



United States  
Department of  
Agriculture

Forest Service

Pacific  
Northwest  
Region

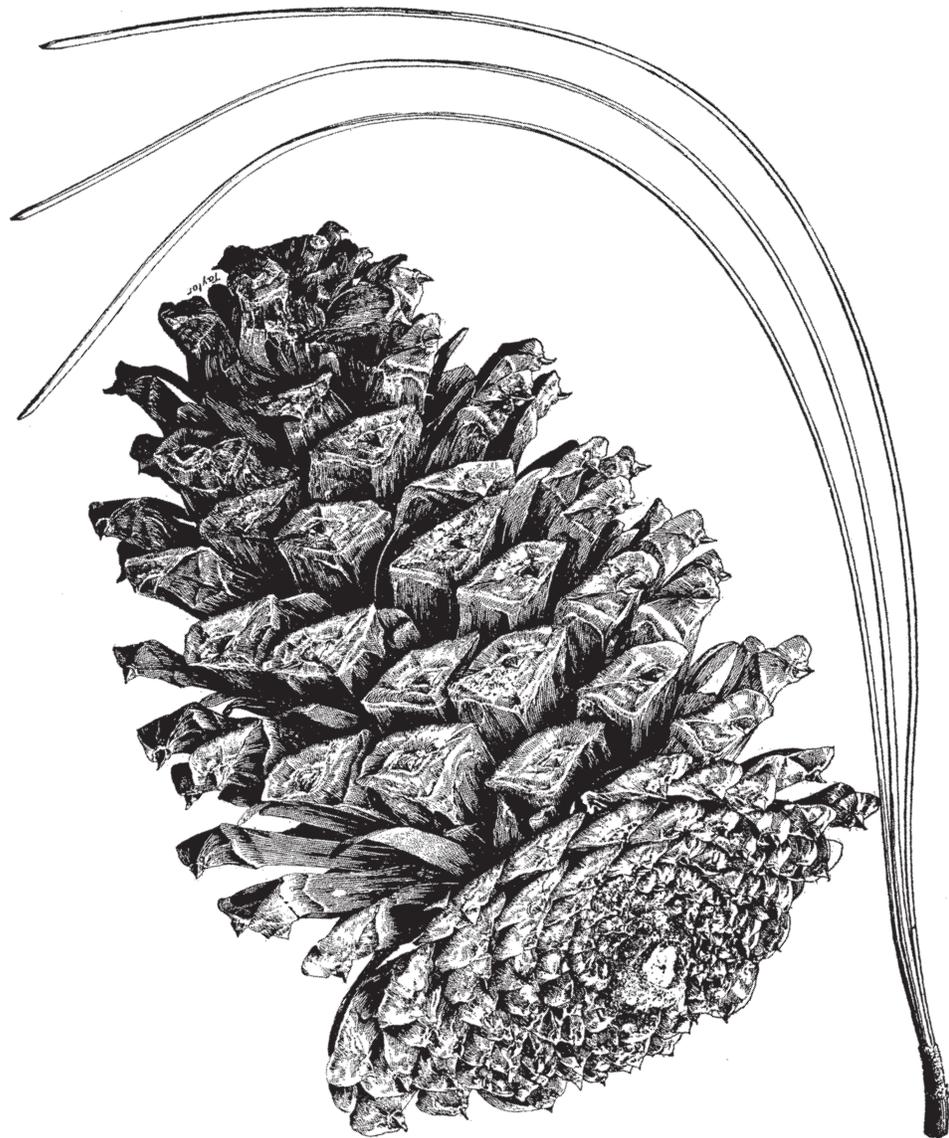
Okanogan  
National  
Forest

May 2007



# Annual Report on the Okanogan Land and Resource Management Plan:

## Implementation and Monitoring for Fiscal Year 2005



# Contents

<b>Introduction .....</b>	<b>1</b>
Forest Plan Decisions.....	1
Monitoring Methods.....	2
<b>Monitoring Implementation of the Northwest Forest Plan.....</b>	<b>3</b>
Late-Successional Reserves.....	3
Riparian Reserves .....	4
Matrix.....	4
Key Watersheds.....	5
Watershed Analysis .....	5
Participation .....	5
Provincial Advisory Committee Monitoring .....	6
<b>Summary of Recommended Actions .....</b>	<b>7</b>
Summary Table of items Reported in FY 2005 .....	8-11
No. 1 Scenery Management.....	12
No. 2 Physical, Social and Managerial Setting for Recreation Opportunities.....	13
No. 3 User (visitor) Needs and Expectations .....	14
No. 4 ORV Use Rates and Patterns.....	15
No. 5 Physical, Social and Managerial Setting for Wilderness Opportunities. ....	16
No. 6 Specific Area Use Levels .....	17
No. 7 Effects of Activities on Attributes for Wild and Scenic River Designation .....	18
No. 8 Mule Deer Management as an Indicator for Deer Winter Range .....	19
No. 9 Mule Deer Population Levels .....	19
No. 11 Primary Cavity Excavators.....	20
No. 14 Lynx .....	21
No. 15 Lynx Population Trends .....	22
No. 16 Ruffed Grouse Habitat Management.....	22
No. 17 Ruffed Grouse Population Changes .....	23
No. 19 Grizzly Bear Habitat Management .....	23
No. 20 Bighorn Sheep.....	24
No. 22 Mountain Goat .....	25
No. 25 Northern Spotted Owl .....	25
No. 26 and No. 27 Pileated Woodpecker, Pine Marten, Three-toed Woodpecker, Barred Owl .....	26
No. 29 Raptor Nests .....	26
No. 31 Status of Aquatic Management Indicator Species .....	27
No. 32 Watershed Condition and Aquatic Habitat .....	30
No. 36 Range Heath (changed from Range Condition) .....	34
No. 38 Allotment Management Plans .....	35
No. 41 Forest Health .....	36
No. 42 Timber Sale Harvest Quantity .....	36
No. 44 Reforestation .....	37
No. 47 Riparian Watershed Implementation Monitoring .....	37
No. 49 Soil Compaction and Displacement .....	38
No. 51 Soil and Water Improvement Projects .....	40
No. 53 Road Miles & Operational Status .....	41
No. 55 Actual Annual Fire Wildfire Occurrence Frequency by Statistical Cause.....	43
No. 63 Minerals Withdrawals .....	44
No. 70 Heritage Resource Site Protection .....	44
No. 71 Heritage Resource Site Preservation.....	45
No. 72 American Indian Relations .....	46
No. 73 Management of Competing and Unwanted Vegetation .....	47
<b>Forest Plan Amendments .....</b>	<b>48-52</b>
<b>Schedule of Proposed Actions .....</b>	<b>53</b>
<b>List Of Preparers .....</b>	<b>54</b>

# INTRODUCTION

Monitoring is done to measure progress in *Forest Plan* implementation. It consists of gathering data, making observations, and collecting and disclosing information. Monitoring is also the means to determine how well objectives of the Plan are being met, and how appropriate the management Standards and Guidelines are for meeting the Forest's outputs, and protecting the environment. Monitoring is used to determine how well assumptions used in development of the *Forest Plan* reflect actual conditions.

Monitoring and evaluation may lead to a change in practices or provide a basis for adjustments, amendments, or Plan revision. Monitoring is intended to keep the *Forest Plan* dynamic and responsive to change. Upon evaluation of the data and information, determinations are made as to whether or not planned conditions or results are being attained and when they are within Plan direction. When a situation is identified as being outside the limits of acceptable variability, changes may need to occur.

This report covers *Forest Plan* Monitoring and Evaluation for the Okanogan National Forest for Fiscal Year 2005. Monitoring and evaluation processes are laid out in the amended *Okanogan National Forest Land Management Plan (Forest Plan)*. Under this process, reports for each individual monitoring item by various resource specialists were completed. The Okanogan Forest continues to alter its' monitoring reporting strategy in recognition of the *Forest Plan* revision effort and the administrative merger with the Wenatchee National Forest. This year's report includes the 5-year reporting items that were not reported on last year's report (2004 would have been the scheduled 5-year reporting year, however, reporting of 5-year items was delayed a year in order to bring both the Okanogan and Wenatchee Forests on to the same reporting cycle). In addition, many items are being reevaluated in terms of *Forest Plan* revision and are not being reported this year.

## Forest Plan Decisions

The amended *Forest Plan* is a set of decisions that guide our management of the Forest. Taken broadly, it contains three types of decisions:

- Goals, Objectives, and Desired Future Conditions provide general direction regarding where we should be headed as we put the Plan into practice.
- Standards tell us how to put the Plan into practice, or give us conditions we must meet while we implement the Plan.
- Land Allocation by management areas (MAs) as described in the Forest Plan and displayed on the Forest Plan Map, in a sense "zone" the Forest into different types of areas that are suitable and available for different types of land management and resource production.

Monitoring is gathering information and observing management activities. *Forest Plan* monitoring is organized into three levels:

- Implementation monitoring determines whether goals, objectives, standards and management practices are implemented as detailed in the amended Forest Plan, asking ourselves, "Did we do what we said we were going to do?"

- Effectiveness monitoring determines whether management practices, as designed and executed, are effective in meeting amended Forest Plan standards, goals, and objectives. The question being asked, “Did the management practice or activity do what was intended?”
- Validation monitoring is used to determine whether the data, assumptions and coefficients used in the development of the amended Forest Plan are covered. The question being asked, “Is there a better way to meet the Forest Plan’s goals and objectives?”

## Monitoring Methods

The amended *Forest Plan* defines a process that was designed to monitor implementation of the decisions above. Are we doing what the *Plan* envisioned? Are we seeing the effects and outputs the *Plan* predicted? Are the standards working? Do we need to adjust practices to meet standards? Does the monitoring process need to be adjusted?

In addition to these monitoring methods, we also have monitoring procedures for timber sales, grazing allotments, fisheries, water quality, wildlife, and project effects. The results of these other types of monitoring are considered in this report.

# Monitoring Implementation of the Northwest Forest Plan

The *Record of Decision and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (Northwest Forest Plan)* amended the *Okanogan Forest Plan* in April of 1994. The decision resulted in some change in management emphasis for lands administered by the Okanogan Forest, generally west of the lower and middle portions of the Methow River and west of the Chewuch River and Andrews Creek.

The *Northwest Forest Plan* requires that a monitoring plan be developed and incorporated into current Forest monitoring plans. The following narrative addresses the key implementation monitoring items identified on pages E-5 and E-6 of the ROD and Standards and Guidelines. Many of the effectiveness and validation monitoring items are being monitored through current efforts. As new monitoring direction arrives, it will be incorporated. This section is organized according to the following categories:

- Late-successional Reserves
- Riparian Reserves
- Matrix
- Key Watersheds
- Watershed Analysis
- Participation

## Late-Successional Reserves

### **1. Is timber harvest consistent with Standards and Guidelines and with Regional Ecosystem Office review requirements?**

The Hungry Hunter Project is currently being implemented and includes stand treatments in the Hunter Mountain LSR, consistent with Standards and Guidelines. In the Hungry Hunter project the primary objective of treatments will be to maintain and protect existing late-successional habitat and reduce the risk of large-scale natural disturbances. The Eight-mile Vegetation Management Project includes portions of the Nice and Upper Methow LSRs. In the Eightmile Project, proposed vegetation and fuel treatments will also reduce the risk of large-scale natural disturbance, maintain existing late-successional habitat, and promote the development of sustainable late-successional habitat in younger stands.

### **2. Were other management activities consistent with standards and guides?**

All projects were designed to be consistent with Standards and Guidelines.

### **3. Have Late-Successional Reserve assessments been completed?**

Yes, An Assessment of the Northeastern Cascades Late-Successional Reserves was published in April 1998.

### **4. Were management activities consistent with LSR assessments?**

Management activities were designed to be consistent with the LSR assessment and watershed analysis documents.

## **Riparian Reserves**

### **1. Width and integrity of Riparian Reserves; did the conditions that existed before management activities were conducted change in ways that are not in accordance with the Standards and Guidelines?**

The width and integrity of riparian reserves was maintained for all projects; no changes were made in default guidelines.

### **2. Was watershed analysis completed prior to management activities where required?**

Watershed analysis was completed prior to management activities.

### **3. Were management activities in Riparian Reserves consistent with Standards and Guidelines?**

If possible, management activity was designed to avoid Riparian Reserves. In the Hungry Hunter Project, stand treatments will help restore Riparian Reserves.

Stand treatments will occur on about 184 acres of dry site vegetation within the default guidelines; this includes about 33 acres of treatment near perennial streams, but not affecting riparian vegetation. In the Eightmile Vegetation Management Project, about 174 acres of mechanical vegetation (silvicultural) treatments and associated fuel treatments will promote desired species composition, stand structure, and disturbance patterns associated with pre-settlement conditions. In general, activities in portions of Riparian Reserves were designed to be consistent with Aquatic Conservation Strategy (ACS) objectives and applicable Standards and Guidelines.

## **Matrix**

### **1. Did number and distribution of green trees meet Standards and Guidelines in harvested areas?**

Most treatments in the Eightmile and Hungry Hunter projects include stand thinning with adequate residual green tree cover. In the Hungry Hunter Project, about 214 acres will be seed tree treatments with adequate retention of the existing manageable understory. About 43 acres includes patch regeneration treatment of lodgepole pine with retention of Douglas-fir and ponderosa pine for structural diversity and snag recruitment. In the Eightmile Project, seed tree treatments would be implemented on about 31 acres. In the seed tree areas, the number and distribution of green trees meet Standards and Guidelines.

**2. Were appropriate amounts of snags and coarse woody debris retained?**

In both the Eightmile and Hungry Hunter projects, the appropriate amount of snags and coarse woody debris were retained or will be created in timber harvest areas. Prescribed fire is expected to produce the abundance of smaller snags, and post harvest surveys will pinpoint areas where snag creation will occur as mitigation.

**3. Was watershed analysis completed prior to harvesting late-successional stands in watersheds with less than 15 percent late-successional forest remaining?**

Yes.

## **Key Watersheds**

**1. Was watershed analysis completed prior to management activities?**

Yes, watershed analysis was completed prior to management activity.

**2. Was the presence and timing of activities, including restoration projects coordinated?**

The presence and timing of activities was coordinated through interdisciplinary participation by various District specialists.

**3. Were any new roads built in roadless areas?**

No new roads were proposed for roadless areas.

**4. Was there a net increase in roads?**

In the Chewuch River Key Watershed (Eightmile project), there was a net decrease in roads due to proposed road management (decommissioning).

## **Watershed Analysis**

**1. Was presence and timing of watershed analysis appropriate?**

Appropriate watershed analysis was completed as required.

## **Participation**

**1. Were multiple agencies, the public, and others involved in planning, implementing, and monitoring watershed analysis?**

Efforts were made to include the public, American Indian tribal governments, and other agency involvement in the process of completing watershed analysis.

**2. Was information sharing pursued between all parties such as agencies, publics, and communities?**

Yes, see above and below (Hungry Hunter sub-committee of PAC).

**3. Were clear expectations and responsibilities identified?**

Yes, where applicable.

**4. Were active partnerships developed?**

There is an on-going effort to keep local citizens, governments, and organizations informed of proposed projects. The Hungry Hunter project included cooperation with landowners, the Forest Stewardship Project, the Small Wood Initiative, academia, and Forest Service personnel.

**Provincial Advisory Committee Monitoring**

Monitoring under the *Northwest Forest Plan* is done by the Eastern Washington Cascades Provincial Advisory Committee (PAC). In 2005, there were no projects selected for monitoring in the Eastern Washington Province on the Okanogan National Forest.

# SUMMARY of RECOMMENDED ACTIONS

The following table illustrates the recommended action for each monitoring item reported for Fiscal Year 2005.

## Results okay; continue monitoring

The results for these monitoring items are within the Threshold of Variability listed in Chapter V of the *Forest Plan*, or more than one year's data is needed to evaluate the results. Several years' data is generally necessary to evaluate questions of the effectiveness or validity of the *Plan*. Studies are being initiated to provide the baseline data and inventories necessary to answer these questions.

## Change Management Practices

Areas where the results exceeded the Threshold of Variability for a particular item in Chapter V, and an evaluation of the situation indicated the need to change practices to comply with the *Forest Plan*.

## Further Evaluation/Determine Action

Results may or may not have exceeded the Threshold of Variability, but additional information is needed to better identify the cause of the concern and to determine future actions.

## Propose Forest Plan Amendment

Areas where results were inconsistent with the *Forest Plan* or *Forest Plan* direction was not clear. The action is either changing or clarifying the *Forest Plan* through the amendment or revision process. Non-significant amendments may be made by the Forest Supervisor. Significant amendments require Regional Forester approval.

## Other Recommendations

Results suggest issuing action other than that specified by the above four options. Comments directing action were written by resource specialists.

## Summary Table of items Reported in FY 2005

Monitoring Items	Results Okay; Continue Monitoring	Change Management Practices	Further Evaluation	Propose Forest Plan Amendment	Other Recommendations
<b>SCENERY</b>					
1. Scenery Management	●				Continue to monitor, priority areas: Projects in Special Places and Areas of High Scenic Concern
<b>RECREATION</b>					
2. Physical, Social and Managerial Setting for recreation Opportunities	●				No action needed. Results and effects meet the standards prescribed. Continue current course.
3. User (visitor) Needs and Expectations	●				Continue current course. Emphasize need for providing interpretive and educational opportunities as well as safe sanitary sites.
4. ORV Use Rates and Patterns	●				Continue to utilize Forest Travel Plans to manage vehicle use. Work with local snowmobile groups and WA State Parks to more effectively educate snowmobilers on the prohibition of motorized use in wilderness.
<b>WILDERNESS</b>					
5. Physical, Social and Managerial Settings for Wilderness Opportunities	●				Continue to implement the action items of the Wilderness Recreation, Stock and Outfitter Use Strategy and complete the Outfitter Guide EIS.
6. Specific Area use Levels	●				Continue to monitor use levels in the Lake Chelan Sawtooth and Pasayten Wildernesses. Compare registration records to determine if use continues above the determined capacity for Lake Chelan Sawtooth Wilderness.
<b>WILD and SCENIC RIVERS</b>					
7. Effects of Activities on Attributes for Potential Classification of River Segments Recommended as Suitable for Designation as Part of Wild and Scenic River system or Recommended for Further Study	●				No action needed. Monitoring indicated management direction is being achieved. Continue current course.

Monitoring Items	Results Okay; Continue Monitoring	Change Management Practices	Further Evaluation	Propose Forest Plan Amendment	Other Recommendations
<b>WILDLIFE</b>					
8. Mule Deer Indicator for Deer Winter Range	●				Reliable, consistent vegetation information, including structure components, is needed to provide more conclusive analysis of deer habitat conditions.
9. Mule Deer Population Levels	●				No action needed.
11. Primary Cavity Excavators	●				Continue existing monitoring projects.
14. Lynx		● See Recommendations			Drop the monitoring item since it only applies to portion of lynx habitat in MA 12. The LCAS and CA address lynx habitat management more thoroughly until the Forest Plan revision is completed and information from the LCAS is incorporated into the Forest Plan.
15. Lynx Population Trends	●				Continue monitoring in cooperation with various partners. Expand the use of hair pad transects to determine lynx distribution on the east portion of the forest.
16. Ruffed Grouse Habitat Management	●				Continue to monitor aspen occurrences and distribution in timber management allocations to detect changes.
17. Ruffed Grouse Population Changes		● See Recommendations			Drop this monitoring item. Not enough information has been gathered in a consistent manner or scheduled fashion over a broad enough area to give any reliable analysis.
19. Grizzly Bear Habitat Management	●				Results ok; continue to monitor and complete biological assessments and consultation.
20. Big Horn Sheep	●				Continue monitoring; Reliable, consistent GIS based information on current vegetation is needed to be able to provide more conclusive analysis of habitat conditions.
22. Mountain Goat Habitat Capability	●				Continue to monitor habitat for mountain goat

Monitoring Items	Results Okay; Continue Monitoring	Change Management Practices	Further Evaluation	Propose Forest Plan Amendment	Other Recommendations
25. Northern Spotted Owl	●				Continue monitoring with partners.
26. and 27. Pileated Woodpecker, Pine Marten, Three-toed Woodpecker and Barred Owl	●				Results ok; monitoring indicates management direction is being achieved.
29. Raptor Nests	●				Results okay; continue monitoring
<b>FISH</b>					
31. Status of Aquatic Management Indicator Species	●				Continue to monitor these populations.
32. Watershed Condition/Aquatic Habitat	●				Continue to survey streams for riparian and stream channel condition. Continue to monitor sediment in the Chewuch system and others as funding allows.
<b>RANGE</b>					
36. Range Heath (changed from Range Condition)	●				No action needed. Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed. Continue the current course.
38. Allotment Management Plans	●				Results Okay; Continue monitoring.
<b>TIMBER WATERSHED and SOIL</b>					
49. Soil Compaction and Displacement	●				Dozer lines used to create fire breaks need to be used sparingly so as to not invite OHV use. Continue monitoring ground based logging. Implementation monitoring should continue. Continued follow-up in the summer is needed to assess if winter logging detrimentally compact soils (See Soil Section for additional recommendations)
51. Soil and Water Improvement Projects	●				Results Okay; Continue monitoring.

Monitoring Items	Results Okay; Continue Monitoring	Change Management Practices	Further Evaluation	Propose Forest Plan Amendment	Other Recommendations
<b>FACILITIES</b>					
53. Road Miles & Operational Status	●				Results okay; Continue monitoring. Continue to utilize watershed analysis, roads analysis, and project level analysis to identify the need for roads, and to update forest road inventories. Use best available science to determine road density standards during Forest Plan revision.
<b>FIRE</b>					
55. Actual Annual Fire Wildfire Occurrence Frequency	●				Results okay; pursue investigations of human fire starts in order to determine cause.
<b>MINERALS</b>					
63. Minerals Withdrawals					Evaluation dropped in 2003, Output Table available.
<b>HERITAGE</b>					
70. Heritage Resource Site Protection	●				Continue monitoring sites inside project areas. Emphasize site evaluation, especially the evaluation of previously documented cultural resource sites.
71. Historic Site Preservation	●				Continue to perform condition assessments on historic properties and treat sites as needed. Look for additional sources of funding.
72 .American Indian Relations	●				Meet with the Colville Confederated Tribes THPO annually to discuss and evaluate the effectiveness of the Forest's consultation protocol. Work on developing a memorandum of understanding for government-to-government consultation, TCP identification and the sharing of sensitive information in general in 2006.

## EVALUATION REPORTS

Monitoring Item No. 1

### Scenery Management

(Replaces dropped NEPA item dropped in 2003)

**Objective or Purpose:** Manage vegetation and facilities that provide views, which are consistent with the stated scenic quality objectives and landscape character goal for each management area.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Consultation with district and field reviews.

**Unit of Measure:** Cumulative effects of all resource activities within a viewshed and project site specific in areas with a moderate to high concern for scenic quality and landscape character.

**Criteria & Standards:** *Forest Plan* direction, Standards and Guidelines, Forest Service Scenery Management System (USDA Forest Service 1995), and the Visual Management System (USDA Forest Service 1974) National Forest Landscape Management Handbooks.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** The Okanogan and Wenatchee National Forest (NF) landscape architect reviewed projects on ranger districts to assess the potential cumulative effects of resource activities on scenery. Project areas were field reviewed along the viewsheds of Washington Pass Scenic Highway 20 and Loup Loup State Route 20. Scenic resource analyses on these viewsheds indicate the viewsheds vary from natural appearing to a slightly altered condition.

Washington Pass viewshed is in a natural appearing condition throughout the travel route. There is a spruce budworm infestation that is very active and changing the landscape character dramatically by turning green trees to brown on a landscape scale, predominately at elevations above 4,000 feet. Vegetation management changes throughout the travel route blend well with the natural diversity of landscapes from Early Winters to Rainy Pass. The scenic setting will improve over time as new use patterns are established and new vegetation grows in.

The Rainy Pass day use site was improved through redesign and installation of new Cascadian style toilets which reflect the desired rustic landscape character. In addition, Cascadian style toilets were installed at Canyon Creek Trailhead, East Creek Trailhead, Easy Pass Trailhead, Rainy Pass Trailhead, and Bridge Creek Trailhead.

The installation of communication facilities at Flag Mountain Communication Site was fully successful in meeting Retention Visual Quality Objectives and maintaining the high quality scenic setting as viewed from the visually sensitive areas. The site is located at the ridgeline of Flag Mountain which is the backdrop for the community of Mazama and Freestone Lodge in the Washington Pass viewshed. The project consisted of installing a 120' black monopole tower, two propane tanks and an equipment building at an existing communication site. The color and placement of the tower and building remain visually subordinate. The propane tanks were installed below grade and are not visible from the viewpoints.

In the Loup Loup viewshed, the Electric Timber Sale, a project near the pass, was designed to enhance the scenery by thinning out the dense thick overgrown stands and exposing larger diameter trees for viewing. Hand piling and underburning will be used in the future to mitigate and soften any future visual effects

Monitoring at Loup Loup Ski Area continues to ensure improvements and developments meet the rustic Cascadian architectural style through the choice of building materials, colors and placement on the site to maintain an esthetically pleasing landscape setting.

**Projects Monitored in Other Viewsheds:** The Aspen Meadows Diversion Project contributed to the restoration of the natural landscape character of the Little Bridge Creek, a tributary located off the Twisp River. The dilapidated diversion was removed and replaced with boulder weirs, which in turn stabilized banks to reduce erosion. As the denuded areas grow new vegetation, the area will be further restored. The intake was painted a rust color to blend into the surrounding landscape. By incorporating the design arts, the project meets the higher Visual Quality Objective of Retention and reflects a more natural appearing landscape character.

**Recommendations:** Continue to monitor as scheduled, projects in special places and areas of high scenic concern.

Continue working with the Washington State Department of Transportation and permittees to minimize signs and structures and ensure aesthetically pleasing structures, safety features and hazard removal along highways passing through National Forest System lands.

Continue working with Loup Loup Ski Company Education Foundation to improve architectural style, color scheme, signs, and landscaping.

Monitoring Item No. 2

## **Physical, Social and Managerial Setting for Recreation Opportunities**

**Objective or Purpose:** Assure that selected physical and visual attributes described in the ROS User's Guide are being protected from degradation in recreation management emphasis areas.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Project review involving vegetation manipulation, road or trail reconstruction and construction in recreation management emphasis areas.

**Unit of Measure:** Acres not meeting desired attributes.

**Criteria:** *Forest Plan* direction, Standards and Guidelines.

**Standards:** Was desired physical, social and managerial setting achieved?

**Frequency Item is Monitored:** Continuous.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** Review of NEPA documents from FY 2000 to FY 2005 indicates that selected physical and visual attributes are being protected from degradation. Any changes are consistent with ROS direction for the management areas in which the management activities occurred. Some management activities may not meet standards immediately upon implementation, but do meet the Standards and Guidelines in the long term.

The National Visitor Use Monitoring (NVUM) results for the Okanogan National Forest show that visitors rate the scenery and attractiveness of the forest landscape as very important. In the FY 2005 survey, these two characteristics had a very high satisfaction rating.

**Recommended Actions:** No action needed. Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed.

Monitoring Item No. 3

## User (visitor) Needs and Expectations

**Objective or Purpose:** Identify changing needs and expectations.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Sample field contacts with users in recreation management emphasis areas and review of written and electronic comments.

**Unit of Measure:** Number of comments.

**Criteria:** *Forest Plan* direction, Standards and Guidelines.

**Standards:** Do more than 50% of comments over a 5-year period indicate the needs of public are not being met?

**Frequency Item is Monitored:** Continuous.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** In the 2005, National Visitor Use Monitoring (NVUM) surveys, the lowest satisfaction ratings were for recreation information and parking availability. The highest ratings were for a feeling of safety, restroom cleanliness, and the condition of parking lots. The availability of parking, however, was rated fairly low, indicating the parking lots may be too small for visitors. Overall, the NVUM surveys show that user needs and expectations are being met.

**Recommended Actions:** Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed. The emphasis needs to be on providing safe, sanitary facilities and quality interpretive and educational opportunities.

Monitoring Item No. 4

## **ORV Use Rates and Patterns**

**Objective or Purpose:** Avoid resource damage and/or conflicts with non-motorized users.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Sample field observations for effects on land and other resources. Sample field contacts with non-motorized users in areas open to ORV use.

**Unit of Measure:** Acres and/or miles of roads and trail receiving unacceptable impacts. Number of reports of conflict.

**Criteria:** *Forest Plan* direction, Standards and Guidelines.

**Standards:** Are impacts from use within acceptable limits?? Are numerous reports of conflicts reported?

**Frequency Item is Monitored:** Continuous throughout heavy use season.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** ORV use on the Okanogan National Forest is fairly light compared to the Colville and Wenatchee National Forests. In FY 2001, OHV use and snowmobile use represented only 4% of the visitor use on the Forest. In the FY 2005 NVUM surveys, these numbers are even lower, probably reflecting the very low snow year of 2004-2005.

A substantial change from the previous 5-year monitoring period is the increase in quad or ATV use. These vehicles are not legal on most Forest Service roads; they are however, legal on state roads, which are adjacent to National Forest lands. The Forest has a single track trail system in the Lake Chelan-Sawtooth divide outside of wilderness and there are few ORV opportunities in other areas. The Forest is working on developing an ATV trail system east of the Loup Loup divide on the Tonasket Ranger District.

Conflicts have occurred between snowmobile and motorized winter activities and non-motorized user groups. There was a lawsuit during the monitoring period regarding winter motorized use for which the Forest prevailed.

**Recommended Actions:** No action needed. Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed.

Continue to utilize Forest Travel Plan to manage vehicle use (including ORV use) activities. Work with local snowmobile groups and Washington State Parks to more effectively educate snowmobilers on the prohibition of using motorized transport in wilderness and to more effectively sign portions of the Pasayten Wilderness Boundary.

Monitoring Item No. 5

## **Physical, Social and Managerial Setting for Wilderness Opportunities.**

**Objective or Purpose:** Assure that wilderness attributes are maintained.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Sample field observation of heavy use areas and travel corridors.

**Unit of Measure:** Acres not meeting desired attributes.

**Criteria:** Forest Plan direction, Standards and Guidelines.

**Standards:** Are wilderness Standards and Guidelines being met?

**Frequency Item is Monitored:** Continuous throughout heavy use season.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** For the period FY 2000 through FY 2005, monitoring of sites in the Pasayten and Lake Chelan Sawtooth Wildernesses indicate the following:

### Pasayten Wilderness

**Standards for camp site conditions:** Forty-three percent of the 106 campsites monitored in the MA15 B (trailed) portion of wilderness exceeded the Standards and Guideline for barren core area; thirty-seven percent exceeded the Standards and Guidelines for the number of exposed roots. Of the 5 sites monitored in the MA15A (trailless) portion of wilderness, twenty percent exceeded the Standards and Guidelines for barren core area; and forty percent were within two hundred feet of water.

**Standards and guidelines for social encounters:** The Okanogan Forest Plan standard for 15B (trailed) is that there will be an eighty percent probability of no more than seven encounters daily through all use seasons. With an assumption that fifty percent of wilderness visitors register, days with four or more groups at each trailhead have a potential to have eight or more groups on that trail for that day. Not all information was available for all years for each trailhead. The year 2003 was a year many trailheads and trails in the eastern Pasayten were closed due to fire. Although there are days with more than seven encounters, it happens thirteen percent or less throughout the use season averaged over the four year period. There were individual years for Billygoat, Irongate, Pacific Crest Trail and Buckskin Ridge Trailheads where the possibility of encounters over seven was fourteen to twenty percent. The highest likelihood of more than 7 encounters generally occurs on weekends and holidays in July, August and September but may also occur randomly during the week. Billy Goat and Buckskin Ridge trails access two trails within a short distance of the trailhead and the encounter rate may be actually lower as people disperse between the two trails. There are many factors influencing amount and distribution of use which influences encounters. Weather, fire activity, featuring a particular trail or trip in the media, can cause an obvious increase or decrease at specific in use on a yearly basis on an individual trail.

No monitoring in trailless (15A) was done for social encounters, although the information could be derived from wilderness permits.

## Lake Chelan Sawtooth Wilderness

**Standards for campsite conditions:** Of the thirty-nine campsites monitored in 1999, forty-eight percent exceeded standard and guideline for barren core area; fifty-three percent exceeded standard and guideline for number of exposed roots. No sites were monitored from 2000 through 2005. Some sites were monitored in 2006.

**Standards and Guidelines for social encounters:** The Okanogan Forest Plan Standard for 15B (trailed) requires an eighty percent probability of no more than seven encounters daily through all use seasons. With an assumption that fifty percent of wilderness visitors register, days with four or more groups at each trailhead have a potential to have eight or more groups on that trail for that day. Gilbert and South Creek trails are the two most popular routes used by day riders from Twisp River Horse Camp, with North Lake and Louis Lake being the most popular destinations. The use figures are most likely higher than indicated in the chart for these two trailheads as there were a number of groups riding from the horse camp that did not designate specific trails or destinations on the register. However, the trailhead accesses two separate trails, Twisp Pass and North Lake Trail, so the encounter rate may be less than indicated by the trailhead figures. The encounter standard is currently being met in the Lake Chelan Sawtooth Wilderness Trailed area (15B) and the opportunity for solitude in this area is moderate to high for the majority of the use season. Although there are days where there may be more than seven encounters, it happens ten percent or less throughout the use season. The highest likelihood of more than seven encounters generally occurs on weekends and holidays in July, August and September.

No monitoring in trailless (15A) was done for social encounters, although the information could be derived from wilderness registration.

In April, 2000, a "Wilderness Recreation, Stock and Outfitter Use Strategy and Action Plan" was approved. The objective of this plan is to reduce recreation impacts, and especially stock related impacts, in wilderness. The plan contains twenty action items, and work is continuing on those items.

An analysis of Outfitter Guide use is being completed for permit renewals of stock outfitters. This EIS will be completed in FY07, and will address some of the issues discussed for both wilderness areas.

**Recommendations:** Continue to implement the action items of the Wilderness Recreation, Stock and Outfitter Use Strategy and complete the Outfitter Guide EIS.

Monitoring Item No. 6

### Specific Area Use Levels

**Objective or Purpose:** Assure use levels in specific areas are within established carrying capacities.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Sample field observations and review of use reports.

**Unit of Measure:** Number of visitor days.

**Criteria:** Forest Plan direction, Standards and Guideline.

**Standards:** Does actual use exceed established carrying capacities or is there a downward trend in resource impacts?

**Frequency Item is Monitored:** Continuous.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** In FY 2000, the Okanogan National Forest conducted the first National Visitor Use surveys. The survey was repeated in FY 2005. In the first survey, the Forest had 389,929 visits. This increased in 2005 to 397,000 visits. While this increase is fairly small, most other National Forests showed an actual decline in visitor use during the same period.

Estimated wilderness use almost doubled during the same period going from 32,470 visits to 59,600 Recreation Visitor Days (RVDs) for the Lake Chelan-Sawtooth Wilderness and 104,959 RVD's for the Pasayten Wilderness. The FEIS for the Okanogan Forest Plan identified recreational capacity as 56,000 RVD's for the Lake Chelan-Sawtooth Wilderness and 349,000 RVD's for the Pasayten Wilderness.

The visitor use in the Lake Chelan-Sawtooth Wilderness is above the Standards and Guidelines for the Okanogan Forest Plan. The Forest Plan does not set a capacity number, but instead relies on visitor encounters and physical standards to protect wilderness values. The level of use in FY 2005 does call for additional monitoring to see if this is just a one-year aberration, or if it reflects increased visitor use.

In 2001, the Forest started work on the Recreation Use Model. This model uses the National Visitor Use data and pro-rates it across the landscape. It provides a quick method to look at recreational use as it is distributed across the landscape and through the seasons.

**Recommended Actions:** Continue to monitor the wilderness use on the Lake Chelan-Sawtooth Wilderness and the Pasayten Wilderness using registration records to see if it continues above determined capacity

Continue with application of the Recreation Use Model to determine recreational capacity figures for the Okanogan National Forest.

Monitoring Item No. 7

## **Effects of Activities on Attributes for Potential Classification of River Segments Eligible for Wild and Scenic River Designation**

**Objective or Purpose:** Assure that attributes for potential classification of river segments eligible for wild and scenic river designation are maintained.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Project reviews involving vegetation manipulation, road or trail reconstruction and construction along suitable river segments.

**Unit of Measure:** Acres within river corridor not meeting desired attributes.

**Criteria:** Forest Plan direction, Standards and Guidelines.

**Standards:** Have activities lowered potential classification of the river segments?

**Frequency Item is Monitored:** Continuous.

**Frequency Item is Reported:** Every 5 years.

**Evaluation:** Review of NEPA documents from FY 2000 to FY 2005 indicates the Outstandingly Remarkable Values for river and creek segments eligible to be included in the National Wild and Scenic

River System have been maintained. These segments were determined to be eligible for inclusion in the National Wild and Scenic River System based on their free-flowing characteristics through out the major portion of the primary use season and because they exhibit at least one outstanding remarkable value. These eligible segments include the following streams: Methow River, Chewuch River, Twisp River, Lost River, Pasayten River, Wolf Creek, Canyon Creek, Granite Creek and Ruby Creek.

**Recommended Actions:** No action needed. Monitoring indicated management direction is being achieved. Results and effects meet the standards prescribed.

Monitoring Item No. 8

## **Mule Deer Management as an Indicator for Deer Winter Range**

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Verify by field samples. Use Geographic Information System to determined amounts and distribution of thermal and hiding cover on summer range.

**Unit of Measure:** Habitat effectiveness.

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Is habitat effectiveness more than 20% below management objective?

**Frequency Item is Monitored:** Every 5 years

**Evaluation:** Vegetative information in GIS is not adequate or accurate enough to determine deer cover. Deer habitat is analyzed on a project-by-project basis, but no monitoring on the landscape scale has been completed.

**Recommended Actions:** Reliable, consistent vegetation information, including structure components, is needed to provide more conclusive analysis of deer habitat conditions.

Monitoring Item No. 9

## **Mule Deer Population Levels**

**Objective or Purpose:** Population change

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Coordinated field surveys with Washington Department of Fish and Wildlife.

**Unit of Measure:** Numbers.

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Have population estimates changed more than 20% in a 5-year period?

**Frequency Item is Monitored:** Every 5 years

**Evaluation:** No population estimates have been made in the past 20 years. Trend counts are based on herd composition surveys that are completed annually, both post hunting season and in the spring. Trend counts indicate an increasing population (based on the number of fawns surviving the winter), but it is difficult to measure total population change based on these indices. The results of the trend counts for 2005 were: spring 44 fawns/100 adults; fall (post hunting season) 18 males/100 females (5 of the 18 males were three-point or better), and 84 fawns/100 adult females.

**Recommended Actions:** No action needed.

Monitoring Item No. 11

## **Primary Cavity Excavators**

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Estimate numbers of snags and wildlife trees by sampling timber management projects and established transects

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Does greater than 10% of the area have less than 90% of prescribed level of snags?

**Frequency Item is Monitored:** Every 5 Years

**Evaluation:** To monitor primary cavity excavator populations and their habitat use, two large studies have been conducted. These include monitoring primary cavity excavators within stand replacement fires that occurred in 1994, and monitoring the effects of vegetation management on the retention levels of snag habitat. The study of primary cavity excavators within the burned areas was carried out in 1998 and 1999. More details of the study can be found in the published paper which is available at the Forest Headquarters Office: "Effects of Stand-Replacement Fire and Salvage Logging on a Cavity-Nesting Bird Community in Eastern Cascades, Washington". Northwest Science 75(4):387-396 by M.E. Haggard and W.L. Gaines, 2001.

This study was intended to monitor how primary cavity excavator populations responded to stand replacement fires and subsequent salvage logging. This study will be repeated during 2006 and 2007 to monitor the long term effects of fire and salvage logging on primary cavity excavators and their habitats. The second primary cavity excavator monitoring study was initiated in 2001 and was designed to determine the direct, short-term effects of timber harvest and harvest systems on snag numbers. In addition, a secondary objective was to monitor the effectiveness of meeting Forest Plan snag standards. To date, the status of 1,058 snags within four dry forest restoration projects have been monitored. Additional monitoring is underway to determine how different harvest systems and prescribed fires influence snag numbers, and to develop statistically accurate measures of snag attrition rates.

Snag Size (Inches DBH)	Mean Attrition Rate
6-10	48.1%
10-20	34.2%
>20	30.0%

**Recommended Action:** Continue existing monitoring projects.

Monitoring Item No. 14

## Lynx

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Estimate amount of lodgepole pine providing lynx and snowshoe hare habitat in primary lynx area. Use Landsat imagery and aerial photos with field sampling as imagery data or photos are updated.

**Unit of Measure:** Percent sapling and pole condition providing habitat.

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Are the amounts less than 10% predicted in the Forest Plan?

**Frequency Item is Monitored:** Every 5 years

**Evaluation:** The Lynx Conservation Assessment and Strategy (LCAS) was completed in 2000 and included recommendations for lynx conservation based on the most current science available. The Forest Service and US Fish and Wildlife Service signed a Conservation Agreement (CA) in February 2000, revised and amended in May 2005 and July 2006, to be effective until forest plans can be amended or revised to incorporate information in the LCAS. The LCAS contains similar recommendations as were contained in the Okanogan Forest Plan, e.g. restricting to 30% the amount of lynx habitat present in an unsuitable condition. The LCAS also provided information on lynx habitat and direction from the Regional Office provided guidance on identifying lynx habitat. Although monitoring item 14 only applies to MA12, lynx habitat is much more widespread on the Okanogan Forest and the CA applies to all lynx habitat.

**Recommended Action:** Drop the monitoring item since it only applies to portion of lynx habitat in MA 12. The LCAS and CA address lynx habitat management more thoroughly until the Forest Plan revision is completed and information from the LCAS is incorporated into the Forest Plan.

Monitoring Item No. 15

## Lynx Population Trends

Objective of Monitoring: Population trends

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Establish transects to measure snowshoe hare densities. Monitor snow track routes to determine lynx presence.

**Unit of Measure:** Estimated numbers of hares/acre and lynx tracks per survey route

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Trend 20% less than predicted.

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** A limited research program (University of Washington Masters study) involved two winters of intensive lynx backtracking (2001-02 and 2002-03) on the forest. Results of this study indicated lynx were distributed across the study area in similar patterns as were determined in the 1980 studies. Additionally, lynx scats were collected during the study and through DNA analysis and subsequent modeling, it was determined that approximately 15 lynx occupied the study area (minimum number 12). The estimate from the studies in the 1980s was 15-25 adults.

**Recommended Actions:** Continue monitoring in cooperation with various partners. Expand the use of hair pad transects to determine lynx distribution on the east portion of the Forest.

Monitoring Item No. 16

## Ruffed Grouse Habitat Management

Objective of Monitoring: Habitat management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Estimate acreage of aspen in timber management areas compared with existing amounts

**Unit of Measure:** Acres

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Representation of aspen, which is less than expected in management strategies.

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** No monitoring has occurred since the last monitoring report. However, aspen enhancement was included on the Conger Project and proposals to enhance and/or restore aspen groves were submitted for funding to be completed in FY 2006.

**Recommended Actions:** Continue to monitor aspen occurrence and distribution in timber management allocations to detect changes.

Monitoring Item No. 17

## **Ruffed Grouse Population Changes**

**Monitoring Objective:** Population changes

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Estimate relative abundance from field observations and Washington Department of Fish and Wildlife surveys and hunter information annually.

**Unit of Measure:** Numbers

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Population trends 20% less than predicted

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 10 Years

**Evaluation:** Information has not been gathered on a schedule or in a manner consistent enough or widespread enough to estimate population trends.

**Recommended Actions:** Drop the monitoring item.

Monitoring Item No. 19

## **Grizzly Bear Habitat Management**

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Review National Environmental Policy Act (NEPA) documents for adherence to guidelines. Field verify implementation of guidelines.

**Unit of Measure:** N/A

**Criteria:** Forest Plan direction, Standards and Guidelines, Interim Forest Direction (1997)

**Standards:** Are Biological Assessments (BA) completed and Grizzly Bear guidelines followed?

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** Biological Assessments are prepared and consultation completed for all proposed projects in the grizzly bear recovery area and linkage areas. Interim direction issued in 1997 restricts projects to “no net loss of core area”. Forest Plan revision will incorporate additional guidance across the Forest in the Recovery Zone.

**Recommended Actions:** Continue to complete Biological Assessments and consultation. Continue to work with the North Cascades Grizzly Bear Management Subcommittee to refine guidance addressing grizzly bear habitat issues and habitat.

Monitoring Item No. 20

## **Bighorn Sheep**

**Monitoring Objective:** Habitat management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Use Geographic Information System with field verification to assess amount and distribution of cover.

**Unit of Measure:** Habitat effectiveness

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Management area is more than 20% below the objective

**Frequency Item is Monitored:** Every 5 Years

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** No monitoring was done in FY 05 to assess the amount and distribution of cover. No projects were completed that affected bighorn sheep habitat. However, the Summit project was signed in 2005 and treatments in MA 11 will be completed in the next several years. A fire did burn portions of sheep habitat in 2001, but a re-analysis of cover has not been completed.

**Recommended Actions:** Reliable, consistent GIS based information on current vegetation is needed to be able to provide more conclusive analysis of habitat conditions.

Monitoring Item No. 22

## Mountain Goat

Reported every 2 years. Changed to a 5-year reporting cycle in 2005

**Monitoring Objective:** Habitat Capability

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Assess cover and forage in mountain goat habitat

**Unit of Measure:** Amount, condition and quality of habitat

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Downward trends which are not consistent with the goal of the management strategy

**Frequency Item is Monitored:** Every 5 Year

**Frequency Item is Reported:** Every 2 Years

**Evaluation:** Habitat conditions for mountain goats were not evaluated in FY 05. The Needles Fire burned through some mountain goat habitat in 2003. The result was likely favorable to goat habitat through rejuvenation of shrubs. No evaluation was completed.

**Recommended Actions:** Continue to monitor habitat capability for mountain goats.

Monitoring Item No. 25

## Northern Spotted Owl

**Objective or Purpose:** Habitat Capability and Population Changes

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** GIS with field verification to assess suitable habitat. Follow Regional protocol for population monitoring.

**Unit of Measure:** Habitat capability and occupancy

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Is Northern Spotted Owl suited habitat between 92,115 and 112,585 acres?

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** Habitat capability has not changed. Each project proposal is assessed to determine the effects on spotted owls and spotted owl habitat, a biological assessment is prepared to document and

support the effects determination and consultation with the US Fish and Wildlife Service to address effects. All known nests are within Late-successional Reserves or wilderness. Monitoring for nest occupancy was not completed in FY 2005.

**Recommended Actions:** Continue monitoring with partners.

Monitoring Item No. 26 and No. 27

## **Pileated Woodpecker, Pine Marten, Three-toed Woodpecker and Barred Owl**

**Objective or Purpose:** Habitat management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** GIS with field verification to assess amount and distribution of suitable habitat.

**Unit of Measure:** Number of habitat acres

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Are Management Requirements (MR) sites being maintained as described in the Forest Plan?

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 5 Year

**Evaluation:** Management Requirements areas are included in evaluation addressing proposed activities under the National Environmental Policy Act. The description of habitat conditions and best-suited habitat within the distributional guidelines are selected for the MR cell.

**Recommended Actions:** No action needed. Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed.

Monitoring Item No. 29

## **Raptor Nests**

**Objective or Purpose:** Habitat management

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Field reviews of identified nest sites

**Unit of Measure:** Habitat

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Does not meet Standards and Guidelines for habitat identification and effects of projects

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** Surveys for great gray owls were conducted following protocol in conjunction with the Buckhorn Mine and several other projects. No owls were detected.

**Recommended Actions:** Continue with monitoring biological evaluations.

Monitoring Item No. 31

## **Status of Aquatic Management Indicator Species**

(formerly Anadromous and Resident Fish Management Indicator Species)

Changed to report every year from a 5-year cycle

**Objective or Purpose:** Ascertain Population Trends

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Obtain anadromous fish numbers from Washington State Department of Fish and Wildlife (WDFW). Obtain resident fish numbers from WDFW and Forest sampling.

**Unit of Measure:** Trend in numbers

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Is there more than a 10% reduction in fish population over a 5-year period?

**Frequency Item is Monitored:** Every year

**Evaluation:** The Forest cooperated with Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (USFWS) to conduct steelhead and bull trout spawning surveys. Douglas County PUD funds spring Chinook and summer Chinook spawning surveys. Spawning reports for spring and summer Chinook salmon are not available at this time. The Forest also conducted fish distribution surveys in several streams. The fish distribution surveys are not intended to estimate population size, but to determine spatial distribution and relative abundances of fish species. The following reports results for surveys that the Forest participated in.

### **Steelhead**

Steelhead inhabiting the Methow and Okanogan subbasins are part of the Upper Columbia Evolutionary Significant Unit and are listed as Endangered under the Endangered Species Act. Steelhead are not found within the boundaries of the Tonasket Ranger District, so only the Methow subbasin results are presented here. The objective of the steelhead spawning surveys is to estimate spawning abundance and distribution within the Methow subbasin and monitor potential changes to release of juvenile hatchery steelhead.

Abundance and distribution information is obtained throughout the Methow subbasin by expanding weekly counts from index areas on the Twisp, Methow and Chewuch Rivers. Selected tributaries were also surveyed as river conditions and personnel staffing constraints permitted.

Steelhead spawning surveys in the Methow River basin, 2001-2005 are shown in the table below. Redd (spawning areas) counts are based on total observations (2001-2002) and expanded values from comprehensive index area counts (2003-2005).

<b>Reach/River</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Lower Methow River</b>					
Subtotal	--	70	333	188	591
<b>Upper Methow River</b>					
Subtotal	21	338	685	509	648
<b>Twisp River Basin</b>					
Subtotal	189	350	696	256	483
<b>Chewuch River Basin</b>					
Subtotal	--	115	305	78	58
<b>Methow Basin Total</b>	<b>210</b>	<b>873</b>	<b>2,019</b>	<b>1,031</b>	<b>1,780</b>

Steelhead numbers in 2005 are near the 2003 high count, but the number of years with comparable areas surveyed is very small. Debris flows in the Chewuch basin in 2004 from high intensity summer thunderstorms blanketed the Chewuch streambed with fine sediment. This may have affected steelhead spawning numbers in 2005.

## Bull trout

### Redd Counts 1995-2005

Watershed/Stream Surveyed	Miles	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Twisp River Watershed</b>												
1. Twisp River												
-South Creek to Roads End	3.0	18*	-	2*	67*	38	72	53	67	30*	56	74
-Reynolds Cr. to Poplar Flats	1.5	-	-	-	-	-	-	19	13	16	24	
2. North Cr – Mouth to Falls	0.6	3*	-	-	19*	63	33	0	2	29	18	6
4. E. Fork Buttermilk to Falls	3.3	4*	0	-	0*	0*	0	3	3	2	0	4
5. W. Fork Buttermilk Cr.	3.0	-	-	-	-	-	-	-	7	9	2	3
6. Other Surveys in Twisp River		0*	-	-	-	0*	0*	1*	1*	-	1*	
Subtotal Twisp Watershed		25*	0*	2*	86*	101	105	76	93	86*	101	87
<b>Upper Methow Watershed</b>												
1. Upper Methow River												
1. Trout Cr to Falls at Brush Cr	5.3	27	15	13*	11*	1	2	19	54	- <sup>1</sup>	21	44
2. Early Winters-Below Falls	4.0	-	9*	1*	2*	0*	3	5	6	0	1	3
3. Goat Creek above Vanderpool	3.0	-	-	-	-	-	11*	0*	4	3	12	9
4. Other Upper Methow Surveys		1*	2*	1*	-	-	-	3*	-	-	-	
Subtotal Upper Methow		28	26	15	13	1	16	27	64	3	34	56
<b>Chewuch Watershed</b>												
1. Chewuch - RM 32.9 to 34.4	1.5	-	-	-	-	-	-	9*	11	6	4	19
2. Lake Creek												
-Mouth to Black Lake	6.5	-	-	-	-	-	10*	1	-	4	0	0
-Black Lake to Three Prong	1.5	22	13*	9*	8*	0	8	21	11	10	6**	24
Subtotal Chewuch River		22	13	9	8	0	18	31	22	20	10	43
Wolf Cr.- RM 2.6 to N Fork	4.0	-	3*	3*	27*	29	26	20	15	18	24	15
Crater Cr – RM 1.5 to RM 3	1.5	-	2*	2*	1*	0	-	0	1	0	3	4
Crater Creek	-	-	-	-	-	-	-	-	-	-	-	10
Blue Buck Creek	-	-	-	-	-	-	-	-	-	-	-	0
Total Methow Basin Redds		75*	44*	31*	135	131	165	155	195	132*	172	215
Total Miles Surveyed		17.5	24.2	22.1	26.5	24.2	36.7	46.9	31.0	25.6	39.4	32.7

Bull trout redd (spawning areas) count numbers are at their highest recorded level. Also, bull trout redd counts appear unaffected by the after-effects of fires and debris flows occurring in the Methow Basin in recent years. In fact, the surveyors report bull trout spawning in new habitat made available by these watershed disturbances. However, basin wide, the total number of bull trout redds is not large.

**Recommendations:** Continue to monitor these populations.

Monitoring Item No. 32

## **Watershed Condition and Aquatic Habitat**

(Changed from Fish Habitat and Riparian Condition in 2003)

**Objective or Purpose:** Comply with State Water Quality Standards; monitor cumulative effects of project activity and natural disturbances

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Stream channel survey, sampling of quantitative measurement of water quality parameters

**Unit of Measure:** Each

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Are sediment levels low enough to support reproductive success of fish populations? Do temperature regimes meet state standards?

**Frequency Item is Monitored:** Every 5 years

**Evaluation:** Sediment: Core sampling examines sediment conditions at the depth that salmonid eggs are buried during spawning. There are several methods used to evaluate streambed sediment conditions, quantitative techniques involve core sampling. The McNeil Core sampling method is the quantitative technique chosen to accomplish sampling goals for the Chewuch and Twisp Rivers.

The Chewuch River drainage is characterized by highly granitic soils and is naturally high in fine sediment. The watershed provides important spawning and rearing habitat for steelhead, Chinook salmon, and bull trout, which are all listed as threatened or endangered under the Endangered Species Act. The headwaters of the Chewuch River begin deep in the Pasayten Wilderness where recent wildfires have burned with varying intensities in a 90,000 acre perimeter. The Thirtymile fire burned approximately 9,324 acres in 2001, and the Farewell fire perimeter included approximately 79,000 acres of the Chewuch watershed in 2003. Both fires occurred above the sediment sampling reaches, so there is a good opportunity to monitor effects of fire on fine sediment in spawning substrate. Landslide activity in the Chewuch Research Natural Area has added gravels and fine sediment to the Chewuch River and changed spawning habitat in the reach. Data collected in 2005 is displayed in table below showing the percentage of fine sediment smaller than 0.85mm in spawning substrate of the Chewuch River.

Funding constraints in 2005 required the district to decide which four reaches (instead of the eight reaches surveyed in the previous 4 years) to survey in the Methow Basin. In 2004, summer thunder showers and subsequent landslides produced high flows and turbid waters. Half of the sampling was postponed until flows subsided and was completed by a different crew, which may have affected accuracy of the data. The landslides in the Andrews Creek and Thirtymile areas produced sediment pulses that blanketed the Chewuch streambed. Because sampling for the 2004 Chewuch data set was challenging we chose to survey all four reaches in the Chewuch in 2005.

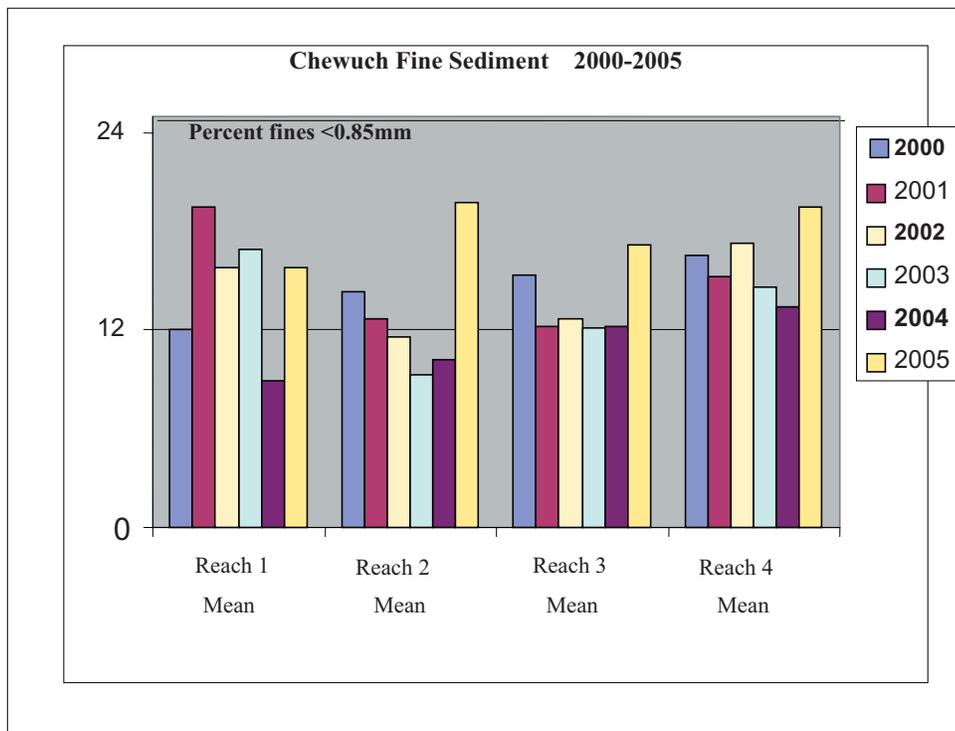
The Okanogan National Forest Land and Resource Management Plan states that spawning gravel will consist of no more than 20 percent fine sediment <1.00 mm and that “sediment in streams shall be maintained at levels low enough to support good reproductive success of fish populations as well as adequate in-stream food production by indigenous aquatic communities to support those populations.”

The deleterious effects of excessive sedimentation on egg-to-fry survival of salmonids are well-documented in the scientific literature including: suffocation and metabolic-waste-poisoning of eggs decreased egg survival to emergence and increased fry mortality due to entrapment and suffocation in fine sediment less than 0.85mm in diameter can affect salmonid spawning and rearing success. A Framework to Assist in Making ESA Determinations (framework) for bull trout (USFWS, 1998- Adopted from NMFS) suggests levels of fine sediment. The framework lists standards of functionality as: <12% fines <0.85mm is functioning appropriately, 12% to 17% fines < 0.85mm is functioning at risk, >17% fines <0.85 is functioning at unacceptable risk. Data is collected for both standards of sedimentation measurement, but in this report the focus is on percent fines less than 0.85mm that the framework defines.

Table 1 Summary of 2005 Chewuch McNeil Core data

Reach	Mean % fines <1 mm	Std dev < 1 mm	95% CI	Functional Rating*
1	15.77	6.55	11.61< $\mu$ <19.93	Functioning at Risk
2	19.8	10.68	13.01< $\mu$ <26.59	Functioning at Risk
3	17.18	4.93	14.04< $\mu$ <20.31	Functioning at Risk
4	19.5	4.06	16.91< $\mu$ <22.08	Functioning at Risk

\*USFWS rating for mean fines < 0.85 mm.



The 2005 samples are the highest on record for three of the reaches and show the effects of the landslide activity in the Andrews Creek, Thirtymile, and Lake Creek drainages. The Chewuch River system is naturally high in fine sediment, and by USFWS and NMFS standards, all reaches sampled can be considered functioning at unacceptable risk for Chinook and bull trout spawning in 2005. But, it should be noted that the reaches selected for this study are not suitable for bull trout spawning habitat because of warm water temperatures.

A series of cloud bursts in the summer of 2004 in the Farewell and Thirtymile fire areas triggered landslides and blow-outs of the Chewuch tributary creeks. Andrews Creek, Lake Creek, and some unnamed tributaries contributed large amounts of fines, sand, gravel, and rocks to the river in the summer 2004. The slides muddied the water for weeks and covered substrate with a layer of sand. Hydrologic conditions after large these disturbances in the watershed led to sediment deposition and an ensuing pulse. Pulses typically enter the river via landslides or debris flows then migrate downstream as a pulse or decay by dispersion. The two pulses in the Chewuch occurred at the Thirtymile memorial and Andrews Creek and there were multiple slides on Lake Creek which will reach the Chewuch in the next 10 years. Sediment sampling in 2004 did not show any effect to spawning gravels in the Chewuch, but the 2005 sample apparently does. Future monitoring may help identify the effects of the slides, the mode of sediment transport, and elucidate its effect on the fisheries resource. Future sampling is also expected to show fine sediment levels dropping to more normal values as the sediment pulse moves downstream.

## Temperature

The Methow Basin stream temperature monitoring program was extensive in 2005. 71 sites were monitored as listed in the table of temperature monitoring results below.

Methow Valley Ranger District Temperature Monitoring 2005

Stream	Monitoring Elevation	Number days max > 14.4°C
Andrews Creek	3,020'	45
Beaver Creek	1,525'	
Boulder Creek	2,171'	61
Chewuch River	5 sites, 1,756' to 3,406'	84 /53/ 46
Eightmile Creek	6 sites, 2,180' to 3,800'	0 for all sites
Early Winters Creek	2,150	37
Gilbertson Springs	1,720'	0
Goat Creek	2,100'	68
Hancock Springs	1,940'	Exceeded
Lake Creek	4 sites, 3,205' to 4,005'	32/54/65/1
Libby Creek	1,375'	65
Little Bridge Creek	4 sites, 2,150' to 2,620'	63/46/36/21
Lost River	2,380'	5
Methow River	31 sites, mouth to Needle Cr.	Every site had exceedences, unknown number
Suspension Creek	2,100'	0
Twisp River	1,640'	83
Wolf Creek	2 sites, 1,800' & 2,750'	75/ 37

While 14.4°C (the temperature that stream temperatures were compared against in the last column above) is not a Forest temperature standard (see discussion below), it is a rough gauge of what exceedences look like with 16°C as the reference temperature, i.e., almost every site had water temperatures that exceeded state standards, which the Forest adopts as its stream temperature standard as well. The only stream that did not exceed standards was Eightmile Creek, a tributary of the Chewuch River. 2005 had record low stream flows due to a very low snowpack. This contributed to higher than normal stream temperatures. What role human influence has played in these stream temperature levels is unknown.

The stream temperature data is used to help determine which stream reaches in the Methow River, Chewuch River and Twisp River meet NOAA Fisheries and U.S. Fish and Wildlife Service stream temperature guidelines for properly functioning fish habitat for ESA listed fish species in the Methow River subbasin. The temperature guidelines promulgated by NOAA Fisheries (for all ESA listed salmonids) and the USFWS (for bull trout) were developed to assist in establishing an environmental baseline and to assist in making effects determinations on listed fish. The following table summarizes stream temperature guidelines established by NOAA Fisheries (Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale, NOAA Fisheries, August 1996) and the USFWS (A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale, USFWS, February 1998).

### Temperature Indicators for ESA Listed Salmonids

<b>Effects Determination</b>	<b>NOAA Fisheries Guidelines<sup>1</sup> (for all Salmonids)</b>	<b>USFWS Guidelines (for Bull Trout)</b>
Properly functioning fish habitat (NOAA Fisheries) Functioning appropriately (USFWS)	50-57°F <sup>1</sup> (10-13.9°C)	7 day average maximum temperature in a reach during the following life history stages: Incubation 2-5°C Rearing 4-12°C Spawning 4-9°C Also temperatures do not exceed 15°C in areas used by adults during migration (no thermal barriers)
At Risk (NOAA Fisheries) Functioning at risk (USFWS)	57-60°F, (13.9-15.5°C) spawning 57-64°F, (15.5-17.8°C) rearing and migration	Incubation <2°C or 6°C Rearing <4°C or 13-15°C Spawning <4°C or 10°C Also temperatures in areas used by adults during migration sometimes exceeds 15°C
Not Functioning Properly Functioning (NOAA Fisheries) Functioning at unacceptable risk (USFWS)	> 60°F (>15.5°C) spawning > 64°F (17.8°C) rearing and migration	Incubation <1°C or >6°C Rearing >15°C Spawning >4°C or >10°C Also temperatures in areas used by adults during migration regularly exceed 15°C (thermal barriers present).

The Bureau of Reclamation (BOR) has identified stream restoration projects in the Methow River (from Benson Creek to Lost River), in the Chewuch River (from the mouth to Falls Creek) and in the Twisp River (from the mouth to War Creek). The three streams segments described above were broken into reaches based on tributaries and temperature monitor locations rather than landform features. Known steelhead, spring Chinook salmon and bull trout use (spawning, rearing and migration) was identified within each reach. A temperature indicator rating based on NOAA Fisheries and USFWS value criteria was made for each type of fish use (spawning, rearing and migration). Most of the habitat area in the three rivers was found to have a not properly functioning rating (NOAA Fisheries) and functioning at an unacceptable risk rating (USFWS) for stream temperatures. The temperature results will be just one aspect in helping to plan the BOR restoration projects.

It is not known how much human influences have affected stream temperatures.

## Stream Surveys

In 2005, a total of 28 miles of stream were surveyed to evaluate stream channel and riparian conditions. Streams were re-surveyed in 4 areas burned in 2003 (Chewuch 5 miles, West Fork Methow 5 miles, Lake Creek 2 miles, Andrews Creek 3 miles) to look for changes due to the fires. The results of those resurveys were not available in time for this report. In addition, 12 miles of Wolf Creek were surveyed. Overall results of that survey indicated that most of the 6 reaches were meeting Forest Plan Standards and Guidelines.

**Recommendations:** Continue to survey streams for riparian and stream channel condition. Continue to monitor sediment in the Chewuch system and others as funding allows.

Monitoring Item No. 36

## Range Heath (changed from Range Condition)

**Objective or Purpose:** Determine condition and trend and compliance with Standards and Guidelines.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Condition and trend transects, field observations, production, and/or utilization studies.

**Unit of Measure:** Continuing

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Has there been a continued downward trend in problem areas?

**Frequency Item is Monitored:** Every 5 Years

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** Rangeland health on the Okanogan National Forest has continued to improve through a focus on range administration. Range personnel work with the permittees to administer the allotments according to the Forest Plan Standards and Guidelines, as well as the Northwest Forest Plan, PACFISH, and INFISH Standards and Guidelines. These Standards and Guidelines are incorporated into the grazing permits, discussions at annual operating instruction meetings, Allotment Management Plan development, and allotment field inspections. This is a significant change in the way range administration personnel and permittees view grazing practices as compared to ten years ago when the Forest Plan was first implemented.

The increased focus on administration of the range resource in view of meeting the Forest Plan Standards and Guidelines has resulted in improved range health. On many allotments, this is quite evident. Range management specialists are observing improvements in plant vigor, plant residual after the grazing period, desirable plant composition, and improvements to riparian areas.

Due to funding levels, a majority of the utilization studies were ocular estimates. The Forest uses stubble height surveys to determine plant residual along the streamside greenline area where practicable. Forage production over the past five years has been quite variable over the Forest. Four of the past five years (2002, 2003, 2004, and 2005) have been in drought conditions. During this drought period, the Forest saw an increase in non use of range allotments by grazing permittees due to lower forage production and limited water availability. Precipitation patterns and temperatures have greatly influenced the forage

production, which in turn greatly influences utilization, livestock distribution and patterns of use within the allotments and ultimately affects range health.

Information and data collection concerning the rangeland and riparian areas has continued to increase over the past five years. Due to fisheries consultation requirements, allotments which are situated within the Northwest Forest Plan, INFISH or PACFISH areas are monitored with district fisheries biologist assistance. In 1999, the Forest implemented the Grazing Implementation Monitoring Module within the PACFISH allotments.

Coordinated Resource Management Planning activities have been occurring on the Benson, Texas, Finley, Little Bridge Creek, Beaver, Toats Coulee, Buck, Ramsey, Hungry Mountain, Goat, East Chewuch, Cub, Wolf and Boulder allotments or approximately 21% of the allotments on the Forest. This process is used to voluntarily bring people together, improve communications, reduce conflicts, address problems, reach consensus and implement actions to improve natural resource management on associated private and public lands. This process has been successfully improving range health on the Federal, State and private lands within the associated lands.

During the past five years, fifty condition and trend monitoring areas have been resampled. Many of these monitoring areas were originally established in the 1950's and 60's. Rangeland condition and trends are improving on the Forest. The Forest recognizes that there are rangeland and riparian areas that need improvement. An emphasis on rangeland analysis and administration is expected to continue in the upcoming years. Rangeland health is expected to continue to improve.

**Recommended Action:** No action needed. Monitoring indicates management direction is being achieved. Results and effects meet the standards prescribed. Continue the current course.

Monitoring Item No. 38

## **Allotment Management Plans**

(No. 37 Riparian Habitat Improvement combined with No. 38)

**Objective or Purpose:** Ensure Management Plans are Developed and Implemented, and Plans incorporate Standards and Guidelines, including Riparian Objectives

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Review environmental assessments and allotment management plans

**Unit of Measure:** Range allotment NEPA decisions completed

**Criteria:** Forest Plan direction, Standards and Guidelines, Riparian Objectives

**Standards:** Has the Forest prepared an average of six allotment management plans per year?

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** Three allotment management plans that included Standards and Guidelines, including riparian objectives, were completed for the Okanogan National Forest prior to 2002: Clark, Squaw Gulch and Libby. In 2002, there were no range allotment NEPA decisions made nor were any allotment management plans developed incorporating riparian objectives into the AMPs, primarily due to lack of funding. However, as directed by the Regional Office, Forest Plan Standards and Guidelines, including riparian objectives are included in all term grazing permits. Completing range allotment NEPA decisions

is generally a two year process. The range analysis is completed the first year and the environmental document is written the second year after the analysis is complete. Good progress has been made on preparing range allotment NEPA decisions since 2002. In 2003, range allotment NEPA decisions were made on the Sheridan and Toroda grazing allotments. In 2004, decisions on the Hull, Beaver, Frazer, Finley, Cayuse, Siwash, Haley, Lost and Phoebe grazing allotments were made. In 2005, range allotment NEPA decisions were made on the Benson, Buck, Texas, Salmon Basin, Ryan, BS and Fish Coulee grazing allotments.

**Recommended Actions:** Results okay; continue monitoring.

Monitoring Item No. 41

## **Forest Health**

(Changed from Distribution of Timber Harvest Acres and Volume to a combination of Changes in Fire Regime and Condition Class and No. 45 Insect and Disease. The Change in Condition Class was not reported on in this reporting cycle due to the lack of data at this time).

Changes in Condition Class will be reported beginning in Fiscal Year 2008, or as directed in the Forest Plan Revision. Change in Condition Class will facilitate quantitative and well as qualitative comparisons of the effects of prescribed burning, wildfire, insects and diseases, and mechanical vegetation treatments.

Insects and Diseases: Aerial survey information for the annual insect detection surveys for Oregon and Washington are posted on the web at: [www.fs.fed.us/r6/nr/fid/data.shtml](http://www.fs.fed.us/r6/nr/fid/data.shtml). Insects, primarily bark beetles, continue to kill trees on large numbers of acres across the national forests. Western spruce budworm (WSBW), a defoliating insect, is increasing on the Methow District. Forest conditions continue to favor increases in both bark beetles and defoliating insects.

Disease conditions were reviewed in the 2004 Forest Health Assessment: Okanogan and Wenatchee National Forests<sup>1</sup>. Dwarf mistletoes are widespread, affecting trees in over half of the forest types. Root diseases are also widespread, but the effect is localized in pockets of infections. Root diseases and dwarf mistletoes increase slowly. Dry and mesic forest types are most affected.

<sup>1</sup>Townsley, J., B. Gaines, J. Hadfield, R. Harrod, C. Mehmel, and E. Leyda. 2004. Forest Health Assessment: Okanogan and Wenatchee National Forests. Unpublished report. USDA Forest Service, Okanogan & Wenatchee National Forests. 104 p.

Monitoring Item No. 42

## **Timber Sale Harvest Quantity**

(Combined with No. 40)

Timber Sale Program Quantity and Allowable Sale Quantity

The volume sold and harvested for each national forest in Oregon and Washington is reported in various ways that are readily available to the public. The volume sold and harvested is reported for each quarter and annually by fiscal and calendar year on the world wide web. Cut, and sold data for all recent years is available for review on the following website: [www.fs.fed.us/r6/nr/fp/CutSoldReports](http://www.fs.fed.us/r6/nr/fp/CutSoldReports)

Monitoring Item No. 44

## **Reforestation**

Dropped in 2003. This item is reported elsewhere.

Reforestation information for each national forest is published annually by the National Forest System and published on the Forest Service world wide website. The reports are published at:

[www.fs.fed.us/forestmanagement/reports/reforest-tsi](http://www.fs.fed.us/forestmanagement/reports/reforest-tsi)

Monitoring Item No. 47

## **Riparian Watershed Implementation Monitoring**

(changed from Water Quality/Best Management Practices in 2003, variable reporting dependent on project implementation)

**Objective or Purpose:** Document implementation and effectiveness of Best Management Practices or other projects

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Interdisciplinary EA and project implementation review.

**Unit of Measure:** Each

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Any failure to meet planned objectives

**Frequency Item is Monitored:** Variable, as projects are implemented

**Evaluation:** Under the guidance of the centennial Respect the River project, 18 acres along 7 miles of riparian habitat, were protected and restored in the Methow and Tonasket watersheds. This restoration effort utilized the services and skills of community members, local ranger district personnel, Student Conservation Association (SCA) volunteers and contractors.

District fire crews built over 1000 feet of buck and pole fences to protect fragile stream banks and prevent vehicle compaction of riparian sites. Ranger district restoration crews and contractors planted shrubs and grasses, and built and placed over 50 Respect the River signs at newly restored sites. Heavy equipment was used to loosen compacted soils and obliterate roads and boulders were placed to direct foot and vehicular traffic. Community volunteers pulled and removed noxious weeds from project sites.

An important element of the restoration process is providing the public information and suggestions of they can do to contribute to the restoration process. Public understanding provides added protection to riparian and stream habitat and to our restoration investment. SCA volunteers made over 5,500 contacts with visitors with important information about fish-friendly camping techniques and habitat protection. They also collected demographic information, helping managers to strategize additional ways of informing the public about Respect the River program and to focus on working with certain user groups. These "contact rangers" also inspected project sites for additional recreation impacts, enabling the restoration crews to address critical impacts before they caused additional damage. For example, a boulder was moved and vehicles were driving into the Methow River streambed during low water at the end of August, 2005. When this problem was discovered, restoration crews were able to fix the problem within a week.

## Other Watershed Restoration Projects

Stream flow was reconnected to Jimmy's Meadow, a moist meadow and wetland system that had been disconnected for over 70 years on the Tonasket District. One of the goals is to raise the water table two feet. Raising the water table will enhance aspen sprouting, providing cover and a winter food source for ruffed grouse. It will also insure longer, slower water delivery to downstream fisheries throughout the spring, summer, and fall, and will help native vegetation reestablish in the meadow and wetland system. This will improve water quality by holding back sediment and shading the watercourses to keep the water cooler. Such a system provides excellent habitat for upland birds and neotropical migrants, and downstream habitat for trout and waterfowl. The project also includes an educational component to introduce students to the concepts of watershed function and to stimulate their interest in natural resources work.

Additional habitat restoration work was completed in Little Bridge Creek, Twisp River and Beaver Creek watersheds. Partnerships were developed for the Twisp River watershed project activities which included road decommissioning, planting native plants at fish passage structures, fencing a bull trout spawning area to protect it from livestock, constructing a buck and pole fence at a dispersed recreation site on the Twisp River, relocating beaver to the Beaver Creek watershed and establishing the Methow Restoration Council.

**Recommendations:** Results okay; continue this program.

Monitoring Item No. 49

## Soil Compaction and Displacement

**Objective or Purpose:** Compliance standards for soil productivity

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Field sampling and visual observations. A Dickey-John soil penetrometer was used to determine soil compaction.

**Unit of Measure:** Each

**Criteria:** Forest Plan Direction, Standards and Guidelines

**Standards:** Were project designs and mitigations implemented so management activities did not exceed the 20% detrimental soil standard (FSM R6 2500-98-1) and Okanogan National Forest Plan Forest-wide standard and guideline 13-10 (which only applies to yarding systems).

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every Year:

**Evaluation:** Excavator piling is a tool used to pile slash from tree harvesting, especially for site preparation of regeneration units following logging. Excavator piled units on the Sneed, Meyers Butte Beetle Salvage, and Chic Timber Sales on Tonasket Ranger District were reviewed in 2005. Logging operations were completed for Sneed in 2002 and Meyers Butte Beetle and Chic in 1998. Vegetation, including lodge pole and larch regeneration, shrubs, grass and forbs was growing in excavator tracked

areas. The amount of disturbance recorded is less than that of the previously used tractor piling due to low PSI tires, single passes and operating on slash. These areas did not exceed the Okanogan Forest Plan soil standards and soil productivity was maintained.

**Prescribed Fire:** Units in TPR and Leecher Timber Sales were visited to evaluate if prescribed fires caused high burn severity to soils and loss of effective ground cover with a resulting loss of productivity. All units observed had adequate vegetation remaining and were within acceptable standards for effective ground cover. Leecher had dozer lines located adjacent to roads that tended to invite OHV use, which in turn contributed to additional compaction on the dozer lines. Detrimental soil disturbance from prescribed fires did not exceed the 15% threshold and soil productivity was maintained.

**Grazing:** The Finley and Libby Allotments on the Methow District were reviewed for compliance with Forest Plan detrimental soil condition standards. Late season grazing resulted in the most over-utilization of forage and bare ground. There were small areas of concentrated livestock use that resulted in bare ground and the invasion of weedy species. Droughty years have resulted in the recession of water in ponds on the Finley Allotment, and livestock have been able to access riparian plant species and have in turn caused pedestaling and compaction of seasonally wet soils. However, grazing was within acceptable soil standards for allotments

**Ground based summer logging:** Monitoring of the Leecher Sale (Methow District) during summer ground based operations resulted in the following observations regarding the variable effects on soils. Single pass trails on rocky soils (Leecher) showed little compaction or displacement of soils. Where slash was incorporated into the trail during operations, there was less displacement of soils. Logging in dry ash conditions resulted in some severe displacement on main skid trails. This displacement was mitigated by blading in soils with an excavator. Overall, operations were within soil standards.

**Ground based winter logging:** Flexible winter logging mitigations have been or are being applied on Tonasket District sales of Conger, Bailey, Bailout, Redmill, Summit and Upper Aeneas. Methow District sales include H-H and Leecher. Site visits recorded air temperature, snow depth and condition and depth of frozen ground and condition. Observations were recorded from December 2003 through April 2005.

**Observations:** Having main skid trails freeze up 1 to 2 days prior to skidding operations was successful on all sales when snow was compactable. Cold light snow was difficult to compact. A depth of 8" of snow and frozen ground or a combination of both was effective in meeting Forest Plan standards. Ground frozen for a depth of 8 inches without snow cover can support equipment. Compacted snow over 3 feet deep supported equipment when the ground beneath was semi frozen or unfrozen. When conditions deteriorated, winter operations were suspended. "Go back" trails and main trails converging at landings showed the most deterioration.

Summer visits also occurred on ground based winter logged units on Tonasket District sales of Conger and Redmill and on Methow District sales of Leecher and TPR. A Dickey-John soil penetrometer was used to determine soil compaction on winter logged units. All units were within acceptable standards for compaction and displacement. One unit on TPR had a late spring log haul on a southerly-west aspect that resulted in skid trail compaction. Redmill was logged on frozen ground only (no snow) and had little compaction. The estimated detrimental soil condition was less than 5 percent and was due primarily to "go back" trails. "Go back" trails are access trails used on slopes that are unsafe for winter operations. These trails usually require more operational turns and these turns can cause detrimental soil conditions. Equipment often causes excess snow displacement when continuously operating over road cutbanks.

**Recommendations:** Dozer lines used to create fire breaks need to be used sparingly so as to not invite OHV use. Continue monitoring ground based logging. Follow-up needs to be done to see how dry ash-capped soils recover after 1-2 growing seasons. The practice of “blading” (with an excavator) displaced ash-capped soils from trails and roads needs to be reviewed.

Seeding and water bar installation needs to occur when moisture is available. Seeding rates and mixes need to be considered for weed competition as well as soil erosion.

The use of excavator piling rather than tractor piling has minimized the amount the detrimental soil disturbance and should be continued as a project design feature.

Implementation monitoring should continue. Continued follow-up in the summer is needed to assess if winter logging detrimentally compact soils. Winter logging can occur on ground that is frozen to 8” deep without snow cover with good results. A “heads up” to contractors is necessary when warming trends occur

Range permittees need to actively monitor and move cattle that loiter in sensitive locations for extended periods of time, especially in those riparian areas where receding water levels allow access to riparian vegetation and by locating salt blocks a quarter of a mile away from riparian areas.

Monitoring Item No. 51

## **Soil and Water Improvement Projects**

**Objective or Purpose:** Accomplish soil and water improvement projects in priority order

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Review attainment reports

**Unit of Measure:** Each

**Criteria:** Forest Plan direction, Standards and Guidelines

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** National and regional direction is to reduce the number of watersheds in declining watershed condition through restoration such that each 5th field Hydrologic Unit code (HUC) is in fully functioning hydrologic condition.

The Tonasket Ranger District improved about 30 acres in the Salmon Creek watershed (HUC 1702000603). The work included fencing along streams to improve channel conditions and All Terrain Vehicle (ATV) trail restoration and barrier placement. Three miles of user-created roads were also closed to allow the road surfaces to stabilize.

The Methow Valley Ranger District did not report any restoration acres. The District continues to maintain the Respect the River campaign along the Chewuch River and improve the riparian area and channel conditions along the River

The Tonasket Ranger District and Methow Valley Ranger District continue to treat acres in line with the appropriated funds for soil and water improvement acres in the highest priority fifth field HUUS.

**Recommended Actions:** Results Okay; Continue monitoring.

Monitoring Item No. 53

## Road Miles & Operational Status

**Type of Monitoring:** Implementation ■ Effectiveness ■ Validation □

**Method of Monitoring:** Project reviews and year end reports. Continuous GIS update (as available) with field sampling and Forest Transportation Plan annually.

**Unit of Measure:** Open road density, based on the miles of open road in a given discrete management area.

**Criteria:** Forest Plan direction, Standards and Guidelines

**Standards:** Fails to meet plan objectives by more than ten percent annually.

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every 5 Years

**Evaluation:** Approximately half of the Forest is allocated to Management Areas that do not have road density standards, but have prohibitions or severe restrictions on road building (e.g., wildlife, semi-primitive, wilderness and special emphasis areas). The other half is allocated to Management Areas that have a specified road density standard.

Approximately 92 percent of the acres in Management Areas with a road density standard meet the standard. Approximately 96 percent of the acres on the Forest comply with Forest Plan Standards designed to have limited or no wildlife disturbance from road densities.

Total Forest Acres	Percent of Acres with No Road Density Standard	Percent of Acres with Road Density Standard	Percent of Total Forest Acres Meeting Road Density Standard
1.7 million	52%	48%	96%

77 percent of the discrete Management Areas with road density standards currently meet the standard. 99.3 miles of road have been decommissioned since the Forest began keeping records in 1992. Since that time, efforts have been made to inventory non-system roads that were not included in the earlier inventories. These roads are the “unclassified roads” described in the roads analysis rule. This has resulted in a higher inventoried road mileage in many Management Areas. The majority of these non-system roads existed before the Forest Plan, but had not been inventoried.

21 Management Area road lengths have decreased since 1992 in Management Areas but still do not currently meeting road density standards (not including minor increases and decreases caused by rounding). Road lengths have increased in 16 Management Areas that still do not currently meet road density standards; as noted above these increases are likely due to discovery of open roads that were not part of the 1992 inventory. However, despite adding old roads to the inventory, overall open road miles in management areas with road density standards have decreased from 2085 miles in 1992 to 1761 miles in 2005, or about 16 percent.

Road construction on the Forest continues to be low. At its highest, fifty-nine miles of road were constructed in 1990, and the low was 0.0 miles in 2000 and 2003.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total System Road Construction Miles	59	15.2	7	10	1.8	3.9	1.6	4.9	3.1	1.4	0	0.8	0.9	0	1.9	4.2

The Forest actively began obliterating roads in 1992, removing them from the transportation system.

Miles of Road Decommissioned	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
System	4.8	8.0	0.7	3.5	0.0	2.2	12.5	2.6	0	0.0	3.5	3.7	0	4.7
Non-System <sup>2</sup>								4.9	15	4.0	15	12.5	0	1.7

2 Prior to 1999 no records were kept of non-system road decommissioning

Most timber sale NEPA documents now approve road closures and decommissioning, and the trend is toward increasing closures. The table below displays the amount of road mileage approved in timber sale NEPA documents for closure or decommissioning since 1996. Because timber sales are implemented over a period of many years, these road closures are approved but may not yet be accomplished on the ground or entered into the roads database, and therefore may not yet be reflected in current road densities:

Fiscal Year Approved	Miles to be Closed	Miles to be Decommissioned
1996	11.2	6.9
1997	22.8	0.0
1998	56.9	32.9
1999	39.7	0.0
2000	17.0	27.0
2001	16.8	14.3
2002	21.6	17.6
2003	53.3	24.3
2004	29.7	22.9
2005	1.5	2.3
Total	270.5	134.3

Trend: Road construction that adds to the forest transportation system is expected to remain low under current direction, and the Forest expects to continue road closure and decommissioning as funding is available. The Forest Service has a roads policy that requires roads analysis at several different planning levels to determine the need for existing roads. NEPA documents continue to approve road closures resulting in an upward trend in meeting road density management direction across the Forest.

**Recommended Actions:** Results Okay; Continue monitoring. Continue to utilize watershed analysis, roads analysis, and project level analysis to identify the need for roads, and to update road inventories. Use best available science to determine road density standards during Plan revision.

Monitoring Item No. 55

## Actual Annual Fire Wildfire Occurrence Frequency by Statistical Cause

**Objective or Purpose:** Assure that fire management direction is being met.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Completed individual fire report for each wildfire.

**Unit of Measure:** Each.

**Criteria:** Forest Plan direction, Standards and Guidelines.

**Standards:** Change of +15% in total acres burned from 5 year average.

**Frequency Item is Monitored:** Annually.

**Frequency Item is Reported:** Annually.

**Evaluation:** Lightning continues to lead as the primary cause of ignitions on the Forest. Human caused fires result from a variety of causes as shown below, but typically result in a smaller number of acres burned.

	2005		5-Yr. Average	
	No. of Fires	Acres	No. of Fires	Acres
Lightning	25	25.1	54	25,390.5
Equipment			0.6	766.0
Smoking	1	0.1	1.6	0.2
Campfire	2	0.2	4.8	1,879.5
Debris Burn	1	0.3	1.2	15.1
Incendiary			0.4	0.0
Children			0.2	0.0
Misc.	3	2873	3	675.7

**Recommendation:** Results are okay, nothing can be done for natural ignitions. However, there is a need to pursue investigations of human fire starts in order to determine cause. The Forest has a greater need for qualified Fire Investigators.

Monitoring Item No. 63

### Minerals Withdrawals

Item dropped in 2003, however, it was recommended that the minerals output table continue to be displayed on an annual basis.

Outputs and Effects (Unit of Measures)	Estimated Decade (Annual Avg)	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05
Minerals Operating Plans, Notices, Sales, etc.	75	45	39	54	35	40	29	37	36	38	48	41	38
Minerals Produced (Million \$)	0.10	0.004	0.003	0.004	0.003	0.009	.002	.001	.007	.024	.011	.003	.002

Monitoring Item No. 70

### Heritage Resource Site Protection

**Objective or Purpose:** Cultural resources that are eligible or potentially eligible for the National Register of Historic Places are being protected as stated in the Forest Plan and in compliance with federal laws and regulations.

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Monitor a stratified sample of all unevaluated sites and of all significant sites in active project areas

**Unit of Measure:** Report percent unevaluated and significant sites sampled and the respective compliance with the Forest Plan.

**Criteria:** Forest Plan direction, Standards and Guidelines

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** The Okanogan National Forest Heritage program is managed by the Okanogan and Wenatchee National Forests. The Heritage Program Manager oversees and directs Section 106 and Section 110 consultations on both Forests. On the Okanogan, cultural resource technicians do 90 to 95 percent of the Section 106 project work. One large project requiring nearly 2000 acres of field inventory was done by a team of archaeologists from the Colville National Forest. The project was to be done under contract but no bids were received.

In FY 2005, a total of 20 separate consultations occurred in compliance with Section 106 of the National Historic Preservation Act and in accordance with the 1997 Programmatic Agreement regarding cultural resource management on National Forests in the State of Washington (PMOA). Of these consultations, 15 projects required Section 106 consultation with the Washington State Historic Preservation Officer (SHPO) and five project consultations were handled internally per the 1997 PMOA. Two projects in particular, the Methow Transmission Line and Buckhorn Access Project, warranted considerable time and attention because they involved coordination with private archaeological contractors hired by the project proponents, issuance of permits for archaeological survey and testing, surveys across federal and non-federal land, numerous meetings and coordination with the Tribal Historic Preservation Officer (THPO) for the Confederated Colville Tribes and consultation with the Advisory Council for Historic Preservation.

More than half of the projects requiring heritage support had little or no potential to affect cultural resources and included such activities as fence maintenance, permit renewals, and toilet replacement within existing campgrounds. Cultural resource surveys for Forest undertakings resulted in a determination of no historic properties affected/no effect and no sites were impacted during implementation of a project.

Project planning acreage ranged from a high of 44,240 acres for the West Fork Salmon Allotment Management Plan project on the Tonasket Ranger District to less than one acre. Acreage actually inventoried for cultural resources varied from a high of 1756 acres for the Eightmile Vegetation project on the Methow Valley Ranger District to less than one acre. A total of 4108 acres were systematically inventoried and 41 new cultural resource sites were documented. Most of the new sites were located during inventories for fuel reduction and salvage-and timber sales with large planning areas. Forty new and/or previously documented sites were formally evaluated for nomination to the National Register of Historic Places. This increase in the number of sites evaluated reflects increased emphasis in this area of the heritage program.

Three of the FY05 Section 106 project reports specifically recommended site and/or project monitoring to insure avoidance and/or identification of cultural resources. In two cases, monitoring was recommended during and/or after project activities because dense vegetation precluded inspection of the ground. One other project, the Buckhorn Access Project, will require site testing if an alternative is selected that involves upgrades to a Forest Service road bisecting a historic cabin.

**Recommended Action:** Continue monitoring sites inside project areas. Emphasize site evaluation, especially the evaluation of previously documented cultural resource sites.

Monitoring Item No. 71

## **Heritage Resource Site Preservation**

New Item added in 2003 (Competing and unwanted vegetation management number changed to No. 73)

**Objective or Purpose:** Management of properties eligible for the National Register of Historic Places includes preservation, rehabilitation, and stabilization of such properties

**Criteria:** Forest Plan direction, Standards and Guidelines

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Site preservation projects

**Unit of Measure:** Number of listed or eligible heritage resources in need of treatment (cumulative) and number of listed or eligible heritage resources treated in the FY.

**Frequency Item is Monitored:** Every two years

**Frequency Item is Reported:** Every two years

**Evaluation:** No rehabilitation or stabilization projects to report. Some maintenance is conducted by the Forest facilities staff but for sites that are exclusively heritage priority assets, the Forest has a backlog of sites in need of rehabilitation, restoration and preservation. Heritage funding does not meet the need.

**Recommended Actions:** Continue to perform condition assessments on historic properties and treat sites as needed. Look for additional sources of funding.

Monitoring Item No. 72

## **American Indian Relations**

New Item added in 2003

**Objective or Purpose:** The Forest is meeting its trust responsibility to American Indian Tribes

**Criteria:** Forest Plan direction, Standards and Guidelines

**Type of Monitoring:** Implementation  Effectiveness  Validation

**Method of Monitoring:** Number of government-to-government consultations

**Unit of Measure:** Number and types of consultation with appropriate tribal representatives in the fiscal year

**Frequency Item is Monitored:** Annually

**Frequency Item is Reported:** Annually

**Evaluation:** The Okanogan National Forest is sensitive to American Indian concerns and issues. Government-to-government consultation with the Colville Confederated Tribes, Yakama Nation and other interested tribes remains a critical element of the program. Consultation with tribes that may have an interest in management activities is initiated at the earliest stage of project planning and is carried through to completion of the project. The heritage program shares project information through distribution of the Forest's Schedule of Proposed Actions (SOPA), Passport in Time newsletters, on a case-by-case basis for all projects involving a record of decision, decision notice or decision memo and via face-to-face meetings with tribal councils.

In FY 2005, 19 separate government-to-government letters were sent to the Confederated Colville Tribes and the Yakama Nation regarding projects. In each letter the project was described, the type of NEPA document being prepared was disclosed and very specific information was provided about the area of potential effect (APE) and the type of consultation being proposed per this PMOA. Each letter sought information regarding resources of interest to tribes including traditional cultural properties (TCPs) and further stated that Tribal Historic Preservation Officers (THPOs) or appointed staff would be contacted immediately if a prefield literature review identifies a TCP or a potential TCP. Each letter stated that special arrangements will be made if and when sensitive information was provided.

At the request of the Colville THPO, TCP studies were conducted for two non-federal projects that involved portions of the Forest. These studies were conducted by private contractors, and involved close coordination with the Colville THPO. The TCP investigation for the Buckhorn Access Project project was completed and reviewed by the Colville THPO and SHPO. The TCP study for the Methow Valley Transmission Line began late in the fiscal year and was still underway at the close of the fiscal year.

Due in part to consultation difficulties with the Coville THPO for the Methow Transmission Project, a need to establish a better Section 106 consultation protocol/process in FY 06 was identified. The process for identifying Traditional Cultural Properties (TCPs) in particular remains problematic with the Colville THPO because of differences in opinion regarding who should provide TCP information and the process for obtaining it. The THPO requested revision of the Section 106 consultation process and a meeting date was established for October 2006.

The Forest consulted with both Tribes regarding two new national directives; the Special Forest Products Act and the Tribal Forest Protection Act. A gathering ordinance was drafted by the Confederate Colville Tribes and several meetings were held to discuss the document between the Tribes and the Forest Service.

Fees for special forest products are waived for tribal members. Information that may be sensitive is not shared with or distributed to the public. Privacy is provided for ceremonial activities.

**Recommendations:** Results okay; continue monitoring. Meet with the Colville Confederated Tribes THPO annually to discuss and evaluate the effectiveness of the Forest's consultation protocol. Work on developing a memorandum of understanding for government-to-government consultation, TCP identification and the sharing of sensitive information in general in 2006.

Monitoring Item No. 73

### **Management of Competing and Unwanted Vegetation**

This item was not reported this year due to the redirection of resource specialists and Program Managers time to the Tripod Fire and Burned Area Emergency Rehabilitation.

# FOREST PLAN AMENDMENTS

At the end of Fiscal Year 2005, 35 site-specific amendments had been made to the *Okanogan National Forest Land and Resource Management Plan* since it was signed in 1989. All have been non-significant amendments and are listed as follows:

No.	Date	Decision Name	Standard/ Guideline Amended	Amendment
1	5/4/90	Meyers Beetle Timber Sale	MA25-8A MA25-6A	Site-specific amendments for project area only for visual quality and cover because of insect and disease problems.
2	11/19/90	Forest Plan Amendment # 2	Forestwide 17-6 MA5-8B MA5-20E MA11-20C MA12-20C MA14-20C	Changes to correct errors and to ensure consistency with other standards and guidelines.
3	12/14/90	Forest Plan Amendment # 3	Forestwide 17-8	Temporary amendment to allow both roads 4330 and 4010 to be plowed and open for two weeks to allow logging of two timber sales.
4	5/16/91	Forest Plan Amendment #4	None	Clarify the intent of some of the monitoring items, and correct errors.
5	5/16/91	Lyman Timber Sale	MA5-6A MA11-6B MA14-6 MA14-6B MA26-61	Eliminates total rows for cover requirements and clarifies Standards and Guidelines.
6	8/6/91	Forest Plan Amendment #6	None	Updates schedule of activities in Forest Plan, Appendices A-F.
7	2/7/92	Forest Plan Amendment #7	17-6 17-8	Error in current wording results in allowing a segment of a road to be snowplowed, when the intent was that entire route remain unplowed.
8	8/3/92	Forest Plan Amendment #8	None	Updates scheduled of activities in Forest Plan, Amendment A-F.
9	9/23/92	Coyote timber Sale	MA26-6A	Site specific amendment for project area only for Snow Intercept Thermal Cover and Winter Thermal Cover to treat insects and disease and provide long-term cover.
10	2/26/93	Little Bonaparte Timber Sale	Forestwide 6-1 MA14-6A MA14-6C MA5-17C MA14-17A	Site-specific amendment for project area only to allow cover values below, and road densities above Forest Plan Standards and Guidelines. Cover values are reduced to allow treatment of severe insect and disease, and road densities are exceeded to allow management of the area to reduce post sale densities.
11	5/14/93	Dragon Timber Sale	MA26-17B	Site-specific amendment for project area only, allowing road density above Forest Plan Standards and Guidelines in discrete MA26-28, because all roads in the management area that can be closed are already closed.

No.	Date	Decision Name	Standard/ Guideline Amended	Amendment
12	6/15/93	Lamb Butte Timber Sale	MA14-17A	Site specific amendment for project area only, allowing road density above Forest Plan Standards and Guidelines for discrete MA14-04, because all roads in the management area that can be closed are already closed. Also allows temporary amendment for additional roads to be opened during life of sale.
13	9/3/93	Forest Plan Amendment #13	MA15A-210 MA15B-21P MA15B-21Q MA15A-21U MA15B-21Z	Clarifies wilderness Standards and Guidelines.
14	9/6/95	Forest Plan Amendment #14		Amends Forest Plan to allow snow plowing and wheeled vehicle use of Road 52, a designated snowmobile route, during the winter of 1995-96, to facilitate quick removal of the fire-killed, deteriorating trees in the Whiteface fire area.
15	4/12/96	Forest Plan Amendment #15	MA15A-19E MA15B-19E	Decisions to declare any lightning fire in the Pasayten Wilderness a prescribed natural fire will follow the direction in the Pasayten Wilderness Prescribed Natural Fire Plan. A prescribed fire plan shall be approved prior to the use of prescribed fire in the Lake Chelan-Sawtooth Wilderness.
16	5/31/96	Cayuse Timber Sale	MA14-6A	Reduce snow intercept/thermal cover for deer in the winter range by an additional 1% to improve forest health and accelerate the growth of healthy future wildlife cover.
17	9/3/96	Doe Timber Sale and Associated Activities Forest Plan Amendment #17	MA25-17C MA17-8	Allows open road density in discrete MA25-03 to exceed Forest Plan standard and guideline MA25-17C during the sale. Portion of groomed snowmobile route along Road 5010 to be relocated to an adjacent planned trail, and approximately 2400 feet of the east half of Road 5100 beyond the sno-park may be plowed.
18	9/30/96	Shady Timber Sale	MA25-17C	Allows open road density in discrete MA25-14 to exceed the Forest Plan standard and guideline during the life of the sale.
19	2/3/97	Crown Jewel Mine and Forest Plan Amendment #19	MA27	Creates a new minerals management area (MA27) with goals, objectives, Standards and Guidelines.
20	6/9/97	Roger Lake RNA/ Forest Plan Amendment #20	MA8	Establishes Roger Lake area as a Research Natural Area.

No.	Date	Decision Name	Standard/ Guideline Amended	Amendment
21	9/12/97	Long Draw Salvage Timber Sale/Forest Plan Amendment #21 Decision withdrawn	PACFISH RHCA widths	Modifies PACFISH interim RHCA widths where necessary to achieve riparian management goals and objectives. Subsequently withdrawn when decision was withdrawn.
22	9/29/97	Beaver Salvage Timber Sale/Forest Plan Amendment #22 Decision withdrawn	PACFISH RHCA widths	Modifies PACFISH interim RHCA widths where necessary to achieve riparian management goals and objectives. Subsequently withdrawn when decision was withdrawn.
23	4/3/98	Beaver Salvage Timber Sale/Forest Plan Amendment #23	PACFISH RHCA widths	Site-specific amendment to PACFISH interim widths for life of this sale to achieve riparian management goals and objectives.
24	5/19/98	South Twentymile Timber Sale/Forest Plan Amendment #24 Old growth amendment withdrawn	MA14-17A	Amends road density in discrete MA14-05 and restores old growth characteristics in three stands of timber; site specific to this sale only. Old growth portion of this amendment was withdrawn.
25	5/27/98	Oakley Timber Sale/Forest Plan Amendment #25	MA14-6A	Amends the Forest Plan to allow management activities to improve long-term winter thermal cover for deer.
26	9/30/98	Bailout Prescribed Fire for Natural Fuels Reduction/Forest Amendment #26	F/W19-8 MA26-6A	Allows site specific burning of natural fuels within 128 acres of mixed conifer Forest Plan old growth located in discrete MAs 26-33 and 26-34, to move structure towards historic ranges and promote late/old structure, and to protect and to develop snow intercept thermal cover which currently does not meet Standards and Guidelines.
27	5/18/99	Redmill Timber Sale, Road Management and Noxious Weed Management and Forest Plan Amendment #27	MA 14-6A	Reduction in snow intercept/thermal cover in MA 14-23 to help reduce disease and move stands toward conditions that maintain deer winter cover and increase long term sustainability of deer winter range.

No.	Date	Decision Name	Standard/ Guideline Amended	Amendment
28	5/15/99	Chewuch RNA and Forest Plan Amendment #28	MA-8	Establishes the Chewuch Research Natural Area.
29	2/11/00	Coco Integrated Resource Projects #29	MA26-17B	Changes road density standard in MA26-31 from 1.0 miles/square mile to 1.3 miles/square mile to allow main arterials and collectors to remain open
30	2/11/00	Prescribed Fire Projects from the Coco Integrated Resource Projects EA #30	MA19-8	Allows the use of prescribed fire in two old-growth stands to reduce natural fuels and encroachment of small trees.
31	7/18/00	TPR Stand Treatment, Road Management and Prescribed Fire #31	MA26-20J	Allows winter logging in mule deer winter range for this project only in MA26-05 to mitigate soil impacts and reduce rate of spread of noxious weeds.
32	3/3/03	Bailey Fire Restoration Project #32	MA14-17A	Allows open road density to exceed Forest Plan standards during life of project; public access controlled in most areas.
33	7/19/04	Upper Aeneas Integrated Resource Project #33	Regional Forester Amendment #2 relating to 21" trees	Allows for expansion of seed orchard administrative site and the removal of 21 inch trees within the expansion area to create a 300' no pollen zone adjacent to the actual seed orchard
34	7/18/05	Summit Restoration Project #34	MA5-6D, MA5-6A, MA25-6A	Allows reduction in summer thermal and hiding cover in summer range and SIT winter cover in deer summer range
35	8/2/05	Two Lakes Fuels Reduction Project #35	F/W 5-1, 17-6, 19-8; MA5-6A, MA25-6A,	Allows harvest and burning in Forest Plan old growth; allows snowplowing of Forest Road 3200050; allows reduction of SIT winter cover in deer winter range and summer cover in deer summer range

In addition, the *Forest Plan* has been amended by four multi-Regional or Regional amendments. These are:

1. *The Record of Decision and Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional and Old-Growth Forest Related species within the Ranger of the Northern Spotted Owl*, signed by Secretary of Agriculture Mike Espy and Secretary of Interior Bruce Babbitt on April 13, 1994 and amended on January 12, 2001;

2. *The Decision Notice and Environmental Assessment for Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales*, signed by Regional Forester John Lowe on June 25, 1996;
3. *The Decision Notice and Environmental Assessment for the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH)*, signed by USDA Forest Service Chief Jack Ward Thomas and USDI Bureau of Land Management Director Mike Dombeck on February 24, 1995; and
4. *The Decision Notice and Environmental Assessment for Interim Strategies for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana and Portions of Nevada (INFISH)*, signed by USDA Forest Service Regional Foresters Hal Salwasser (Northern Region), Dale N. Bosworth (Intermountain Region) and John E. Lowe (Pacific Northwest Region) on July 28, 1995.

# SCHEDULE OF PROPOSED ACTIONS

The Forest Service published revised policies and procedures for implementing the National Environmental Policy Act (NEPA) on September 18, 1992. One major change in the revised policies and procedures is the requirement that a schedule of proposed actions (SOPA) be published quarterly. The purpose of this schedule is to provide notice of proposals that may undergo environmental analysis and documentation to interested and affected agencies, organizations and individuals. All documents for which the Okanogan National Forest has developed a proposed action are listed on the quarterly schedule, and decisions made during the previous quarter are highlighted.

Projects listed in the schedule disclose the following information: Name of project, description, location, when scoping will begin, status, estimated date of decision, and contact person.

If you have any questions about the schedule, or wish to receive a copy of the schedule, call the Planning and Environment section of the Okanogan and Wenatchee National Forests at (509) 664-9306 or write to: Okanogan and Wenatchee National Forests, Environmental Affairs, 215 Melody Lane, Wenatchee, WA 98801.

# LIST OF PREPARERS

<b>Jim Archambeault</b>	Recreation Planner
<b>Mel Bennett</b>	Hydrologist
<b>Pierre Dawson</b>	Fisheries Biologists
<b>Laurie Dowie</b>	Wilderness Manager
<b>Jan Flatten</b>	Environmental Coordinator
<b>Powys Gadd</b>	Archeologist
<b>Annoinette Green</b>	Soil Scientist
<b>Barbara Jackson</b>	Landscape Architect
<b>Rod Lentz</b>	Mining Geologist
<b>Robert Naney</b>	Wildlife Biologist
<b>Don Phillips</b>	District Environmental Coordinator
<b>Keith Rowland</b>	Range and Lands
<b>Vladimir Steblina</b>	Recreation Staff
<b>Katheleen Tillman</b>	Engineering
<b>John Townsley</b>	Silviculturalist
<b>Randy Whitehall</b>	Assistant Fire Staff