

Colville National Forest Forest Plan Monitoring and Evaluation Report: 1997

Many of you received a copy of the 97 Report that had blank pages from page 36 and on. This copy has all pages. Sorry about the inconvenience.

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 1997 (10/1/96 - 9/30/97) 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.

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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 FY97. 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 overall. Forty-six decisions were made on the Forest, and all but a few were appealable. Half of the eight Forest Supervisor decisions were not appealed, one was resolved at the local level, and three went on to formal review. The Noxious Weed EA was remanded back to the Forest for more analysis and a new decision. Two litigation cases were decided in favor of the government and one went forward on appeal.
2-Standard and Guidelines	Standards and guidelines are being met on timber sales that were reviewed in 1997. Road Management Objectives review was identified for further monitoring.
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.

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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	Standards and guidelines are being implemented as prescribed in the Forest Plan. Complete achievement of the desired forage/cover ratios will be difficult to achieve in some areas and/or may require more than one timber harvest entry.
11-Primary Cavity Nesters	Sufficient numbers of snags are being identified during timber sale marking, and/or mitigated with K-V funds following sale closure. However, post-sale firewood cutting continues to impact the Forest's ability to provide and maintain the desired number of snags within many areas of the Forest and it is recommended that firewood management practices be changed.
12-Old Growth Dependent Species	Forest Plan direction is being met. However, the Forest Plan prescribed an old growth habitat network established on a grid system. Problems frequently arise when grid locations fall on sites not ecologically suited for management as old growth forest.
13-Management Indicator Species	Forest Plan direction is being followed and significant improvements in locating and protecting lynx habitat and goshawk nest sites have been made.
14-Threatened, Endr, & Sens. Species	Little habitat management affecting caribou and grizzly bear has occurred, but population monitoring and coordination with other agencies continues to work well. Road closures have improved grizzly bear seclusion opportunities, and the Sullivan Lake District has established an effective monitoring/public education program to insure compliance with

road closure objectives. A bald eagle nest was located on national Forest System lands, and a monitoring program and management plan for this nest site is being developed. Sensitive plant monitoring continues to fall short of the 25% site revisit objective in the Forest Monitoring Plan due to the large number of plant sites on the Forest. Monitoring efforts have been scaled back to focus on some long-term monitoring projects.

15-Fisheries

Only 1 district monitored a timber sale which was in compliance. The other districts need to coordinate with the forest fishery biologists to develop monitoring plans. Fish structures are being implemented across the Forest, however more coordination with forest fishery biologists is needed.

16-Range Improvements

Inspections by both permittees and forest service employees of improvements were completed. Notice was given to the permittees of those improvements needing maintenance. Construction of new facilities was limited to 2 miles of fence and a new water development.

17-Livestock Permitted

In 1997 the total permitted numbers was 30,136 AUMs, which is outside the recommended 10% variance. There was 1,321 AUMs of permittee requested non-use.

18-Utilization of Forage

Utilization of forage in 1997 was within acceptable ranges for the allotments checked on the whole. There are still areas of concentrated use that need to be monitored closely.

19-Riparian and Range Conditions

This item was not specifically monitored in 1997. Effects are similar to those discussed in monitoring item 18.

20-Restocking of Lands

In 1992 final removal and/or regeneration harvest occurred on 2957 acres. By the end of 1997, 2853 acres (96.4%) are satisfactorily stocked. All the non-stocked acres are scheduled for planting in FY 98 and 99.

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21-Timber Yields	Not monitored in 1997
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 silviculture method (even-aged and uneven-aged management) is below Forest Plan projection for all methods except in management area 3.
25A-Water Quality	Data was collected from 32 selected sites to meet several objectives. The data indicated water quality objectives were being met at an estimated 80% of the locations. Temperature and fecal coliform levels exceeded the criteria due in part to management practices and in part to natural conditions.
25B-Watershed Best Management Practices	Best Management Practices are being prescribed and implemented based on the best available information at the time. Practices are modified based on conditions to meet water quality goals and objectives.
26-Riparian Areas	Riparian areas are receiving more focus for protection of natural processes. Riparian roads are being planned for relocation.
27-Soils	Soil compaction is the most significant detrimental soil disturbance due to management. There was a wide variation in results due to season, soil type and harvest method used. Natural decompaction rates are unknown but are expected to exceed 30 years in most areas.
28-Transportation System Management	Road maintenance and monitoring efforts have been altered due to the need to concentrate on FY96/97 flood repair efforts. There is an emphasis to take advantage of the flooding effects and resize our transportation system.
29-Insect and Disease Populations	Douglas-fir bark beetle activity will be intensifying following several storm events during the winter of 1996/97. Localized

salvage sale and beetle trapping activities will take place over the next 3 to 5 years.

Root disease and mistletoe infections continue at high levels. Review and prioritization for management will be made with individual timber sales.

30A-Heritage Resource Protection

Although harvest and other undertakings are avoiding direct impact to significant properties, those sites are being adversely impacted through vandalism and natural deterioration.

30B-Heritage Res Compliance Activities

Compliance generated archaeological survey was conducted on approximately 6000 acres; 18 new properties were documented. While compliance standards were met, compliance fieldwork and reporting quality varied in quality.

31-Actual and Planned Costs

Not reported for FY 1997.

32-Economic Effects

Returns to Government

Actual returns to government data for FY 1997 for the Forest was not available (see Chapter 4). However, total timber program revenue for FY 1997 was \$6.7 million (1997 dollars).

Payments to States

Actual payments to states data for FY 1997 for the Forest was not available (see Chapter 4). However, total timber program related payments to states for FY 1997 was \$1.5 million (1997 dollars).

33-Coordination with Adjacent Landowners

Direction is being met under NEPA.

34-Modeling Assumptions

Not reported for FY 1997.

35-Minerals

100 percent of the land disturbed by mineral operations on the Colville National Forest has been reclaimed as prescribed within 2 years.

36-Community Effects

Not reported for FY 1997.

SUMMARY OF RECOMMENDED ACTIONS

Table 1.1 displays a summary of the recommended actions for each item monitored during FY97. 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			
3-Recreation Experience			X	
4-Recreation Trail Use	X			
5-Semiprimitive Recreation	X			
6-Off-Road Vehicle Use			X	
7-Visual Quality Objectives		X		
8-Wilderness	X			
9-Potential Wild Scenic Rivers	X			
10-Deer and Elk Winter Range				
I-1	X			
I-2	X			
I-3	X			
I-4	X			
11-Primary Cavity Nesters		X		
12-Old Growth Dependent Species	X			
13-Management Indicator Species				
I-2	X			
I-4	X			
E-2	X			
14-T.E.S. Species				
I-2	X			
I-3	X			
I-4	X			
I-5	X			
I-6	X			
E-2	X			
15-Fisheries:				
I-1	X			
I-2	X			
I-3	X			
I-4	X			
16-Range Improvements	X			
17-Livestock Permitted	X			
18-Utilization Of Forage	X			
19-Riparian & Range Condition	X			
20-Restocking of Lands	X			
22-Land Suitability	X			
23-Dispersal of Units	X			
24-Silvicultural Practices	X			
25A-Water Quality	X			
25B-Watershed BMPs	X			
26-Riparian Areas	X			
27-Soil Productivity Changes	X			
28-Transportation System	X			
29-Insects and Disease	X			
30A-Heritage Resource Protection		X		
30B-Heritage Resource Compliance	X			
32-Economic Effects			X	
33-Cood W/ Adjacent Land Owners	X			
35-Minerals	X			

CHAPTER 2 MONITORING RESULTS AND EVALUATION

This section summarizes the results of monitoring and evaluation conducted during fiscal year 1997, which ran from October 1, 1996 to September 30, 1997. 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

Eight Forest Supervisor decisions were made. Of those decisions, four were not appealed (Totem, Ruby Mtn, SR 20, Old Berry), one was appealed and resolved in the appeal process (North Sherman), and three others were appealed and not resolved in the informal disposition process. Two decisions that went forward for formal review were upheld at the higher Regional level (New Moon, Tonata AMP). One decision that went forward, the Noxious Weed EA, was remanded back to the Forest for more analysis and a new decision. A total of 38 District Ranger Decisions were signed, two were appealed and upheld at higher levels. Of the other District Ranger Decisions, some were not appealable under the Recission Salvage legislation.

Litigation summary: Eagle Rock project was decided in the government's favor in 1997, Bead Lake Shoreline Hearing Permit appeals (2) were decided in the county and government's favor, and the East Curlew case was appealed to the Ninth Circuit Court of Appeals.

Evaluation

In general, analysis and documentation for projects is meeting the requirements of the National Environmental Policy Act. The 1996 Noxious Weed environmental assessment needed more information for the Responsible Official to determine the significance of the environmental consequences and to make a reasoned choice among the alternatives.

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

Projects that were reviewed included active timber sale reviews, and Rufus Timber Sale post-sale harvest review and Eagle Rock road review. Monitoring on these activities showed that Forest Plan standards and guidelines were being met. An emphasis item on the Eagle Rock road review was Road Management Objectives and the need for them to be determined by both planning and implementation people.

Evaluation

Monitoring indicated that Standards and Guidelines are being met.

Recommended Action

Results Acceptable/Continue to Monitor

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

Monitoring Methods Used

Fee collection records and visitation reports from concessionaire operations.

The level of monitoring done during FY 1997 was reduced in part due to the reduction in discretionary Recreation funds available to the Districts for completing surveys, evaluating, and reporting. There was a 20% reduction in these funds from FY 1996 to FY 1997. This is in conflict with available funding amounts listed for Recreation in Chapter 4 financial tables, but those dollar amounts include non-discretionary funds not available for monitoring tasks (specific deferred maintenance projects, KV projects, reconstruction and repair due to flood or storm events, etc.).

Colville RD

No monitoring on this item occurred for fiscal year 1997

Kettle Falls RD

No monitoring on this item occurred for fiscal year 1997

Newport RD

Three campgrounds (Pioneer, Browns, S. Skookum) generally exceed peak capacity on weekends and every holiday weekend. However, due to late spring flooding of the Pend Oreille river, the two river campgrounds had a very late opening date. Due to this, the concessionaire saw a slight decrease in the revenue collected from the FY96 level, and overall use of the campgrounds was slightly down from 1996 levels.

RV use in the campgrounds was higher again in FY97 than in the past, with the exception of Pioneer Park, where RV camping accounted for almost half of the use.

The Brown's lake water system failed in 1996 and was not opened in FY97. If water is to be provided at this campground in the future, additional funding for a new or deeper well will be required. Without water, the concessionaire has been forced to reduce fees.

Republic RD

Overall use at fee sites as percent of capacity: 80%

Total 1997 Recreation use fees for:

Swan Lake Campground showed 27% decrease from 1996

Long Lake Campground showed 50% decrease from 1996

Formal monitoring of non-fee sites was not conducted.

Ferry Lake and 10-mile Campgrounds remain non-fee, pack-in/pack-out.

Events: Fish Festival at Swan Lake of May 1997 had 50 participants

Fall Bike Festival at Swan Lake of September 1997 had 150 participants over 2 days

Monitoring of dispersed recreation sites was conducted in a Fall Hunter Patrol

Sullivan Lake RD

Forestwide Standard #9 was met at a higher level under the concessionaire operations of developed campgrounds than in the past when FS operated the facilities.

Actively met #5 by making visitor contacts to dispersed campsites along Sullivan Creek to share information on “leave no trace” camping and proper disposal of human waste.

Standards and guidelines for resources other than recreation are being met.

Current conditions are within the threshold of variability for this item.

Evaluation

Site conditions, and user satisfaction, across the Forest has been severely affected by weather events. These events also limit the ability of the workforce to assess user needs beyond keeping existing facilities open and available.

In May and June of 1997, heavy rains combined with above normal spring runoff caused the Pend Oreille River to overflow its banks. The areas affected include Edgewater, Pioneer Park, and Panhandle campgrounds. Flooding not only limited access to the facilities, but damaged slopes and flooded toilet buildings. The same heavy rains and runoff caused Crescent Lake to rise sufficiently to completely flood the campground. This is the second year that Crescent Lake Campground has been closed due to flooding.

During the same rain/runoff event, Noisy Creek Campground was also affected when the Creek flowed out of its established channel, deposited gravel and cobble in areas of the campground, and eroded portions of the roadbed. Damage occurred to the access road and some campers were actually trapped, requiring emergency road repairs. Also, the dispersed campsites along Sullivan Creek were affected when that Creek flooded. The three vault toilets were flooded, and a total relocation of these facilities will be needed to remedy health and safety problems.

While Forest Plan Standards and Guidelines regarding general ROS allocations appear to have been met, they are intended to be used with national and regional policies. National standards for quality now being emphasized (Meaningful Measures) set a clearer and more measurable picture of whether we are providing quality recreation opportunities. While the Colville National Forest is not meeting all Meaningful Measures Standards, we are attempting to meet those standards considered critical in addressing health and safety concerns.

Recommended Action

Further Evaluation/Determine Action. 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 still needed than is currently available. Tentative results of the San Dimas study show that public education is necessary to bring about a change in the attitudes of users.

The Forest will continue to implement and utilize the Meaningful Measures process to address concerns regarding the quality of recreation opportunities provided..

MONITORING ITEM 4 Recreation Trail Use

Forestwide Goal

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

Purpose of Monitoring

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

Standard

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

Summarized Results

Monitoring Methods Used

Monitoring consisted of field observations, trail counters, registration boxes/cards, GPS surveys, and visitor contacts.

Colville RD and Kettle Falls RD

One hundred sixty completed registration cards were collected from the SF Mill Trailhead on the Little Pend Oreille ORV Trail. ORV use was the prominent use; bicycling, horseback riding, hiking and hunting were also mentioned. Visitors were from WA, CA, ID and Canada. The Thomas Mountain Road Closure also closed a portion of this trail, and drew a number of complaints from berry-pickers and hunters seeking access to this area.

Newport RD

Pioneer Interpretive trail received over 2000 visitors.

Bead Lake trail is heavily used by local Bead Lake residents for walking and skiing and is very popular with residents in the Spokane and surrounding areas for hiking and mountain biking. Use is approximately the same, slightly up from FY96 levels, and is estimated to be over 2000 users.

Browns Lake (2 sites monitored) 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. Use on the trail is estimated at over 2000. The fish interpretive site is a popular point on the Brown's Lake trail.

South Skookum trail continues to be a popular trail. Use has stayed about the same as FY96 levels and is around 5000.

Batey-Bould trail use for FY97 is estimated to be about the same as FY96 levels, but with a higher percentage of use from horseback riders. Use levels have been affected by the reconstruction occurring on the trail. With the improvements to the trail, use is expected to rise after 1997. The trail is also becoming popular with mountain bike

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enthusiasts and several groups have expressed interest in holding organized mountain bike races on the trail in the near future. Use is estimated at over 2000.

Upper Wolf trail use continues to rise. Numbers of users is estimated to be up from FY96 levels, as is the number of users on Lower Wolf, which is popular with locals for hiking.

Geophysical trail use has remained fairly steady with FY96 levels. The area is becoming more popular with Scout troops who have used the trails several times for large group events, including hiking and mountain biking.

Republic RD

1996 Winter through Fall 1997 Trail Registers (includes Trail #s: 13n, 23, 30, 12, 49, 25, 1, 41, 3, 10, 40, 8, and 7)

	Hiker	Horse	Mtn. Bike	Total Registered
Number Registered	451	124	229	804
Percent of Total Registered	56%	15%	29%	

Special Events (Not registered):

Kettle Crunch (31.2 mile traverse of the Kettle Crest from the Sherman Pass to Boulder-Deer pass) in September 1997 had 15 participants (11 runners, 6 bikers).

Winter Non-Motorized Trails (from Snowparks):

Snowparks	Ski	Snowshoe	Snowboard	Total Registered
Sherman Pass (Kettle Crest #13) Backcountry	372	38	15	425
Boulder-Deer Ck (Deer Ck XC Trails)	42	5	20	372
Scatter Ck (Lakes Area XC Trails)	Closed - the county dropped this area after 1996			

Snowpark Totals

Snowpark	Ski	Snowshoe	Snowboard	Snow Play	Total registered
Total Registered	677	80	20	20	797

Note: Trends in Use: Use continues to grow in general. Snowshoeing is the largest increased use of the season.

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Sullivan Lake RD

Trails monitored include: Mill Pond Flume, Red Bluff, Noisy Creek, Salmo Basin, and Thunder Creek

Figures below show total numbers of people who registered at trailheads, by date.

Date	6/9	6/20	7/7	7/16	7/19	7/22	8/1	8/5	8/10	9/19
Number Registered	1	6	10	na	na	3	3	4	20	na

Note: The variable threshold has not been exceeded.

Evaluation

Monitoring indicates that Forest Plan Standards and Guidelines are being met. Use is expected to continue to rise. Trail registration cards have not proved to be an effective means of monitoring trail use, as most users do not take the opportunity to complete the cards. The cards do, however, provide a good summary of the people using the trails. Comments include a desire for more trails, better signing, wider and better maintained trails.

Trailheads with information boards and maps are received well. The district trails brochures continue to be popular, as are individual brochures for district ski trails, etc. Generally user satisfaction is high.

Recommended Action

Results Acceptable/Continue to Monitor. 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

Colville RD and Kettle Falls RD

Thirty eight completed registration cards were collected from the Hartbauer and Silver Creek Trailheads. Hiking, horseback riding and hunting were listed as prominent uses of this area. Physical barriers were installed on the South Fork Silver Creek Trail to restrict ORV use of this non-motorized trail.

Republic RD

Problems with motorized trespass:

Access into MA-11 continues

Snow Peak Shelter Status-Number of registered users:

21 permits for 120 overnight guests (estimated visits at 175)

Contributions/Improvements:

The Snow Peak Shelter Alliance completed the outhouse structure and temporary roof.

Trail reconstruction/construction:

Completion of the Columbia Mountain Loop Trail.

Sullivan Lake RD

Trails monitored include: Hall Mountain and Flume Creek

Figures below show total numbers of people who registered at trailheads, by date.

Date	6/9	6/20	7/7	7/16	7/19	7/22	8/1	8/5	8/10	9/19
Number Registered	5	3	na	na	9	6	na	2	14	na

Note: Recorded use falls below variable threshold.

Evaluation

Observations and trail counts, that were completed, indicate that ROS class criteria are being met. The level of use, and trail maintenance, met requirements for Semi-Primitive Non-motorized Recreation; however, problems with motorized trespass are still occurring.

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

The level of monitoring done during FY 1997 was reduced in part due to the reduction in discretionary Recreation funds available to the Districts for site visits, public education and enforcement.

Colville RD and Kettle Falls RD

One hundred seventeen registration cards were collected on the Little Pend Oreille. Use was limited by severe windstorm damage and emergency trail clearing funds were obtained to repair trail damage. Access to the Gillette Mountain Trail from the Alladin Valley was closed for the season due to flood damage; a number of complaints were received at the district office. Finally, an unauthorized ORV trail constructed in the North Fork Chewelah Creek drainage may be posing a safety hazard to general forest users due to the trail condition.

Newport RD

The construction of the Combo ORV trail in the Middle Fork of the Calispel has assisted in providing an area where ORV users are able to use existing trails instead of riding off-trail through the meadows, 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 an adequate parking area with loading ramps needs to be provided.

Comments on the reconstruction of the Batey-Bould system have been very positive. There is a need to look at developing a trail system in the Tacoma Creek area that would provide a link from Tacoma Creek area to the Batey-Bould system. Users are creating their own trails right now, and construction of this link would mitigate resource damage in the Tacoma Creek area by directing existing ORV use.

Republic RD

Limited effects as the majority occurs in the fall season and on the forest roads. Occasional trespass occurs on the Old Stage Trail into the MA-11.

Sullivan Lake RD

All areas outside of MA9 and MA11 are designated as open to ORV use by the Colville National Forest 1995 Travel Map. The proposed Bunchgrass Meadows RNA (MA4), however was posted as closed to all motorized use - signs posted were high enough to be visible above snow. Portions of the LeClerc Creek area and the area away from the road in the West Branch C.G. are closed to all motorized vehicles from December 1 to March 31. Only the roads, designated as snowmobile trails remain open during periods of winter range use. The Forest Plan states that "new single-purpose Service Level D roads will be closed after the resource activity is complete unless the environmental assessment requires keeping them open."

ORV trails (dirt bike, 3-wheeler and 4-wheeler) within the LeClerc Creek area and Old West Branch C.G. 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 use. No action was taken in FY97 to close user created ORV trails.

The area outside of the old West Branch Campground is experiencing resource damage similar to that stated above. Trails have been created at random by ORV users. While some trails have been closed by Forest Order to meet habitat needs for Threatened and Endangered species, new trails continue to be discovered.

Snowmobile use on the District has violated the Management Area 9 Standards and Guidelines, which states that use of motors or mechanized equipment is prohibited. 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 of signing effectiveness was minimal.

Management Area 8 Standards and Guidelines state that ORV use is permitted, and current recreation use meets the setting requirements.

Evaluation

No comprehensive planning has been done to address ORV use and ensure that use is managed in such a way as to mitigate the impacts on other resources. Riders are continuing to cause resource damage by riding in inappropriate areas. Visitor contacts and law enforcement are necessary to educate the users on ethical use of the forest.

Recommended Action

Further Evaluation/Determine Action. 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 still needed than is currently available. Tentative results of the San Dimas study show that public education is necessary to bring about a change in the attitudes of users.

The Forest will continue to implement and utilize the Meaningful Measures process to address concerns regarding the quality of recreation opportunities provided..

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

No formal monitoring was conducted.

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. The treatment of overstocked stands is still a high priority for silvicultural treatment or the introduction of prescribed fire.

Recommended Action

Change or Clarify Management Practices. Management direction needs to be clarified regarding how to achieve visual quality objectives respective of the new Scenery Management System.

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 Salmo-Priest Wilderness Standards and Guidelines Environmental Assessment was completed and enacted via a Decision Notice dated 1/23/96. This Decision Notice amended both the Colville and Idaho Panhandle National Forest Plans and provided detailed,

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measurable social and physical standards. In 1997 a GS-5 Wilderness Ranger and one Student Conservation Association volunteer monitored the new standards and guidelines. Monitoring began in late June and continued through August. About 90 percent of all trailed areas were monitored in the Semi-Primitive Zone. All the more frequently traveled untrailed corridors in the Primitive Zone were likewise monitored.

The summary below lists the applicable standards that were monitored in FY 97. It shows which standards have been met, and which have not.

Campsite Density

The full text of the Campsite Density standard for the Semi-Primitive Zone reads as follows: An average of 1 established campsite per 2.0 square miles, for a maximum of 20 sites will be allowed. No new established sites will be allowed within 1/4 mile of an existing site. A maximum of 1 established site will be permitted at the Trail #506 river crossing and a maximum of 6 established sites will be permitted in the Salmo basin. All sites will be located a minimum of 100 feet from lakes, rivers, and streams, including those sites in the Salmo basin. Recreational or other stock will not be permitted to be grazed or held within 100 feet of the edge of any stream, lake, or other water body.

Those components of the Semi-Primitive Zone standard that were met in FY 97 are as follows.

Wilderness rangers counted 16 permanent campsites. This is down one site from FY 96. Wilderness personnel naturalized about 6 to 7 recently created rock fire rings in order to maintain the number below 20, and to prevent any new sites from being established within 1/4 mile of an existing site.

Those components of the standard that were not met are as follows:

A maximum of one established site permitted at the Trail 506 river crossing (at present there are four such campsites at the river crossing);

A maximum of six established campsites permitted in the Salmo Basin (at present there are seven established campsites);

All campsites will be located at least 100 feet from lakes, rivers and streams (at present there are eight established campsites within 100 feet of water bodies);

Stock animals are not to be grazed or held within 100 feet of water bodies (this standard is violated at 23 campsites next to water which continue to be used by packstock animals);

The Campsite Density standard for the Primitive Zone is that no established campsites are allowed;

To meet this new standard, wilderness and botanist specialists naturalized four small, established campsites. They disguised each site by scattering fire ring rocks and ashes, covering parts of sites with logs and duff and debris. They imported soil from adjacent root wads and collected and sowed portions of sites with seed of local grasses and sedges. They posted temporary signs at each former campsite and at trailhead access points. This work

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was done near season's end; therefore no observations could be made as to visitor compliance with the new standards. It is understood that a combination of naturalization, possibly including site revegetation, aggressive monitoring and public information are necessary components of any successful outcome in the Primitive Zone.

Campsite Condition

Existing standards for campsite conditions are established in terms of the size of areas which have lost vegetation in each campsite. Two types of exposed mineral soil areas are recognized for monitoring purposes. These are barren core mineral soil (typically the more hardened areas in and around the fire ring), and vegetation loss aside from barren core (typically peripheral, lower-use areas within the campsite, including stock-holding areas, which may not be entirely denuded).

In the Semi-Primitive Zone the maximum barren core mineral soil size is 400 square feet, and the maximum vegetation loss aside from barren core is also 400 feet, except that no site may exceed 625 square feet of barren core and other vegetation loss combined.

In the Primitive Zone no permanent campsites are allowed. Therefore no barren core or other vegetation loss is allowed.

Those components of the Campsite Condition standard that are being met include 13 of the 16 campsites in the Semi-Primitive Zone remain below the 625 square feet maximum size.

Those components of the Campsite Condition standard that are not being met include three campsites in the Semi-Primitive Zone remain well above the 625 square feet maximum size in terms of vegetation loss.

In the Primitive Zone, naturalization of the four campsites met the spirit of the standard, if not the letter. Complete revegetation of the sites has not yet been accomplished. Again, a policy of future monitoring, naturalization and public education are all prerequisite to attaining the standard.

Campsite Solitude

The standard for campsite solitude is expressed in terms of the probability that a given number of camping parties will camp within sight or sound of any other camping party.

In both the Semi-primitive and primitive zones there is to be a 90 percent chance of seeing or hearing one or fewer other camping parties from one's own campsite. This standard would apply to nine out of ten days during the high-use, 100-day period of mid-June to late September.

Those components of the Campsite Solitude standard that are being met include twelve of the sixteen campsites in the Semi-Primitive Zone are sufficiently distant from each other as to make it very unlikely that more than two parties could camp within sight or sound of each other. For these twelve the standard is presumed to have been met.

During the course of six observation days in the Primitive Zone, wilderness personnel did not observe any other campers. Therefore the standard is presumed to have been met.

The standard is not being met in that part of the Semi-Primitive Zone where four campsites cluster together beside the Salmo River. On two occasions, monitoring personnel were camped next to two other groups.

Solitude While Traveling and Group Size

The standard for Solitude While Traveling is expressed in terms of the likelihood of encountering other groups on an average day while traveling through the Wilderness.

The standard for the Semi-Primitive Zone states that there shall be an 80 percent chance of encountering two or fewer groups per day, but not to exceed an average of 2.4 groups per day during the primary use season.

The standard for the primitive Zone states that there shall be a 90 percent chance of encountering one or fewer groups per day, but not to exceed an average of 1.2 groups per day during the primary use season.

All components of the Solitude While Traveling standard were met.

In the Semi-Primitive Zone, monitors report a total of 31 groups encountered during a 30-day observation period. This equates to an average of 1.03 groups encountered per day. On 83 percent of observation days 2 groups or less were encountered.

In the Primitive Zone, monitors report a total of one group encountered during a 6-day observation period. This equates to an average of .17 groups encountered per day. On 100 percent of observation days 1 group or less was encountered.

The standard for Group Size is 12 people and stock combined in the Semi-primitive zone, and 8 people (pack stock are prohibited) in the Primitive Zone.

All components of the Group Size standard were met in FY 97.

In the Semi-Primitive Zone, monitors encountered 31 groups totaling 102 people and stock, for an average group size of 3.3. They encountered two authorized trail construction parties whose numbers exceeded 12.

In the Primitive Zone, monitors encountered only one group of 3 people.

Evaluation

The intent of the District is to move Wilderness conditions towards compliance with those components of the four standards described above where compliance is currently lacking. Towards this end the District conceptualized, in FY 96, a long-term restoration plan that would rehabilitate certain campsites and provide alternative sites with limited potential for vegetation loss. The replacement of a single campsite in the Salmo Basin, for example, could help meet components of all four standards described in this report.

In 1997 District personnel began scouting out potential locations for new campsites that would replace those not in conformance with the standards. A revegetation specialist from

Region One was detailed in to evaluate the seven campsites in the Salmo Basin and several proposed replacement campsites. She then completed a 3-4 year rehabilitation plan that will serve as an on-the-ground guide as each campsite is naturalized or revegetated. It is understood that an environmental analysis will be completed prior to replacement of any campsites. Other prerequisites to such work include adequate funding and additional reconnaissance for replacement sites.

A combination of naturalization, possibly including site revegetation, aggressive monitoring and public information are necessary components of any successful outcome in the Primitive Zone.

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 FY97 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 mi/mi^2 on all elk winter range and mule deer winter range in Ferry County. Road densities not to exceed 1.5 mi/mi^2 on the rest of deer winter range areas).

Standard

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

Summarized Results

Existing (pre-treatment) winter deer and elk habitat conditions (including availability and distribution of cover, forage, and open roads) were examined in on each District as part of watershed and/or timber sale analysis activities. Specific areas examined included the Quartzite, Gardin-Taco, Berton, and Slate-Salmo watershed analysis areas. Post-treatment conditions were examined in the Thompson, Thomboy, Hoki and Elbow timber sale areas.

Winter range management activities (not including timber harvest) included 547 acres of prescribed burning, 234 acres of encroachment control, seeding and/or planting to improve forage resources, 34 new road closures to reduce winter range road densities, and 31,300 acres of surveys to determine existing winter range conditions and future project needs and opportunities. Most habitat improvement projects were conducted either through Knudsen-Vandenberg (K-V) funding or through the Forest's Challenge Cost Share program, involving contributions of cash and/or volunteer labor from several outside partners. Over the past few years, available K-V funding has been reduced, and the Challenge Cost Share program has become the primary funding source for wildlife habitat improvement work on the Forest.

Evaluation

I-1 Availability and Distribution of Winter Cover

- to As experienced in past years, existing (pre-treatment) conditions in many areas
- I-3 across the Forest do not currently meet the desired conditions described in the Forest Plan. Timber harvest treatments being prescribed indicate that Districts continue to make progress toward the Forest Plan objectives, even though this may require several timber sale entries in some cases. In areas where cover availability is below Forest Plan objectives, treatments being prescribed protect existing cover values, while promoting increased canopy development in other areas for future cover. Some timber

harvest prescriptions, and most wildlife habitat improvement projects, are directed toward improving the quality and quantity of forage resources.

- I-4 As with cover/forage conditions, current open road densities in some areas still exceed Forest Plan objectives. This is often due to the presence of roads not under Forest Service control. Road closure projects, conducted as wildlife habitat and/or watershed improvement activities, or through timber sale planning and coordination, continue to show progress toward meeting the desired future condition.

Recommended Action

- I-1 Results Acceptable/Continue to Monitor. The Forest needs to continue making progress toward the desired future winter range habitat conditions through a combination of coordinated timber sale activity and direct wildlife habitat improvement projects. Additional emphasis also needs to be placed on monitoring closed timber sales to see if habitat conditions are developing as predicted.
- I-3
- I-4 Results acceptable, Continue to Monitor. Efforts to reduce road densities need to continue in many areas, as should monitoring of road closure effectiveness.

MONITORING ITEM 11 Primary Cavity Nesters

Forestwide Goal

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

Purpose of Monitoring

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

Standard

Maintain sufficient standing dead and defective and down dead trees to support 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

Pre-harvest surveys indicate that many areas of the Forest have sufficient levels of naturally occurring snags to meet Forest Plan standards, and timber sale planning and marking activities continue to meet Forest Plan direction regarding retention of snags and green replacement trees in these areas. However, as documented in past monitoring reports, the Forest has a recurring problem retaining sufficient numbers of snags following timber harvest (especially regeneration harvest), resulting in post-harvest snag levels in many units that fall below Forest Plan standards. In many cases this situation is being mitigated through the

creation of snags. However, this practice continues to be expensive, often provided only a short-term solution, and the K-V funds which finance this project are becoming less available than they have been in the recent past. In 1997, the Forest created 235 snags for mitigation, and installed 834 nest boxes as part of other wildlife habitat improvement activities to provide habitat for primary and secondary cavity nesters.

Monitoring and maintenance was also conducted on 468 existing nest boxes and/or snags, and 300 acres of post-harvest snag monitoring was completed. The Forest also began exploring the use of new technologies which will utilize naturally occurring insect populations and/or fungus to create wildlife trees at lower unit costs than the present method of topping the trees with chain saws. Although this may eventually reduce snag creation costs, it will not solve the problems associated with excessive snag removal.

Evaluation

Snag removal to meet OSHA requirements, commercial and non-commercial firewood harvest policies, and the Forest's current practice of leaving timber sale roads open for post-sale firewood harvest opportunities are the primary reasons that snag densities are being reduced below Forest Plan standards. This problem has been documented in every monitoring report since 1992, but little, if any action has been taken.

Recommended Action

Change or Clarify Management Practices. The Forest needs to address the problem of excessive snag removal. While little may be done to change OSHA requirements, the bulk of this problem can be addressed through changes in firewood harvest policies.

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

Colville Ranger District: Evaluated and mapped boundaries of MA-1 areas and MR areas for pileated woodpecker and pine marten within the Quartzite watershed analysis area

Republic Ranger District: Evaluated and mapped 7 MR areas in association with activities conducted for the Berton watershed analysis. Twenty four percent of the acreage was classified as being in late structural stages, 52% was classified as being in middle structural stages.

Sullivan Lake Ranger District: Evaluated and mapped 11MR areas in association with activities conducted for watershed analysis.

Evaluation

As in past years, Districts continue to identify and protect the best available habitat for MA-1 and MR areas, within the limitations imposed by the grid system specified in the Forest Plan. Therefore, Forest Plan direction is being met. However, the uniform distribution of old growth management units, the desired future condition described in the Forest Plan, is still a long way from becoming reality. Situations continue to arise where field examinations indicate that designated MA-1 and/or MR areas do not, and in some cases can not, provide or maintain the multi-storied old growth habitat conditions envisioned by the Forest Plan. Some areas are simply too young to provide the desired habitat conditions, while other areas are located on sites that are ecologically better adapted to be managed in a more open dry forest condition. There is an increasing level of concern being raised over the risk of attempting to

maintain such sites in the dense, structurally complex conditions prescribed by the Forest Plan.

Recommended Action

Results acceptable, Continue to Monitor. Current Forest Plan direction is being met, therefore no changes in management practices are recommended. However, as the Forest prepares for revision of the Forest Plan over the next few years, the desired future condition for old growth habitat needs to be re-evaluated. The amount, condition, and distribution of old growth to be maintained across the Forest needs to be assessed with respect to ecological sustainability on the landscape. In the interim, maintaining the current strategy will provide additional information about the distribution and condition of old growth habitats across the Forest and preserve some future management options.

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 Monitoring Item 12
- I-2 Franklin's Grouse/Lynx Habitat - Lynx habitat conditions were assessed in conjunction with the Quartzite (Colville District) and Gardin-Taco (Newport District) watershed analyses. Items assessed include acres and condition of lynx foraging, denning, and travel habitat as applicable, and acreage of non-lynx habitat within primary lynx range. Future timber harvest prescriptions in these areas will incorporate consideration of lynx habitat needs in these areas. The Forest also participated in lynx survey efforts (track surveys, scent stations and remote cameras) to monitor lynx presence and distribution, and continued working with an Interagency Lynx Working Group to share information about this elusive carnivore and its habitat needs. Lynx habitat improvements (provisions for snowshoe hare cover) were incorporated into pre-commercial thinning prescriptions.
- I-3 Blue Grouse Habitat - No monitoring activities for blue grouse were reported for this year. Grouse habitat management activities conducted include 80 acres of habitat surveys, 8 acres of elderberry and rose planting, and installation of 6 guzzlers (water sources),

- I-4 Heron and Raptor Habitat - Monitoring of known goshawk nests and heron rookeries continued, and the Forest intensified its efforts in goshawk habitat surveys in an attempt to locate new nest sites. Over 50,000 acres were surveyed, and 4 new goshawk nest sites, 2 new red-tailed hawk nest sites, and 1 new kestrel nest site were located. Other management activities included establishment of protective buffers around 1 goshawk nest and installation of 15 nesting platforms.

Evaluation

Available information indicates that Districts are following Forest Plan direction with regard to Management Indicator Species. Appropriate buffers are being established around goshawk nests when they are located in project areas, and the intensified survey efforts have greatly expanded our information about goshawk distribution on the Forest. Lynx survey efforts are providing similar information and should be continued

Recommended Action

Results Acceptable, Continue to Monitor. Overall, the Districts are doing a good job in locating and protecting essential habitat components for lynx and goshawk (and other raptors). Efforts to survey and monitor blue grouse habitat have declined in recent years, but the timber harvest practices being used now are less likely to adversely impact roost trees for blue grouse, and riparian habitat management and protection is doing a better job of protecting nesting habitat needs for this species than when the Forest Plan first went into effect.

MONITORING ITEM 14

Threatened, Endangered and Sensitive Species

Forestwide Goal

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

Purpose of Monitoring

to determine whether:

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

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- 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 - The Sullivan Lake Ranger District continued participation in caribou research, augmentation, and monitoring efforts being conducted by the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife. Participation on the Interagency Caribou Technical Committee and the Caribou Recovery Team also continued. No management activities in caribou habitat were conducted, but the District followed up on 6 sighting reports and developed an interpretive sign to help reduce snowmobile disturbance of caribou during the winter.
- I-2 Grizzly Bear Habitat - Two miles of road were revegetated and closed within the grizzly bear recovery area to improve habitat and seclusion opportunities for this species. Monitoring and maintenance (as needed) was done on 70 road closures, and patrols were conducted during big game hunting seasons to monitor compliance with road closures and educate the public about road closures and grizzly bear habitat needs. The Forest also continued its participation on the Grizzly Bear Recovery Team and the Interagency Grizzly Bear Subcommittee.
- I-3 Bald Eagle Habitat - The Kettle Falls Ranger District participated in the annual mid-winter bald eagle survey conducted by the U.S. Fish and Wildlife Service. The Newport Ranger District reported the first known bald eagle nest on Forest Service lands, and began a program to survey habitat around the nest and monitor its success. A nest site management plan will be developed next year.
- I-4 Wolf Reports Being Investigated - A total of 9 wolf sightings were reported to the Forest and investigated. No hard evidence of wolf presence was detected.
- I-5 Maintenance of Sensitive Species List & Distribution of Information - The Forest Botanist continued to maintain a database containing information about sensitive plant distribution on the Forest. No changes to either the sensitive plant list or the sensitive animal list were made by the Regional Forester this year.
- I-6 Biological Evaluation Being Conducted as Prescribed - The Forest completed 64 biological evaluations for projects ranging from timber sales to commercial road use permits. All were in compliance with existing direction.

E-2 Number of Sensitive Species Sites Monitored - Five sensitive plant sites were monitored as part of a long-term project on the Kettle Falls Ranger District. Other Sensitive plant surveys and site visits covered approximately 71,000 acres of land. Additional monitoring and 1500 acres of surveys were conducted on Vulcan Mountain, where California bighorn sheep, a sensitive species, reside.

Evaluation

Management of Threatened, Endangered and Sensitive species on the Forest appears to be within established Forest Plan direction, and biological evaluations are being prepared in accordance with established direction. The Forest continues to have a problem with the number of sensitive species sites that receive follow-up visits each year. As documented in previous monitoring reports, the increase in the number of sensitive plant sites over the years has greatly impacted the Forest's ability to adhere to the 25% re-visit objective envisioned by the Forest Plan. Over the past couple of years, the Forest has been more selective in which plant sites receive follow-up visits, and recent information regarding the growth habits of some species (especially Botrychium spp.) indicate that annual or periodic monitoring would not produce the desired information. That is one of the reasons the longer term monitoring studies were initiated.

Recommended Action

Results Acceptable, Continue to Monitor. Although there is some deviation from the objective to re-visit 25% of the sensitive plant sites annually, the current course being taken by the Forest does not seem to compromise any of the objectives regarding sensitive plant protection. Attempts to revise the monitoring strategy have been made, but they have been a lower priority than other projects, and to date, have not been completed.

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

Nothing reported

Kettle Falls RD

Nothing reported

Newport RD

Fisheries improvement opportunities are not being taken advantage of in the New Moon Sale area. Fisheries standards and guidelines are being applied to the sale. Stream crossings are passable to fish. 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. Instream components have been identified for improvement.

Republic RD

Nothing Reported

Sullivan Lk. RD

Nothing Reported

I-3

Colville RD

Nothing Reported.

Kettle Falls RD

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The district improved fisheries habitat by installing 11 fish structures on Sherman Creek.

Newport RD

Fish habitat improvement projects are being planned, funded, and implemented as listed in the activity/project schedule.

On Activity/Project Schedule for this fiscal year	<i>KV</i>	<i>PM</i>
Structures	60	18
Acres	0	0
Funded this fiscal year		
Structures	60	18
Acres	0	0
Completed this fiscal year		
Structures	60	18
Acres	0	0

Republic RD

Nothing Reported

Sullivan Lk. RD

Protected and improved 11 miles of stream (LeClerc and 4th of July Creeks).

I-4

Colville RD

Condition surveys for approximately 100 existing structures were conducted. Structures had created pools, but need to be modified to prevent washout.

Kettle Falls RD

Nothing Reported.

Newport RD

The Skookum Creek project was designed to place large woody material in the stream to increase flow, create spawning areas, and provide cover for fish. Large woody material was added to the stream and so far seems to meeting the objectives. Additional monitoring during spawning season may determine the use of the area at that time.

Republic RD

There was 1/4 of a mile of stream improvements monitored along the Sanpoil River. Most of the structures were still in place and functioning.

Sullivan Lk. RD

Monitored and maintained exclosures along Whiteman Creek.

Evaluation

- I-1 The one timber sale monitored was in compliance with Forest Plan Standards and Guidelines
- I-2 On the Newport Ranger District, the timber sale program is helping to achieve fisheries objectives in the riparian zone. No other district reported on 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 FY97 accomplishment of 42 structures and 0 acres of habitat improvements met the assigned target of 38 structures and 0 acres for the Forest through the annual program budget.

Recommended Action

- I-1 Newport Ranger District: Results Acceptable/Continue to Monitor
Colville/Kettle, Republic, Sullivan Lake: No monitoring done/ Coordinate with forest fishery biologists to develop a district fisheries monitoring program.
- I-2 Newport Ranger District: Results Acceptable/Continue to Monitor
Colville/Kettle, Republic, Sullivan Lake: No monitoring done/ Coordinate with forest fishery biologists to develop a district fisheries monitoring program.
- I-3 Results Acceptable/Continue to Monitor
Colville and Republic Ranger Districts: No structures done/Coordinate with forest fishery biologists to develop projects.
- I-4 (E-1) Colville, Newport, and Sullivan Lake: 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. Last winter because of heavy snow loads fences were in need of greater maintenance and all maintenance was not completed prior to turnout in the spring.

Evaluation

A lot of the range improvements are not in good shape, which means that more maintenance is then required by the holder of the grazing permit. The grazing permittees will be required to complete more of this work.

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.

Summarized Results

Permitted AUMs of grazing use for FY97 were as follows: total permitted use was 30,136, there was 1,321 of authorized non-use for a total of 28,457 authorized to graze under term permits. There was also 1,105 on private land permits.

Evaluation

The monitoring results show that the 1997 AUMs of grazing (30,136) is 14% below the target stocking level and 4% below the permitted level of 10% variance established for this monitoring item. The reason for this is the non stocking of the Tonata Allotment which we hope to have filled this coming season and several allotments have been reduced numbers at the request of the permittee.

Recommended Action

Results Acceptable/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 1997, 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

Monitoring was completed on all districts for utilization. Because of a wet spring most allotments were found to be in fair to excellent condition. There remain to be some allotments with distribution problems that undesirable utilization in some locations. These allotments will require participation from the permittee either by stock movement or the construction of division structures. The permittees also need to increase their monitoring efforts through out the grazing season to assure proper utilization.

Evaluation

The majority of the allotments on the forest we are in compliance with the forest plan standards and guides.

Recommended Action

Results Acceptable/Continue to Monitor. However, steps must be taken to assure compliance with those allotments exhibiting problems

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 1997, but the range types and condition were evaluated on many allotments as shown in monitoring item 18.

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. If the grazing units are not completely cleaning of all stock or if there is not a grazing system that is implemented then some of the wetter areas will get over utilized. It is the permittees responsibility to monitor this and move the cattle once desired utilization is achieved.

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

Chapter 2 Monitoring Results, Evaluation, and Recommended Actions

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 1992, final removal and/or regeneration harvest occurred on 2957 acres. By the end of 1997, 2853 acres (96.4%) are satisfactorily stocked. The 104 acres that do not meet stocking are scheduled for planting in fy98 and fy99.

After a unit is planted, the success of the planting is monitored the first and third years after planting. Survival, and stocking levels (trees per acre) are monitored. Survival and growth results for 1997 showed an average of 88% survival the first year following planting. Seedlings planted three years ago had an average survival of 83%. See table below.

Table 2.2 Plantation Survival and Growth

First Year	Acres	Percent
Total area sampled	1540	100
Average survival		88
Survival by species:		
Ponderosa pine		96
Western larch		75
Douglas-fir		96
Englemann spruce		81
Western white pine		92
Third Year	Acres	Percent
Total area sampled	2764	
Average survival		83
Survival by species:		
Ponderosa pine		79
Western larch		82
Douglas-fir		88
Englemann spruce		83
Western white pine		83
Lodgepole pine		76
Certified as restocked with one treatment (planting)		88

Evaluation

Stocking success five years after regeneration and/or final removal is improving. One hundred percent success is the goal for the forest.

Recommended Action

Results acceptable/continue to monitor, emphasize the importance of restocking within a five year time frame.

**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 FY97 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 FY97, 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	0	0	0
3A	0	100	100	365	216	581
5	1700	1100	2800	915	119	1034
6	500	400	900	295	0	295
7	5200	0	5200	1951	235	2186
8	1600	0	1600	2374	0	2410
Total	9200	1700	10900	5936	570	6506
Percent of Project Acres	84%	16%	100%	91%	9%	100%

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

Of the 5936 acres of even-aged treatment, 7 acres are planned to be clearcut with reserve trees. All planned harvest units have green trees retained for snag replacement trees. The majority of even-aged harvest in Management areas 5, 6, 7, and 8 are commercial thins: 804, 273, 1546, and 1891 acres, respectively. In management area 3, all even-aged harvests are commercial thins. Other even-aged treatments in the management area are shelterwood harvests, seed tree harvests and overstory removal harvests.

Salvage and sanitation harvests are not included in the above table. There were a total of 586 acres of salvage and sanitation harvest awarded in FY97.

Evaluation

Timber production and harvest were major issues 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. Uneven-aged harvest methods were emphasized in management areas 2, 3A, 5 and 6. Even-aged methods, especially regeneration harvests, were emphasized in management areas 7 and 8. Harvest by silvicultural method is below forest plan projections for all methods except in management area 3.

Recommended Action

Results acceptable/continue to monitor. Awarded timber sales have been the measure of comparison for this monitoring standard for the last five years. In all years the acres of projected harvest have been lower than Forest Plan projections. If this trend continues, projected managed stand yields for future rotations will not be met.

MONITORING ITEM 25A

Water Quality, Including Cumulative Effects

Forestwide Goal

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

Purpose of Monitoring

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

Standard

Water quality will meet or exceed (do better than the minimum requirement) Washington State Water Quality Criteria.

Summarized Results

Water temperature and fecal coliforms exceeded the criteria on Cottonwood creek at the forest boundary. An upstream comparison indicated the increase was due to the open water conditions of the pond at the bottom of Woodward Meadow. A similar situation occurred on Cusick Creek above and below Parker Lake.

The water quality of Bead Lake was sampled at three locations to characterize the trophic state and general condition of the water. The results were similar to previous years which also met the State Water Quality Criteria.

The remainder of the locations sampled had only a few measurements that exceeded the criteria.

Evaluation

The water quality data indicated that there were no unusual conditions at the selected locations. There is a need to validate the State 303(d) listing of impaired waterbodies next year and to delist those that are now meeting the criteria. Elevated fecal coliform levels are still found as a result of both natural conditions and management activities.

Recommended Action

Results Acceptable/Continue to Monitor. Elevated coliform bacteria levels during the summer at certain locations 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. Forest wide BMPs are being used to make consistent and implementable requirements. Several BMPs were reviewed for the manner of implementation and effectiveness during various field visits to timber sales, road projects and grazing allotments. The results were that the BMPs were effective at protecting the water resource especially from accelerated sedimentation.

Evaluation

The BMP process is an effective means to meet the Clean Water Act by using techniques designed to protect water quality on a specific project basis.

Recommended Action

Results Acceptable/Continue to Monitor. Special erosion control materials will be tested on future road construction projects in an attempt to promote more rapid and successful revegetation of exposed soil on steep slopes.

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 visually monitored at the same time as the Best Management Practices (Monitoring Item 25B). The INFISH guidelines were used to determine the adequacy of project planning in protecting fish habitat especially in Priority watersheds. A project is planned in Sullivan creek to move dispersed camping activity from the riparian areas to the uplands and then restore the hydrologic function of the riparian area. A riparian road in LeClerc Creek (another Priority watershed) is planned for relocation out of the riparian area due to the present accelerated sedimentation.

Evaluation

Overall, riparian area standards and guidelines are being met. Mixed ownership is a problem in some areas. Harvesting in riparian areas is minimal now with riparian area improvement being the objective if any is planned. The value of natural processes occurring in riparian areas is being recognized now and steps are being taken to minimize disturbance.

Recommended Action

Results Acceptable/Continue to Monitor.

MONITORING ITEM 27
Changes In Soil Productivity

Forestwide Goal

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

Purpose of Monitoring

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

Standard

The total acreage of all detrimental soil conditions should not 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

District	% disturbance
Colville	
United Eagle 7	29
United Eagle 9	19
Kettle Falls	
Jasper 5	24
Corral 1	18
Corral 2	22

Newport, Republic and Sullivan Lake districts did not do any soil monitoring in FY_1997.

Evaluation

During FY_1997, five logging units were monitored for detrimental soil impacts. Second entry units were selected to determine what the effects of previous logging entries are having on compliance with regional soil guidelines. Results indicate that soil compaction is consistently the most significant factor affecting soil productivity. Recovery may exceed 20-30 years. Timing of entry, type of equipment, trail spacing and slope are important factors. The results of this year's survey indicate that soil productivity on second entry units may need additional analysis and mitigation to offset the effects caused by the first entry to stay within the regional standard. Additional monitoring of harvester/forwarders under a variety of conditions will also increase our knowledge since industry is making increased use of this type of equipment.

Recommended Action

Results Acceptable/Continue to Monitor. As part of planning a decompaction project, a soil scientist or hydrologist should be consulted to ensure that 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	FY 97
Passenger Car	849	801	716	683	683	681	676	676
High Clearance	2500	2409	2350	2299	2286	2242	2155	2155
Total	3349	3210	3066	2982	2969	2923	2831	2831

Evaluation

Several roads were closed using ripping and earth berms. No miles were reported as obliterated. There was an increase of 72 miles of road in new construction but because of moving the equal number of roads into level 1 closures there was no net gain or loss in roads accessible for public use.

Recommended Action

Results Acceptable/Continue to Monitor.

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

Defoliators:

Western spruce budworm was detected near the Forest in the Colville River valley west of Chewelah. Roughly 5,800 acres of light defoliation were mapped. No defoliation was detected on the Forest.

Bark Beetles:

Severe weather events in November of 1996 and spring of 1997 resulted in damage to many Douglas-fir trees. Primary concentrations were in the southeast corner of the Newport RD, the Chewelah Cr. Drainage, and the southwest corner of the Republic RD. The Area Entomologist and DNR Entomologist visited many of the sites with Forest personnel. Douglas-fir beetle attacks were noted at every site visited. The extent of the damage will not be known for several years. Salvage sales are being laid out where access allows.

Approximately 6,000 acres of Mountain Pine Beetle damage was mapped in lodgepole pine. Locations primarily in the Pend Oreille drainage and along the Kettle range. Lodgepole pine trees developing after the extensive wildfires of the 1920's and 30's are reaching a size and age where they can be successfully attacked.

Root Disease:

Root disease is not mapped via aerial detection flights. It is detected through bark beetle mortality primarily. Root disease is very active on the Forest, mainly in Douglas-fir and grand fir.

Dwarf Mistletoes:

Dwarf mistletoe is active in Douglas-fir on the western portions of the Forest, and western larch forestwide.

Evaluation

Defoliators:

Defoliators are not active on the forest at present.

Bark Beetle/Root Disease:

Localized populations of Douglas-fir beetle are of concern in portions of the Republic, Colville, and Newport Ranger Districts. Root disease is present in virtually every drainage on the Forest.

Dwarf Mistletoes:

Dwarf mistletoes are as every present as root diseases, especially in Douglas-fir and western larch.

Recommended Actions

Results Acceptable/Continue to Monitor. Localized salvage and beetle trapping is recommended for Douglas-fir beetle for the next 3 to 5 years. Root disease and dwarf mistletoe are management challenges that are reviewed and prioritized in every timber sale on the Forest.

**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 30 previously-documented properties were visited to ascertain changing site conditions. Monitoring activities resulted in site documentation records being updated on less than half of that number. Monitoring actions performed by cultural resource technicians were reported in units monitoring results. Records were compiled and tabulated by Forest heritage specialists.

The number of properties monitored represents about 3% of the total number of sites recorded on the Forest.

Evaluation

Monitoring results confirm the conclusions made by past monitoring efforts. Properties located within or adjacent to on-going or recently-completed timber harvest areas are being vandalized in spite of being managed on paper as protected. Also, significant properties are being compromised by unmitigated natural deterioration. Even if the Forest goal of 5% monitoring were achieved, each documented property would be visited only once every 20 years.

Other heritage properties monitored included those located within high use areas, such as developed and dispersed campsites, trails and roads. Sites within this category were found to have noticeable levels of adverse change due to erosion, natural deterioration, and a certain amount of vandalism.

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

Recommended Action

Change of Clarify Management Practices. Monitoring priorities need to focus 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, 2) consider using public volunteers or other partnerships to accomplish monitoring goals, and 3) continue to reduce the backlog of unevaluated heritage properties on the Forest (thus reducing the number of sites requiring monitoring).

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.

Summarize Results

Monitoring was performed by tracking 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 Heritage Resource Program file for monitoring items.

Compliance generated archaeological survey was conducted on about 6000 acres; 19 new heritage properties were documented.

Evaluation

Compliance flowline mechanisms which have been established should allow for the timely completion of all NEPA, NHPA and PMOA 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 competency for district cultural resource technicians who perform fieldwork. 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 quality. Also, the Forest Archaeologist needs to prepare an Inventory Management Plan as required by our 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 FY 1997.

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

Actual returns to government data for FY 1997 for the Forest was not available (see Chapter 4). However, total timber program revenue for FY 1997 was \$6.7 million (1997 dollars).

Payments to States

Actual payments to states data for FY 1997 for the Forest was not available (see Chapter 4). However, total timber program related payments to states for FY 1997 was \$1.5 million (1997 dollars).

Evaluation

Forest Plan estimates of revenues and payments to states will not be realized until the average timber revenue per MBF is \$165 (1997 dollars) and total timber harvest is 123.4 MMBF, and the revenue from all other resources is \$115,500 (1997 dollars). According to the planning models used during the planning process, the returns to government and payments to states related to timber would be roughly \$20.3 million and \$5.1 million (1997 dollars), respectively. 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 \$209 per MBF for fiscal year 1997, the Forest would had to have harvested at least 97 MMBF of timber during the fiscal year to realize Forest Plan estimates of total returns and payments to states. That is 67 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. The Districts review county assessor records to compile addresses of adjacent landowners on projects and these addresses are added to District scoping mailing lists.

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

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 made 4 site visits on the forest for the purpose of monitoring operation and reclamation compliance. Those reviews and District reports indicated that 100 percent of the land disturbed by mineral operations on the Colville National Forest has been reclaimed as prescribed within 2 years.

A complete review of District mineral files shows that 36 CFR 228(A) time frames were met 100 percent of the time.

Mitigation measures were generally accepted by mineral proponents. No administrative appeals were received for minerals projects during FY 1997.

Evaluation

The results of minerals monitoring for 1997 show that all threshold criteria were successfully met.

Recommended Action

Results Acceptable/Continue To Monitor.

**MONITORING ITEM 36
Community Effects**

No community effects data was reported for fiscal year 1997. This data will not be reported until after the next Forest Plan revision.

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 (1997 dollars).

Outputs, Effects, Activities and Costs	Unit of Measure	Forest Plan Ann Avg	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997
Developed Recreation Use	MRVD	350	409	554	na	761	na
Non-Wild Disp Rec	MRVD	844	1,055	1,428	na	848	na
Wilderness Use	MRVD	2.4	1.2	1.2	na	3.9	na
Trail Construction/Reconstruction	Miles	26	12	8	15	37	2
Dev Site Const/Reconst	PAOT	354	155	130	29	60	na
Wildlife Habitat Improvement Acres	Acres	1,925	641	na	1,630	1,767	398
Wildlife Habitat Improvement Structures	Structures	1,140	186	na	576	469	1181
Fish Habitat Improvement Acres	Acres	11	16	0	43	68	0
Fish Habitat Improvement Structures	Structures	84	20	45	69	100	34
Range-Permitted Grazing	AUMs	35.0	30.5	30.5	34.4	34.5	30.1
Range-Fences	Miles	5	10	6	na	na	2
Range-Water Developments	Number	10	14	6	42	46	0
Range-Nonstructural Improvements	Acres	1,127	34	175	31	1,929	0
Timber-ASQ (offered)	MMBF	123.4	13.5	45.1	60.3	48.1	59.1
Timber Harvested	MMBF	123.4	72.2	41.4	41.9	35.7	30.4
Fuelwood	M Cords	17.9	3.0	10.0	5.6	0.2	1.7
Reforestation: Planted	M Acres	4.2	5.2	4.8	2.9	2.2	1.6
Reforestation: Natural	M Acres	2.8	0.8	2.4	1.5	2.1	0.9
Timber Stand Improvement	M Acres	2.7	2.6	1.9	1.8	1.8	2.6
Improved Watershed Condition	Acres	12	23	25	20	20	30
Minerals	Operating Plans	150	74	60	56	58	68
Energy Minerals	Billion BTUs	0.0	0.0	0.0	0.0	na	0.0
Non-Energy Minerals	MM\$	7.44	7.47	1.29	0.31	0.03	161.20
Arterial and Collector Road Reconst	Miles	10	16	0	0	64	64
Bridges	Structures	1	1	0	1	0	0
Timber Purchaser Road Const/Reconst	Miles	98	108	6	65	101	100
Roads for Public Use Passenger Car	Miles	849	683	683	581	676	676
Roads for Public Use High Clearance	Miles	2,500	2,299	2,286	2,242	2,155	2,831
Roads Closed to Public	Miles	1,126	1,024	518	1,025	1,188	1,188
Total Forest Road	Miles	3,745	4,006	4,016	3,947	2,832	2,832
Total Forest Budget	MM\$	28.3	20.8	18.4	16.9	16.0	16.4
Returns to Government	MM\$	20.1	9.9	7.4	8.8	7.6	6.7
Payments to States	MM\$	5.0	2.4	1.8	2.0	1.8	1.5
Change in Jobs	Chng In Number	589	155	38	na	-168	na
Change in Income	Change In MM\$	14.4	2.3	-2.3	na	-6.5	na
Acres Harvested by Clearcut	M Acres	4.6	2.1	1.5	0.4	0.1	22.0
Acres Harvested by Shelterwood	M Acres	2.3	1.8	1.1	0.7	0.9	0.6
Acres Harvested by Uneven-age Mngnt	M Acres	1.7	0.3	0.4	0.7	0.6	0.6

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

FOOTNOTES:

Returns to Government and Payments to States data are for the FY97 timber program only.

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 1997. 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 Fiscal Year 1997 (1997 dollars).

Source/Use	Timber	Recreation	Wildlife	Water/Soil	Minerals	Range	Lands
Revenue	6,729,327	na	na	na	na	na	na
Operations & Maintenance	4,141,351	na	na	na	na	na	na
Roads	2,014,199	na	na	na	na	na	na
Buildings & Facilities	28,690	na	na	na	na	na	na
TOTAL							
IMPROVEMENTS	2,042,889	na	na	na	na	na	na
General Admin	2,245,806	na	na	na	na	na	na
Net Cash Flow	-1,700,71	na	na	na	na	na	na
Payments to States	1,537,607	na	na	na	na	na	na

Notes:

Only timber data is available for FY 1997. Data is from FY 1997 TSPIRS report. Data for other program areas was not available this year due to discrepancies between All Resources Reporting system and TSPIRS.

Financial information for the timber program was all that was available for fiscal year 1997. The timber program data was obtained from the 1997 Timber Sales Program Information Reporting System, TSPIRS, report. The data for the other program areas is usually obtained from the All Resources Reporting system, ARR. However, FY 1997 data did not agree with TSPIRS data for timber and was excluded because of this. For example. The ARR system produced a revenue for the timber program of \$4.3 million.

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's Timber program for FY 1997 was a negative \$1.7 million. Payments to states is not part of the net cash flow calculation, it is only an income redistribution,.

The total Forest's timber program revenue decreased by 7 percent from FY 1996 to FY 1997. The decrease in Forest revenue was mostly due to the decrease in timber harvested during FY 1997. Timber harvested during FY 1997 was down 5.3 MMBF, or 15 percent, from the previous year (see Table 3.1 in Chapter 3 Accomplishments).

Table 4.2 shows a comparison of the actual FY 1997 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 1997 for all programs is 70 percent of the Forest Plan 10-year total. This percentage would have been 90 percent if all programs were funded at Forest Plan levels since Plan implementation. Given the budgets of the last 9 years, only two programs meet or exceed Forest Plan budget direction.

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

Chapter 4 Financial Report

much different than those assumed by the Forest Plan, then it would not be possible to make any strong conclusions regarding Plan implementation based solely on funding levels.

Table 4.2 Comparison of Forest Plan budget with fiscal year 1997 actual. (1997 dollars).

Program Area	Forest Plan Ten Year Total	Actual Fiscal Year Budget 1997	Actual Cumulative for Decade 1989-1999	Cumulative as Percent of Forest Plan Program Level	Cumulative as Percent of Forest Plan Total Budget
Timber	133,596,540	6,875,890	94,586,178	70.80%	33.42%
Insect & Disease	0	31,300	57,791	0.00%	0.00%
Facilities	52,190,292	1,974,457	26,001,726	49.82%	9.19%
Gen Admin	27,359,640	3,738,935	30,522,986	111.56%	10.79%
Fire Protection	18,443,502	1,119,231	13,777,566	74.70%	4.87%
Wildlife & Fish	17,085,222	473,656	6,480,423	37.93%	2.29%
Recreation	12,148,521	1,134,814	11,173,492	91.97%	3.95%
Lands	8,199,807	251,716	5,951,146	72.58%	2.10%
Range	6,185,025	408,850	4,150,762	67.11%	1.47%
Water/Soil/Air	4,655,343	211,384	2,306,282	49.54%	0.81%
Minerals	2,624,391	46,251	967,727	36.87%	0.34%
Wilderness	286,209	27,135	274,455	95.89%	0.10%
Law Enforcement	210,210	74,100	1,624,035	772.58%	0.57%
Planning	0	1,497,627	0.00%	0.00%	
Forest Total	282,984,702	16,367,719	199,372,197	70%	70%

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

Major Cooperators *

WA Dept. of Fish and Wildlife
Rocky Mountain Elk Foundation Inland
Northwest Wildlife Council
National Wild Turkey Federation

Management Indicator Species

WA Dept. of Fish and Wildlife
WA Natural Heritage Program
Pend Oreille Valley Sportsmen's Club.
Inland Northwest Wildlife Council

Threatened, Endangered and
Sensitive Species

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
Wildlife Conservation Society
Curlew Job Corps Center

Insects and Disease Populations

Regional Office, USFS

Heritage Resources

State Historic Preservation Office

Fisheries:

Trout Unlimited: Spokane Falls
Chapter
Kalispel Tribe of Indians
Spokane Fly Fishers

* Other cooperators included local volunteers (groups and individuals) and merchants from throughout eastern Washington. Although too numerous to list here, we appreciate their continued support.

CHAPTER 6 AMENDMENTS AND FOREST PLAN ADJUSTMENTS

There were two new Forest Plan Amendments in fiscal year 1997. The following amendments have been issued for the Colville Forest Plan since implementation began in February 1989:

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

Chapter 6 Amendments

		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.
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

Chapter 6 Amendments

		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 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

Chapter 6 Amendments

allow development of big game thermal cover in the understory.

21	8/20/97	Designation of communications site on Ruby Mountain on Newport Ranger District where an existing telecommunications site is.
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23	7/2/97	A site-specific adjustment of the Management Area 1 boundaries in the Old Berry 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.
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