

United States Department of Agriculture

Forest Service

Pacific Southwest Region

Inyo National Forest

July 1994



# Forest Plan Monitoring and Evaluation Report

Inyo National Forest Fiscal Years 1989 - 1993





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# FOREST PLAN

# **Monitoring and Evaluation Report**

#### Fiscal Years 1989 - 1993

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# **Table of Contents**

	l ugc
Introduction	1
Monitoring Report	3
Air Quality	
Cultural (Heritage) Resources	
Diversity	
Facilities	
Fish	
Geology	. 17
Lands	. 18
Minerals	
Mono Basin National Forest Scenic Area	
Pests	
Range	
Research Natural Areas	
Riparian Areas	
Special Interest Areas	
Threatened, Endangered or Sensitive Species	
Timber	. 46
Visual Resources	
Wild & Scenic Rivers	
Wilderness	
	. 59
Appendices	. 64
Project Level Planning	. A
Five-Year Evaluation	
Forest Plan Amendments	

#### Page

- Monitoring: The observation, collection and recordation of results of both natural processes and actions permitted by the Forest Plan.
- **Evaluation:** The analysis of how those results meet Forest Plan direction and identification of measures to keep the Plan viable.

## Introduction

When the Inyo Land and Resource Management Plan (Forest Plan) was approved in August 1988, it charted a course of action for the management of the Inyo for a 10 - 15 year period. This report summarizes the results of Forest Plan monitoring and evaluation conducted from October 1, 1988 through September 30, 1993.

The last five years of implementing the Inyo Forest Plan have been both exciting and challenging. We are continually verifying our data and assumptions through monitoring and then evaluating the results to determine how well the Forest Plan is guiding decision making, and whether the Plan needs to be revised or amended.

This report meets the requirements of 36 CFR 219 which sets forth the direction for the evaluation of Forest Plans. The direction to prepare this report for the Inyo National Forest is contained in Chapter V of the Forest Plan which states that monitoring and evaluation results will be reported periodically.

It is important to note that this report is not about individual project monitoring, which in an ongoing Forest activity. However, some the results of individual projects have been considered and aggregated in the preparation of this report.

This bulk of this report is the resource-by-resource description of Forest Plan monitoring accomplishments and findings compared against established goals and objectives. This section also contains a discussion on why, for some resources, actual outputs differ from projected outputs. Several appendices are included that discuss the overall mixture of projects undertaken, the Forest Supervisor's statement of certification and evaluation of five years of Plan implementation, and a listing of Forest Plan amendments approved to date and those proposed for future Plan implementation.

#### **Relationship to Budgets**

It should be noted that annual programs of work to implement, monitor, and evaluate the Forest Plan are influenced by factors that can vary from year to year. Budgets can and do fluctuate as Congress uses the funding process to indicate to the Forest Service those areas it would like to see more (or less) emphasis. Furthermore, internally within the Forest Service there can be a change in management priorities. While annual programs can be tied to budget levels, Forest management direction and land allocations are budget-independent; they will be adhered to no matter what budget level is appropriated.

#### Format of the Monitoring Report

The monitoring of each resource area is organized as follows:

#### **Forest Plan Goals and Objectives**

Forest Plan goal statements are provided for each resource area. The goal statement describes, in broad and general terms, a desired condition to be achieved and/or maintained sometime in the future.

## Introduction - continued

Objectives were developed in response to the established goals and differ in that they are quantifiable or measurable results that have scheduled accomplishment dates. While most of the objectives are described as average annual outputs, it is the total output over the 10-year planning period that determines whether a given objective has been achieved. Thus, year to year variation is anticipated. Not every resource area has assigned objectives.

#### **Program Strategies**

A program strategy is described for each resource area. The strategy statement describes the overall approach and emphasis that is being taken to achieve desired resource conditions, through Forest Plan implementation process establishes the framework for translating management direction (including goals) into specific on-the-ground projects. Program strategies can be modified as new and better approaches to achieving Forest Plan direction are identified.

#### **Monitoring Actions**

Monitoring actions have been assigned to most resource areas to determine whether the Inyo's programs are effective in meeting the goals of the Forest Plan. Monitoring can also help determine how closely Forest-wide standards and guidelines are being met. Information collected for all of the Ranger Districts has been aggregated at the Forest level. Not every resource has assigned monitoring actions.

#### **Accomplishments/Findings**

The accomplishments and findings for each resource area is a description of results of evaluating monitoring data, performance in terms of outputs and services, and other achievements or trends worth noting. Planned or projected accomplishments have been compared to actual results, hopefully indicating how well Forest Plan goals are being met. When available, both annual and five-year accomplishments are presented.

#### For More Information

For additional information on the programs of the Inyo National Forest, please contact the Inyo National Forest Supervisors Office at:

873 North Main Street Bishop, CA 93514 (619) 873-2400 (619) 873-2538 TDD

# Air Quality

## **Goal and Objectives**

National Forest System lands are managed to maintain air quality that complies with all applicable regulations. The conduct of Forest management activities is carried out in a manner consistent and compatible with the attainment of state and federal air quality objectives.

There are no established objectives for air quality management.

### **Program Strategy**

Protect Class I and Class II areas to the maximum degree possible under the Wilderness Act(s) and the Clean Air Act. Actively participate in the prevention of significant deterioration (PSD) permits that impact the Inyo National Forest. Maintain strong working relationships with the Air Pollution Control District and central Sierra land (and air quality) management agencies, including the USDI Bureau of Land Management, USDI National Park Service and other Forest Service administrative units. Ensure that Forest Service operations are in compliance with state and federal standards.

#### **Monitoring Actions**

Evaluate compliance with state and federal air quality standards in designated Class I and Class II airsheds. Monitor air quality related values (AQRVs) by using the techniques of photography, measurement, analysis and recordation.

#### Accomplishments/Findings

A Forest lichen (AQRV) monitoring program has been established in the John Muir, Ansel Adams and Hoover Class I Wildernesses. Twenty-nine plots have been established with over 50 species identified. Plots will be evaluated every five years for changes that may be the result of air quality degradation or improvement.

Ozone screening of Jeffrey and Ponderosa pines (ARQV) was accomplished forest-wide in 1993. There was no ozone-related injury on the Inyo National Forest except in the Reds Meadow/San Joaquin River area on the west side of the Sierra crest.

The Forest began the review of one PSD permit.

### **Goal and Objectives**

There is no goal statement for the budget process.

BUDGET OBJECTIVE

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective (1988)	
Total Budget	\$ 9,900,000	\$ 12,100,000	

### **Program Strategy**

Use budget allocations in an efficient manner to help move the Inyo National Forest towards it desired future condition.

### Accomplishments/Findings

The following table includes both NF and non-NF dollars.

#### **BUDGET ACCOMPLISHMENTS**

Year	Actual Budget	Plan Objective (in each year's dollars)
1989	12.8 MM\$	13.2 MM\$
1990	9.6 MM\$	13.9 MM\$
1991	9.3 MM\$	14.6 MM\$
1992	10.4 MM\$	15.0 MM\$
1993	12.4 MM\$	15.6 MM\$

As shown in the above table, the actual budgets have consistently been below the Forest Plan objective budgets (adjusted for inflation). This indicates that the implementation of the Inyo Forest Plan is not being fully financed. For fiscal year 1993 the shortfall is over 3 million dollars. Furthermore, what is not shown in the above figures is the inclusion of one-time construction dollars, such as the 4.2 million in FY 1989 for the Mono Basin Scenic Area Visitor Center. The Forest has responded to declining budgets by seeking cooperative funding with the State of California in certain resource areas; strengthening our partnership efforts where possible; putting campgrounds under concessionaire; relying on collection agreements; and asking employees to "do more with less."

## Budget - continued

To make the budget situation even worse, the cost of leasing administrative buildings has significantly increased over the last five years. Since general administrative allocations have not kept pace, resource dollars must be tapped to cover these fixed costs--resulting is less funding for on-theground work.

The allocation of the total budget to individual program areas has been uneven. Some programs, such as lands and minerals, have traditionally been funded at low levels, while programs such as fire pre-suppression have been funded sufficiently to achieve objectives. As described or noted throughout the rest of this document, specific resource areas have not been able to either meet established objectives or conduct monitoring due to the lack of funding.

# **Cultural (Heritage) Resources**

Note: Since approval of the Inyo Forest Plan, Cultural Resources are now called Heritage Resources.

### **Goal and Objectives**

Identification, evaluation, protection and interpretation of cultural and historic resources are continuous and an integral part of management of the Forest.

There are no established objectives for cultural resource management.

### **Program Strategy**

Conduct Forest-wide cultural resource inventory and project-related and non-project related surveys. Emphasize type-of-site investigation rather than the less efficient site-by-site approach to the extent that it is feasible. Emphasize a broad and varied cultural resource management program that includes inventory, evaluation (including National Register nominations and/or National Register eligibility determinations), protection, enhancement and interpretation of cultural values.

### **Monitoring Actions**

1) Assess effectiveness of protective measures taken to achieve "no effect" status on cultural resources from land use projects and other resource management activities. Monitor using on-site inspections: photography, measurement and recordation.

2) Assess target to complete a total Cultural Resource Inventory by the year 2030. Monitor the status of the inventory.

3) Determine the occurrence and extent of vandalism, and the effectiveness of public awareness, interpretation and enforcement programs. Monitor by signing sites and conducting periodic on-site inspections: photography, measurement, and recordation.

#### Accomplishments/Findings

The program strategy goal of emphasizing type-of-site investigations was pursued by implementation of the Piagi Programmatic Treatment Plan, development of the Obsidian Quarry Programmatic Treatment Plan, the Mono Mills Railroad Logging District Evaluation and Treatment Plan, and the Administrative Sites Evaluation. Under the Piagi Treatment Plan, 7 sites were treated in fiscal year 1989, while 4 sites were treated in fiscal year 1991. Enhancement was done at the historic sites of Bennetville, the Hayden Cabin, and the DeChambeau Ranch. Interpretation activities were promoted during Archaeology Week and provided at the Mono Lake Visitor Center and the Interagency Visitor Center in Lone Pine.

Two hundred and fifty-six sites were protected under the Memorandum of Understanding (No Effect) between the Forest and California State Historic Preservation Officer, and other impact avoidance measures. In the reporting period, only one "No Effect" site was adversely impacted. Impacts are occurring, however, through land management practices which have not had NEPA or Section 106 work. As can been seen in the Impact Monitoring Sample table below, 94% of impacts to sites are from land management activities such as grazing, spring development and OHV use. To our surprise, only 6% of the impacts noted were from vandalism. Efforts in the future should focus on continued monitoring and public education to curb vandalism, and coordination with project leaders to avoid project impacts. Most importantly, the Forest needs to begin dealing with existing, on-going impacts.

# Heritage Resources - continued

In addition to the data presented below, Southern California Edison (SCE) monitored 24 sites, of which 12 sites were protected. One site was impacted by SCE activities, while 11 sites monitored by SCE were impacted by others.

Monitoring Elements	Area 1	Area 2	Area 3	Totals
Total No. of Sites	42	153	34	229
Sites Monitored	9 (21%)	121 (79%)	34 (100%)	164 (72%)
<b>Sites Impacted</b> Vandalism Land Use Activities Totals	2 (22%) 7 (88%) 9 (100%)	5 (5%) 88 (95%) 93 (77%)	0 (0%) 16 (100%) 16 (47%)	7 (6%) 111 (94%) 118 (72%)

#### IMPACT MONITORING SAMPLE

Program strategy goals of conducting non-project related inventory, evaluation and nomination of sites to the National Register were not met. With the exception of the Obsidian Programmatic Treatment Plan, all heritage work was done in support of undertakings. No sites were nominated to the National Register. There is a total of 4,490 recorded heritage sites, only 18% of which have been evaluated for National Register eligibility. This leaves a backlog of 3,623 sites that have not been evaluated. The goal of completing the Forest-wide inventory by 2030 would have required survey of 30,000 acres per year; 150,000 acres in five years. As shown in the Accomplishments Table below, only 16,338 new acres were surveyed. All of these failures are due to lack of funding for heritage program work. Goals are considered only in the context of projects.

Year	Undertakings <sup>1</sup>	Acres Inventoried	Sites Inventoried	Sites Evaluated	Sites Protected
1989	45 (36)	10,937	73	11	67
1990	39 (30)	2,040	21	5	36
1991	25 (21)	1,963	32	18	14
1992	24 (20)	305	7	1	40
1993	40 (22)	1,093	55	38	89
Totals	173 (128)	16,338	188	73	246

#### CULTURAL RESOURCE ACCOMPLISHMENTS

<sup>1</sup> "No Effect" undertakings as per the MOU with SHPO are in parenthesis.

# Diversity

### Goal and Objectives

The Forest has achieved diversity of plant and animal communities by providing a threshold level of vegetation types and seral stages.

There are no established objectives for the management of diversity. Refer to the section on wildlife.

### **Program Strategy**

Maintain at least 10 percent of forested lands, including both suitable and unsuitable timber, in older seral stages. Ensure that old growth acreage is adequately distributed throughout the commercial timber types.

Maintain or create snags in managed timber stands to meet at least 40 percent of the natural potential density of snag-dependent wildlife; allow for higher densities outside of managed timber.

#### **Monitoring Actions**

Ensure that Forest-wide distribution of all successional stages meet Forest Service guidelines and prescriptions; that spatial and structural diversity is maintained in riparian areas; and that the prescribed quantity, quality and distribution of snags and downed woody material is maintained. Monitor by comparing existing and long-term minimum levels. Sample range, recreation, timber and prescribed burn projects to determine the cumulative effects on successional stages and spacial diversity.

### Accomplishments/Findings

The Inyo National Forest, has developed and implemented an Old Growth Management Strategy to insure maintenance of the important older seral stages. This strategy is applied to a minimum of 6,400 acres (10 percent of the timber base).

Snag retention has been incorporated into the timber sale planning process. Snags and potential future snags are inventoried and marked for retention to ensure compliance with the Forest Plan standards during timber sale layout. However, loss of snags due to illegal fuelwood gathering is an issue that has not been adequately addressed during this period of Forest Plan implementation.

# **Economic/Social**

## **Goal and Objective**

The Forest is managed in an economically efficient and cost-effective manner while responding to the economic and social needs of the public and local communities.

#### HUMAN RESOURCES OBJECTIVE

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Programs	39 enrollees	39 enrollees

#### **Program Strategy**

The Forest uses the Human Resource Program as a means of providing entry-level work opportunities for local communities, and to achieve on-the-ground resource management needs.

#### **Monitoring Actions**

There are no established monitoring actions for human resources.

#### Accomplishments/Findings

1) Human Resource Program. The following work accomplishments include a variety of Human Resource Programs for each fiscal year, such as the California Conservation Corp, Student Conservation Association, Youth Conservation Corp, California Indian Manpower Consortium, and volunteers.

Year	Participation	Amount of Work	Value of Work
1989	654 enrollees	74.4 person-years	\$963,029
1990	674 enrollees	63.8 person-years	\$1,489,597
1991	331 enrollees	58.8 person-years	\$1,384,266
1992	537 enrollees	59.6 person-years	\$1,363,889
1993	554 enrollees	56.8 person-years	\$1,437,077

#### HUMAN RESOURCE ACCOMPLISHMENTS

As presented in the above table, the Inyo National Forest has had no problem in achieving its stated human resource objective. However, the value of monitoring the 39 enrollee annual objective is questioned, since there is no quality or quantity built into it. A more useful measure might be a given number of person-years or value of work, as disclosed above.

## **Economic/Social** - continued

**2) Rural Community Development.** The Inyo National Forest began an aggressive effort in rural community development in 1991. Most of the work has been in conjunction with the Coalition for Unified Recreation in the Eastern Sierra (CURES), a coalition of public and private providers of recreation services.

Information on rural development programs and funding opportunities has been shared with local governments, chambers of commerce, and other interested parties. Different speakers have given presentations on subjects such as the 1990 Farm Bill, fund-raising opportunities, and partnerships.

In 1992 Inyo and Mono Counties applied for, and received, eligibility for assistance under the 1990 Farm Bill. As required by that Act, a Community Action Plan was completed and approved. In 1993 and 1994 Economic Recovery Funding was granted for the completion of an "Eastern Sierra Recreation Opportunities Map", a strategic marketing plan, and the development and implementation of a "hospitality training program" for local businesses and agencies.

In addition the the work with CURES, several other entities have expressed an interest in working with the Inyo National Forest to help vitalize the local economies. Work with these entities and CURES will continue to grow into the future.

# Energy

## **Goal and Objectives**

Maximum public benefits are obtained from the energy resources of National Forest System lands, while adverse environmental effects on other Forest resources from exploration, development and extraction are minimized. Management operations on the Forest are energy-efficient.

There are no established objectives for energy management.

### **Program Strategy**

Facilitate the orderly development and operation of energy resources, consistent with other resource needs. Conduct administrative duties in an energy-efficient manner.

### **Monitoring Actions**

There are no established monitoring actions for energy.

### Accomplishments/Findings

Several energy saving maintenance projects have been accomplished, particularly on the Mammoth Ranger District office. Due to high elevation, with heavy snowfall during the winter, and relatively cool temperatures in the summer, more insulation was added to the roof of the building during a re-roofing project. The air conditioner was removed, and the on-demand hot water, re-circulating pump, was also removed. Several new well systems have been equipped with solar panels for their energy supply. Low volume flush toilet valves are being systematically installed. Energy conservation has been considered on all new projects during design, and on existing facilities when economically to the advantage of the government.

The management of energy is closely related to other resource areas. Refer to the section on Minerals for information on geothermal resources, and the Lands section for the administration of hydroelectric resources.

# Facilities

## **Goal and Objectives**

An efficient Forest transportation system, administrative sites and other facilities are in place and maintained at least to the minimum standards appropriate for planned uses and the protection of resources.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective		
Administrative Sites Forest Service Owned Forest Service Leased	6 sites 1 site	8 sites 1 site		
Dams and Reservoirs Forest Service State/Local Private	3 dams 4 dams 11 dams	3 dams 4 dams 11 dams		
<b>Roads-Construction</b> Recreation Site Access Recreation Interior Construction (total)	0 miles 0 miles 0 miles	0 miles 2.5 miles 2.5 miles		
<b>Roads-Reconstruction</b> Timber Recreation Site Access Recreation Interior Reconstruction (total)	15 miles 5 miles 5 miles 25 miles	5.0 miles 5.0 miles 5.0 miles 15.0 miles		
<b>Roads-Maintenance</b> Maintenance (total)	974 miles	977 miles		
Trails-Construction Existing Wilderness Recommended Wilderness Concentrated Rec. Areas Open National Forest Off-Highway-Vehicle Nordic Construction (total)	0 miles 0 miles 0 miles 0 miles 0 miles 0 miles 0 miles	0. miles 1.8 miles 9.0 miles 1.0 miles 1.8 miles 10.0 miles 24.3 miles		
Trails-Reconstruction Existing Wilderness Recommended Wilderness Concentrated Rec. Areas Open National Forest	9.0 miles 0 miles 1.8 miles 0 miles	12.6 miles 1.3 miles 4.2 miles 2.2 miles		

#### **FACILITIES OBJECTIVES**

## Facilities - continued

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
<b>Trails-Reconstruction</b> (con- tinued) Off-Highway-Vehicle Nordic Reconstruction (total)	0 miles 0 miles 10.8 miles	16.2 miles 3.2 miles 39.7 miles
<b>Trails-Maintenance</b> Maintenance (total)	1236 miles	1489 miles

#### FACILITIES OBJECTIVES (continued)

### **Program Strategy**

Construct approximately 87 miles of recreation access roads as needed and approximately 535 miles of trails for hikers, equestrians, nordic skiers and OHV users over the 10-year planning period. Reconstruct the road and trail system on a programmed basis and maintain it to assigned maintenance levels. Construct an administrative site for the new Mono Basin National Forest Scenic Area.

#### **Monitoring Actions**

There are no established monitoring actions for facilities.

#### Accomplishments/Findings

No new Administrative sites have been constructed, though construction was completed on a major new Visitor Center in the Mono Basin Scenic Area in 1991.

The number of Dams and Reservoirs has remained unchanged as planned.

Year	Year Administrative Sites	
1989	6 sites owned, 1 site leased	18 dams
1990	6 sites owned, 1 site leased	18 dams
1991	6 sites owned, 1 site leased	18 dams
1992	6 sites owned, 1 site leased	18 dams
1993	6 sites owned, 1 site leased	18 dams

#### FACILITIES ACCOMPLISHMENTS

## Facilities - continued

The Road Construction program has been much smaller than planned. This is due mostly to funding constraints, and completion of the timber road base with less new mileage than originally planned. No new timber roads are being planned. The amount of Road Reconstruction has also been less than planned. Although there are roads needing reconstruction, nationally roads funding is declining and the Inyo's budget has followed that trend. Road Maintenance has been occurring on approximately 1,000 miles of road each year.

Year	Construction	Reconstruction	Maintenance
1989	0 miles	3.3 miles	1,000 miles
1990	0.5 miles	0 miles	1,000 miles
1991	0 miles	1.9 miles	1,000 miles
1992	0.3 miles	1.2 miles	1,000 miles
1993	0 miles	1.2 miles	1,000 miles
Totals	0.8 miles	7.6 miles	5,000 miles

#### **ROADS ACCOMPLISHMENTS**

Trails construction and reconstruction programs have been relatively consistent through the five-year monitoring period, however the budget has not kept pace with the forest plan objectives. The trail use in the summer months is growing annually, including the use of stock. No new trails have been built in wilderness, nor have any OHV or Nordic trails been constructed. Heavy maintenance and reconstruction of heavily utilized trails, and degraded portions of trails, has been the emphasis.

#### TRAILS ACCOMPLISHMENTS

Year	Construction	Reconstruction	Maintenance
1989	2.0 miles	9.0 miles	887.2 miles
1990	3.0 miles	15.0 miles	796.0 miles
1991	1.0 miles	29.5 miles	847.0 miles
1992	0.5 miles	19.3 miles	627.6 miles
1993	2.5 miles	31.4 miles	831.0 miles
Totals	9.0 miles	104.2 miles	3,988.8 miles

Also, see the Recreation section of this report for information on the Off Highway Vehicle program.

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### **Goal and Objectives**

Fish habitat is managed to provide species diversity, to ensure that viable populations of native vertebrates are maintained and the habitats of management emphasis species are maintained or improved. Also see Threatened, Endangered and Sensitive Species for additional discussion of monitoring and evaluation.

#### **FISH OBJECTIVE**

Resource Elements	Base Year Output (1982)	P) Forest Plan Annual Objective	
Resident Trout	1,632 M pounds	1,640 M pounds	

### **Program Strategy**

Improve stream habitat in concentrated recreation areas and in native golden trout habitat. Negotiate with FERC and the affected utility companies to re-water streams for the re-establishment of resident trout fisheries. Conduct programmed watershed improvement work to benefit fish habitat.

#### **Monitoring Actions**

Monitor habitat conditions of resident trout. Ensure that the integrity and productivity of trout streams are maintained or enhanced through the protection of such trout habitat factors as streambank stability, bank and stream cover, riparian vegetation and channel bettom composition. Monitor by conducting stream surveys in cooperation with CDFG where possible. Sample project EAs and conduct field project reviews.

#### Accomplishments/Findings

An extensive network of monitoring transects and livestock exclosures were established across the entire range of stream habitats in the South Fork Kern River drainage on the Inyo NF during the period 1989-1992. Besides the three watersheds on the forest with threatened and endangered fish species, the South Fork Kern is one of the most sensitive riparian/stream ecosystems on the Inyo due to its fragile nature and golden trout population. Monitoring transects will allow forest personnel to evaluate the effect of changes in range management on stream and riparian habitat. Resurvey of the monitoring sites will allow comparison to the initial habitat data and provide information on habitat trend and management technique effectiveness. In addition, the Pacific Southwest Forest and Range Experiment Station (research branch of the Forest Service) began research in 1993 on movements and habitat usage of golden trout.

Numerous stream habitat monitoring transects and residual pool depth monitoring sites were established forest-wide during the 1989-1992 period. Discussions and negotiations between Federal Regulatory Energy Commission (FERC), Southern California Edison, California Department of Fish and Game (CDFG), and the Forest Service during the period 1988-1993 established an agreement to augment flows in Bishop Creek. The area involved will be from the Number 2 intake structure downstream to the forest boundary and beyond. Increased flows will begin in 1994. In addition to greater flows, this will also prevent dewatering of some sections of the channel in extremely dry months. Residual pool depth surveys began in 1989 to monitor habitat changes below hydropower projects.

Although required by the Forest Plan, the reporting of the resident trout output objective (see table below) in thousands of pounds has little meaning to the fisheries management program on the Inyo National Forest, and its reporting will be phased out.

Year	Resident Trout Output <sup>1</sup>	Fish Habitat Improvement	
1989	1,632 M pounds	N/A	
1990	1,632 M pounds	0 acres	
1991	1,632 M pounds	2 acres	
1992	1,632 M pounds	120 acres	
1993	1,632 M pounds	102 acres	

#### **FISH ACCOMPLISHMENTS**

<sup>1</sup> The minimum for each year was 1,632 M pounds.

# Geology

### **Goal and Objectives**

Geologic resources, including groundwater, are assessed. The risks to persons and projects from the potential geologic processes such as landslides, earthquakes and volcanic events are recognized and provisions are made for them.

There are no established objectives for the management of geologic resources.

#### **Program Strategy**

Consideration of geologic resources are conducted on an as needed basis for planning and project level evaluations. Affects to geologic resources and assessment of risks from geologic hazards are the typical products of such evaluations.

#### **Monitoring Actions**

There are no established Monitoring Actions for geology.

#### Accomplishments/Findings

Geologic services are funded as part of the Geology/Minerals budget which for project work has ranged from \$48,000 in fiscal year 1988 to \$28,000 in fiscal year 1993. Specific programs, such as the conversion of campground water systems from surface to ground water sources, have also provided funding. During the period 1988 through 1993, geologic input has been provided for the Mono Basin National Forest Scenic Area EIS and Comprehensive Management Plan, the Sherwin Bowl EIS, the Dry Creek EA, the Wild and Scenic River suitability evaluation, specific campground well drilling projects and numerous in-house and external requests for geologic information.

### **Goal and Objectives**

The Forest has a land and resource management structure and program with compatible relationships between National Forest System lands and adjacent non-federal lands. Specific activities to accomplish this goal are: special use administration, electronic site management, utility corridor management, rights-of-ways management, withdrawal, landownership adjustment and property boundary resurvey and monumentation.

LANDS	OBJECTIVE
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Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective	
Land Acquired	60 acres	54 acres	
Landlines Surveyed	9 miles	6 miles	

#### **Program Strategy**

Acquire lands, if they become available, in Lee Vining Canyon, Lundy Canyon and the upper Owens River for summer recreation development. Coordinate landownership adjustments with community planning and Forest management objectives to provide for the community growth associated with increasing alpine ski area capacity.

### **Monitoring Actions**

There are no monitoring actions for the lands resource.

### Accomplishments/Findings

#### Non-recreation Special Uses (Including Hydroelectric Projects)

The Forest's non-recreation special uses management program has been funded at less than half of the level needed to manage and administer the program in accordance with existing law, regulations, agency policy, and management direction in the Plan. A significant part of the annual funding that has been allocated to the Forest has been used to exercise the agency's responsibilities in the licensing, re-licensing, and administration of hydroelectric facilities under the authority afforded the Forest Service pursuant to Section 4(e) of the Federal Power Act. The Forest has been working with Licensees and the Federal Energy Regulatory Commission (FERC) in developing conditions to be included in long term (30-year) FERC-issued licenses that will re-authorize four existing projects. The FERC has also licensed two new projects on the Forest, neither of which have yet been constructed.

## Lands - continued

The lack of adequate funding, combined with the Forest's use of a large portion of that funding for hydropower licensing activities, have meant that the Forest has been able to manage and administer the remainder of its non-recreation special uses management program at only a minimal level. Some of the symptoms of this minimally managed program include:

1. A small backlog of expired authorizations for existing uses, where the uses/occupancies have continued to occur pending Forest consideration and re-issuance of a new authorization.

2. A program where less than 10% of existing authorizations are field inspected in accordance with agency policy as to the intensity and frequency of such inspections.

3. Existing uses being assessed an annual fee that is based upon obsolete land value appraisals (10 or more years old). Consequently, the fees being assessed for those cases have not been commensurate with the value of the use/occupancy being authorized.

4. The inability to develop site plans for existing and future uses of communications sites.

5. A backlog of applications for new uses, including some which may clearly be in the public's best interest to evaluate and authorize.

In 1993, the Forest adopted a process for the consideration and processing of applications/renewals of all types of special uses, including recreation uses. The process identifies criteria that the Forest will use to prioritize its consideration and processing of special use applications/renewals as they are received. It is anticipated that proponents will continue to be required to provide the Forest with technical and/or financial assistance in order to meet the applicant's timeline for Forest Service consideration of most major project proposals.

#### Land Acquisitions/Landownership Adjustments

The Forest has had a very active landownership adjustment program designed to consolidate landownership patterns throughout the Forest, to convey into non-federal ownership National Forest System lands needed for orderly community growth and development, and to acquire non-federal land having significant recreation, wildlife, wetland, riparian, wilderness, fisheries, and/or scenic resource values that would benefit from National Forest protection and management. For the first five years of Forest Plan implementation, the lands acquisition objective of 270 acres total for the period has been greatly exceeded by the actual acquisition of 2,422 acres.

In 1989, the Forest completed a land exchange with Mammoth Mountain Ski Area that resulted in the acquisition of over 18 properties, totalling over 1,930 acres, within the Mono Basin National Forest Scenic Area. The exchange included the acquisition of land from owners who were calling for the Federal Government to acquire their property because of the potential adverse effects that the Scenic Area's Private Land Guidelines would have on their rights to use and develop their land. A 1989 land exchange with the City of Los Angeles' Department of Water and Power resulted in Federal acquisition of the parcel upon which the Mono Basin National Forest Scenic Area Visitor Center was built.

Relatively high Federal land values combined with relatively low market values for scattered nonfederal parcels have resulted in the acquisition of a significantly higher number of acres of non-federal land than that projected in the Plan. The Forest will continue to use land exchange authorities to further consolidate landownership patterns that provide opportunities to meet other resource management objectives of the Plan, and serve to meet community needs for orderly growth and development.

#### Landlines

The landline program primarily consists of surveying and posting those landlines where there is a threat of incompatible land uses inadvertently trespassing onto the Inyo National Forest from private lands. Many of the interior and exterior landlines are low priority for posting due to land use compatibility with neighboring Los Angeles Department of Water and Power or USDI Bureau of Land Management lands. The program has consistently achieved or exceeded the Forest Plan annual objective of 6 miles.

Year	Land Acquired	Landlines Surveyed
1989	1,983 acres	9 miles
1990	9 acres 7 miles	
1991	150 acres	8 miles
1992	0 acres	7 miles
1993	280 acres	6 miles
Totals	2,422 acres	37 miles

#### LANDS ACCOMPLISHMENTS

## Minerals

### Goal and Objectives

Maximum public benefits are obtained from the mineral (including geothermal) resources of National Forest System lands, while adverse environmental effects on other Forest resources from exploration, development and extraction are minimized.

#### **MINERALS OBJECTIVE**

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective	
<b>Leasable Minerals</b> Power Plants	0 Plants	1 Plant	
Locatable Minerals Operating Plans	67 Plans	50 Plans	

#### **Program Strategy**

Facilitate the orderly development of mineral (including geothermal) resources. Develop geothermal resources according to current agreements in Lease Blocks I and II. Consider additional geothermal lease, exploration and development in response to lease applications on any additional Forest lands outside of designated or recommended wilderness.

#### **Monitoring Actions**

There are no established Monitoring Actions for minerals.

#### **Accomplishments/Findings**

Even though there are no established Forest Plan monitoring actions for minerals, all mining operations are monitored for compliance with approved operating plans and Forest Plan standards. No records are kept that indicated the number of actions taken to correct non-compliance situations.

**Leasable Minerals.** Each number in the following table represents the construction or operation of one power plant. The first geothermal power plant to be constructed on National Forest System land became operational during December 1991. The power output from the plant ranges from 8 to 15 megawatts depending on the time of year with a net year round output of at least 10 megawatts.

**Locatable Minerals.** Although the Forest Plan objective for locatable minerals calls for the reporting of "plans", the Forest has since switched to reporting "cases", which includes mining plans plus other administrative actions. Each case represents some level of work associated with inventorying mineral resources, considering mineral resources during Forest or other planning efforts, or coordinating and processing an exploration or development proposal or application.

## Minerals - continued

#### MINERALS ACCOMPLISHMENTS

Year	Leasable Minerals	Locatable Minerals
1989	0 power plants	55 cases (estimate)
1990	0 power plant	40 cases
1991	1 power plant 36 cases	
1992	1 power plant	40 cases
1993	1 power plant	113 cases
Totals	1 power plant	284 cases

# Mono Basin National Forest Scenic Area

#### **Goals and Objectives**

The legislative direction and the overall goal of Scenic Area management is to protect its geologic, ecologic, cultural, scenic and other natural resources, while allowing recreational, scientific and other activities consistent with this goal.

There are no established objectives for management of the Mono Basin National Forest Scenic Area.

### **Program Strategy**

Provide a program emphasizing ecological values, interpretive opportunities with emphasis on existing sites, and visual values, while continuing a variety of recreation opportunities. Continue other uses and activities at levels compatible with the emphasized resources.

#### **Monitoring Actions**

In addition to the monitoring actions listed in the Forest Plan, the Comprehensive Management Plan for the Mono Basin adopted the following.

Lands. Monitor research uses.

Minerals. Monitor active mining operations through Plans of Operations.

Range. Monitor grazing. Monitor use by feral burros in and adjacent to watering sites.

**Recreation.** Monitor motorized vehicle use, including OHVs and OSVs, to determine effect on resources, if any. Monitor dispersed recreation to determine effects on resources, if any. Monitor fireworks displays for impacts.

**Wildlife.** Monitor number of birds using lake, arrival times, departure times and nesting success to determine any significant changes from historical situations, in cooperation with researchers. Monitor productivity of the aquatic community in Mono Lake in cooperation with researchers. Monitor population trends of special interest species.

#### Accomplishments/Findings

By far, the most significant accomplishment for the Mono Basin National Forest Scenic Area (MBNF-SA) was the March 16, 1990, adoption of a comprehensive management plan (CMP) for this unique ecosystem. The CMP, which was a statutory requirement, provides additional management direction for the MBNFSA to accompany the Forest Plan. Another major event was the May 1993 release of a Draft Environmental Impact Report (EIR) by the California State Water Resources Control Board. This report looks at appropriate instream flow and lake level requirements to be incorporated into the City of Los Angeles' water rights license for diversion from the Mono Basin. The Inyo National Forest provided lengthy and in-depth review and comments to this document.

## MBNFSA - continued

A second accomplishment worth noting was the 1992 completion of construction of the Mono Basin National Forest Scenic Area Visitor Center. This showcase building, includes interpretive displays, a photographic gallery, a theatre, and a book store operated by the Eastern Sierra Interpretive Association. Other accomplishments and findings follow.

**Cultural.** An agreement was developed with the local Native American community to provide nonexclusive access for recognized traditional uses. A decision was made to stabilize the historic buildings at the DeChambeau Ranch, with limited interpretation through signing.

Lands. Acquisition of private lands within the Scenic Area boundary has been accomplished through land exchanges. In 1991, eighteen scattered parcel were acquired through the "Rodeo Grounds" exchange. Acquired parcels include the DeChambeau Ranch, Log Cabin Mine and the Clover property. Former Bureau of Land Management land permits have been re-issued as Forest Service special use permits, with modifications making them consistent with MBNFSA direction.

**Pest Management.** There is an on-going program of eradicating the non-native salt-cedar and halogeton plants.

**Range.** Allotment boundaries have been adjusted to eliminate those portions within the MBNFSA. Livestock management practices have been modified on acquired lands to avoid conflicts with other resources.

**Recreation.** Construction on the multi-million dollar Scenic Area Visitor Center was completed during the summer of 1991, with the center being officially opened to the public in the spring of 1992. Scenic viewing points have been provided along U.S. Highway 395 and State Highways 120 and 167.

**Research.** The Forest is encouraging and providing some logistical support for research activities in the basin.

**Soils.** The Forest has been working with the Great Basin Air Pollution Control Board to stabilize soils on relicted lands (exposed lake bed). The Forest has also encouraged research on establishing native vegetation on relicted lands.

**Water.** In 1989 and 1990 the Inyo National Forest filed *amicus curiae* on behalf of the Audubon Society, when they filed a suit to raise Mono Lake to the 6,377 elevation. These actions helped result in the El Dorado Superior Court issuing preliminary injunctions on water diversions to the City of Los Angeles. The Forest Service participated on the Technical Advisory Groups set up by the state to facilitate their preparation of the Draft ElR for Los Angeles' water rights. The 1990 court order that interim flows be released down Parker, Walker, Lee Vining, and Rush Creeks lead to the establishment of a Restoration Technical Committee of affected parties. The Forest Service is participating as a non-voting member on the committee on Rush and Lee Vining Creeks. Restoration work on these creeks was accomplished in 1991, 1992, and 1993.

## **Pest Management**

### **Goal and Objectives**

Pest-related damage is maintained at levels that do not unacceptably impact land and resource management goals and objectives.

There are no established objectives for pest management.

#### **Program Strategy**

Respond to the high overall need and opportunity for pest management based on high levels of developed recreation use and new site construction, and the moderate opportunity to manage vegetation associated with timber outputs.

#### **Monitoring Actions**

Early detection and evaluation of pest related problems on commercial timberlands and other Forest lands. Monitor by using the techniques of aerial and ground surveys, surveillance, timber stand examinations and other resource-specific examinations.

#### Accomplishments/Findings

#### **Bark Beetles**

The Forest has conducted annual flights over the Mammoth and Mono Lake Ranger Districts to detect the presence of bark beetle activity in the Jeffrey pine and true fir forests. Prior to 1991, mortality due to endemic populations showed up as scattered dead trees and small groups of dead conifers. No salvage action was taken due to a deficit of snags--thus, the dead trees were left to meet resource management goals and objectives.

Flights in 1992 and 1993 revealed much larger populations of bark beetles, due to continuing drought conditions. There was an estimated mortality of sawtimber between 5 and 25 MMBF. A 1 MMBF salvage sale to utilize some of the wood fiber excess to other resource needs was analyzed in 1993, with logging expected to occur in 1994. The salvage operations are not meant to be an action that will reduce bark beetle activities.

#### Root Rot (Heterobasidion annosum)

As a preventative measure, all Jeffrey pine stumps greater than 8 inches in diameter, were treated with Borax at the time of felling. In 1990, 35 infected acres (including a buffer strip) on the Mammoth District was harvested as a direct treatment of this disease. The stumps were then blown-out and burned as a follow-up treatment in 1992.

## Pest Management - continued

#### **Dwarf Mistletoe**

Direct treatment to an infestation of dwarf mistletoe, through timber harvesting, was accomplished on 20 acres on the Mammoth District in 1993.

#### Insects, Disease, Animal Damage, and Vegetative Competition Within Conifer Plantations

First and third year survival exams are performed annually on all pertinent conifer plantations. Detection of pests, causes of tree mortality, and causes of reduced growth are a part of these examinations. The following table shows the percent survival by year.

Year	First Year Survival (%)	Third Year Survival (%)
1989	95 %	74 %
1990	94 %	<b>43</b> % <sup>1</sup>
1991	80 %1	77 %
1992	86 % <sup>2</sup> , 60 % <sup>3</sup> , 67 % <sup>1</sup>	62 %⁴, 87 %⁵
1993	71 %4	<b>44</b> % <sup>1</sup>

#### PLANTATION SURVIVAL

<sup>1</sup> Marginal growing sites for commercial conifer species primarily due to low soil moisture holding capacities.

<sup>2</sup> Jeffrey pine on Mammoth District with minor amounts of pests.

<sup>3</sup> Red fir with gophers.

<sup>₄</sup> Gophers

<sup>5</sup> Jeffrey pine on Mono District with minor amounts of pests.

## Protection

## **Goal and Objectives**

The Forest has a cost-effective fire management program that minimizes resource losses and serious or long-lasting effects from wildfire. Provide a balanced presuppression program for planning, prevention, attack, detection, and aviation commensurate with threats to life and property, public and employee safety, resource values, and resource management goals and objectives.

The Forest Service mission in fire management is to use fire as a resource management tool. Use appropriate fuels management methods to accomplish projects which reduce fuel hazard, increase the probability of control and/or increase the economic efficiency of the forest fire protection program through the treatment of fuel accumulations.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective	
Fuel Treatment Fire Related	18 Acres	0 Acres	
Timber Related Range Related	18 Acres 0 Acres	93 Acres 50 Acres	
Wildlife Related Fuel Treatment (total)	0 Acres 18 Acres	100 Acres 243 Acres	
Expected Wildfire			
Fire Intensity Level 1	13 acres	9 acres	
Fire Intensity Level 2	34 acres	55 acres	
Fire Intensity Level 3	53 acres	64 acres	
Fire Intensity Level 4	647 acres	239 acres	
Fire Intensity Level 5	0 acres	551 acres	
Fire Intensity Level 6	0 acres	0 acres	

#### **PROTECTION OBJECTIVE**

### **Program Strategy**

Use all appropriate wildfire suppression strategies (confinement, containment and control) on the Forest as identified in the Forest Fire Management Action Plan and by Prescriptions and Management Area Direction.

Use prescribed fire (both management ignited fire and prescribed natural fire) as a management tool when its use is determined to accomplish ecosystem management objectives.

### **Monitoring Actions**

Validate predictions of acres burned by wildfire for next Forest Plan update. Monitor by comparing actual acres burned (from fire reports 5100-29) with predictive tables.

### Accomplishments/Findings

Fiscal years 1989 through 1992 were severe drought periods for the Inyo National Forest. The years 1989 through 1991 reflected high number of fire ignitions, but with aggressive initial attack, the burned acreage was kept low. In 1992 a combination of continuing drought conditions and a depletion of initial attack resources resulted in the 8,500 acre Rainbow Fire and the 2,000 acre Aberdeen Fire. Both fires exhibited extreme fire behavior consistent with drought conditions. In 1993, after an above average water year, the number of fire ignitions was down. However, fuel conditions still reflected drought conditions, thus the average acreage burned was up.

Overall, the total acreage of fuels treated for the first five years of Forest Plan implementation (2,793 acres) exceeded the total Plan objective (243 X 5 = 1,215 acres). However, the resource initiating or benefiting from the fuel treatments were not evenly distributed, as all of it was either fire or timber related, and none of the acres burned were range or wildlife related.

Actual wildfire acreages burned by Intensity Levels shows little resemblance to the expected mix projected by the Forest Plan. As discussed above, extended drought conditions influence both actual acres burned and acres burned by Intensity Levels.

Resource Objectives	1989	1990	1991	1992	1993
Fuel Treatment Fire Related Timber Related Range Related Wildlife Related Totals	500 acres 481 acres 0 acres 0 acres <b>981 acres</b>	0 acres 0 acres 0 acres 0 acres <b>0 acres</b>	500 acres 335 acres 0 acres 0 acres <b>835 acres</b>	500 acres 111 acres 0 acres 0 acres <b>611 acres</b>	230 acres 136 acres 0 acres 0 acres <b>366 acres</b>
Expected Wildfire Fire Intensity Level 1 Fire Intensity Level 2 Fire Intensity Level 3 Fire Intensity Level 4 Fire Intensity Level 5 Fire Intensity Level 6 Totals	0 acres 0 acres 3 acres 15 acres 151 acres 0 acres <b>169 acres</b>	0 acres 0 acres 4 acres 120 acres 0 acres 0 acres <b>124 acres</b>	0 acres 0 acres 59 acres 0 acres 0 acres 0 acres <b>59 acres</b>	0 acres 0 acres 9 acres 0 acres 10470 acres 0 acres <b>10479 acres</b>	0 acres 0 açres 1006 acres 11 acres 0 acres 0 acres <b>1017 acres</b>

#### PROTECTION ACCOMPLISHMENTS

Range

#### **Goal and Objective**

A sustained yield of forage is provided, range condition is improved and grazing capacity is increased on suitable range, while other resource values are maintained or improved through cost-effective development and improved management.

**RANGE OBJECTIVE** 

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Grazing	41,400 AUMs	41,400 AUMs

#### **Program Strategy**

Intensify range management with a vegetative treatment program. Accomplish fifty acres a year using prescribed burning. Allow for a reduction in grazing due to vegetation changes resulting from timber management on lands suitable for both timber and range management. Do not increase livestock grazing on deer winter range. Give priority to mule deer in key fawning areas, developing specific direction in allotment management plans. Apply the guideline of 50 percent utilization of forage by livestock.

#### **Monitoring Actions**

1) **Range Utilization.** Ensure proper level of forage utilization in riparian areas, meadows and other areas. AOP compliance. Monitor by conducting sample field surveys.

2) **Range Forage Improvement.** Determine effectiveness of browse release projects. Monitor by conducting field surveys following browse release projects.

3) **Range Condition and Trend.** Determine the effects of grazing levels on the range resource. Update AMPs as per FSM and Forest Plan. Monitor using the techniques of permanent and paced transects.

4) Wild Horse and Burro. Determine effectiveness of wild horse management. Monitor wild horse numbers, sex ratios and vegetative condition of habitat.

#### Accomplishments/Findings

Currently there are 52 grazing allotments on the Inyo National Forest. Since the Forest Plan was implemented in 1988, the following allotments have been eliminated to meet Plan objectives: Pizona, Adobe Hills, Lone Tree, Birch Creek, Wacoba, Evans, DeChambeau, and Mono Settlement. In addition, the Casa Diablo and Chidago allotments were combined into a single allotment currently called Casa Diablo. And finally, the McBride and Queen Valley allotments were acquired from the Bureau of Land Management through the Nevada Enhancement Act of 1988.

## Range - continued

Allotment Management Plans (AMPs) which have been completed and incorporated Forest Plan direction are the Alger Lake, Mono Mills, and Templeton. In addition, analysis has been conducted on the Bloody Canyon, Horse Meadow, and Cottonwood/Tres Plumas allotments, with AMPs very near completion.

Total *permitted* grazing use has remained relatively stable since the plan was approved. In 1993 permitted grazing use was 38,550 animal unit months (AUMs). This, combined with an estimated 2,160 AUMs of wild horse and burro use and an estimated 700 AUMs of recreation pack and riding stock use totals 41,410 AUMs. *Actual* grazing use has varied significantly during this same period, due primarily to loss of forage production from drought conditions, and the voluntary taking of non-use by the grazing permittees. Actual use by grazing permittees is displayed in the following table.

RANGE	ACCOMPLISHMEN	TS

Year	Actual Grazing Use	
1989	33,593 AUMs	
1990	27,479 AUMs	
1991	29,227 AUMs	
1992	28,885 AUMs	
1993	34,546 AUMs	

There are approximately 840,500 acres of National Forest System land within grazing allotments on the Inyo National Forest. Of this, approximately 297,400 acres have range vegetation management objectives (e.g. is land suitable for grazing). In 1993 monitoring was conducted on 33 allotments, representing approximately 30 percent of the acres with range vegetation management objectives. The majority of this monitoring is to determine compliance with allowable use and trampling/chiseling standards. The following table summarizes the results of this compliance monitoring for fiscal year 1993.

#### COMPLIANCE MONITORING RESULTS FOR FY93

Surveys Where:	Number of Surveys	Acres Represented
Allowable Use standard was met	39	6,720
AU standard was exceeded <20%	4	1,300
AU standard was exceeded 20 to 40%	5	875
AU standard was exceeded >40%	101	1,750
$T/C^2$ standard was met (i.e <20%)	7	50
T/C was between 20 and 30%	0	N/A
T/C was between 30 and 40%	1	20
T/C exceeded 40%	0	N/A

<sup>1</sup> These figures include 820 acres (two surveys) where non-use was scheduled. In other words, the allowable use standard was 0, and any use placed these acres in this category.

<sup>2</sup> Trampling and Chiseling

## Range - continued

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The next table identifies the current (1993) status of all National Forest System lands in which grazing is allowed, in relation to Forest Plan Objectives.

Element	Acres		
Acres with Range Vegetation Management Objectives	297,431		
Acres Monitored in Fiscal Year 1993	3,355		
Acres verified MEETING Forest Plan Objectives	1,845		
Acres estimated MEETING Forest Plan Objectives	33,149		
Acres verified MOVING TOWARD Forest Plan Objectives	1,165		
Acres estimated MOVING TOWARD Forest Plan Objectives	125,060		
Acres verified NOT MEETING NOR MOVING TOWARD Forest Plan Objectives	345		
Acres estimated NOT MEETING NOR MOVING TOWARD Forest Plan Objec- tives	11,292		

#### RANGE VEGETATION WITHIN GRAZING ALLOTMENTS

The last table identifies the current (1993) status of lands classified as riparian lands in which grazing is allowed, in relation to Forest Plan Objectives.

#### RANGELAND RIPARIAN VEGETATION WITHIN GRAZING ALLOTMENTS

Element	Acres
Total Riparian Acres	18,757
Riparian Acres Monitored in Fiscal Year 1993	1,210
Acres verified MEETING Forest Plan Objectives	835
Acres estimated MEETING Forest Plan Objectives	1,619
Acres verified MOVING TOWARD Forest Plan Objectives	45
Acres estimated MOVING TOWARD Forest Plan Objectives	5,822
Acres verified NOT MEETING NOR MOVING TOWARD Forest Plan Objectives	330
Acres estimated NOT MEETING NOR MOVING TOWARD Forest Plan Objec- tives	2,002

# Recreation

## Goal and Objectives

A broad range of developed and dispersed recreation opportunities in balance with identified existing and future demand is provided.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Developed Private	1,635,000 RVDs	1,914,000 RVDs
Developed Public	1,201,000 RVDs	1,578,000 RVDs
Dispersed	1,004,000 RVDs	1,191,000 RVDs

#### **RECREATION OBJECTIVES**

## **Program Strategy**

Develop the potential campgrounds and day-use sites needed to support the objective of increasing use. Develop those sites with the greatest projected use first. Water-oriented sites in concentrated recreation areas have the greatest projected use; sites away from water and concentrated use areas have the lowest projected use. Develop interpretive sites as the opportunity arises. Operate facilities and administer permits at standard levels of service. Develop new concentrated recreation areas in the Walder Lake-Sawmill Canyon and Deadman expansion areas. Develop an additional concentrated recreation area in the upper Owens River area if private land along the river becomes available.

Manage for increasing summer and winter dispersed use that will result from increased development. Provide a full complement of trails, restroom, parking areas and interpretive signs to enhance year-round recreational opportunities and protect resources. Manage dispersed recreation at standard levels of service.

Designate motorized vehicle routes, corridors and open areas in the update of the 1977 Interagency Motor Vehicle Use Plan.

## **Monitoring Actions**

1) **Recreation Use.** Determine total recreation use; check coefficients by ROS class. Monitor using the RIM system and other sampling techniques.

2) **OHV Use.** Determine if adverse effects of OHV use is occurring or likely to occur. Monitor using photography and/or field measurement techniques.

## Recreation - continued

### Accomplishments/Findings

#### **Recreation Funding:**

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Even though funding for recreation, trails maintenance, wilderness, and heritage resources has increased from \$3,046,000 in 1989 to \$3,665,000 in 1993, funding still falls short of needs to administer the recreation use on the Inyo National Forest. Fixed costs have risen out of proportion to project funds, a portion of which is still needed to supplement business management operations.

Trail construction/reconstruction funding has been sufficient to meet planned goals. However, more projects are needed in the "concentrated recreation areas" to meet Forest Plan goals in this particular area. Emphasis on "new" trails outside wilderness needs to occur to meet plan goals.

Recreation construction during the last 5 years was dominated by a line item appropriation for the Mono Basin Visitor Center (\$4MM+). Construction funding has not always followed preconstruction funding, and this has caused disruptions in workloads for engineering and design.

#### **Recreation Use:**

Just prior to approval of the Forest Plan recreation use reporting was changed by the Forest Service's Washington Office. Use that used to be reported by specific sites or areas is now reported only by *activity.* Therefore, the use figures presented in the table below are by activity.

Total recreation use has increased 6 1/2% over the last 5 years. Wilderness use has remained static or declined during this period. Dispersed and developed use has increased proportionally to one another at closer to 8% during the last 5 years. Downhill (alpine) skiing has remained static or decreased during this period. However, the Plan calls for an increase in *developed public* use from 1,201M RVD's in 1982 to 3,510M RVD's in 1990. The actual use increase falls considerably short of these estimates. The same holds true for developed *private* and *dispersed* use.

#### Off Highway Vehicle (OHV) Use:

OHV use has remained fairly static or slightly up during the past 5 years. However, OHV use has not increased in line with Forest Plan projections. If a California Desert Wilderness Bill passes, the Inyo could see an increase in OHV use as southern California users migrate north to find places to ride.

The preparation of an EIS for Interagency Motor Vehicle Use was initiated in 1990 and a draft is currently under public review. This plan will designate routes open for motor vehicle use on National Forest and Public (BLM) lands. It proposes mitigation for routes with issues and would establish a monitoring system to track OHV-associated impacts. The inventory of routes (initial monitoring) identified areas of resource concern.

Recreation and OHV use cannot be reported by ROS class, as envisioned in the Forest Plan.

# Recreation - continued

### **Recreation Planning:**

The Mammoth/June area is currently under study as a result of direction provided by the Forest Plan. Baseline data is being loaded into the geographic information system (GIS) for analysis. Regarding the proposed Sherwin/Snowcreek Ski Area, a Final EIS and Record of Decision were issued in October 1990, that gave the go-ahead to Dempsey Construction to prepare a Master Development Plan (MDP). The MDP is currently being evaluated to determine whether a special use permit should be issued for actual ski area development.

### Challenge Cost Share Projects:

In 1993, the go-ahead for construction of a new Visitor Center at Schulman Grove was given. The project is a partnership with a log home manufacturer. A recreation map of the Eastern Sierra is a multi-partnership venture currently being guided by CURES.

#### **Recreation Construction:**

The Mono Basin National Forest Scenic Area Visitor Center was completed in 1991. The developed sites along and adjacent to the Tioga Pass road are currently undergoing reconstruction. Developed site water systems have been upgraded to meet Safe Drinking Water Act (SDWA) requirements. Sweet Smelling Toilet (SST) projects have also been funded to upgrade pit toilets. The Forest has been awarded several grants from the State of California Boating & Waterways to reconstruct boat ramps at Silver Lake, Gull Lake, and Convict Lake. Prior projects included boat ramps and parking at South Lake and Lake Sabrina.

### **Recreation Operation and Maintenance (O&M):**

In order to balance workloads with funding levels, the Forest has offered most of the developed sites for concession operation by the private sector, which can operate and maintain these sites at a full service level to serve the public. If the Forest was operating these campgrounds, fee receipts would exceed one million dollars. Under the fee offset provision of Granger Thye permits and with the heavy maintenance requirements of the permits, the forest is making some progress in correcting backlog maintenance problems in sites under concession operation.

#### Accomplishments:

Recreation use by the various activity groups is described on the following page. These activities occur at both developed and dispersed sites, with the developed sites provided by both the Forest Service and private concessionaires. An example of this is the category of winter sports, which is an aggregation of skier-days at Mammoth Mountain Ski Area operated by the private sector, and dispersed cross-country skiing activities on general National Forest lands, in addition to other winter activities. Wilderness use is included in these figures and discussed further in this report in the section on Wilderness.

# Recreation - continued

Activity Grouping	1989	1990	1991	1992	1993
Camping, Picnicking and Swimming	2,027.0	N/A	1541.0	1625.6	1,670.6
Mechanized Travel & Viewing Scenery	3,029.7	N/A	3,129.1	3,327.2	3,451.7
Hiking, Horseback Riding & Water Travel	454.4	N/A	445.4	461.4	578.2
Winter Sports	909.3	N/A	459.3	709.5	738.4
Resorts, Cabins & Or- ganized Camps	613.3	N/A	684.3	1,020.9	738.3
Hunting	122.1	N/A	77.9	81.4	83.8
Fishing	343.2	N/A	464.9	417.4	437.7
Non-Consumptive Fish & Wildlife Use	134.4	N/A	154.6	166.3	173.9
Other	328.1	N/A	385.2	565.7	599.7
Totals	7,961.5	8,053.1	7,263.8	8,375.5	8,472.3

### **RECREATION ACCOMPLISHMENTS (M RVDs)**

## **Research Natural Areas**

## **Goal and Objectives**

All botanical Research Natural Areas (RNAs) are established and targets are met. All qualified aquatic and geologic candidates are identified and recommended for establishment.

There are no assigned objectives for Research Natural Area management.

## **Program Strategy**

Complete the establishment process for the Whippoorwill Flat and McAfee Meadow Research Natural Areas. Identify new candidate RNAs and recommend for establishment.

## **Monitoring Actions**

There are no assigned monitoring actions for Research Natural Area management.

## Accomplishments/Findings

**Indiana Summit and Sentinel Meadow:** The preparation of a management plan for these RNAs was initiated in 1993. Several meetings addressing the plan were conducted. The management plan is scheduled for completion in 1994. In addition, the Inyo is proposing to re-introduce fire back into to the Jeffrey pine ecosystem of Indiana Summit RNA. The fire plan is schedule for completion and implementation in fiscal year 1994.

**Harvey Monroe Hall:** A management plan for this RNA was completed in 1992. This was the first RNA in the Pacific Southwest Region and is the only RNA on the Inyo, to date, with a management plan--the other RNAs on the Forest are expected to have management plans completed by the end of fiscal year 1998.

**McAfee Meadow:** This is the only remaining "recommended" RNA on the Inyo. Three meetings were conducted during fiscal year 1993 for the purpose of developing an establishment record and outlining the amount of environmental analysis necessary. Also, these meetings included discussions of proposed boundary changes for this RNA to fully encompass the alpine fellfield target element. An Ecological Survey contract was let in fiscal year 1993, with a report to be completed by fiscal year 1994.

Whippoorwill Flat: The establishment record for this RNA was completed in fiscal year 1991.

**Other:** A training workshop was conducted for the forest on RNA management guidelines, gap analysis for new RNAs and status update of existing RNAs. Whitewing Mountain contains a "petrified forest" buried by relatively recent volcanic activity that is being evaluated as a candidate RNA as part of the Mammoth to June planning process.

## **Riparian Areas**

## **Goal and Objectives**

Riparian areas are managed to protect or improve riparian-dependent resources, while allowing for management of other compatible uses.

There are no assigned objectives for riparian area management.

## **Program Strategy**

Prohibit new activities in riparian areas that will have unacceptable long-term effects on water quality, fish or other aquatic fauna, or water-dependent plant life. Fish habitat and watershed improvement work will also benefit riparian areas.

## **Monitoring Actions**

1) Ensure that management prescriptions and Forest-wide standards and guidelines adequately protect meadows, riparian areas and their associated values. Ensure that spatial and structural diversity is maintained in riparian areas. Monitor using field surveys.

2) Determine whether mitigation measures for small hydro projects and geothermal development are sufficient and effective in maintaining riparian vegetation and other riparian-dependent resources. Monitor by conducting field review of applied mitigation measures.

## Accomplishments/Findings

A riparian monitoring plan was developed for determining effects of flow changes associated with small hydro projects on meadows, riparian areas, and their associated values. Southern California Edison Company and their contract biologist reviewed and participated in developing the final methodology, with Bishop Creek and Mill Creek hydro projects the first to fully implement the monitoring plan.

The monitoring plan is scheduled as follows: 3 consecutive baseline years, then subsequently every 5 years for the life of the license. The baseline summary report will be issued for Bishop Creek in 1994 and Mill creek in 1995. The monitoring results from the subsequent 5 year intervals will be compared to this baseline summary to display trends in the riparian community.

# **Special Interest Areas**

## **Goal and Objectives**

Special Interest Areas (botanic, scenic, zoologic) and National Natural Landmarks are managed to fulfill the intent and purpose for which the areas are established.

There are no assigned objectives for Special Interest Area management.

## **Program Strategy**

Evaluate identified candidate Special Interest Areas and establish those selected. Evaluate National Natural Landmarks and make recommendations to the USDI National Park Service for those that should be established.

## **Monitoring Actions**

There are no monitoring actions for Special Interest Areas.

### Accomplishments/Findings

The only established SIA on the Forest is the Ancient Bristlecone Pine Forest Botanical Area. No action has been taken on the eight candidate areas, in terms of evaluations or recommendations to the Regional Forester for establishment. In the interim, candidate areas are being protected from any activities that would affect their qualifications as SIAs.

The 22 possible National Natural Landmarks, as identified by the Park Service, have not been evaluated, nor have recommendations been made to the Park Service regarding their establishment. This is due to the NNL program having not been funded in recent years.

# Threatened, Endangered or Sensitive Species

## **Goal and Objectives**

The habitats of threatened or endangered animals are protected or improved to assist the recovery of the species in cooperation with state and other federal agencies. Sensitive plant species are protected to ensure that they will not become threatened or endangered.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective	
Bald Eagle	1 winter roosting area	1 winter roosting area	
Peregrine Falcon	0 pairs	2 pairs	
Goshawks (in suitable tim- ber)	15 pairs	15 pairs	
Sierra Nevada Mountain Sheep	300 animals	350 animals	

THREATENED,	<b>ENDANGERED</b>	AND	SENSITIVE	SPECIES	OBJECTIVES
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## Program Strategy

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Bald Eagle. Maintain the integrity of the existing bald eagle winter roosting area.

Peregrine Falcons. Provide for at least two nesting pairs of re-introduced peregrine falcons.

**Goshawks.** Maintain all existing goshawk nesting territories in suitable timber, allocating one hundred acres to each nesting pair.

**Sierra Nevada Mountain Sheep.** Provide for at least one additional herd of re-introduced Sierra Nevada mountain sheep. Consider the re-introduction of additional herds on a case-by-case basis.

**Owens Tui Chub.** Manage Owens Tui Chub populations according to US Fish and Wildlife Service (USFWS) interim directives until the completion of the recovery plan by the USFWS. Improve and protect habitat to assist the recovery of the species by consultation with the USFWS and state agencies.

Lahontan Cutthroat Trout. Manage Lahontan Cutthroat Trout according to USFWS interim directives until the completion of the recovery plan by the USFWS. Improve and protect habitat to assist the recovery of the species by consultation with the USFWS and state agencies.

Paiute Cutthroat Trout. Develop a management plan for the Paiute cutthroat trout.

**Sensitive Plants.** Maintain viability of existing populations and conduct extensive surveys for additional populations for potential de-listing. Do outplantings of extremely restricted distributions.

## **Monitoring Actions**

1) **Fish.** Ensure compliance with recovery plans and Forest-wide standards and guidelines for threatened and endangered fish. Monitor by conducting GAWS inventories of existing and potential habitats. Population inventories should be coordinated with CDFG for existing and re-introduced populations.

2) Sensitive Plants. Detect changes in key populations of each species and assess impacts on selected populations of occupied habitats. Identify key populations that will be used for monitoring purposes. Monitor by conducting population trend censuses. Use applicable techniques identified in interim or species management guides.

3) **Goshawk.** Ensure compliance with Forest-wide standards and guidelines. Determine population and habitat trends. Monitor by surveying all known nest sites with areas managed for timber. Survey 50% of known nest sites outside of areas managed for timber.

4) **Peregrine Falcon.** Verify nesting and reproductive success of peregrine falcons. Implement recovery plan. Monitor using field surveys of historic nest areas and high potential nest sites.

5) Sierra Nevada Mountain Sheep. Insure compliance with Forest-wide standards and guidelines, and recovery plans. Monitor by conducting herd composition counts with CDFG of existing populations.

6) **Bald Eagle.** Implement recovery plan. Evaluate trends of habitats delineated to meet recovery goals. Determine trends of winter populations. Monitor by surveying known winter areas. Survey capability of delineated habitats for specific proposed projects.

7) Other Sensitive Species. Ensure protection is provided by Forest-wide standards and guidelines, and Habitat Capability Models. Monitor using appropriate survey methods. Apply Capability Model to delineate habitats for proposed projects.

8) **Species Management.** Ensure that management activities afford protection of all Threatened, Endangered and Sensitive species as prescribed in the Forest Plan. Monitor by sampling EAs and conducting field surveys of completed projects.

### Accomplishments/Findings

**1a) Owens Tui Chub**. All potential Forest Service activities influencing Owens Tui Chub were reviewed according to Endangered Species Act (ESA) consultation procedures. There are two populations of Owens Tui Chub on the Inyo National Forest. One is a stream dwelling population, and the other population is maintained in two small spring habitats at the CDFG hatchery on Hot Creek.

The stream dwelling population of Owens Tui Chub on the Inyo National Forest occurs within a grazing allotment. A Biological Assessment for a reduction in grazing utilization in this allotment has been prepared by a Forest Service regional team and the USFWS, and is in the process of being approved. A multi-species recovery plan which includes the Owens Tui Chub is in the initial stages of development by a contracting firm, the Owens Valley Multi-species Recovery Team, and the USFWS.

No formal habitat monitoring stations have been established for the stream dwelling population of Owens Tui Chub on the forest. Cursory walk-through surveys have been done at various dates throughout the period 1989-1993 by the Forest Service and the CDFG.

There has been no formal population estimate of the stream dwelling population of Owens Tui Chub on the Forest.

A Forest Service habitat improvement project created multiple pools (a habitat niche preferred by Owens Tui Chub) and tripled the existing habitat of the stream dwelling population in 1991. Additionally, the earthen dam of a small reservoir on this stream was rebuilt to secure the dam and prevent upstream migration of the Lahontan Tui Chub, which hybridizes with the Owens Tui Chub.

**1b)** Lahontan Cutthroat Trout. All potential Forest Service activities influencing Lahontan Cutthroat Trout were reviewed according to ESA consultation procedures. There is one stream dwelling population of Lahontan on the Inyo National Forest, and it occurs within a grazing allotment. A Biological Assessment analyzing a change in range management has been prepared by a Forest Service regional team and the USFWS, and is in the process of being released. The USFWS Lahontan Cutthroat Trout Recovery Plan is due for completion in early summer 1994.

Forest Service stream habitat monitoring stations and initial surveys were established for the one population on the forest in 1989. Sufficient time has not passed to document habitat changes. Cursory walk-through surveys to monitor general habitat conditions are conducted at random intervals by the Forest Service and CDFG.

Inventories by CDFG in the late 1980's place the population at about 200 individuals.

**1c) Paiute Cutthroat Trout**. All potential Forest Service activities influencing Paiute Cutthroat Trout were reviewed according to ESA consultation procedures. Two stream dwelling populations of Pauite Cutthroat Trout are found on the Inyo, both occurring within grazing allotments. A Biological Assessment analyzing a change in range management to further protect riparian habitat has been prepared for one allotment by a Forest Service regional team and the USFWS, and is in the process of being released. The USFWS Pauite Cutthroat Trout Recovery Plan is due for completion in early summer 1994.

A Paiute Cutthroat Trout Habitat Management Plan based on the Recovery Plan was developed by the Forest Service, Bureau of Land Management, and CDFG in 1989 and is being implemented by the Forest. A change in range management is being instigated (via the Biological Assessment referenced above) for the allotment in one of the Paiute's watersheds. This will slightly amend the Habitat Management Plan.

Stream habitat monitoring stations and initial surveys were established for the two populations on the forest. Sufficient time has not passed to document habitat changes for one population. However, for the other population, surveys looking at channel width changes in an area excluded from cattle grazing have indicated no significant change in width after 24 years. However, this research (by the White Mountain Natural Resources Institute) did indicate a pronounced change in recovery of overhanging vegetation.

Population inventories have been conducted by the CDFG for the years 1989-1993 and indicate a stable, but small population of approximately 400-500 fish in one stream. The Inyo has experienced a drought since 1987, with the exception of 1993. During initial years of the drought, the population declined by half from a high of approximately 800-1,100 fish. The other stream had a population estimated at less than 500 in 1988; data for 1989-1993 were not collected.

2) Sensitive Plants. Ten sensitive plant populations on the Inyo National Forest have existing monitoring programs in place. Only two of these have been measured long enough to determine any trends. In each case, the trend is downward. Baseline information has been collected for the rest. Twenty-one species Interim Management Guides have been prepared over the last 5 years, providing direction for management of the respective species. Three have been approved, while the remainder are under review. Input into environmental analyses has been provided to prevent adverse impacts to sensitive species. During the first five years of Forest Plan implementation, 49 biological evaluations were prepared for sensitive plants.

The botanical program consists of the systematic maintenance and monitoring of sensitive and watch list species and their populations, to prevent listing under the Endangered Species Act. For the first five years of Forest Plan implementation, this included:

• Preparation the the Forest Sensitive Plant Management Plan which provides guidelines for field surveys, monitoring and evaluation.

• Field surveys on 20,321 acres for 14 different species to determine population sizes and to locate new occurrences. Fifty-four new plant populations and 19 sub-populations were recorded.

• Monitoring was conducted under two existing strategies and six new ones were installed. Three of the new strategies have been sampled each year as recommended, while the other 3 have not been sampled as planned.

• Challenge Cost Share program was used to provide 2 status reports, a yearly update on Nevada species, and to maintain/protect/monitor sensitive species. In addition, another 5 structures were maintained.

• In 1993 the Forest Sensitive Plant List and the Watch List received an extensive review. This resulted in the elimination of several species of little concern and the addition of a number of newly described species or subspecies which have highly restricted distributions.

Inventories of project sites have been conducted for known sensitive plant population locations. However, areas of potential habitat have often been overlooked due to budget limitations. To support these survey efforts, the following items have been implemented:

• A Forest Sensitive Plant Atlas has been developed with all the known populations mapped. Survey areas with negative results are being recorded. Watch List plants have not been recorded due to budget limitations.

• A sensitive plant list has been developed for each livestock grazing allotment.

• Extensive surveys were conducted in the Mammoth Lakes basin for two species that have not been seen since 1913 and 1917. The areas surveyed are currently being disturbed due to project related activities.

**3) Goshawk.** The monitoring of goshawks has occurred annually throughout areas under timber management, including those areas outside the commercial base where salvage, selective cutting, sanitation and fuelwood harvesting is allowed. The southern two districts, with less habitat and minor amounts of timber harvest, monitor their goshawk nests 50% of the time and on a project-by-project basis due to budgetary and time constraints. The monitoring of goshawks is thorough and provides information needed to plan projects that might affect goshawk nesting success.

Using a rough estimate of a 200 square mile total goshawk/timber base, the density of nests is approximately one territory per 30 square miles, just over 50% of the Forest Plan direction. Distances between nests appear to be 12 miles between territories or clumps of territories, which meets Forest Plan direction. The nest numbers during the five-year period for the goshawk/timber districts are on average, just over 50% the Forest Plan forest objectives for goshawks (see table below).

**4) Peregrine Falcon.** In 1991, a comprehensive two-year survey was initiated to research historical sightings, monitor these locations and also monitor sites with high potential for nesting habitat. In 1989, 1990 and 1993, historical nesting sites and potential habitat for nesting were monitored. The Inyo was a contributor in the attempt to establish nesting through re-introduction of peregrines into suitable habitat at Crowley Lake from 1988 through 1992. Sightings of peregrines on the Forest have continued to occur, giving positive indications of continued activity. In 1991, Lee Aulman, a Forest Service peregrine falcon researcher (Draft Peregrine Falcon Survey for the Southern Sierra Nevada and Los Padres National Forest 1991-1992) watched a pair demonstrate nesting activity on Forest lands near Grant reservoir. Also, Janet Lithicum (Santa Cruz Predatory Bird Research Group) described the activities of previously released birds from Crowley, carrying food between Crowley and Forest lands up McGee and Convict canyons, leading her to believe that there might be a nest in one of these areas. She also added that looking for a nest on the eastern escarpment of the Sierra, is like looking for "a needle in a haystack", so the fact that a nest has not been located yet isn't surprising.

The fact that Inyo hasn't been more active in the re-introduction of peregrines, as stated in the Forest Plan, is consistent with the peregrine falcon program statewide, in that the re-introduction program has gone through a shift. The program has proven successful and the need to continue to introduce falcons into former territory has dropped off with the goal of 120 birds being reached in the early 1990's. The program has moved into the next phase, which is to verify monitoring success through locating nests. With the two sightings mentioned above and other recent sightings of single falcons, there are indications that more falcons are using the Inyo than previously, due to the re-introduction program, and the possibility of nesting occurring is greater.

Over the past 5 years, the Inyo National Forest has implemented the Pacific Coast American Peregrine Falcon Recovery Plan, prepared by the U.S. Fish and Wildlife Service.

**5) Sierra Nevada Mountain Sheep.** The southern four herds: Mt. Langley, Mt. Williamson, Mt. Baxter and Wheeler Ridge have all been monitored by the California Department of Fish and Game and the Inyo National Forest over the last 5 years. The Lee Vining herd was monitored by Yosemite National Park and the Inyo National Forest. Mountain sheep habitat existing in 1988 is being maintained.

Definitive herd size numbers for the four southern herds are only available for 1989 (see table below) because of complications in the monitoring of those herds. The dry years since 1989 have caused the herds to change their movement patterns, making them very difficult to locate (personal communication, Wehausen).

The sheep re-introduced into Lee Vining canyon in 1985 have been closely monitored. This herd has increased regularly during the first five years of the Forest Plan implementation to a population of over 50 animals and is now considered a more stable herd size (personal communication, Yosemite Park Personnel).

John Wehausen of California Department of Fish and Game (Inyo National Forest Sierra Bighorn Sheep Management Plan, 1985), explains that with a herd size over 50 animals, we have some leeway and do not need to track these herds annually but can monitor every three to five years. The exception would be herds with populations below that figure, such as the Mt. Williamson herd and the Wheeler Ridge herd, which would need to be tracked annually. This is a change from the current management plan which states that all herds need to be tracked every other year.

Currently, we are not meeting the Forest Plan goal of re-introducing additional herds into suitable habitat. This is due to limited information on the Baxter herd's viability since 1989, the source for previous re-introduction programs.

In the southern part of the Forest, fifty acres of travel corridor habitat in the south fork of Diaz Creek was opened up for the Langely herd, with the prescribed burning of the invading pinyon pine forest.

6) Bald Eagle. The Inyo National Forest has annually participated in the U.S. Fish and Wildlife Service's bald eagle winter survey held in early January, which covers the known suitable daytime perching/foraging habitat within Mono and Inyo counties. It is difficult to detect a trend (whether bald eagles are increasing on the Forest or not) in the annual winter count due to varying weather and a differing amount of coverage each year. What is consistent is that eagles are showing up every winter and the counts are being repeated every year.

Another possible trend surfaced in the last few years with two eagles being seen on the Forest near Alpers' ranch, throughout the summer of 1992 (personal conversation, Alpers Ranch employee). Two inspections by biologists from the Forest Service and California Department of Fish and Game resulted in the location of one adult bald eagle and two large nests in close proximity to winter eagle daytime perch sites. Whether this indicates nesting or not is unknown at this time as no complete surveys have been done.

Another unknown is where the eagles winter nighttime roosts are, and its importance to land management activities on the Forest. The Pacific Bald Eagle Recovery Plan (U.S. Fish and Wildlife Service) sheds light on the importance of night roosts: "Habitat requirements for communal night roosting are different from those for diurnal (daytime) perching. Communal roosts are invariably near a rich food resource (i.e. runs of anadromous fish, high concentrations of waterfowl) and in forest stands that are uneven-aged and have a least a remnant of old-growth forest component." There may be a nighttime eagle roost in the Owens river near Alpers' ranch, as there is old-growth habitat with good canopy cover and eagles are seen often in the area.

To meet Plan standard and guidelines for eagle recovery, the Forest monitors the eagle on a project-by-project basis. The Inyo National Forest prepared a draft Winter Bald Eagle Management Plan which tiers to the USFWS's Pacific Bald Eagle Recovery Plan. Over the last 5 years, the Inyo has maintained the integrity of existing daytime perching/foraging wintering areas in most cases. The Inyo has enhanced fish, waterfowl, and other prey-base populations within winter foraging areas where opportunities exist, such as the Dechambeau ponds, securing streamflows for trout habitat, working towards a higher lake level for Mono Lake, and enhancing waterfowl habitat. However, the Forest has not integrated the consideration of nighttime roosts into the planning process.

**7) Other Sensitive Species.** The monitoring of wolverine, fisher, pine marten and Sierra Nevada red fox habitat takes place on a project-by-project basis. The Inyo has been a part of a three-year furbearer study in 1991, 1992 and 1993. The results of monitoring for furbearers has been inconclusive except for the marten. Camera/bait station studies have been successful in photographing martens, adding greatly to the information base for this mammal.

Monitoring of the California spotted owl is done on a project-by-project basis. Additional monitoring has taken place using habitat capability models. In 1990 the Forest funded a survey in a known spotted owl area at the south end of the Forest where habitat exists and owls had been documented in the past. This survey succeeded in locating a pair of spotted owls and possible nesting pair. It is felt that no spotted owl habitat exists on the two northern districts at this time. The Forest Plan was amended on January 13, 1993 by the Regional Forester, adding interim direction for management of the spotted owl.

Monitoring of the great gray owl is done on a project-by-project basis. No great gray owl surveys have been completed nor have there been any recent sightings of this bird. They are considered extremely rare in the eastern Sierra (Gaines, 1988).

8) Species Management. All projects conducted on Inyo National Forest must satisfy the National Environmental Policy Act (NEPA)--typically this analysis results in documentation. Biological evaluations are prepared for each project to evaluate any effects on threatened, endangered or sensitive species. The U.S. Fish and Wildlife Service are contacted for each project (or group of projects) for a list of any species (including proposed) that may be present in the project area. Early in the five year Plan implementation period the Forest did not systematically prepare biological evaluations for all projects. This discrepancy has been remedied. All projects are monitored prior to approval to ensure that biological evaluations have been prepared.

Year	Bald Eagle <sup>1</sup>	Peregrine Falcon	Goshawks	Sierra Nevada Mountain Sheep <sup>2</sup>
1989	5 roosts	0 pairs	5 pairs	275-325 animals (43)
1990	26 roosts	0 pairs	5 pairs	N/A (51)
1991	13 roosts	0 pairs	6 pairs	N/A (58)
1992	6 roosts	0 pairs	11 pairs	N/A (69-72)
1993	N/A	0 pairs	7 pairs	N/A (80-89)

#### THREATENED, ENDANGERED AND SENSITIVE SPECIES ACCOMPLISHMENTS

<sup>1</sup> Annual survey of daytime perches

<sup>2</sup> Numbers in parenthesis are for the Lee Vining herd

# Timber

## **Goal and Objectives**

The timber resource is managed to provide a sustained yield of commercial sawtimber, public fuelwood and miscellaneous wood products, while other resource values are maintained at or above those minimums prescribed by law and/or regulation.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Allowable Sale Quantity	10.5 MMBF	7.1 MMBF
Fuelwood	10.0 M cords	10.6 M cords
Reforestation	300 acres	200 acres
Timber Stand Improvement	328 acres	374 acres

### TIMBER OBJECTIVES

### **Program Strategy**

Use even-aged management techniques for timber harvested east of U.S. 395 and uneven-aged management west of the highway. Manage timber for high level production where cost-effective on all suitable lands, with these exceptions:

1. west of U.S. 395 in the Mammoth/June area,

2. existing or potential concentrated recreation areas,

3. the Monache area, and

4. the foreground zones of Sensitivity Level 1 travel routes to meet the Retention visual quality objective.

Provide fuelwood in response to demand. If the supply of logging residue falls below the demand for fuelwood, consider supplying some fuelwood out of the programmed harvest.

## **Monitoring Actions**

1) **Reforestation.** Determine successfulness of regeneration practices. Monitor using techniques described in FSH 2470, including the sampling of species, survival, planting stock and density.

2) **Suitability.** Determine whether lands classified as not suited for timber production are suitable. Monitor by evaluating projects and timber inventories.

3) **ASQ**. Ensure that implementation of the timber sale program (programmed sale quantity acres and volume offered and harvested by prescription and forest type) is consistent with the Forest Plan. Monitor by reviewing programmed harvest statements and timber sale EAs.

## Timber - continued

## Accomplishments/Findings

#### Allowable Sale Quantity

As shown in the table below, the reduced accomplishment (6.9 MMBF actual versus 7.1 planned) is a reflection of the large amount of stands identified for management as old growth. While the Forest Plan projected that most of the ten percent old growth requirement could be met on steep slopes unavailable for tractor logging, actual location of such stands is scattered throughout the commercial timber base to accommodate the movement of old growth dependent animals.

#### Fuelwood

Personal use fuelwood is obtained from downed trees and slash from logging and precommercial thinning. The amount sold is dependent upon availability and the needs of the local communities. Each person is allowed purchase up to 6 cords, with no more than 12 cords per household. During years of low availability due to reduced logging, precommercial thinning has been increased. The amount of personal use fuelwood is therefore dependent upon demand.

#### Reforestation

Reforesting ares burned by wildfires amounted to 253 acres in 1990, 218 acres in 1991, and 205 acres in 1992. Without these acres, the Forest reforested an average of 202 acres per year, which is consistent with Plan objectives.

#### Timber Stand Improvement

Acres needing precommercial thinning will be reduced while the acres needing vegetative release will increase within the next five years, as compared to the last five years. Vegetative release is particularly vital to the success of plantations during drought years experienced every year of Plan implementation except for 1993. The Plan objective should be increased from 374 acres to 500 acres per year.

Year	ASQ	Fuelwood	Reforestation	Timber Stand Imp.
1989	7,517 MMBF	8,634 cords	251 acres	500 acres
1990	7,202 MMBF	6,846 cords	481 acres	568 acres
1991	6,233 MMBF	6,440 cords	469 acres	556 acres
1992	6,709 MMBF	6,670 cords	335 acres	554 acres
1993	6,695 MMBF	7,508 cords	151 acres	555 acres
Totals	34,356 MMBF	36,098 cords	1,687 acres	2,733 acres

### TIMBER ACCOMPLISHMENTS

# Visual Resources

## Goal and Objectives

The quality of the scenic resource and viewing opportunities are maintained or enhanced.

There are no assigned objectives for visual resources management.

## Program Strategy

Assign prescribed visual quality objectives (VQOs) with the following exception: timber management must meet or exceed the VQO of Retention in potential concentrated recreation areas. Timber harvest units should be limited to twenty acres or less in most cases.

## **Monitoring Actions**

1) **Visual Condition.** Determine if VQOs are being met as per the Forest Plan. Monitor using field reviews and photo points.

2) Determine if desired visual character as stated in the Forest Plan is being approached or maintained. Monitor by conducting field reviews using landscape control point photo methodology.

3) Determine if an active program of visual resource improvement is being carried out. Monitor using field reviews and photo points.

## Accomplishments/Findings

Scenic Quality is a primary reason for millions of recreationists to visit the Inyo National Forest every year. In all activities on National Forest lands, maintaining or enhancing the visual resource is a major consideration. The Visual Quality Objectives established in the Forest Plan are very restrictive and become an overriding constraint on many land altering proposals, both in-service and from outside proponents. Approximately 25% of the forest is in classified wilderness in which ecologically evolving landscapes will be retained. Because of the steep terrain and wide open views of the Forest as seen from most viewpoints, the Retention VQO predominates. Visible impacts that are readily apparent were mostly created many years ago before the creation of the Visual Resource management system and the direction provided in the Forest Plan (e.g., Horseshoe Meadows road). The focus of management direction is maintaining and enhancing the visual resources in terms of providing natural appearing landscapes as viewed from the many heavily use recreation road and trail corridors and recreation use zones in the Eastern Sierra. The focus is centered on the steep escarpment lands of the Sierra and White/Inyo Mountain Ranges and water features such as lakes, streams and associated riparian zones on the forest.

### **Trend In Visual Quality**

The trend in visual quality was monitored by comparing the results of on-the-ground activities with both the visual conditions that existed prior to the activity and the adopted Visual Quality Objectives

## Visual Resources - continued

specified in the Forest Plan. The following project areas have been monitored on-the-ground during the 1989-1993 period:

**Vegetation Management:** Visual input into 3-7 timber sales and thinning projects each year ensures the meeting of VQOs. Also, input was provided for potential salvage sales created by the Rainbow fire, the Knolls Fire and the extended drought situation for the past 7 years. All vegetation treatments and harvest activities have met the adopted VQOs in the Forest Plan. Visual impacts related to the timber resource are not readily visible because of the east side timber types, mainly open stands of Jeffrey Pine, and the relatively flat terrain. Much of the timber base is now managed with uneven-aged prescriptions based in part on the visual resource benefits.

**Power and Communication Related Projects:** There have been many power and communications projects, proposals and re-licensing efforts in the last 5 years that have been thoroughly reviewed as they relate to the visual resource. Many of these facilities are existing and are currently being evaluated for re-licensing. This has provided the opportunity to improve or enhance the visual resource by reducing visible impacts created by power facilities. We have also improved the visual resources in affected areas by providing new direction on maintaining high reservoir levels during the recreation use seasons, and by dramatically increasing streamflows in critical sections of many drainages. In the process of re-licensing we have also been able to reduce the visual impact created by poorly located powerlines. Existing projects that have recieved extensive visual input include:

Bishop Creek re-licensing, Southern California Edison (SCE), includes 3 reservoirs, 3 power plants, flowlines, powerlines, and streamflows in 25 miles of streams.

Replacement of flowlines SCE in Bishop Creek and correction of erosion caused by past blowouts.

Dredging of Intake II Reservoir.

Rush Creek re-licensing, SCE, includes power plant, 3 reservoirs, powerlines.

Lee Vining Canyon re-licensing, SCE, includes power plant, 3 reservoirs, powerlines and 20 miles of streamflows.

Lundy Canyon re-licensing, SCE, includes power plan, 1 reservoir, flowlines, and 8 miles of streamflows.

The relocation or elimination of various power and communication lines within the Mono Basin Scenic Area that have greatly enhanced the views as seen from major highways and developed interpretive sites.

## Visual Resources - continued

New facilities proposed and reviewed over the last five years include:

Mustang Mountain electronic site.

Rainbow Ridge communication site.

Transmission Corridor Visual Analysis completed under cooperative agreement with the BLM. The analysis identifies the most visually acceptable powerline corridors on the Forest.

Red Mountain small hydroelectric proposal.

Tungstar small hydroelectric proposal.

Pine Creek small hydroelectric proposal.

Other major projects monitored for visual quality impacts include:

Snowcreek Golf Course.

Doe Ridge Golf Course.

Sherwin (Snowcreek) Ski Area.

Stratcor tungsten mine rehabilitation Plan.

**Highway and Road related projects**: Involvement and monitoring has also occurred in relation to many highway projects, most notable has been the continued widening of Highway 395 to a four lane divided highway throughout the forest. Not only has the location and design of this highway been a priority but also the opportunity to enhance and provide spectacular viewing opportunities have been identified. Planning and visual input is currently taking place relating to an alternate access route to the village of June Lake as proposed by Mono County. Also, input is being provided relating to the relocation of a major Caltrans Maintenance station in the Crestview grade area.

Also related to highway development has been the designation of two Scenic Byways on the forest--the Lee Vining Canyon Scenic Byway and the Bristlecone Pine Scenic Byway. The Inyo National Forest is presently working on a proposal to nominate 200+ miles of U.S. Highway 395 as a Scenic Byway. These nominations will provide a platform to showcase the exceptional scenic resource available in the Eastern Sierra.

Associated with these byways are 30 to 35 proposed turnouts, viewpoints and information areas that will also enhance viewing opportunities. It is vitally important that views seen from these highways reflect the high quality, natural appearing landscapes that the VQOs in the Forest Land Management Plan are devised to preserve.

## Visual Resources - continued

**Recreation Development:** In the last five years the forest has rehabilitated or has done the design work on 35 recreation sites, worked with a dozen permittees and has completed construction of a major visitor center in the Mono Basin National Forest Scenic Area. A basic theme in rehabilitation has been to improve the visual appearance of recreation developments and reduce negative visual impacts created by a lack of proper design in the past. A major emphasis in all rehabilitation has been to provide a high quality visual setting for the users of all rehabilitated sites.

A major planning effort was concluded in 1989 and 1990 with the completion of the Mono Basin National Forest Scenic Area Comprehensive Management Plan. This plan identifies the scenic resource of the Mono Basin as a primary emphasis and provides detailed direction to preserve and protect the basin's outstanding landscapes. In keeping with this direction and emphasis, a Corridor Viewshed Plan is currently being prepared. The Forest Service was a party in testifying before the State Water Resources Board in relation to water rights and water levels of Mono Lake. Part of this testimony given was related to the scenic resources and values of the Mono Basin and Scenic Area.

#### Monitoring results

In the last 5 years the adopted VQOs in the Forest Plan have been met. There have been only minor changes in visual condition generally related to the U.S. Highway 395 corridor and in relation to the communities of June Lake and Mammoth Lakes. Most of these changes have been made in relation to widening of the highway corridor itself or in respect to what the viewer sees as the existing developed communities. Some land exchanges in the vicinity of June Lake will expand the visibly identified limits of the town and will result in a decrease of natural appearing landscapes within the June Lake Loop. Also, as part of the same exchange proposal, natural appearing landscapes within the Mono Basin Scenic Area will be preserved as private land has been placed into public ownership. There is the potential to improve the quality of the visual resources in Lower Lee Vining Canyon as Southern California Edison lands revert to public ownership through land exchange. Relocation of 200-300 campsites to less visually sensitive areas of the canyon will greatly improve the viewed landscape.

It is difficult to photographically monitor changes to the landscape through the establishment of long term photo points, as called for in the Forest Plan. Changes in vegetation are not readily visible to the casual observer and do not show up in photos, especially during short time periods. However, there are a few areas with major impacts that readily lend themselves to long term photo points. These include the two existing ski areas, the proposed Sherwin (Snowcreek) ski area and the proposed Snowcreek golf course site. Areas of current mining impact could also be monitored through the use of photo points. Most other projects can be monitored with before and after photos. Photos are being taken of the ski areas and other projects on a before and after basis.

The overall Visual Condition of the Forest has basically remained unchanged over the last 5 years, as the road system and range of disturbed areas have not changed except as noted above. Few changes in Visual Condition are expected for the next 5 years, except for the continued widening of highway 395, the addition of one or two power transmission lines to identified corridors, the development of Sherwin ski area, the development of the Snowcreek golf course and continued development lands exchanged out of federal ownership and into private ownership in the June Lake Area.

# Watershed

## **Goal and Objectives**

National Forest management activities are conducted to maintain or improve soil productivity, to maintain favorable conditions of waterflow, and to comply with water quality goals as specified in state and federal clean water legislation for the sustained benefit of consumptive users of water.

WATERSHED	OBJECTIVE

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Improvement	100 acres	350 acres
Quality (yield at standards)	1,047,000 acre-feet	1,050,000 acre-feet
Increased Quantity	0 acre-feet	7,000 acre-feet

## **Program Strategy**

Implement the Forest Watershed Improvement Needs (WIN) plan at an average of 350 acres per year.

## **Monitoring Actions**

1) Verify the adequacy of prescriptions and standards and guidelines in their ability to maintain and improve soil productivity. Monitor using observations and measurements. Validate the use of BMPs in project activities.

2) Assess the compliance with BMP direction, and continue to evaluate the effectiveness of BMPs. Monitor by reviewing prepared EAs and contract provisions. Conduct field activity reviews, water quality analyses and field observations.

3) Evaluate effectiveness of watershed improvement measures. Monitor using observations and measurements.

## Accomplishments/Findings

Watershed improvements have proceeded at a pace far below the Forest Plan objective of 350 acres due to funding limitations. Quality has not been measured, but is assumed to be similar to the base year of 1982. Increased quantity is no longer a Forest objective (a Plan amendment will probably be proposed to correct this discrepancy).

The Inyo National Forest has participated in the R5 Best Management Practices (BMP) Evaluation Program in 1992 and 1993.

Watershed - continued

Verification of the adequacy of prescriptions, standards and guidelines has been accomplished each year. Where inadequacies have been noted, Plan amendments have been proposed. For example, a change from the current Bank Protection Ratings methodology to the more state-of-the-art Stream Channel Stability Ratings has been proposed.

Year	Improvement	Yield At Standards	Increased Quantity
1989	N/A	N/A	N/A
1990	105 acres	N/A	N/A
1991	40 acres	N/A	N/A
1992	56 acres	N/A	N/A
1993	39 acres	N/A	N/A
Totals	240 acres	N/A	N/A

#### WATERSHED ACCOMPLISHMENTS

## Wild and Scenic Rivers

## **Goal and Objectives**

The newly designated North Fork of the Kern, and South Fork of the Kern, Wild and Scenic Rivers are managed to protect their wild and scenic qualities. The Middle Fork of the San Joaquin is managed so as to not preclude its designation as a Wild and Scenic River.

There are no assigned objectives for Wild and Scenic Rivers management.

### **Program Strategy**

The Wild and Scenic River recommendation for the Middle Fork of the San Joaquin River will be submitted to Congress by the Sierra National Forest.

### **Monitoring Actions**

There are no assigned Monitoring Actions for Wild and Scenic Rivers management.

### Accomplishments/Findings

**Kern.** In April of 1989 an environmental assessment, prepared jointly with the Sequoia National Forest, was completed for the designation of corridor boundaries on the North and South Forks of the Kern River. The boundary that was adopted is one quarter mile from the ordinary high water mark, each side of the river. This assessment also validated existing segment classifications (i.e wild, scenic or recreation) with one minor modification. A draft environmental impact statement, also prepared jointly with the Sequoia National Forest, was issued in January 1992 for the purpose of adopting an Implementation Plan for these rivers. A final decision is expected to be made soon.

**San Joaquin.** The Sierra National Forest is the lead agency for the planning of the Middle Fork San Joaquin, including the headwaters portion located on the Inyo. In September 1992 the Sierra Forest Plan found it to be suitable for addition to the National Wild and Scenic Rivers System. To date, no legislative action has been initiated.

**Other Streamcourses.** The Forest Plan used Nationwide River Inventory (NRI) data for its assessment of streamcourse eligibility for addition to the national Wild and Scenic Rivers system. The NRI criteria excluded many smaller streams and rivers. Two appeals of the Forest Plan, filed by Friends of the River and American Rivers, raised the issue that several non-NRI streams were not adequately assessed during the land management planning process. Between 1989 and 1991, a Forest Service interdisciplinary team conducted preliminary evaluations of the non-NRI streams. The finding was

## Wild and Scenic Rivers - continued

made that 18 streamcourses (or segments) were eligible for possible inclusion into the National Wild and Scenic Rivers System:

### ELIGIBLE STREAMCOURSES

Convict Creek McGee Creek South Fork Bishop Creek Lone Pine Creek Cottonwood Creek (Sierras) Cottonwood Creek (Whites) Laurel Creek Golden Trout Creek Big Pine Creek

Lee Vining Creek (headwaters) Lee Vining Creek (middle) Rock Creek Walker Creek Mill Creek South Fork Mill Creek Glass/Deadman/Upper Owens Hot Creek Parker Creek

The final step in the river assessment process is the determination of suitability, in which recommendations are made for the purpose of eventual legislative action. For the 18 eligible streamcourses on the Inyo, this process was initiated during the summer of 1993. A draft legislative environmental impact statement is expected to be completed during FY 1995, which will contain a Forest Service recommendation. Ultimate authority for designating any of the 18 streamcourses as Wild & Scenic lies with Congress.

## **Goal and Objective**

Classified wilderness is managed to protect and perpetuate the wilderness character of the area; to provide opportunities for primitive recreation; to maintain wildlife and fish, scenic and watershed values; and to maintain or enhance the quality of wilderness experiences.

### WILDERNESS OBJECTIVE

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
Wilderness Recreation	540,000 RVDs	644,000 RVDs

## **Program Strategy**

Recommend the following Further Planning Areas for wilderness designation: Table Mountain, Tioga Lake, the upper elevations of the White Mountains, and the southeast quarter of the Paiute area in the Inyo Mountains. Containment will be the primary wildfire suppression strategy for natural fires in the wilderness.

## **Monitoring Actions**

Measure changes and compare with limits of acceptable change, and evaluate associated environmental effects. Monitor by remeasuring campsite condition class; record changes according to FSM 2323.1 (R-5 Supplement #145).

## Accomplishments/Findings

### **Monitoring Results**

The Forest Plan monitoring program calls for comparing actual use to planned desired conditions. The monitoring technique refers to a Forest Service Manual (FSM) supplement added to the manual in 1983. Said supplement is no longer a part of the manual system. The supplement noted that user-caused changes occur in wilderness and specifically noted camping impacts. The supplement directed managers to analyze existing campsites and to use the Frissell System for campsite condition analyses.

All districts report that they have watched campsite condition and take appropriate action when necessary to restore, move, or close sites. Only one district, however, uses a systematic process. The Mono Lake RD did inventory campsites in the Hoover Wilderness about 5 years ago. The analyses revealed that in general, campsite conditions had improved since the last survey five years previously. However, the records are inaccessible at this time.

## Wilderness - continued

Two districts have begun the process of inventorying stock camps with the purpose of gathering baseline data.

In many locations, baseline data on campsite condition is lacking, has not been gathered, or was gathered at some point of time but is now lost. However, monitoring of campsite condition is a recognized need. It may be possible to utilize the Central Sierra Wilderness Managers group to coordinate the accomplishment of an initial inventory that is consistent across multi-jurisdictional boundaries. A four-wilderness (Ansel Adams, John Muir, Dinkey Lakes and Monarch), inter-forest interdisclipinary team is currently working with the method to accomplish it. Campsite condition appears to be a needed "indicator" to measure acceptable change. The specific system to accomplish this has not been decided at this time.

#### Accomplishments

The following table shows measured wilderness use for the first five year of Forest Plan implementation. Actual use averaged 517,600 recreation visitor days (RVDs) per year, below the Plan annual objective of 644,000 RVDs. This finding is consistent with a national trend of static to declining wilderness use overall, and a shift towards shorter (i.e., weekend) trips.

Year	Wilderness Recreation
1989	532,800 RVDs
1990	535,100 RVDs
1991	500,400 RVDs
1992	511,600 RVDs
1993	508,300 RVDs

#### WILDERNESS ACCOMPLISHMENTS

The Boundary Peak Wilderness was established in 1989 by passage of the Nevada Wilderness Protection Act (P.L. 101-195). This new wilderness which is located at the north end of the White Mountains, covers approximately 10,700 acres. Since the area was being managed under Forest Plan prescription #2, Proposed Wilderness, its establishment helps accomplish a portion of the 172,600 acres proposed for wilderness by the Forest Plan.

An Implementation Plan (IP) for the South Sierra Wilderness, prepared in conjunction with the Sequoia National Forest, was completed in 1991. Since this IP included programmatic direction for this wilderness that was not originally part of the Forest Plan, the Forest Plan was amended in 1993 to add that direction.

## Wilderness - continued

The Inyo National Forest continues to be an active participant in the Central Sierra Wilderness Managers Group, comprised of 5 National Forests and 2 National Parks. The group's purpose is to provide common management direction, where possible, for adjacent wildernesses. As noted above, the Inyo is involved in a joint planning effort with the Sequoia and Sierra National Forests, for four wildernesses. The limits of acceptable change (LAC) process is being utilized. A public taskforce is in place and meets on a regular basis.

Prescribed natural fire planning efforts are in progress for the Golden Trout, Ansel Adams and John Muir Wildernesses.

An active program of wilderness education is on-going. The Inyo is an active member of the Central Sierra Wilderness Education Group. In 1993, a cooperative wilderness education effort with the Eastern Sierra Packers Association was initiated.

# Wildlife

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## **Goal and Objectives**

Wildlife habitat is managed to provide species diversity, to ensure that viable populations of existing native vertebrates and invertebrates are maintained, and that the habitats of management emphasis species are maintained or improved. Refer also to the section on Threatened, Endangered and Sensitive Species.

Resource Elements	Base Year Output (1982)	Forest Plan Annual Objective
<b>Mule Deer</b> Animals on Inyo <sup>1</sup> Animals (total)	12,000 animals 20,200 animals	12,000 animals 20,200 animals
Nelson Mountain Sheep	130 animals	140 animals
<b>Wildlife User Days</b> Mule Deer Resident Trout Other Total	25.2 M WFUDs 340.0 WFUDs 25.8 WFUDs 391.0 WFUDs	25.2 WFUDs 341.7 WFUDs 26.9 WFUDs 393.8 WFUDs
Direct Habitat Improvement Mule Deer Resident Trout Other	0.5 acres 0.0 miles 0.0 acres	0.2 acres 0.4 miles 0.3 acres

#### WILDLIFE OBJECTIVES

<sup>1</sup>Number of animals that summer and/or winter on National Forest lands.

## **Program Strategy**

1) **Mule Deer.** Enhance mule deer habitat by vegetative treatment at an average rate of 180 acres per year, emphasizing key winter range. Do not increase cattle grazing on key deer winter range. Emphasize the protection of key fawning habitat, developing specific direction in allotment management plans. Prohibit or modify ski area development, geothermal development and timber management to minimize impact on deer migration routes.

2) Nelson Mountain Sheep. Provide for at least one reintroduction of Nelson mountain sheep to unoccupied range.

3) **Management Indicator Species (MIS) Habitat Capability.** Maintain at least 10 percent of forested lands including both suitable and unsuitable timber in older seral stages. Ensure that old growth acreage is adequately distributed throughout the commercial timber types.

4) **Snags.** Maintain or create snags in managed timber stands to meet at least 40 percent of the natural potential density of snag-dependent wildlife; allow for higher densities outside of managed timber.

## **Monitoring Actions**

1) **Mule Deer.** Ensure compliance with CDFG deer herd management plans; Forestwide standards and guidelines; and Management Area direction. Monitor by coordinating compliance counts with CDFG. Evaluate habitat for specific projects.

2) **Nelson Mountain Sheep.** Insure compliance with Forestwide standards and guidelines, and recovery plans. Monitor by conducting herd composition counts of existing populations with CDFG.

3) **MIS Habitat Capability.** Ensure that habitat capability trends for MIS are consistent with Forest Plan direction. Monitor using field surveys and office review of projects, to determine habitat capability for MIS.

4) MIS Relationship. Validate that maintenance of MIS habitat capability maintains habitat for the species they represent. Monitor using field surveys to determine represented species are present.

5) **Snags and Downed Logs.** Ensure minimum quantity, quality and distribution of snags, dead and downed wood material. Monitor by reviewing EAs and conducting field surveys of completed projects. Monitor MIS group.

### Accomplishments/Findings

### 1) Mule Deer

Seven deer herds use the Inyo National Forest for winter, transition and summer range. According to California Department of Fish and Game, the Mono Lake deer herd primarily uses the Toiyabe National Forest, and thus should not be considered an Inyo herd. The Forest will consider preparing an amendment to the Forest Plan to remove it from consideration.

a) *Emphasize the protection of key deer winter range*. In deer wintering areas, habitat protection such as construction of a drift fence near Olancha, which excluded cattle from a riparian area and improved 10 acres of key winter habitat for the Monache deer herd, took place in 1992.

In 1993 the Casa Diablo deer herd, which shares its wintering habitat with the Montgomery Pass wild horse herd, benefited from the excavation and stabilization of seven natural spring watering holes. The strategy was to give the horses access to water over a more spread-out area, lessening the impacts to the soil (compaction) and forage near those watering holes. The deer benefit when they arrive for the winter by having the forage near their water access areas in much better condition due to the lessening impacts of the horses. The over-all project, which included other riparian restoration, will improve 2,000 acres of deer winter range.

b) Enhance mule deer habitat through vegetative treatment at an average rate of 180 acres per year emphasizing key winter range. The Inyo National Forest has not been able to fully achieved the enhancement objective of 180 acres per year due to funding constraints.

A prescribed burn conducted in 1989 benefited the Ash Creek/Goodale herd by improving 50 acres of winter range. A test burn of five acres was completed in 1993 near Convict Creek in order to learn more about the effects of prescribed burning on the bitterbrush habitat. No other prescribed burning of winter range has been conducted in the first five years of Forest Plan implementation.

In 1993, 8 acres of winter habitat for the Casa Diablo deer herd were improved through the planting of willow saplings in the area of Pizona, in conjunction with a spring improvement project.

A total of 121 acres have been planted with bitterbrush seedlings between 1989 and 1993 (75 acres within the Crestview timber sale area, 46 acres within the Deadman timber sale area.

c) Keep from increasing cattle grazing in key deer winter range. No increase in permitted livestock numbers has occurred during the life of the Forest Plan. Actual use numbers have been significantly below permitted numbers during this same period due to extended drought conditions. Grazing permittees have voluntarily taken non-use for resource protection in excess of 50 percent of their permitted AUMs during the period from 1989 through 1993 within deer winter range areas on the Forest.

d) *Emphasize the protection of key fawning habitat.* Livestock management is the most significant potential impact to fawning habitat on the Forest. This potential impact is mitigated through actions identified in the grazing annual operating plans, and includes actions such as salt location, delaying livestock turnout until after fawning season, and utilization standards.

330 acres of riparian habitat have been excluded from grazing impacts through exclosure fencing on the Kern Plateau. This includes 7 spring exclosures, 5 miles on corridor fencing along the South Fork Kern River, and one wetland exclosures.

Fawning habitat and water access were addressed in the Alger Lake Allotment Plan (updated in 1989) with work done at Lorenzo spring in the summer of 1992. An exclosure was built which allows the deer access, but keeps the sheep out. Also, sheep watering tanks were moved away from the riparian area. This was an important project as this area is one of two key holding areas for the Casa Diablo deer herd along their transitional range.

e) Develop specific direction in allotment management plans for habitat protection. In the five-year Forest Plan implementation period, three allotment management plans for the grazing of domestic livestock were prepared. In 1989, the Alger Lakes and Mono Mills allotment plans were completed. In 1991, the Templeton allotment plan was prepared for a portion of the Kern Plateau.

Because of the the number of permits set to expire during the next several years, and in concert with the direction set forth in the range reform proposal, it is anticipated that this specific direction will be incorporated directly into the grazing permits, as they are re-issued. At this time the range reform proposals calls for elimination of AMP's as a planning document.

f) Prohibit or modify ski area development, geothermal development and timber management to minimize impact on deer migration routes. The Inyo National Forest uses the NEPA process as the primary vehicle for analyzing and disclosing potential impacts to mule deer, including their key migration routes.

The Sherwin Bowl Ski Area Final EIS and Record of Decision was released in 1990. The EIS evaluated the need for additional alpine skiing capacity, considered alternative sites, and analyzed several development scenarios at the Sherwin site. Evaluation of impacts on the migration of the Buttermilk/ Sherwin (Round Valley) deer herd and proposed mitigation measures were included. The Sherwin Bowl proposal has lead to joint deer herd studies with the California Department of Fish and Game to better understand the Round Valley herd.

g) Develop water sources where water is needed and opportunities are available. During the first five years of Forest Plan implementation, four guzzlers were constructed in areas where it was felt that access to water was a limiting factor for deer use. This effort accounted for 3,200 acres of habitat improvement for deer.

h) Coordinate with Caltrans and the counties to provide the safest possible road crossings for mule deer. In the past five years, the Forest has worked closely with Caltrans and Fish and Game on a proposal to widen Highway 395 north of June Lake, to ensure deer and other wildlife values are protected.

The following table displays the number of mule deer that totally or partially rely upon habitat located on the Inyo National Forest. The California Department of Fish and Game provided figures for 1993, that are for the three-year period of 1991 through 1993. They reflect lower numbers of deer in each herd, across the board, from the numbers cited in the Forest Plan. As pointed out by Fish and Game. the Round Valley herd has especially experienced a dramatic decline in numbers. Another reason for these numbers being lower than those project by the Forest Plan, is that they do not include the Mono Lake herd, as it shouldn't be counted as part of the Invo. This table also displays accomplishments in terms of Wildlife and Fish User Days (WFUD)--with a WFUD being defined as twelve hours of recreation involving wildlife or fish. The figure displayed were taken from the Recreation Information Management (RIM) numbers for "Big Game Hunting" on the whole forest. Fish and Game has confirmed that over the last five years hunter use numbers haven't changed much. And finally, this table shows the amount of habitat improvement work accomplished by the Forest. The numbers in this table were drawn from year-end wildlife reports, information from district biologists and other personnel, and project files. These totals only reflect those projects in which accomplishments were documented. There were other projects conducted, other plantings of bitterbrush, for example, that are missing from the retrievable record.

Year	Mule Deer on Inyo	Mule Deer Total	User Days	Habitat Improvement
1989	N/A	N/A	106,100 WFUDs	50 acres
1990	N/A	N/A	59,400 WFUDs	300 acres
1991	8,000 animals	14,000 animals	58,000 WFUDs	760 acres
1992	8,000 animals	14,000 animals	60,000 WFUDs	3,350 acres
1993	8,000 animals	14,000 animals	63,800 WFUDs	2,700 acres

### MULE DEER ACCOMPLISHMENTS

### 2) Nelson Mountain Sheep

The California Department of Fish and Game monitors the status of the Nelson Mountain sheep herd in the White/Inyo Mountains. Before a herd can be used for re-introductions elsewhere, a sufficient base population needs to be in place and adequate monitoring is needed to make that judgement call. Through the use of monitoring, Fish and Games knows approximate herd sizes and locations. John Weyhausen estimates there are approximately 200 sheep in the White mountains and 60 in the Inyos. In 1988 a small herd was re-introduced into Silver Canyon in the White Mountains near Laws. This group suffered heavily from mountain lion predation initially, but has since recovered and appear to be making a slow but steady comeback. As shown in the table below, the number of sheep is exceeding the Forest Plan objective.

The following table displays the number of Nelson Mountain sheep that rely upon habitat located on the Inyo National Forest. The California Department of Fish and Game provided figures for 1993, that are for the three-year period of 1991 through 1993. They reflect higher numbers of Nelson Mountain sheep than called for by the Forest Plan.

Year	Nelson Mountain Sheep
1989	N/A
1990	N/A
1991	260 animals
1992	260 animals
1993	260 animals

### MOUNTAIN SHEEP ACCOMPLISHMENTS

#### 3) MIS Habitat Capability

MIS habitat capability is being implemented through the NEPA planning process, including preparation of Biological Evaluations and/or Biological Analysis for threatened, endangered and sensitive species.

### 4) MIS Relationship

Within the last five years, the Inyo National Forest has completed an analysis of Goshawk utilization of managed habitats.

### 5) Snags and Downed Logs

The Forest completed an intensive inventory of snags and down logs in the Indiana Summit RNA to identify potential numbers of each in a non-managed environment. Snag and down log numbers are identified in timber sale planning documents, and future recruitment trees are identified. Also, refer to the section on Diversity within this report for additional information on snags and downed logs as a component of diversity.

# Appendices

The following three appendices are provided to further outline how the Inyo National Forest has implemented it's Forest Plan over the last five years, plus some actions and/or considerations triggered by this report. Included are the following:

## Appendix A - Project Level Planning

**Appendix B - Five Year Evaluation** 

**Appendix C - Forest Plan Amendments** 

## **Appendix A - Project Level Planning**

The primary way the Inyo Forest Plan is implemented is through on-the-ground projects that cumulatively move the Forest towards its desired condition. Therefore, this appendix highlights the results of five years of project-level planning. Over this time period, an average of 32 projects have gone through the planning and approval process each year. These planning activities are conducted under the guidance of the National Environmental Policy Act (NEPA). Furthermore, determinations of consistency with the Forest Plan and the requirements of the National Forest Management Act (NFMA) are made before a project is allowed to proceed.

Additional information on these projects is available upon request from the Inyo's Land Management Planning department, located at the Supervisors Office in Bishop, California.

### **Fiscal Year 1989 Projects**

Mono Basin Visitor Center Bishop Creek Hydroelectric Project Intake 2 Modifications June Mtn Ski Area Phase I Casa Diablo Substation Mammoth Mountain Hiking Trail Snow Creek Reservoir Water Treatment Plan Improvement Fiber Optics Line to Whitewing Work Center Sierra Safari Poker Ralley Storage Reservoir for Smokey Bear Flat Highway Project Lone Pine Gravel Pit Expansion **USGS Strainmeter Site PLV1** Suction Dredging Rush Creek Channel North Fork Cottonwood Creek Paiute Cutthroat Habitat Enhance 2 Tamarack Lodge Ski Trail Widening Experimental Bobsled Test Permit, Jim Dunn Royal Gold, Bulk Sample Drilling Cores Royal Gold, Drilling to Better Define Deposit Dry Creek Commercial Thinning Project

### **Fiscal Year 1990 Projects**

Doe Ridge Golf Course (decision was no-action) Crestview/Aqueduct Timber Compartment **Contel Fiber Optics Line** Mammoth/June Airport Gravel Pit Use & Extraction June Lake Ballfield Shady Rest Stand Improvement Project Removal and Relocation of Southern California Edison Powerline Frontier Pack Train Development Plan and Office Addition **Gull Nesting Habitat Protection Glass Creek Campground Rehabilitation** Gull Lake Marina Boat Launch Mammoth Mountain Ski Area Mountain Bike Park Reconstruction of the Convict Boat Ramp Juniper Ridge Access Road Permit Mammoth Crest Trail Project **Bobsledz International Bobsled Proposal** 

Sherwin Creek Bridge Project Mammoth Creek Park Project, Phase I Republic Geothermal, Inc. Drilling Project Widening of Convict Lake Bridge Woods Cabin Addition Project Mill City Recreation Residence Tract Project Mammoth Ski & Racket Club Undergrounding Project Jaegerhof Telephone Line Underground Project Shady Rest Underground Telephone Line Project Tamarack - Fall 89, Cross Country Ski Trail Maintenance Special Use Authorization for a Public Snow Sliding Hill Convict Pipeline Project Private Road Permit to Ms. Betty Mitchell Reds Meadow Resort, Drilling of Well Forest Trail Fuelbreak Project

## Fiscal Year 1991 Projects

Sherwin Ski Area FEIS Sand Timber Compartment Snowcreek Golf Course (decision withdrawn) Crestview/Aqueduct Timber Compartment **Dual Sport Motorcycle Trail Ride** Mammoth Adventure Connection Special Use Authorization Templeton Grazing Allotment Management Plan Town Of Mammoth Lakes Performing Arts Center Hot Creek Downstream Access Trail Project Crystal Crag Storage Shed/Garage Project MMSA Temporary Snowmaking System Mammoth Mountain Chalet Owners Association, Term Permit June Mt. Ski Area, Term Ski Area Permit Authorization **Snowmobile Grooming Project** Twin Lakes Weed Removal Project Long Valley Project Bobsledz International, Tow Rope Proposal Mammoth Mountain Concert University of Nevada Reno, Seismic Monitoring Site Project Convict Lake Campground Water Well Project Sale of Motorcycle Merchandise Commerce Drive, Roadside Drainage **Operating Food/Beverage Catering Business** Road Closures, 6 Roads Camp High Sierra Campground, Steel Pipeline Long Valley Project, 2nd Phase of Drilling Town of Mammoth Lakes, Settlement Basin Irrigation Line, Replacement from Hwy 203 to Shady Rest Park Convict Boat Ramp, Correction #1 to 06/12/90 Categorical Exclusion

## **Fiscal Year 1992 Projects**

June Lake Marina Term Permit Authorization Bobsledz International Addition Aspen/Big Bend Campground Well Drilling Site Town of Mammoth Lakes, Winterfest 1992 Shady Rest Park Expansion

Outfitter Guide Special Use in John Muir Wilderness New Shady Rest Entrance **Forest Service Compound Road** Sierra Meadows Equestrian and Ski Touring Center **Orienteering Recreation Event Project Team Challenge Marathon Race Reds Meadow Well Project** Lake George Cabin Project **Dry Creek Commercial Thinning Project** Lee Vining Interpretive Trail Horseshoe Lake Exploratory Wells Waterline Repair **Reds Meadows Hazard Tree Removal** Long Valley Project, 3rd Phase Drilling Little Hot Creek Riparian Enhancement Project MMSA Mt. Bike Park Trail Expansion Sierra Manor Stormdrain & Settlement Basin Project

### **Fiscal Year 1993 Projects**

Relicensing of the Lee Vining Hydropower Project FERC #1388-001 SCE East June/Upper Gull Lake Homeowners Land Exchange Mazourka Peak Communication Site Amendment #1 - South Sierra Wilderness Direction Parsons Small Tracts Acts Conveyance Mammoth Lakes Trail System Amendment #3 - Motor Vehicle Direction Bright Water Transmission Line SUP Lo-Invo Amateur Radio Society SUP Sandbox Fall, Buck and Scale Project Rainbow Ridge Electronics Tower and Telecommunications Building Railroad Compartment (Timber Sale) Wildyrie Lodge Permit Renewal Mammoth Area Fuels Reduction Project Frontier Pack Train SUP Renewal Marvelly Dog Sled Permit Mammoth Snowmobile Adventure, Temporary Snowmobile Storage Tamarack Lodge, Boulder Removal Convict Lake Water Tank Installation **Snowshoe Demonstration** Twin Lakes Campground Dwarf Mistletoe Control Peterson Group Mining Exploration in Inyo Crater Flats Walker Lake Trailhead & Improvement Project SCE's Bishop Creek Plan 5 Flowline North Village, Mt. Bike Construction Mammoth Lakes Snowmobile Association Winterfest Mammoth Mountain Ski Area Chair 16 Detachable Quad Mammoth Lakes Board of Realtors PLES 1 Injection Well and Pipeline Little Hot Creek Cattleguard Rerouting of Shady Rest/Knolls Mt. Bike Trails Convict Lake Water Tank Installation **DeChambeau Enhancement Project Rainbow Fire Reforestation** Inyo Mountains Fossil Collection Special Use Authorization

So. Sierra Continental Dynamics Study Group Special Use Authorization **Big Bend Water Line Burial** Convict Lake Boardwalk & Fisherman Trail Reconstruction Foxtail Pine Sampling Special Use Permit Sierra Meadows Development Plan Schulman Grove Visitor Center Thomas Recreation Residence Storage Shed **Rainbow Falls Trailhead Toilet** Hayden Cabin Granger-Thye Special Use Authorization Recreation Events, Associated Activities and Weddings **Commercial Still Photography & Filming** Notice of Intent to Mine Bluebell Mine Chair 18 Modification Notice of Intent to Mine Silver Princess #1 Mammoth Creek Groundwater Monitoring Wells Mammoth Creek Treatment Plant Upgrade Mammoth Mountain Ski Area Bike Trail (Beach Cruiser) Replacement of Gun Tower #1 - Mammoth Mountain Ski Area Wildyrie Resort Paving Three Guzzlers in the Inyo Mountains Three Mountain Bike Trails Saddlebag Lake Campground Water Pipeline Grant Lake Spring Development O'Brien Notice of Intent--Frisian #1 Tamarack Lodge Fuel Storage Vault

# Appendix B - Five-Year Evaluation

I have reviewed the Five-Year Monitoring and Evaluation Report for the Inyo National Forest. I am satisfied that this report meets the intent of both the Forest Plan's requirement for monitoring (Chapter V), and regulations at 36 CFR 219.

Furthermore, the planning regulations that guided the preparation of the Inyo Forest Plan also require the Forest Supervisor to review the conditions on the land covered by the Plan at least every 5 years to determine whether conditions or demands of the public have changed significantly (36 CFR 219.10(g)).

#### Land Condition

While no ecosystem is completely static, there have been no significant changes to the condition of the Inyo National Forest over the last five years. Most management actions to maintain or restore desired land conditions have been successful. Of particular note are actions being taken to protect riparian habitat on those lands in which the grazing of domestic livestock is permitted.

#### **Social Demands**

The Inyo is an important component of the National Forest System and the Pacific Southwest Region. Relative to its place in this system, the Inyo provides substantial amounts of recreational opportunities, Wilderness, heritage resources protection, wildlife habitat, and fish habitat; and lesser amounts of wood, forage, water and minerals. Over the past five years of Forest Plan implementation, there have been no significant increases or decreases in the public's demand for the products and services the Inyo National Forest provides or is scheduled to provide.

#### **Budgets**

The budgets allocated to the Inyo National Forest over the past five years have not facilitated the implementation of the Forest Plan to its full potential. However, static to declining budgets are not unique to the Inyo or the Forest Service--the federal government as a whole is learning to live with reduced funding. The Forest has adapted to declining budgets by strengthening partnerships with other agencies and the private sector. Internally, the Forest is considering organizational changes that will promote and improve the effectiveness and efficiency of actual budgets. Thus, budgets have not significantly changed the relationship between levels of multiple-use goods and services projected under planned budget proposals, as compared to those projected under actual appropriations (36 CFR 219.10(e)).

I find that conditions and demands have not changed significantly, and the Forest Plan may continue to be implemented:

DENNIS W. MARTIN Forest Supervisor

1/13/94

Date

# **Appendix C - Forest Plan Amendments**

The Inyo Forest Plan was never meant to be a static document that would never need adjustment. As the Plan is implemented, there is the expectation that there may be changes in Forest Service policies, Forest Service regulations, Congressional intent, public expectations, public needs, land conditions, and biotic conditions. Thus, the Plan is a dynamic document that must respond to changing conditions. The way in which the Forest Service keeps the Inyo Forest Plan up-to-date is through the amendment process.

### **Completed Amendments**

Over the first five years of Plan implementation three amendments have been approved for the Inyo Forest Plan. All of these amendments have been non-significant, in accordance with regulations at 36 CFR 219.10(f).

Number	Date Approved	Title	
1	01/26/93	South Sierra Wilderness Direction	
2	01/13/93	California Spotted Owl Direction	
3	06/02/93	Motor Vehicle Direction	

### Approved Forest Plan Amendments

### **Proposed Amendments**

The results of this Monitoring and Evaluation Report, in addition to other analyses has resulted in the identification of a number of proposed Forest Plan amendments. Actual analysis and approval of the proposed amendments is dependent upon the urgency of the action, its priority in relation to the overall Forest workload, funding requirements, and staffing available to conduct the necessary work. However, it is the Inyo's intention to complete these amendments before a second generation Forest Plan is approved and implemented.

The proposed amendments include the following:

**Deer Herd Management Direction:** Un-incorporate deer herds plans that were incorporated into the Plan without revision, and simultaneously, supplement the Plan with revised deer management direction.

Watershed Direction: Modify standards and guidelines such that state-of-the-art methodologies are used.

Forest-wide Range Utilization Standards: Provide "umbrella" utilization standards for all range allotments, based on vegetation type.

Furbearer Habitat Direction: Provide additional direction on the management and monitoring of furbearer habitat.

**Management Direction for the John Muir and Ansel Adams Wildernesses:** Provide management direction to ensure protection of these two wildernesses.

**Snag Retention Direction:** Provide direction that ensures adequate number of snags will be protected from fuelwood cutting activities.

Mono Basin National Forest Scenic Area Comprehensive Management Plan Amendment: Reevaluate the range of lake levels that should be recommended to protect this unique ecosystem.

**Prescribed Natural Fire:** Allow the use of prescribed natural fire in all wildernesses, and provide necessary guidance for its application.