	-6.5
Acres Harvested by Clearcut	M Acres	4.6	2.6	2.1	1.5	0.4	0.1
Acres Harvested by Shelterwood	M Acres	2.3	1.0	1.8	1.1	0.7	0.9
Acres Harvested by Uneven-age Mngnt	M Acres	1.7	0.6	0.3	0.4	0.7	0.6

"RVDs" denotes "Recreation Visitor Days"; "WFUDs" denotes "Wildlife & Fish Users Days"; "AUMs" denotes "Animal Unit Months"; "BTUs" denotes "British Thermal Unit".

#### FOOTNOTES:

**Recreation:** Non-Wilderness Dispersed Rec, roaded and unroaded, were combined in fy96 to be consistent with current methodologies.

**Fuelwood**--Figure for the plan represents estimate of supply available. Does not represent amount demanded or collected.

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

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

**Energy Minerals**--These figures are relative values based upon minerals accessibility and are not intended to be accurate estimates of mineral production.

**Public Use Roads**--The days available for public use would vary even though the miles do not.

**Forest Budget**--Does not include budget for Job Corps Center.

**Change in Jobs**--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.

**Payments to States**--Does NOT include portion of Kaniksu N.F. admin by Idaho Panhandle N.F. that is Washington State.

**Acres Harvested by Presc.**--Does not include the Final Removal cut of shelterwood prescriptions or the overstory removal on Remove Now and Remove Next condition classes.

**Total Forest Road**--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 1996. 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 is provided below.

**Table 4.1a** Sources and Uses of Funds for FY 1996 (1996 Dollars), Colville National Forest.

Source/Use	Timber	Recreation	Wildlife	Water & Soil	Minerals	Range	Lands	Total
Revenue	7,085,065	205,860	26,024	5,000	580	43,545	34,854	7,400,928
Capital Improvements								
Operations & Maintenance	4,638,556	794,676	229,858	62,075	27,767	260,312	1,992,09	8,005,338
Structural Improvements	116,333	45,033	74,071	31,853		55,008		322,298
Nonstruct Improvements	2,046,885	10,708	41,447	36,169		15,678	280,319	2,431,206
Roads	368,333	10,021						378,354
Trails		80,210						80,210
Bldings & Facilities	480	-2,498					403	-1,615
Total Improvements	2,532,031	143,474	115,518	68,022		70,686	280,722	3,210,453
Total Indirect Expenses	3,474,482	389,926	134,947	59,132	12,453	139,329	528,118	4,738,387
Net Cash Flow	-3,560,00	-1,122,216	-1,122,21	-184,229	-39,640	-426,782	-2,766,08	-8,553,250
Payments to States	1,652,970	48,028	6,071	1,167	135	10,159	8,132	1,726,662

**Notes:**

Revenues also include monies from special-use permits.  
All data is from All Resource Reporting System.

## Chapter 4 Financial Report

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 1996 was a negative 8.6 million dollars.

Total Forest revenue decreased by 15 percent from FY 1995 to FY 1996. The decrease in Forest revenue was mostly due to the decrease in timber harvested during FY 1996. Timber harvested during FY 1996 was down 6 MMBF, or 15 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 1996, the net gain for the timber program was a negative 3.6 million dollars, 3 million dollars less than that for FY 1995 (for more detail, see the TSPIRS reports).

Table 4.2 shows a comparison of the actual FY 1996 budget and the projected Forest Plan budget. Because budgets can vary widely from year to year, comparisons to the Forest Plan should be made with respect to a Forest Plan 10 year total vs. the actual cumulative for decade. The cumulative expenditures from 1989 to 1996 for all programs is 64 percent of the Forest Plan 10-year total. This percentage would have been 80 percent if all programs were funded at Forest Plan levels since Plan implementation. Given the budgets of the last 8 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 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.

## Chapter 4 Financial Report

**Table 4.2** Comparison of Forest Plan budget With Fiscal Year 1996 Actual, by Program Level (1996 Dollars).

Program Area	Forest Plan Ten Year Total	Actual FY 1996 Budget	Actual Cumulative for Decade Starting 1989	Cumulative as Percent of Forest Plan Program Level	Cumulative Percent of Forest Plan Total Budget
Timber	133,344,145	7,238,537	86,076,734	64.55%	30.48%
Insect & Disease	0	17,000	25,918	0.00%	0.00%
Facilities	52,091,692	1,293,681	23,617,923	45.34%	8.36%
Gen Admin	27,307,951	3,790,752	26,278,013	96.23%	9.30%
Fire Protection	18,408,658	1,082,148	12,425,168	67.50%	4.40%
Wildlife & Fish	17,052,944	400,268	5,911,482	34.67%	2.09%
Recreation	12,125,570	884,998	9,849,901	81.23%	3.49%
Lands	8,184,316	241,666	5,593,475	68.34%	1.98%
Range	6,173,340	383,260	3,675,769	59.54%	1.30%
Water/Soil/Air	4,646,548	173,723	2,061,547	44.37%	0.73%
Minerals	2,619,433	39,149	906,817	34.62%	0.32%
Wilderness	285,668	29,538	242,646	84.94%	0.09%
Law Enforcement	209,813	73,148	1,516,184	722.64%	0.54%
Planning	0	1,465,593	0.00%	0.00%	
<b>Forest Total</b>	<b>282,450,077</b>	<b>15,647,868</b>	<b>179,647,170</b>	<b>64%</b>	<b>64%</b>

**Notes:**

The Forest Plan budget included Planning expenditures with all other programs.

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**

Deer and Elk Habitat and Population

Management Indicator Species

Threatened, Endangered and Sensitive Species

Insects and Disease Populations

Heritage Resources

Fisheries: I-3

### **Cooperators**

WA Dept. of Fish and Wildlife  
Rocky Mountain Elk Foundation  
Inland Northwest Wildlife Council

WA Dept. of Fish and Wildlife  
WA Natural Heritage Program  
U.S. Fish and Wildlife Service  
Inland Northwest Wildlife Council  
Eastern WA State University  
American Birding Association

WA Natural Heritage Program  
WA Dept. of Fish and Wildlife  
U.S. Fish and Wildlife Service  
Hawkwatch International  
WA Falconers Association.  
Barstow Area Bald Eagle Society  
Kalispel Tribe of Indians  
Tri-County Diving Club  
Sea Otter Diving Club  
Conservation Biology Research  
Loon Lake Loon Association  
University of Montana

Regional Office, USFS

State Historic Preservation Office

Trout Unlimited: Spokane Falls  
Chapter

**\*CHAPTER 6 AMENDMENTS AND FOREST PLAN ADJUSTMENTS**

There were five new Forest Plan Amendments in fiscal year 1996. The following amendments have been issued for the Colville Forest Plan since implementation began in February 1989:

<b><u>Amendment</u></b>	<b><u>Date</u></b>	<b><u>Nature of Amendment</u></b>
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

Chapter 6 Amendments
----------------------

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.       |
| 8   | 12/1/94 | A designation of a communications site with existing use on the Kettle Falls Ranger District.  |
| 9   | 3/31/95 | A site-specific adjustment of the Management Area 1 boundaries in the Seldom Seen 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.    |
| 10  | 4/26/95 | A site-specific adjustment of the Management Area 1 boundaries in the East Curlew 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.         |
| RF2 | 6/12/95 | Revision and clarification of Regional Forester's Forest Plan Amendment #1, which revises descriptions of the structural stages of Historic Ranges of Variability.   |
| 11  | 6/21/95 | A site-specific adjustment of the Management Area 1 boundaries in the Upper Ruby and Rufus Planning Area on the Newport Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species. |
| 12  | 6/21/95 | A site-specific adjustment of the Management Area 1 boundaries in the Pack to Go 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.      |

Chapter 6 Amendments		
----------------------	--	--

13	6/21/95	A site-specific adjustment of the Management Area 1 boundaries in the Exposure Snyder 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.
14	6/21/95	A site-specific adjustment of the Management Area 1 boundaries in the Mill Planning Area on the Colville Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.
INF	7/31/95	Inland Native Fish Strategy adopted by Regions 1, 4 and 6 to provide interim direction to protect habitat and populations of resident native fish outside of anadromous fish habitat.
15	9/27/95	Site specific exception to the screening guidelines in the Nancy Tie Hoobedoo Timber Sale in unit E. Treatment within the Marten Management Requirement Area #55 is needed to develop the best possible habitat for pine marten and ensure long term viability.
16	1/23/96	Revision of Forest Plan management direction for the Salmo Priest Wilderness. Additional standards and guidelines developed to maintain wilderness character and non-degradation of the established area. This amendment was signed jointly with the Idaho Panhandle National Forests.
17	10/23/96	Site-specific exception to the screening guidelines in the North Sherman and Fritz Timber Sales EIS on the Kettle Falls Ranger District to treat mature lodgepole stands for lynx forage habitat. This would maintain habitat that is being lost for Franklin grouse and lynx. The decision also includes an adjustment of the Management Area 1 boundaries to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.
18	6/6/96	A site-specific adjustment of the Management Area 1 boundaries in the Wolfman 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.
19	5/31/96	A site-specific adjustment of the Management Area 1

Chapter 6 Amendments

boundaries in the Addy-Chewelah Planning Area on the Colville Ranger District, designed to locate the MA-1 in more suitable habitat that better meets the needs of old growth dependent species.

20

6/19/96

A site-specific exception to the screening direction. Harvest unit 9 in Eagle Rock Restoration Project on the Republic Ranger District will include removal of Douglas-fir trees over 20 inches that are infected with dwarf mistletoe, to allow development of big game thermal cover in the understory.