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Modoc National Forest

Monitoring and Evaluation Report FY 2003

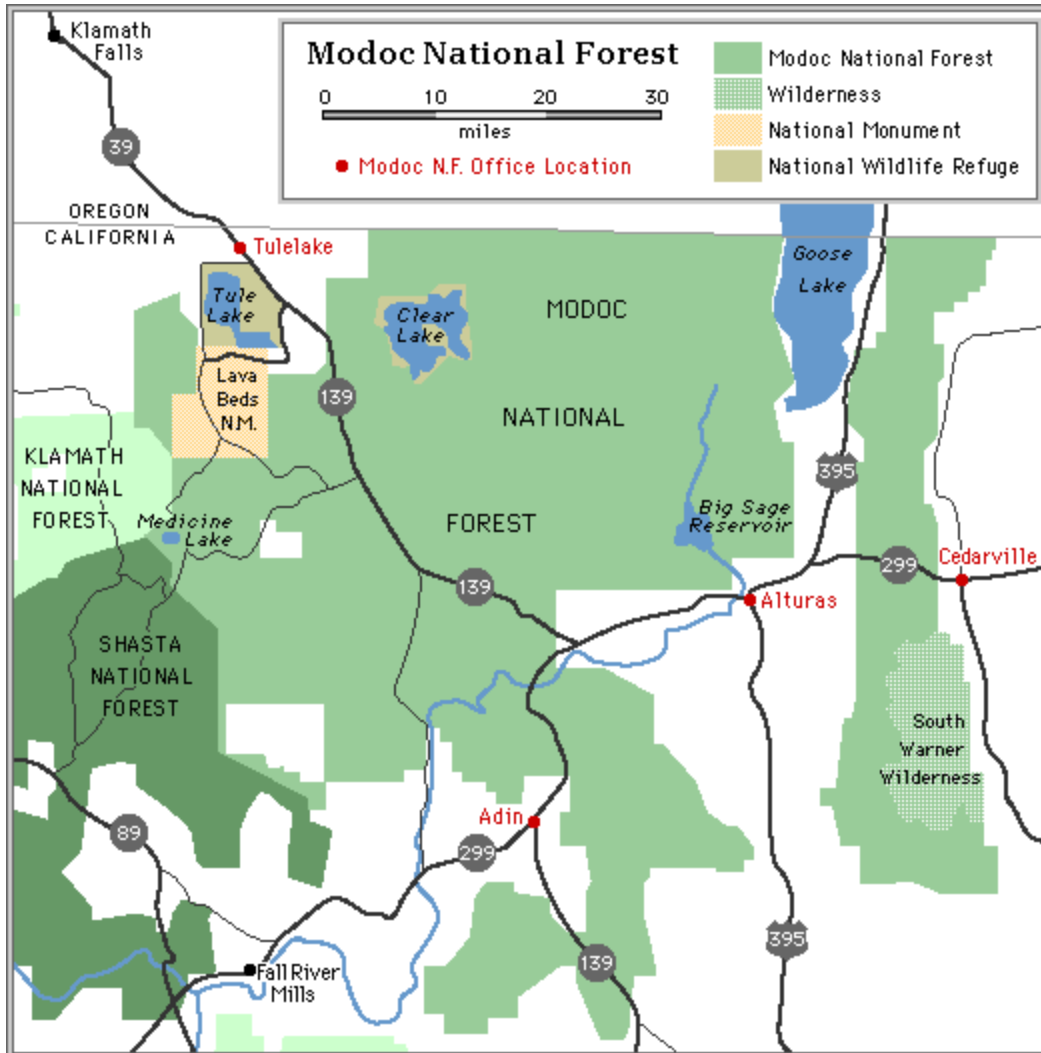
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Introduction

The Modoc National Forest (MDF) is located in the extreme northeast corner of California (Figure 3-1). The Forest comprises 1,678,587 total acres. The forest lies in Modoc (1,374,238 acres, 82.6%), Lassen (158,597 acres, 9.5%) and Siskiyou (130,561 acres, 7.8%) counties.

Modoc County, a vast land area (2,689,346 acres) is one of the least populated counties in California with fewer than 10,000 residents. Federal Lands (US Forest Service, BLM, Fish and Wildlife Service, BIA-Tribal) comprise 64% of Modoc County. Less than 1% of Modoc County area is State of California Land (State Land Commission, Fish and Game), while 35.5% is in private ownership.

Industry in Modoc County today consists of livestock ranching and alfalfa hay farming and the services/retail businesses associated with local resident needs and those of tourism, including hunting and fishing. The Federal, State, County and City governments are important employers in the county.



Figure 3-1 Vacinity Map

Land and Resource Management Plan

The Modoc Forest Land and Resource Management Plan (Forest Plan) is the basis for management of all the Forest's resources. This report constitutes the Modoc National Forest's Monitoring and Evaluation Report for fiscal year 2003 (FY03) as required by the Forest Plan. The Forest Plan is the integration of direction from the 1991 Land and Resource Management Plan, as amended by the Northwest Forest Plan of 1994, and the 2001 Sierra Nevada Amendment. The management direction of the Land and Resource Management Plan is based on land allocations to Management Areas and the accompanying Standards and Guidelines from these three decisions. Standards and Guidelines form a hierarchy of Forest management direction as the basis for combined and coordinated management guidance. In all cases, this hierarchy of direction describes how resources are managed. Significant change in the Sierra Nevada Amendment of 2001 and the Northwest Forest Plan of 1994 occurred in FY03 along with other National initiatives.

Monitoring Requirements

A number of laws authorize the Forest Service to monitor and evaluate its programs and activities. Such provisions are a part of the National Forest Management Act, the Forest Ecosystems and Atmospheric Pollution Act, the Cooperative Forestry Assistance Act, the Clean Water Act, and most recently, the Government Performance and Results Act (GPRA) of 1993. <http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html#h1>

National Strategic Plan

To comply with the provision of the GPRA, the Forest Services was required to develop and implement a Strategic Plan in 2002. <http://www2.srs.fs.fed.us/strategicplan/>

The goals and objectives of the National Strategic Plan are outcome focused, identifying results that will be achieved over a period of time, typically longer than 1 or 2 years. These outcomes are to be achieved by managing the lands and resources of the National Forest System — in collaboration with the American public, interested organizations, private landowners, State, local and Tribal governments, Federal agencies and others— delivering technical assistance through State and Private Forestry programs, making use of scientific information from Research and Development programs, and improving the management of, and accountability for, these activities.

The National Strategic Objectives are shown below. For monitoring and reporting purposes the Modoc National Forest Land and Resources Management Plan monitoring requirements and the Local Unit Critical Indicators (see LUCID discussion below) have been grouped under one of the national strategic objectives.

Goal 1: Ecosystem Health (Chapter 3)

Promote ecosystem health and conservation using a collaborative approach to sustain the Nation's forests, grasslands, and watersheds.

- **National Strategic Objective 1a:** Improve and protect watershed conditions to provide the water quality and quantity and the soil productivity necessary to support ecological functions and intended beneficial water uses.
- **National Strategic Objective 1b:** Provide ecological conditions to sustain viable populations of native and desired nonnative species and to achieve Objectives for Management Indicator Species (MIS)/ focal species.
- **National Strategic Objective 1c:** Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from fires, insects and diseases, and invasive species.

Goal 2: Multiple Benefits to People (Chapter 4)

Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

- **National Strategic Objective 2a:** Improve the capability of the Nation's forests and grasslands to provide diverse, high- quality outdoor recreation opportunities.
- **National Strategic Objective 2b:** Improve the capability of wilderness and protected areas to sustain a desired range of benefits and values.
- **National Strategic Objective 2c:** Improve the capability of the Nation's forests and grasslands to provide desired sustainable levels of uses, values, products, and services.
- **National Strategic Objective 2d:** Increase accessibility to a diversity of people and members of underserved and low- income populations to the full range of uses, values, products, and services.
- **National Strategic Objective 2e:** Improve delivery of services to urban communities.

Goal 3: Scientific and Technical Assistance (Chapter 5)

Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability.

- **National Strategic Objective 3a:** Better assist in building the capacity of Tribal governments, rural communities, and private landowners to adapt to economic, environmental, and social change related to natural resources.
- **National Strategic Objective 3b:** Increase the effectiveness of scientific, developmental, and technical information delivered to domestic and international interests.
- **National Strategic Objective 3c:** Improve the knowledge base provided through research, inventory, and monitoring to enhance scientific understanding of ecosystems, including human uses, and to support decision making and sustainable management of the Nation's forests and grasslands.
- **National Strategic Objective 3d:** Broaden the participation of less traditional research groups in research and technical assistance programs.

Goal 4: Effective Public Service (Chapter 6)

Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

- **National Strategic Objective 4a:** Improve financial management to achieve fiscal accountability.
- **National Strategic Objective 4b:** Improve the safety and economy of USDA Forest Service roads, trails, facilities, and operations and provide greater security for the public and employees.
- **National Strategic Objective 4c:** Improve and integrate informational systems, data structures, and information management processes to support cost- efficient program delivery.
- **National Strategic Objective 4d:** Improve the skills, diversity, and productivity of the workforce.
- **National Strategic Objective 4e:** Ensure equal opportunity in employment practices.
- **National Strategic Objective 4f:** Provide appropriate access to NFS lands and ensure nondiscrimination in the delivery of all USDA Forest Service programs.

Modoc Monitoring Methods and the LUCID Framework

The 1991 Land and Resource Management Plan identified 86 activities, effects, or resources to be measured. As a result of the duplicated and overly ambitious monitoring programs, and the high costs of monitoring identified in Forest Plans the Forest Service began evaluating various monitoring strategies due to changes in management needs,.

In 1996 the Modoc National Forest participated as one of six forests nationwide in a test of a new monitoring strategy called Local Unit Criteria Indicators Development Project (<http://www.fs.fed.us/institute/lucid/>). LUCID generally follows the seven criteria from the Montreal Process Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests, endorsed by the United States in 1995. <http://www.fs.fed.us/global/pub/links/santiago.htm>.

Lucid provides a common language for understanding sustainable management and has been guiding the Modoc National Forest monitoring report since 1997. The LUCID Criteria and Indicators (LUCID CI) framework provides a structured approach to defining the parameters and goals of social, economic, and ecological sustainability and assessing progress toward them. The Modoc National Forest adopted the use of LUCID for reporting the actual monitoring conducted because it meets the intent of the Land and Resource Management Plan.

The results of monitoring activities related to the Strategic Goals and Objectives are reported in chapters three through six, whenever possible, using LUCID. This framework was designed to assist the Forest Supervisor in determining the effectiveness of Plan implementation.

The information reported using the LUCID framework closely conforms to the National Strategy to implement the Government Performance and Results Act. Whenever possible, the LUCID framework is used to display results. Narrative discussions of monitoring conducted for some Strategic Plan Objectives are included. In other cases, narrative discussions supplement the LUCID information for the Objective.

Ecosystem Health

National Strategic Plan Goal 1: Promote ecosystem health and conservation using a collaborative approach to sustain the Nation's forests, grasslands, and watersheds.

The results of monitoring activities related to the National Strategic Goals and Objectives for Ecosystem Health are reported using the Local Unit Criteria and Indicators (C&I) for Ecosystem Health. Where the data to benchmark and measure a brief narratives following the LUCID framework is utilized.

National Strategic Objective 1a: Improve and protect watershed conditions to provide the water quality and quantity and the soil productivity necessary to support ecological functions and intended beneficial water uses.

Table 3-1 Ecosystem Health Monitoring Results for National Strategic Objective 1a using LUCID (C&I)

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
WATER				
Water quality management	Assess compliance with BMPs, S&G's direction, and State water quality Objectives. Evaluate the effectiveness of BMPs	Field inspection of BMP and S&G implementation. Evaluation of effectiveness through field data collection and analysis.	-10% non-implementation in any year. -20% of MPs not effective in any year.	BMPEP monitoring was completed and is currently completed for identified projects.
Watershed condition	Determine existing watershed condition and provide basis for watershed restoration program	Stream reach inventory and channel stability evaluation. Watershed Improvement Needs inventory	Backlog of restoration needs (acres/mile) increases as a result of management activities and does not decrease in response to watershed and riparian area treatments.	A current Watershed Improvement Inventory is being maintained and improved to identify out year Watershed Improvement Needs projects.
Cumulative watershed effects	Identify adverse cumulative impacts in specific watersheds	Cumulative watershed impact analysis (FSH 2509.22, Ch. 20). Stream reach inventory and channel stability evaluation.	Deteriorating stream channels.	Cumulative watershed effects were analyzed for activities during project planning. The Forest Cumulative Watershed Effects Model was modified to be consistent with Regional direction and review. Mitigating measures were included in decision documents.
Cumulative watershed effects	Determine effectiveness and validity of cumulative watershed effects modeling process, and management	Select specific projects for an administrative study. Collect baseline information.	Current process does not protect resource values or overly constrains management options.	Thresholds of Concern for the affected watersheds and the ERA's were modified based on project planning areas and soil/watershed/geomorphic

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
	thresholds			factors.
RIPARIAN AREAS				
Riparian areas	Evaluate compliance w Forest Plan goals & effectiveness of BMPs and S&G's in protecting riparian dependent resources	Photo points, bank stability, cover, water temperature, and fish surveys.	10% reduction in channel and riparian condition or riparian area standards.	The Forest monitored riparian areas ensuring compliance with Standards and Guidelines set for aquatic Threatened and Endangered species
SOILS				
Soil compaction.	Assess loss in productivity; evaluate compaction on 5% of disturbed areas	Nuclear gauge, penetrometer, bulk density sample, visual inspection.	10% or more reduction in soil porosity on 15% or more of the area.	Soil compaction analysis of 5% of the disturbed areas was not completed during 2003. However, Soil productivity and compaction were monitored within ongoing projects. During the planning of proposed projects, mitigation measures or specific monitoring may be identified as part of the project action design based the Cumulative Watershed Effects.
Significant change in soil productivity	Assess compliance and effectiveness of prescribed mitigation measures and soil-related BMPs to maintain productivity	Review EAs and contract provisions, field activity reviews, measure soil parameters.	Meet soil quality standards on at least 85% of lands dedicated to producing vegetation.	FY03 was Year 1 of a 5 year monitoring study of Soil Productivity performed under the monitoring requirements of the SN Amendment.
Response to fertilization	Identify which soil types respond to fertilization and their level of response at selected sites	Use semi-permanent plots and existing Forest fertilization monitoring plan.	Deviation of 10% from expected results,	No monitoring completed Fertilization projects have not be initiated or conducted for several years.
Soil and water improvement projects	Accomplish projects in priority order	Review attainment reports,	Scheduled projects not accomplished	Check dams installed to stop headcuts near Howard's Gulch, Upper Rush Creek & along Hwy 139 south of Adin. A culvert buried in roadfill at Hwy 139 was removed.

National Strategic Objective 1b: Provide ecological conditions to sustain viable populations of native and desired nonnative species and to achieve Objectives for Management Indicator Species (MIS)/ focal species.

Table 3-2, Ecosystem Health Monitoring Results for National Strategic Objective 1b using LUCID (C&I)

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
WILDLIFE AND FISH				
Bald eagle (breeding)	-Determine trend and productivity of breeding	Aerial or ground nest surveys, habitat	Any decline in habitat or population.	The Forest monitored 28 Bald eagle Territories in

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
	population; -Evaluate trend of habitat delineated to meet Recovery Plan Objectives. Assess effectiveness of S&Gs	condition and use surveys, population surveys.		FY03. Planning for Habitat Improvement Projects for Raptors has begun.
Bald eagle (wintering)	Determine condition and trend of identified active and potential roost sites. Assess effectiveness of S&Gs	Vegetation surveys, habitat capability analyses, and silvicultural prescriptions, population surveys.	Any significant decline in habitat capability or decline in roosting population.	Bald eagle wintering - Winter sightings are recorded.
Peregrine falcon	Verify nesting and reproductive success during and after reintroduction. Assess effectiveness of S&Gs	Observation during reintroduction and follow-up survey's.	Lower success or greater loss of birds than Statewide average.	Although no monitoring was completed, These areas are allocated to Management Areas prohibiting timber harvest contributing to the ASQ. Planning for Habitat Improvement Projects for Raptors has begun
Northern spotted owl	Survey to determine if nesting pairs occur on Forest. Assess effectiveness of S&Gs	Survey protocols and habitat surveys.	Noncompliance with Recovery Plan.	Same as above.
Bighorn sheep	Evaluate habitat condition, population trend and livestock or recreation interactions	Aerial and ground surveys; composition counts; identify conflicts with other resources.	Any decline in population attributable to management activity.	No monitoring completed There have been no Big Horn sheep on the Forest in the past ten years.
Goshawk	Determine population and habitat trends; evaluate prescription effectiveness	Nest surveys for occupancy and production in existing and potential habitat.	Any decline in a sample population over a 3-year period; consistent deviation from S&G's Prescription or target population.	Pre-project surveys of known Goshawk territories occur routinely. The Devil's Garden / Doublehead RDs surveyed 6 goshawk territories and the Big Valley RD 16 in FY03. High intensity surveys were conducted on many of the goshawk territories on the Warner Mountain RD.
Modoc Sucker	Determine condition and trend in critical habitat and populations, effectiveness of BMPs and S&G's	Stream and population surveys, photo points, project reviews.	Any significant decline in habitat condition or population. Noncompliance with Recovery Plan	Trends up. Cooperative surveys with the California Department of Fish and Game and the US Fish and Wildlife Service were completed on 2 miles of streams.
Lost River and Shortnose suckers	Determine habitat and population trends, effectiveness of BMPs and S&G's	Stream and population surveys, photo points, project reviews.	Any significant decline in habitat condition or population. Noncompliance with Recovery Plan	Population trend presently unknown, but habitat condition on the MDF is improving
Goose Lake redband trout Lake run	Determine habitat and population trends, effectiveness of BMPs and S&G's	Stream and population surveys, photo points, project reviews.	Failure to implement Riparian Prescription or meet Recovery Plan	Trend Static and habitat condition on the MDF is improving

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
Fisheries (trout and largemouth bass)	Determine habitat and population trends, effectiveness of BMPs and S&G's	Stream/lake habitat and population surveys, project reviews.	Downward or static trend in habitat or populations.	This inventory is completed by State Department of Fish and Game. Trend is unknown.
Pine marten, Pileated woodpecker	Insure quantity and quality of available habitat to maintain viable populations. Assess effectiveness of S&G's	Vegetation mapping, down log & snag transects, population surveys,	Reduction in acres of old growth below management area Objectives; reduction in population levels.	No formal monitoring was conducted, however sightings are recorded. Standards and Guidelines are incorporated into all vegetation management projects. Snags are abundant as the drought and insects contribute to more acres dead and dying.
Mule deer	Evaluate habitat condition, population trend and effectiveness of S&Gs	Deer use surveys, annual CDFG composition counts, vegetation sampling and mapping.	+ or-10% attainment of Forest Plan targets for each herd. Noncompliance with Forest S&G's	Inventory (composition counts) completed by State Department of Fish and Game. Deer herds are stable to decreasing.
Pronghorn	Determine habitat condition, population trend and effectiveness of S&G's	State herd counts, forage surveys, type maps, range condition and trend.	Downward trend in habitat condition or population.	This inventory is completed by State Department of Fish and Game. Trend is unknown.
Canada goose, Mallard, Sandhill crane	Verify production due to wetland improvements and evaluate habitat condition. Assess effectiveness of S&Gs	Nest survey and livestock utilization measurement.	10% decline attributable to management activity or inadequate maintenance.	No formal monitoring completed. The MDF reports known sightings. No trend information available
Sage grouse	Determine trends in population and habitat. Assess effectiveness of S&Gs	CDFG or FS lek and brood count, livestock use, vegetation mapping and condition and trend measurements.	Downward trend in populations or habitat over 5 years.	No monitoring completed
Western gray squirrel, Blue grouse	Monitor acres of habitat and application of S&Gs	Vegetation mapping and sampling.	Failure to meet S&G's on a Forest-wide basis. Downward trend in population over 5 years.	No formal monitoring completed. The MDF reports known sightings. No trend information available.
Hairy woodpecker	Verify acres of required vegetation, snag numbers and trends, and implementation of other S&G's	Snag and down log transects, vegetation mapping and project evaluation.	Decline in old growth acres or snag numbers due to mgmt activities.	No formal monitoring. Sightings are recorded.
Prairie falcon, Osprey, Golden eagle	Ensure existing or potential nest territories are maintained. Assess effectiveness of S&G's	Nest surveys, population surveys, and habitat utilization assessment.	Decline in population over 5 Years	No formal monitoring completed. The MDF reports known sightings. No trend information available.
Swainson's hawk	Ensure existing or potential nest territories are maintained. Assess effectiveness of S&G's	Nest surveys, population surveys, and habitat utilization assessment.	Decline in population over 5 years.	No monitoring completed

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
Riparian species: (Red-breasted and Red-naped sapsuckers; willow flycatcher, yellow warbler)	Determine trends in woody vegetation and habitat capability in riparian areas. Assess effectiveness of S&G's	Vegetation sampling, photo points, point counts for birds, nesting and reproductive success surveys.	Decline or static trend in vegetation or populations.	Survey protocols were conducted on the Warner Mountain RD for willow flycatcher.
Habitat improvement	Determine compliance with planned habitat Improvement program	Compare accomplishments with Forest-wide and mgmt area direction; all planned improvements.	+ or-5% of attainment targets.	Assigned targets were met. Examples include Uplands prescribed burning, recruitment of Aspen and bitterbrush, and development of wetlands
Habitat improvement effectiveness	Determine effectiveness of habitat improvements	Pre-and post project sampling of wildlife use; selected improvements.	Absence of intended habitat improvement or use.	Effectiveness monitoring was completed on 10 sites, primarily for riparian dependent species.
Snags	Assess the numbers, distribution and characteristics of snags on each management area. Assess effectiveness of S&G's	Compartment exams, belt transects; use surveys.	Noncompliance with S&G's, snag longevity not attained, use rates not achieved	New project designs meet requirements for maintaining and recruitment of snags. Devil's Garden RD continued monitoring of the longevity of snags or potential snags. With the spread of the Mountain Pine Beetle, snag recruitment is not needed on much of the MDF.
DIVERSITY				
Diversity	Assess the amounts, types and distribution of vegetation communities and seral stages. Assess and validate S&G's	Compartment exams, landscape analysis.	Non-compliance with Forest S&G's.	Projects implemented applicable S&Gs.
SENSITIVE PLANTS				
Sensitive plants	Detect changes in key populations of sensitive plants and assess mgmt impacts on populations and habitat	Techniques identified in interim or existing mgmt guides for selected species.	As specified in species management guide	Continued monitoring Ivesia paniculata, Astragalus anxius, Calochortus longebarbatus, and started monitoring of Botrychium species and Mimulus evanescens.
SPECIAL INTEREST AND RESEARCH NATURAL AREAS				
Natural integrity of Research Natural Areas and Special Interest Areas	Assess preservation of features for which the area was established	Field inspection.	Any encroachment or degradation.	No monitoring completed

Botany Program Highlights for FY03

To foster Environmental Education and Public Awareness, two education sessions were held for students of Alturas Elementary School who learned basic plant identification skills.

Inventory and Monitoring: Eighty new sites for Threatened, Endangered, and Sensitive (TES)/Watch plants were discovered. See Table 3-3 below.

Species	# New sites	Status
<i>Cypripedium montanum</i>	16	Sensitive
<i>Orcuttia tenuis</i>	14	Threatened
<i>Pogogyne floribunda</i>	8	Sensitive
<i>Calochortus longebarbatus</i>	7	Sensitive
<i>Astragalus pulsiferae</i> var. <i>coronensis</i>	6	Sensitive
<i>Botrychium simplex</i>	5	Watch
<i>Mertensia oblongifolia</i> var. <i>oblongifolia</i>	4	Watch
<i>Dimeresia howellii</i>	4	Watch
<i>Ivesia paniculata</i>	3	Sensitive
<i>Botrychium crenulatum</i>	3	Sensitive
<i>Iliamna bakeri</i>	2	Sensitive
<i>Mertensia longiflora</i>	2	Watch
<i>Mimulus evanescens</i>	2	Sensitive
<i>Galium glabrescens</i> ssp. <i>modocense</i>	1	Sensitive
<i>Phacelia inundata</i>	1	Sensitive
<i>Eriogonum prociduum</i>	1	Sensitive
<i>Lomatium ravenii</i>	1	Watch

In addition 18 known sites were revisited in 2003, 16,600 acres were surveyed for federally listed plants and noxious weeds, and 31 Biological Evaluations were prepared in FY 2003.

National Strategic Objective 1c: Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from fires, insects and diseases, and invasive species.

Table 3-4 Ecosystem Health Monitoring Results for National Strategic Objective 1c using LUCID (C&I)

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
VEGETATION				
Size of harvest openings	Ensure openings meet Regional policy	Review timber sale EAs, project plans, and reports.	Exceeds size standard or did not follow process to obtain approval for a larger opening.	Timber sales sold and or operating did not contain large openings.
Dispersal of harvest openings	Ensure that spacing of harvest openings conforms to Regional policy	Review timber sale EAs, projects, plans, and reports.	Any variation.	Timber sales sold and or operating did not contain large openings.
Reforestation survival	Determine success of reforestation practices, (Adequately restocked within 5 years)	Described in FSH 2409.26; minimum 1% sample.	More than 10% of the acreage is not reforested to standard.	Survival exams performed for each plantation indicate overstocking in some forest plantations, understocking in others, and some well stocked.
Timber stand improvement	Determine success of release and stand improvement practices	Systematic and/or random samples of project areas; 10% of projects.	More than 10% of forest stands growing potentially below standard.	Monitoring in FY 2003 indicates recent thinning activities are successful. Overstocked plantations, sapling and pole stands

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
				represent fire threats.
RANGE				
Riparian Health	Assure riparian Objectives are in AMPs	Review EAs and AMPs.	Riparian Objectives in AMPS.	All Annual Operating Instructions contain best management practices including methods to protect riparian Objectives.
Forage Availability	Determine compliance with S&G's for forage utilization end evaluate stocking to ensure available capacity is not exceeded.	Production utilization studies; field observations; use mapping and utilization measurements.	Exceeding utilization S&G's as specified in AMPS and Annual Operating Plans.	Review of annual range monitoring reports for 2003 indicates that 79 % of benchmark site monitored are within standards.
Implementing Allotment Management Plans	Ensure AMPs include S&G's and are implemented. Determine effectiveness of S&G's	Conduct field reviews.	Deviation from management direction.	Successful implementation of fencing projects and season of use adjustments are creating "win-win" solutions for the Permittee and riparian resource.
Range health	Determine range ecologic condition and trend.	Photo points and Chisel and Tremle transect; Ecodata field observations.	Continued downward or static trend in problem areas.	Monitoring continues to indicate an upward trend. Innovative methods to simultaneously maintain rangeland production and protect riparian areas are being introduced.
Wild horse management	Determine number of wild horses and territory expansion	Aerial counts.	Numbers exceed 335 or fall below 275.	An aerial count of 850 animals was observed. 249 horses were removed and / or adopted. However the size of the herd and expansion of territory is of increasing concern.
FIRE AND FUELS				
Burned acres from wildfires by fire intensity class and management prescriptions	Compare actual and predicted burned acres for the Forest and for designated fire management areas	Review fire reports.	More than 35% discrepancy within a 5-year period,	In FY03 almost 11,000 acres burned. The Ackley fire burned 9,940 acres alone. The mean from 1992 to 2003, is about 11,300 acres.
Fuel treatment	Evaluate compliance with management area direction for treatment of fuels	Review all prescribed burn plans, annual fuel treatment accomplishment reports; field inspection of at least one project per district yearly.	+ or - 25 % of planned target.	Treated acres (7,022) exceeded planned target by 31%.due to National strategic goal#1 Fuel Treatment activities complied with the S&Gs of the Forest Plan and other applicable Federal, State and County (Air Quality Boards) laws and

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Results – What was Done
				requirements
FOREST PESTS				
Effects of pests and damage	Early detection and evaluation of pest-related problems and damage	Aerial and ground surveillance and detection surveys, resource exams, FPM evaluations,	Pest-related damage becomes unacceptable relative to management Objectives,	Monitoring in the Big Valley Ranger District shows that several areas of black stain are increasing. New pockets of both Black Stain and Annosus were also found forest-wide. Insect mortality continues to occur above endemic levels.
NOXIOUS WEEDS				
Noxious weeds	Determine if noxious weeds have increased to damaging levels	County weed inventory.	Levels impact meeting management Objectives.	16,600 acres were surveyed for TES plants and noxious weeds. A Noxious Weeds treatment DEIS is being prepared. The forest proposes to authorize annual treatments of weed infestations ranging from an estimated 300 to 1,500 new acres (first time treatment) annually.

Severity of the Drought in the Area

The mean yearly precipitation for this area is 15.00 inches. This averaged was computed by the Western Regional Climate Center using measurements recorded at Canby Ranger Station, California.

This area has experienced extreme drought over the last decade. The prolonged drought overshadows and affects all ecosystem elements. The National Oceanic and Atmospheric Administration measured the severity of the drought (-4) for northeast California and the precipitation required (between 18 and 50 inches) to end the drought in 6 month. Northeastern Oregon is categorized as being in the state of extreme drought and would require more than 25 inches of precipitation over the next 6 months to end the drought. These results are displayed visually below. This information was found on the web page <http://lwf.ncdc.noaa.gov/oa/climate/research/drought/drought.html>

Rangeland Implementation Monitoring

The Modoc National Forest, with 80 Allotments, administers the largest Range program in the Pacific Southwest Region of the Forest Service. The primary rangeland forage species include: Idaho fescue, Bottlebrush squirreltail, Bluebunch wheatgrass, Bluegrasses, Needlegrasses, sedges, spikerushes and bitterbrush. Overall, drought conditions have prevailed on western rangelands for several years. In the spring of 2003, rain combined with warm soil temperatures resulted in an above average forage production year, but did not break the drought. Additionally, stock ponds that were not filled during the mild winter in many areas received sufficient water.

Every year, range permittees meet with District personnel to discuss allotment conditions, grazing strategies and range improvements. These meetings are documented in Annual Operating Instructions that are site-specific and include standards and guidelines consistent with the Forest Plan.

To assess the effects of the grazing program on rangeland health, 459 key areas within the allotments are systematically monitored. The monitoring methods (type and intensity) included measuring Stubble Height, Paired Plot comparisons, Landscape Appearance Herbaceous, ocular estimate of Key Species, and Stream-bank alteration examinations. In FY 2003, monitoring occurred on 120 key areas and 56 non-key areas. Of the total areas (128) monitored 101 (79 %) met resource standards and 27 did not meet the standards.

Multiple Benefits to People

National Strategic Plan Goal 2: Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems.

The results of monitoring activities related to the National Strategic Goals and Objectives for Multiple Benefits to People are below, using LUCID. As noted for the first goal, in some cases, the data necessary for the Forest to benchmark and measure its performance directly on this strategic goal and set of Objectives are lacking.

National Strategic Objective 2a: Improve the capability of the Nation’s forests and grasslands to provide diverse, high- quality outdoor recreation opportunities.

Table 4-1: Multiple Benefits to People Monitoring Results for National Strategic Objective 2a using LUCID (C&I)

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
RECREATION				
Physical, social and managerial setting for recreation opportunities.	Assure that selected physical and visual attributes described in the ROS User's Guide are being protected from degradation	Review all projects.	More than 10% change in designated ROS classes.	Monitoring for Blue Lake Campground and Medicine Lake Campgrounds completed. Medicine Lake Campgrounds lack adequate vegetation in camping areas.
Condition and use of developed and dispersed sites	Identify need for maintenance and/or regulation of sites	Field review 20% of sites, occupancy rate samples.	Deterioration of site beyond that anticipated under normal use.	Sites are being maintained at less than standard condition.
User (visitor) needs and expectations	Identify changing needs and expectations	Interview public at recreation sites; review public comments.	When more than 50% of comments indicate need for change.	Comments have not exceeded the threshold.
Off-highway vehicle (OHV) effects	Determine effects of OHVs on sensitive soil areas, vegetation, cultural, wildlife, and visual resources. Determine conflicts between OHV users and other recreationists	Visual evaluation, visitor reports, other resource surveys and data observation.	Excessive conflict or resource damage.	No formal monitoring to detect the effects of OHVs on sensitive soil areas, vegetation, cultural, wildlife, and visual resources was conducted. No major conflicts reported.

Developed Recreation Inventory and Monitoring

The Forest has 22 developed sites including campgrounds and picnic sites, ten boat ramps, a swimming beach, over 80 miles of trails, 2,848 miles of Forest Development Roads, and numerous “semi-developed” dispersed campsites available for public enjoyment

Recreation users experienced sites that were not maintained to standard and experienced limited contact with Forest Officers. In 2003, the Regional Office completed a review of the fee campgrounds on the Modoc National Forest that showed campgrounds are not being maintained to standard due to reduced recreation budgets.

Despite the low recreation budgets several recreation site improvements took place during FY03 including rest room replacements, construction of boat launches, the Red Tail Rim Trail was completed, the Cedar Creek Interpretative trail was opened, and the Emigrant Trails Scenic Byway was dedicated. Minor repair and improvement items have been made but are not reducing the backlog of deferred maintenance. These improvements were possible due to special capital investment funds and partnerships with recreation users groups, Modoc County, and the State of California.

Comment cards received on the service provided by the Forest indicates that most people are pleased with the recreation facilities and the types and amounts of services provided when they come into or phone the office or visit the recreation sites. Approximately two of every three of the comments are favorable.

Dispersed Recreation Inventory and Monitoring

The 2003 trail inventory for the Forest includes approximately 118 miles of trails, 79 miles of which are in the South Warner Wilderness. The Red Tail Rim Trail and Cedar Creek Interpretive Trail were constructed in Fiscal Year 2003, adding six more miles of trails to the current trail inventory. Red Tail Rim Trailhead near Ash Creek was constructed with a new accessible restroom and units designed for horse use. Damage to Owl Creek Trail and Summit Trail in the South Warner Wilderness was caused from a storm event that washed out several creek crossings and a segment of trail. These were completed in a timely manner to prevent further damage during normal spring run off.

This Forest has more land available to Off-Highway Vehicles than any forest in the Region. Ninety-four percent of the land is open to Off-Highway Vehicle use, and flat to gently sloped topography allows easy access. In addition to cross-country travel, more than 1,000 miles of primitive roads provide challenging routes. The Forest completed route designation signing of the “Modoc Backcountry Discovery” route making over 200 miles of non-paved backcountry roads more visible to special utility vehicles and motorbike operators. Winter sports users were provided over 52 miles of groomed trails.

Gathering firewood and hunting are the primary activities associated with Off-Highway Vehicle use. People are creating additional trails to access firewood areas. Although past use has not been significant, some resource damage has occurred.

The Medicine Lake Highlands and Cedar Pass provide winter sports activities. The Medicine Lake Highlands has 52 miles of groomed snowmobile trails, warming hut, and parking. The Cedar Pass Ski Hill provides downhill skiing, snowboarding, and sledding. Obsidian collection is a growing recreational activity. Collectors appear to be generally pleased with the permit process. For the sport of hang-gliding Sugar Hill (Warner Mountain RD) offers a world-class experience and remains a recreation destination.

The Forest continues to receive complaints about the lack of local hunting opportunities. Overall local hunting opportunities have dropped dramatically since the 1991 Forest plan was developed as the State of California changed the hunting regulations regarding permit issuance limits and requirements. The Forest receives some complaints about the limited firewood season when fire restrictions are imposed.

The Modoc National Forest participated in the National Recreation Use Inventory for the 1st time in FY 2000. This is an effort to uniformly survey recreation use and demand on each National Forest every four years. http://www.fs.fed.us/recreation/programs/nvum/reports/year1/R5_Modoc_final_082001.doc

Recreation Customer Satisfaction

The Forest receives approximately 50 comment cards from customers per year. Nearly all expressed their satisfaction with the service received but some noticed declining quality of recreation campgrounds. A few customers, while expressing their satisfaction with the service received commented that the Forest needed to restrict or remove cattle from the South Warner Wilderness, improve cleanliness of campgrounds, and/or increase law enforcement patrols

National Strategic Objective 2b: Improve the capability of wilderness and protected areas to sustain a desired range of benefits and values.

South Warner Wilderness Area Management, Monitoring and User Satisfaction.

The monitoring Objective for the South Warner Wilderness (SWW) is to examine whether wilderness attributes are being maintained. The monitoring technique is field observations in heavy -use areas and travel corridors

The South Warner Wilderness Fire Management Plan was approved in 1997 and allows for natural ignitions to play their role in perpetuating the natural diversity of plant and animal communities within the SWW. The Warner Mountain Rangeland Management Project provides appropriate utilization standards for seeps and springs, streams, uplands, and Aspen areas; along with implementation and effectiveness monitoring protocols. These standards and monitoring protocols are implemented through allotment management plans. The emphasis in these plans is to manage forage utilization to maintain or improve the Wilderness resource. Trailhead bulletin boards are maintained at each of 8 trailheads into the SWW. Information regarding Leave-No-Trace and regulations pertaining to the use of SWW are prominently displayed on these bulletin boards.

The Forest receives comments regarding many aspects of Wilderness and its use. Commonly, comments are of an informational nature regarding the conditions that the visitors encountered at the trailheads, campgrounds, trails, and in the Wilderness. There are also suggestions as to how the Forest might better serve the public. Often these suggestions conflict with Wilderness direction, such as providing destination signing along the trails, with mileages etc. to inform hikers. The Forest continues to receive comments from visitors concerning adverse effects of grazing on wilderness characteristics and riparian health.

National Strategic Objective 2c: Improve the capability of the Nation’s forests and grasslands to provide desired sustainable levels of uses, values, products, and services.

Table 4-2: Multiple Benefits to People Monitoring Results for National Strategic Objective 2c using LUCID (C&I)

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
RANGE				
Permitted AUMs	Compare permitted to Forest Plan projected AUMs	Annual grazing statistical report.	Permitted AUMs do not meet Forest Plan estimates for 3 consecutive years.	Permitted Use for FY03 was 124.966 AUMS yielding 125.222 Head Months of Grazing for Cattle and Sheep and Goats. Authorized use in FY03 was 67.336

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Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
				AUMS yielding 78.356 Head Months of Grazing for Cattle and Sheep and Goats. Cattle accounted for 95 % of Authorized AUMS. These use estimates are below the 91 Forest plan projections of 118.8 thousand AUMs.
Developing allotment management plans.	Ensure AMPS are developed for all allotments within 10 years (I)	Number of AMPS completed.	Less than 5 per year.	Big Valley RD began 5 AMPs in FY03.
TIMBER				
Annual sale quantity and acreage.	Ensure consistency of the timber sale program with the Forest Plan	Record sale quantity and acreage by Forest type regulation class and harvest method on all sales.	20% deviation from Forest Plan.	2.2 MMBF was sold and 8.9 Million Board Feet harvested in FY03 compared to the 1991 Forest plans Allowable Sale Quantity of 45.5 MMBF.
FIREWOOD				
Firewood	Verify supply and use of both charge and free-use	MAR Cut & Sold reports.	Variable monitor trend + or- 50% from 10-year average.	Commercial Use permittees cut 765 cords (382.50 MBF) of fuelwood. Western juniper is the preferred species for firewood, easily accessible, and produces the most firewood in the area. Juniper reproduction is estimated at 18,000 cords per year. Trend is static.
Non-chargeable and firewood quantities	Assess trend to determine how detailed manage.	Record volume by species.	20% deviation from Forest Plan	Personal Use permittees cut 32,662 cords (1,331 MBF) of fuelwood in Fy03. Western juniper is the preferred species. Trend is static.
Reforestation and timber stand improvements	Verify consistency with scheduled acre outputs and FOREST PLAN prescriptions	Record data from all projects using the stand record system.	+ or-20% planned activity schedule on a fiscal year basis.	Targets were met for timber stand improvement in FY03.
Timber-forage plantations	Evaluate growth and survival of conifers and pounds of forage produced	Systematic and/or random sample	More than 10% of unit growing below standard; or- 25% deviation from yield tables.	No monitoring completed
Land suitability for timber	Verify classification of land as to suited or not suited for timber production	EA reviews; soil survey evaluation; timber stand data; inventory.	Reclassification leading to a net change of >10% of the current suitable land.	Land suitability for timber is examined for every proposed stand treatment action. However a forest-wide

Monitoring and Evaluation Report FY 2003

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
				evaluation of suitability has not been done since the 1991 Forest plan.
Growth and yield projections.	Determine if growth and yield projections for silvicultural prescriptions are occurring as projected	Timber inventory of plantations and untreated stands.	Unacceptable results based on an ID team review.	The MDF examines every plantation and the results of timber stand improvement activity to gauge the success of the activity in improving stand health. Recent monitoring in the Hackamore area indicates success. However no in-depth comparisons of field results to growth and yield projections were conducted.
AIR QUALITY				
Prescribed burning: planned and unplanned ignitions.	Assure all prescribed fires comply with air quality Regulations	Report of fuels burned for each project.	Visual deterioration in smoke sensitive areas or measurements indicative of particulate levels exceeding standards.	Individual prescribed burn plans were monitored daily with reports to the County Air Quality Control Board. Though the County Board received no official complaints, some members of the public were upset about smoke levels as burns were conducted.
Total suspended Particulate emission production from Forest activities.	-Establishing baseline data -Comparison with established baseline values.	Visibility reports from the camera installed at Likely Mtn. Lookout.	10% change in visibility produced from baseline values	Daily monitoring of each ignition occurred. Photo points of smoke columns were utilized
Effects of Forest activities on AQRVs of Class I areas	-Identify AQRVs -Establish baseline data -Identify trends. -Identify areas of potential impairment	-Detailed inventory of Class I Wilderness areas first year for vegetation including lichens, rocks & soils to establish AQRVs. -Inventory AQRVs annually.	10% change in screening levels.	No complaints were received. Photo point was not utilized.
CULTURAL RESOURCES				
Effect of deterioration or destruction of cultural resources through vandalism or natural causes.	Determine effects of vandalism and natural factors on cultural resources and means to mitigate effects.	Field review of cultural resource conditions.	10%	No systematic monitoring was conducted
Effect of land use projects on cultural resources,	Ensure cultural resources receives adequate protection.	Field review during and following projects; 25% of	Any variation from standard.	No systematic monitoring was conducted.

Monitoring and Evaluation Report FY 2003

Activity, Effect, or Resource to be Measured	Monitoring Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
		projects per district.		
LANDS				
Effect of land adjustment on total Forest land base for all resources	Assure that Forest's outputs are not adversely affected by land adjustments.	Determine net change in acres and inventory for each land adjustment.	-5%	No land adjustments were completed.
MINERALS				
Mineral Development	Assess level of mining and mineral leasing operations to ensure operations are not unreasonably impaired.	Review environmental documents for Plans of Operation.	Increase over 10% from current unavailable or constrained acres.	No change
Plan of Operation	Assure compliance with Plan of Operation.	Review operations and activities of each project.	Any deviation	No deviation from Plan(s) of Operation.
Withdrawals	Review Forest Service initiated withdrawals to assess whether they are needed.	Review withdrawals.	None	No monitoring completed
VISUAL RESOURCES				
Trend of visual character	Determine if desired character stated in plan is being approached or maintained	Field reviews with landscape control point method,	Indication of trend away from the stated goal on greater than 5% of areas.	No monitoring completed
Visual condition of Forest	Determine compliance with visual quality Objectives (VQOs)	Review and field check all projects in Retention, 50% of projects in Partial Retention, and periodic review of projects in modification	-10% of 1 and 2 sensitivity level acreages;-33% of other acreage,	No monitoring completed

The Timber Sale Program in FY 2003

The Modoc National Forest sold two Timber Sales in Fiscal Years 2003 totaling 2.2 Million Board Feet or 4,339 hundred cubic feet (CCF) but harvested 8.9 Million Board Feet (17,734 CCF) from prior year sales.

Table 4.3 FY 2003 Volume Sold and Harvested

Sold	Sale Name		Ranger District	MBF	Biomass Tons	CCF
	Ryan Forest Products		BV	1,989	9,944	3,978
	Granger		WM	182		361
	Total			2,171	9,944	4,339
Harvested						
	Diaz/Letterbox PCT	Biomass	BV	784	2,240	896
	Green Springs	Sawtimber	DG	1,662		3,060
	Pullplug	Sawtimber	WM	2,600		5,491
	Granger	Sawtimber	WM	41		81
	Spaulding	Sawtimber	DG	3,012		7,246
	Boyd	Biomass	BV	840	2,400	960

Sold	Sale Name		Ranger District	MBF	Biomass Tons	CCF
	Total			8,938	4,640	17,734

MBF=Biomass=CCF, the conversion factors vary by sale and diameter of material

The Diaz/Letterbox PCT sale harvest was the only Service Contract in operation. No other Service Contracts or Stewardship contracts were awarded in FY03.

Rangeland Use and Implementation Monitoring FY 2003:

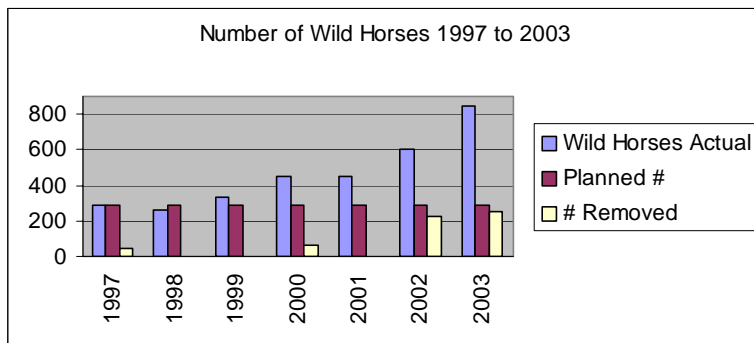
Overall, drought conditions have prevailed for several years. In the spring of 2003, the forest received average precipitation, but did not receive enough to break the drought conditions. The primary rangeland forage species include: Idaho fescue, Bottlebrush squirreltail, Bluebunch wheatgrass, Bluegrasses, Needlegrasses, sedges, spikerushes and bitterbrush. Rain combined with warm soil temperatures resulted in an above average forage production year, and stock-ponds filled with more water. The “Permitted Use” for FY03 was 132,696 Animal Unit Months (AUMs) of range available to permittees. The “Authorized use”, permittees actually grazing animals on NFS lands, for Cattle and Sheep and Goats was 100,950 AUMS yielding 89,477 Head Months. Cattle accounted for 95 % of authorized AUMS.

The Modoc National Forest, with 80 Allotments, administers the largest Range program in the Pacific Southwest Region of the Forest Service. Ranger District range staff met with permittees to discuss allotment conditions, grazing strategies and range improvements prior to the season. These meetings were documented in Annual Operating Instructions that are site-specific and include standards and guidelines consistent with the Forest Plan.

To assess the effects of the grazing program on rangeland health, 459 key areas within the allotments are systematically monitored. The monitoring methods (type and intensity) included measuring Stubble Height, Paired Plot comparisons, Landscape Appearance Herbaceous, ocular estimate of Key Species, and Stream-bank alteration examinations. The results of this monitoring are presented in Table5-4 on pages 53-61 below. In fiscal year 2003, monitoring occurred on 120 key areas and 56 non-key areas. Of the total areas (128) monitored 101 (79 %) met resource standards and 27 did not meet the standards. This report, in full detail, is found in Appendix A.

The wild horse population continued to grow well past the planned level of the Forest Plan. Without natural predators, the herd is expanding rapidly.

Figure4-1 Wild Horse Population



Air Quality

Forest management activities such as prescribed burning did not adversely affect the air quality. For each prescribed fire, the Forest prepared an Air Quality Impact Plan which must be approved by the County with jurisdiction. Results and findings for air quality monitoring are based on daily smoke management

reports. Fuel to be treated and particulate tonnages were reported daily for each prescribed burning project. Smoke columns created from these ignitions were monitored and reported daily as well with photography. Although some recreation users of the Forest and people living in the Wildland Urban Interface were inconvenienced, no complaints were filed with County Air Quality Control Boards.

Wildfires both on and off the Forest did adversely affect air quality for short periods of time particularly reducing the distant views.

Fire and Fuels

The Modoc National Forest implemented projects designed to decrease fuel loads. The Forest completed 7,022 acres of hazardous fuels reduction, 131% of the assigned target. Of the total 7,022 acres accomplished, 2,481 took place in the Wildland Urban Interface. Mechanical treatments accounted for 2,009 acres while prescribed fire occurred on 4,923 acres. See Table 4-4:

Table 4-4 Fuel Treatments FY03			
Treatments	WUI	Non-WUI	Total Acres
Mechanical	585	1,514	2,099
Prescribed Fire	1,896	3,027	4,923
Total Treatments	2,481	4,541	7,022

The comprehensive Fire Management Plan for the Modoc National Forest was revised and approved in 2003. Fire Management funding was provided at 95% of Most Efficient Level (MEL) for FY03 down from 100% MEL in FY02. The Fire Use Fire Management Unit, encompassing the South Warner Wilderness, allows lightning caused fires to play their natural ecological role in the Wilderness. In 2003 four fires were allowed to burn consuming 1 acre. The Mount Bidwell and West Valley fire use fire management units, 1,892 and 8,866 acres respectively, have also been selected for wild fire use to promote vegetation restoration. The Big Sage Management is included in the appropriate suppression response fire management unit (FMU). This FMU allows for a full range of suppression responses from aggressive initial attack to multiple strategies to confine the wild land fire.

The Modoc National Forest controlled 149 fires, 135 lightning and 14 person-caused. Only 11,277 acres burned with 10,883 acres due to lightning and 344 acres resulting from person-caused fires. 11, 330 is the average number of acres burned by wildfire since Forest Plan implementation in 1992. The 2003 fire season lasted nearly 5 months from June 10 to November 4. The California Department of Forestry, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, Fish and Wildlife Service, and contract resources supported preparation and implementation activities.

The Forest also established a dedicated fuels monitoring crew in FY03. This crew gathered information using “Brown’s Planner Intercept and basic Stand Exams” on the study area covering 11,950 acres.

Heritage Resource Management Inventory and Monitoring

Of the 124 separate undertakings implemented under the Programmatic Agreement with the California State Historic Preservation Office in FY-2003, 46 received archaeological surveys covering a total of about 24,018 acres. Of these 46 undertakings, 24 contained a total of 356 historic properties within their Area of Potential Effects, while the other 24 undertakings had no properties. As for the 78 undertakings where no new archaeological surveys were performed, 26 of these were Exemptions and 52 were within previously surveyed areas, with 16 of these containing historic properties.. There were 124 previously recorded historic properties protected or monitored within these projects with prior coverage. Two hundred and twenty-one new archaeological sites were recorded as a result of these identification efforts. Of these, 178 were prehistoric, 27 were historic, and 16 contained both prehistoric and historic

components. Fifty-nine previously recorded archaeological sites were re-recorded/updated during these inventories. The re-recorded sites included 47 prehistoric sites, 7 historic and 5 dual component sites. 429 archaeological site records, including newly recorded and re-recorded with or without state trinomial, were submitted to the Northeastern California Information Center at California State University, Chico during FY 2003.

All Forest projects comply with requirements of NEPA and the State Office of Historical Preservation before implementation. Surveys reveal sites where cultural resources are known or suspected. These sites are generally Flagged and Avoided when projects are implemented.

Special Use Permits

The Forest issued 155 Special Use Permits (SUP) in FY03. Approximately 80 % of these permits were issued for Utilities, Water transmission and impoundments (ditches, reservoirs, dams). The other 20 % were issued for a wide variety of uses including Weather Stations, Scientific Studies, Road access, Boat Docks, and other Recreation uses.

14 SUPs were issued for Decorative Rock contracts, totaling 11 tons. Six commercial contacts removed 11 tons of obsidian. In addition 1,030 “free use” permits were issued for non-commercial collection of obsidian.

National Strategic Objective 2d: Increase accessibility to a diversity of people and members of underserved and low- income populations to the full range of uses, values, products, and services.

The new Big Valley Ranger Station began construction in 2003. Completed in 2004, the Facility fully complies with the standards for accessibility required by the Americans with Disabilities Act (ADA).

Planning analyses began in FY03 for several Developed Recreation site improvements; including rest room replacements (meeting ADA standards) at several campgrounds including Janes Reservoir, Logan’s Slough, Blue Lake Campground, Medicine Lake Campground, and Sugar Hill Lookout.

Construction of The Cedar Creek Interpretive Trail began in Fiscal Year 2003, the first Interpretive Trail on the Forest. The Learning Exchange Class of 2003 chose this project as its Legacy Field Project. This project primarily constructs 14 interpretive stops along one mile of the trail and installs trail signs along the entire 3.5 miles of the Cedar Creek Trail near Cedar Pass on the Warner Mountain Ranger District. This project builds a premiere “family trail” for people interested in the ecosystems of the Warner Mountains. This is an easy and gorgeous stretch of country. As a result people of all ages can use it. It is designed for all year non-motorized activities only such as hiking, horseback riding, snow shoeing, x-country ski, and biking. . Although the trail is not presently wheelchair accessible, the Ranger District is looking to eventually transform at least part into wheelchair accessible.

National Strategic Objective 2e: Improve delivery of services to urban communities.

The Forest treated stands in the Wildland Urban Interface. However, for the most part, this Objective does not fit with the decidedly rural characteristics of the area comprising and surrounding the Modoc National Forest and is not further discussed.

Participation in Scientific and Technical Assistance Activities

National Strategic Goal 3: Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability.

The goal of State and Private Forestry (S&PF) is to improve the social and economic health of rural communities through diversification and improved natural resource management on private lands. Through cooperative programs started in FY01 and completed early in FY03, MDF S&PF facilitated partnerships with the Ft. Bidwell Indian Community, Cedarville Rancheria, Modoc County, City of Alturas, private landowners and non-profits, and local fire communities. The issue of hazard fuels within wildland urban interface (WUI) was addressed through the formation of the Modoc County Fire Safe Council and two fuel reduction projects on private lands; Modoc County's rich history as it connects with the Forest was address through the nomination and approval of the Emigrant Trails Scenic Byway and marketing of an historical play, "Modoc Indian Wars." Technical reports are available from the S&P office of the MDF

State and Private Forest: Funding of Community Grants and Agreements

The Modoc National Forest's State, Private Forestry and National Forest Service funding of community based grants and agreements are exhibited in Table 5-1. The Economic Assistance (EAP) and Resource Advisory Committee (RAC) Projects are briefly described later in this chapter.

Table 5-1 FY03 State and Private Grants and Agreements

Type	Project Name	Fire Plan Treatment Acres	Grantee	Federal Dollars	Contributed Dollars
Lassen County RAC	South Knob Fuel Reduction		Tom Esgate	\$53,005	\$25,000
EAP	Economic Action Projects		Surprise Valley Chamber	\$16,000	\$4,100
EAP	Feasibility Study for Gas Station, storage units, gym, bowling alley, RV park		Cedarville Rancheria	\$30,000	\$7,500
NFP, WFHF	South Knob Fuel Reduction (NFP), Community Protection Plan	1,414	Lassen County Fire Safe Council	\$164,700	\$89,180
ER	Modoc Co. Capacity Bldg		Sperior California Economic Development District	\$15,000	\$3,750
NFP, ER	Hazard Fuel Removal		Ft. Bidwell Indian Community	\$30,000	\$383
EAP	Modoc Economic Action Project		MEDC	\$30,000	\$10,389
Totals		1,414		\$338,705	\$140,302

EAP: Economic Assistance Program, RAC: Resource Advisory Council, NFP: National Fire Plan, ER: Econoic Reovery

National Strategic Objective 3a: Better assist in building the capacity of Tribal governments, rural communities, and private landowners to adapt to economic, environmental, and social change related to natural resources.

Government to Government Consultation

The Forest Supervisor met with the Ft. Bidwell Indian Community Council, council members and staff of the Klamath Tribes and the Pit River Tribal Council, in their communities. As part of Sierra Nevada Framework Amendment the discussions included the need for protocol agreements, continued cooperation in project consultation and program delivery. The Forest Supervisor emphasized his support for economic development and technical assistance and cooperation in the areas of fuels and noxious weeds. The Forest Supervisor and the District Rangers are now meeting quarterly with the Pit River Tribal Council.

Community Assistance Economic Development

The Forest is providing technical and financial assistance (grant) to the Ft. Bidwell Indian Community to implement hazardous fuels reduction on the reservation.

The Forest is continuing to provide technical assistance to Ft. Bidwell Indian Community Council's driving program. For their licensing program, the Tribe uses master copies of USDA Forest Service, Safety Six video training tapes and workbook.

The Forest is providing technical and financial assistance (grant) to the Cedarville Rancheria for economic development.

The Forest collaborated with the Pit River Tribal Council, Hewise Band representatives and traditional users (partnership), to submit a proposal to the Rocky Mountain Elk Foundation to do burning to enhance cultural plants and elk habitat. The Forest was awarded \$40,000.

The Pit River Tribe has water rights associated a reservoir. At the Tribe's request, a field trip and 3 meetings have been held to discuss issues, concerns and opportunities for improved access to the dam and maintenance of the dam structure.

Work is ongoing with co-operation among:

- The Modoc National Forest Tribal Relations Program Manager, Engineer, Special Uses Coordinator and Doublehead RD Resource Officer,
- The Bureau of Indian Affairs,
- Bureau of Reclamation Dams and Bridges Division.

Environmental Education

The Forest coordinated a noxious weeds environmental education field day for the Modoc Indian Health Project students and Resources for Indian Students Education. The two organizations provide education services to local Indians. 17 students elementary through high school student participated.

Indian children participated in the Big Valley Ranger District's Natural Resources Day; an environmental education field day for elementary children in Big Valley.

Resource Advisory Committee Projects

The Modoc County Resource Advisory Committee (RAC) was chartered September 30, 2001. Since that time the RAC has made recommendations and provided funding to the Forest on projects that improve watershed, recreation, wildlife, facilities, forest health and roads on or adjacent to the MDF. FY03 the RAC recommended four projects that would enhance the watershed, safety and health of the recreating public at Cedar Creek and address the issue of sage steppe ecosystem through juniper management. These projects combined with fourteen FY02 and FY01 projects, have provided water for wildlife (guzzlers); replaced bathroom facilities; improved road conditions at Roney Flat and Sugar Hill;

purchased noxious weeds resource books for local libraries; and improved a wetlands project on Devil's Garden. The RAC's hard work, about \$750,000 has supplemented the MDF declining budget.

National Strategic Objective 3b: Increase the effectiveness of scientific, developmental, and technical information delivered to domestic and international interests.

The US Forest Service participates in activities related to this Objective at the national level, primarily through the dissemination of General Technical Reports from five research stations across the country and the Inventory and Monitoring Institute in Fort Collins, Colorado. This Objective is not further discussed here.

National Strategic Objective 3c: Improve the knowledge base provided through research, inventory, and monitoring to enhance scientific understanding of ecosystems, including human uses, and to support decision-making and sustainable management of the Nation's forests and grasslands.

The Forest participated in activities improving the ecosystem knowledge base through direct participation in studies and with grants, partnerships, and agreements promoting science. Of particular note for FY03 are the following items: The Forest:

- Pooled historic air photographs (1946 and later) with those of the California State Department of Fish & Game. These photos are used for wildlife studies in the Warner Mountains and on the Devil's Garden dealing with Juniper encroachment and with Sage Grouse leeks.
- Issued a Special Use Permit to mark segments of the Applegate Trail across the Devil's Garden, with the approval of the National Park Service, in partnership with the Oregon-California Trails Association.
- Participated with Dr. James F. O'Connell, of the University of Utah, studying the nutritional values of certain Great Basin root crops – notably "epos" and camas, which are found locally in abundance.
- Worked cooperatively with the River Center providing interpretive and education opportunities for the citizens of Modoc County.
- Worked closely with the local schools providing leadership and interpretive services for programs such as: "Trout in the Classroom", "International Migratory Bird Day", and the Modoc County Fair.
- Operates the largest wetlands program in the National Forest System with key partnerships with Ducks Unlimited, Rocky Mountain Elk Foundation, and other groups for habitat restoration and development.
- Worked with the US Fish and Wildlife Service on a status review for the Modoc sucker.
- Worked with the Southeastern Oregon Ecosystem Service Center studying the effects of fuel reduction treatments (both mechanical and prescribed fire) on bitterbrush.
- Cooperated with Northern Sierra Nevada Zone entomologist studying the sensitive plant *Illiuma bakerie* to discover how it is pollinated.
- Worked with Pacific Southwest Research on Black Stain studies investigating the effect of soil disturbance on the prevalence and spread of the disease.
- Completed an Aspen delineation and classification project with California Department of Fish and Game on the Warner Mountain Ranger District.
- Continued partnership with the Bureau of Land Management, to manage the one of three nationally sanctioned Experimental Stewardship programs that has been established nationally.
- Forged a partnership conducting a study on bitterbrush recovery following fuel treatments.
- Awarded a grant to Tom Esgate to mechanically thin 1414 acres on his property, meshing Forest
- Provided personnel to Bulgaria, and Hawaii to instruct in Fire Behavior and the Incident Command System.

- Provided personnel to National Prevention Teams to assist in Hawaii covering the islands of Maui and Molokai.
- Assigned two employees to the Federal Emergency Management Administration to support the super typhoon “Pongsona” relief efforts; one spent four weeks in Guam and the other at the Regional Operations Center.
- Provided two hand crews and five overhead personnel to Space Shuttle recovery operations.
- Provided six Forest overhead personnel to assist in the Exotic Newcastle Disease incident.
- Participated in the Modoc County Weapons of Mass Destruction interagency terrorist chemical attack and civil disaster training.
- Implemented the new Volunteer Fire Department Co-op agreement and has a Forest representative for the Modoc County Fire Chiefs Association. This resulted in increased use of volunteer equipment on wild land fires, increased training opportunities and increased coordination of resources during emergency operations
- Worked together with the Transmission Agency of Northern California (TANC). The Forest has provided an initial attack engine and treated fuels within the power line project area for the past 12 years. The California / Oregon Transmission Project engine module is funded by TANC and is co-located at the Long Bell Guard Station. TANC provided approximately \$185,400 to the Modoc National Forest in FY2003.

National Strategic Objective 3d: Broaden the participation of less traditional research groups in research and technical assistance programs.

To foster Environmental Education and Public Awareness, two botany education sessions were held for students of Alturas Elementary School. The students learned basic plant identification skills. The Forest coordinated a noxious weeds environmental education field day for the Modoc Indian Health Project students and Resources for Indian Students Education. The 2 organizations provide education services to local Indians. Seventeen students, elementary through high school, student participated. Indian children participated in the Big Valley Ranger District’s Natural Resources Day, an environmental education field day for elementary children in Big Valley. The Forest also coordinated instruction of basic fire training at area schools, including offering “Basic 32 Fire School” at the Modoc and Tulelake High Schools, as it has for the past eight years, in conjunction with the Lassen Community College, and with local Federal and State fire agencies.

Effective Public Service

National Strategic Plan Goal 4: Ensure the acquisition and use of an appropriate corporate infrastructure to enable the efficient delivery of a variety of uses.

The results of monitoring activities, related to the Strategic Goals and Objectives for Effective Public Service, are reported below using the Local Unit (C&I) for Effective Public Service. In some instances, no data currently exists to establish baselines or measure the Forest’s performance on this strategic goal and set of Objectives. Nonetheless each National Strategic Objective is addressed in the LUCID framework or in a narrative summary.

National Strategic Objective 4a: Improve financial management to achieve fiscal accountability.

In 2003 the Forest Service received a clean audit report and the Forest Service met all budget reporting requirements within the specified time and accuracy standards.

Table 6-1: Effective Public Service to People Monitoring Results for National Strategic Objective a using

LUCID C&Is.

Activity, Effect, or Resource to be Measured	Monitoring National Strategic Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Finding
ECONOMICS				
Unit costs and values	Improve cost and value estimates for planning purposes	Examine expenditure and allocation reports as needed for accuracy.	10% variance from standard.	New methods to deliver FS services are being examined.
Budget	Determine if budgets have significantly affected the production of projected outputs	Compare annual budget and output levels with Forest Plan projections.	Average outputs for 5 years are + or- 10% of decade avg.	The budget declined almost \$3 million from the FY02 budget falling below projected levels from the 91 Forest Plan.

Budget and Attainment

In FY03 the Forest budget declined \$2.9 million (15.4%) from the FY 02 level of \$18.8 million. Table 6-2, below, presents the Forest's total budget by Budget Line Item percentage of the total budget.

Table 6-2

Modoc National Forest Fiscal Year 2003 Budget) Appropriated Funds National Forest System	Budget Amount	% Total Budget	BFES FUND Code
Vegetation Treatments to Improve Conditions	413,000	2.6%	NFCC
Inventory and Monitoring	611,600	3.8%	NFIM
Land Ownership Management	124,600	0.8%	NFLM
Minerals and Geology Management.	31,300	0.2%	NFMG
Title IV Rehabilitation and Restoration	28,000	0.2%	NFN3
Land Management Planning	29,900	0.2%	NFPN
Grazing Management	444,600	2.8%	NFRG
Recreation / Heritage/ Wilderness	324,700	2.0%	NFRW
Timber Sales Management	555,000	3.5%	NFTM
Vegetation and Watershed Management	837,300	5.3%	NFVW
Wildlife and Fisheries Habitat Management	446,000	2.8%	NFWF
NFS Subtotal	\$3,846,000	24.2%	NF Funds
Wildland Fire Management			
Hazardous Fuels Reduction	1,982,436	12.5%	WFHF
Fire Preparedness	2,875,476	18.1%	WFPR
WF Subtotal	\$4,857,912	30.5%	WF Funds
Appropriated Funds	Budget	Total	FUND
National Forest System	Amount	Budget	Code
Capital Improvement and Maintenance			
Facilities Improvement and Maintenance	230,077	1.4%	CMFC
Title VIII, Federal Infrastructure Improvement	984,845	6.2%	CMII
Roads Capital Improvement and Maintenance	694,968	4.4%	CMRD
Trails Capital Improvement and Maintenance	129,437	0.8%	CMTL
CIP Subtotal	\$2,039,327	12.8%	CIP Funds
State & Private Forestry			
Economic Action Programs	166,000	1.0%	SPEA
Forest Health Mmgt, Federal Lands	264,000	1.7%	SPFH
Title IV, Forest Health, Federal Lands	137,000	0.9%	SPS4
Title IV, Economic Action Programs	5,000	0.0%	SPS6
St & Pr Subtotal	\$572,000	3.6%	S&P Funds
Permanent Appropriations and Trusts			
Knuteson Vanderberg	1,636,000	10.3%	CWKV
Cooperative Works	580,000	3.6%	CWFS

Modoc National Forest Fiscal Year 2003 Budget) Appropriated Funds National Forest System	Budget Amount	% Total Budget	BFES FUND Code
Reforestation Trust Fund	548,140	3.4%	RTRT
Roads and Trails for States	389,816	2.4%	TRTR
Timber Salvage	317,000	2.0%	SSSS
Range Betterment Fund	80,400	0.5%	RBRB
Brush Disposal Fund	15,000	0.1%	BDBD
Operation and Maintenance of Quarters	24,000	0.2%	QMQM
Recreation Fee demo Site-Specific Special fund	81,000	0.5%	FDDS
Recreation Fee demo Fee Collection Support Fund	24,000	0.2%	FDCL
Restoration and Improvement of Forest Lands	19,000	0.1%	RIRI
Perms and Trusts Subtotal	\$3,714,356	23.3%	P&T Funds
Appropriated Funds Subtotal	\$15,029,595	94.4%	APP Funds
Non-Appropriated Funds			
Reimbursable Agreements	258,000	1.6%	NFEX
Federal Highway Administration	4,000	0.03%	HTAE
Secure Rural Schools, Modoc County	260,945	3.9%	PSCP, PSRS
Non-Appropriated Funds Subtotal	\$889,593	5.6%	Non App \$
FY03 Budget Total	\$15,919,188	100%	

Management Attainment Reporting

The Management Attainment Report (MAR) is the standard Forest Service summary of program accomplishments (outcomes) from budget expenditures. The FY 2003 MAR for the Modoc National Forest is exhibited below in Table 6-3. Each row contains an Accomplishment Description, the Forest's Initial Target for the type of Accomplishment, a mid-fiscal year estimate of possible target achievement (Full Year Estimate), and the final Accomplishment in FY03.

Table 6-3 MAR Report FY03

Accomplishment Description	Unit of Measure	Initial Target	Full Year Estimate	Final Accomp
Road Reconstruction	Miles	6	14	15
Roads Decommissioned	Miles	15	4	4
High Clearance Roads as OML 1 or 2	Miles	302	302	
Passenger Car Roads as OML 3, 4 & 5	Miles	177	177	
Percent of Road Analyses Completed	Percent	100%	-	100
Fire Protection & FFPC calculated @ regional level				
Non-WUI Fuels Treatment	Acres	3,737	4,541	_1/
WUI Fuels Treatments	Acres	1,617	2,476	_1/
Land Management Planning				
Watershed Scale Assessment	Assessments	1	8	8
Inventory				
Above-Project Integrated Inventory	Acres	231,329	232,000	232,000
GIS Resource Mapping	Quads		727	727
Monitoring				
FOREST PLAN Monitoring and Evaluation Reports	Reports	0	2	2
Recreation Management				
Recreation Special Uses Administered to Standard	Permits	14	20	20
Seasonal Capacity Administered to Standard	PAOTS	65,439	65,439	65,439
Recreation Days Managed to Standard	Days	4,241	4,241	4,241
Recreation Products provided to Standard	Products	21	5	5
Heritage Management				
Heritage Resources Managed to Standard	Sites	56	56	56
Wildlife Habitat Management				
Wildlife Habitat Restored or Enhanced (BFES)	Acres	42	42	42
Terrestrial Wildlife Habitat Restored or Enhanced	Acres	-	42	42

Monitoring and Evaluation Report FY 2003

Accomplishment Description	Unit of Measure	Initial Target	Full Year Estimate	Final Accomplishment
Fish Streams Restored or Enhanced	Miles	1	1	1
Inland Fish Streams Restored or Enhanced	Miles		1	1
T&E Species Management				
T&E Species Recovery Actions Accomplished	Actions	1		
Sensitive Species Conservation Actions Accomplished	Actions	2		
Wildlife Interpretation & Education				
Wildlife Interpretation & Education Products Provided	Products	23	23	23
Range Management				
Grazing Allotment Administration to Standard	Allotments	62,852	62,852	62,852
Grazing Allotments Analyzed/NEPA Decisions Signed	Allotments	1	0	
Forest Management				
Timber Management NEPA Documents	Signed Docs.	1	1	3
Establish Vegetation	Acres	282	276	282
Improve Vegetation 2/	Acres	72,640	72,640	72,640
Special Products Permits Administered	Permits	2,000	1,000	1000
Timber Sales as Treatment	Acres			2,400
Timber Volume Harvested (Green & Salvage)	CCF	25,000	12,622	17,734 _1/
Green Timber Volume Offered	CCF	5,000	10,255	_1/
Salvage Timber Volume Offered	CCF	68,000	1,306	_1/
Timber Volume Sold (Green & Salvage)	CCF	-	4,686	4,339 _1/
Vegetation and Watershed Management				
Noxious Weed Treatment	Acres	303	303	303
Watershed Improvement				
Soil & Water Resource Improvements	Acres	89	89	89
Minerals and Geology				
M&G Operations Administered to Standard	Operations	1,019	667	667
M&G Operations Processed	Operations	827	667	667
Geologic Permits and Reports Completed	Reports	2	0	
Land Ownership Management				
Land Classification Cases Resolved	Cases	2	0	
Land Use Authorizations Administered to Standard	Authorizations	45	54	54
Land Use Proposals and Applications Processed	Number	14	14	14
Boundary Line Marked or Maintained	Miles	12	12	12
Trail Maintenance and Construction				
Miles of Trail Maintained to Standard	Miles	27	27	27
Facility Construction / Reconstruction				
Capital Improvements Completed (>\$250,000)	Improvements	1	1	1
Facility Condition Index	-	0	78	78
State and Private Forestry				
Communities Under Strategic Plans	Communities		17	17
NFP-Communities Under Strategic Plans	Communities		2	2

1/ Attainment for these accomplishments were compiled from other sources and not found in MAR report.

2/ The accomplishment of 72, 640 acres of "Forest Management Improve Vegetation" doesn't ring true. Perhaps it should be 7,264.

National Strategic Objective 4b: Improve the safety and economy of USDA Forest Service roads, trails, facilities, and operations and provide greater security for the public and employees.

Table 6-4: Effective Public Service to People Monitoring Results for National Strategic Objective b using LUCID C&Is.

Activity, Effect, or Resource to be Measured	Monitoring National Strategic Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
FACILITIES				
Building, utility, and dam function	Evaluate facility maintenance,	Field and office reviews.	Inadequate facilities or excessive energy	Facilities funds lag maintenance needs by a

Activity, Effect, or Resource to be Measured	Monitoring National Strategic Objective	Monitoring Technique	Variation from Standard Requiring Further Action	Monitoring Conducted and General Results
	replacement needs, and energy consumption.		consumption.	large amount resulting in deteriorating buildings and inefficient energy consumption. Dams are inspected annually and meet current standards. Cedar Pass Ski Area improvement planning began.
Road and bridge construction, reconstruction, and maintenance,	Ensure road facilities support Forest National Strategic Objectives, protect resources, and comply with road development guidelines.	Field review of all projects,	Any unexplained deviation.	The forest has a large backlog of needed maintenance and reconstruction projects.
Trail construction and maintenance.	Ensure adherence to the Trail system presented in Appendix & evaluate compliance with trail S&G's.	Field review of all projects.	Any unexplained deviation from trail S&G's	Trail projects implemented forest standards and guidelines.
Road construction	Assure dust control measures applied.	Report of dust control measures applied vs. number of road miles constructed.	Visual deterioration indicator of particulate levels exceeding standards.	No monitoring completed. Road construction did not occur.
Issues and Concerns	To determine degree of issue and concern resolution and identify new issues	Public involvement	Adverse public response.	Public Involvement efforts continue despite the "bombardment" some people feel. Some degree of confusion exists in light of all the changes

Forest Facilities

As in FY 2001-02 the Forest was faced with declining budgets and increased maintenance costs for facilities in FY03. Work began on a Master Facilities Plan in FY03 that was completed in 2004. Many additional building construction or reconstruction projects have been identified. Construction of the Big Valley Ranger District office began in FY03. The Dry Lake Apparatus Building and Barracks Remodeling project also began in FY03.

Roads System

To assess the Modoc National Forest transportation system, a forest-wide Roads Analysis was completed in FY 02. This analysis identified the core transportation system suitable for passenger vehicles (Maintenance Level III, IV, and V roads). The Modoc National Forest is nearing completion of the mapping of all roads and trails as part of a Regional contract.

The following table, 6-6, exhibits the change that occurred in FY03 to the classified road and unclassified road systems on the Modoc National Forest. The changes are mainly associated with improvements in road inventory and map information.

Table 6-6 Road System Change

SYSTEM ROADS	Miles
Miles at start of FY03	2,909.0
Miles Added to System:	
+ Unclassified road miles moved to the system	0.0
+ New Construction	0.3
- Miles Decommissioned	0.0
Adjustments to Inventory (+ or -)	-99.2
Miles at End FY03	2,810.1
UNCLASSIFIED ROADS	Miles
Miles at Start of FY03	663.9
+ Miles Identified During FY	0.0
- Unclassified miles moved to the system	0.0
- Miles Decommissioned	4.0
Other Adjustments (+ or -)	-244.5
Est. Miles at End of FY03	415.4

Adjustments include corrections, changes due to land acquisitions and exchanges, changes in jurisdiction, etc

Road Maintenance

Miles of road maintained are shown in table 6-7 with the number and percent of roads maintained and meeting road management objectives by maintenance level.

Table 6-7: Road Maintenance

	FY03 Total System Miles (Miles)	Roads Receiving Maintenance (Miles)	Roads Meeting RMO (Miles)	Maintenance Level Definition
Maintenance Level 1	139	75	40	Roads closed
Maintenance Level 2	1956	275	225	Open to high clearance vehicles
Maintenance Level 3	684	525	300	Open to passenger cars
Maintenance Level 4	13	3	7	Open to passenger cars
Maintenance Level 5	18	5	12	Open to passenger cars
Total Miles	2810.1	883	584	
% of Road Receiving Mntce			31%	
% of Miles Meeting RMO			21%	

Insufficient maintenance causes a decrease in road quality for forest recreation users. Only 31 % of system roads were maintained and 21% met Road Management National Strategic Objectives.

Law Enforcement

The Modoc National Forest's Law Enforcement Officer records Incidents requiring attention and Violations of law, which impose financial penalties. These incidents and violations are recorded into the LEMARS database and reporting system. There were 30 Violation Notices issued during FY03. Of these, 6 were given mandatory court appearances due to an issue of restitution, clean up, or to allow time to remove property from National Forest land. The additional 24 Violation Notices were listed as fines only. These 30 Violation Notices resulted in \$5827.00 in fines and \$1000.00 in restitution. In addition, a court case, which has been pending for the last 2 years, was resolved and resulted in the recovery of \$2500.00 in fire suppression cost. An investigation into the unauthorized dredging of a stream was also conducted during FY03. This matter was resolved through the efforts of Forest, District and Law Enforcement staff. A collection agreement with the responsible party resulted in the collection of \$18,545, which will be

used to perform rehabilitation of the damaged area. During FY03, there was one investigation into the cultivation of marijuana on National Forest lands conducted in cooperation with the Modoc County Sheriff's Office. This investigation resulted in the arrest of 2 juveniles and the eradication of 4 marijuana plants, as well as the recovery of an additional quantity of processed marijuana and drug paraphernalia at a private residence.

National Strategic Objective 4c: Improve and integrate informational systems, data structures, and information management processes to support cost- efficient program delivery.

The Forest Service's evolving databases and communication systems are increasingly becoming corporate. For example, the Forest Service internet and intranet web-pages at the Washington, Regional, and National Forest levels now have the same look and tools to links to subjects of interest. The Modoc National Forest's website opens to a wealth of information about Forest programs and projects. (<http://www.fs.fed.us/r5/modoc/>)

The Forest Service Natural Resource Information System

The Forest Geographic Information System (GIS) staff makes professional map products and provides information for resource analysis using two corporate GIS systems. Oracle stores spatial (quantitative and qualitative) types of resource information. The Oracle link to the Forest's Geographic Information System ArcInfo / ArcView enables production of high quality maps and other kinds of analysis. All projects are mapped to professional standards including recording of metadata.

The Forest Service Natural Resource Information System (NRIS) combines a standard corporate database and computer applications designed to support field-level users. NRIS databases contain basic natural resource data in standard formats built to run within the Forest Service computing environment. This system provides employees, our partners, and the public with access to essential natural resource data needed to support the management decisions that form the core business of the Forest Service. The major **NRIS components** are described below. In addition, the Forest's effort in FY03 to make this information installed and available, "corporate data" is shown below by NRIS component.

- **Fauna:** This component documents the occurrence of terrestrial wildlife on National Forests and is linked to other federal, state, and organization databases on wildlife species. In FY03, priority legacy data was loaded into the NRIS module Fauna.
- **Field Sampled Vegetation (FSVeg)** module contains data that has been collected in the "field." FSVeg data is stored in an Oracle database on the Forest Service server. This NRIS component covers point and plot vegetation data from field surveys such as stand exams, inventories and regeneration surveys. Data on trees, surface cover, understory vegetation and down woody material are managed in this component. It does not contain photo-interpreted data, calculated data, or estimated data.
- **Forest Service Activity Tracking System (FACTS)** The FACTS project was initiated to migrate and re-engineer the SILVA portion of the Timber Activity Control System (TRACS) application. Ultimately, it will support the timber sale process in an integrated database environment, by providing the required activity information. It will also standardize the automation of activity information nationwide, providing tools to plan, track, and upward report activity data. In FY03, the old Stand Record System data was prepared for migration to FACTS. Many of the time series graphs in Appendix A of this report were developed from FACTS
- **Human Dimensions:** This component provides access to social, economic, and demographic data generally collected by other federal and state agencies and organizations. In FY03, Version 1 of the Human Dimensions module was available but not widely used since it held only 1990 Census data. Version 1.1 was being developed at the NRIS Human Dimensions staff at Michigan State University.

- **Terra:** This component contains core terrestrial ecology data on soils, geology, geomorphology, ecological classification, and potential natural vegetation. In FY03 the Terra database began to be installed on the Forest.
- **Water:** This component focuses on data that describes aquatic habitats and stream morphology. In FY03 the Water database began to be installed on the Forest and a review of 5 & 6 field watersheds was completed.

The Law Enforcement Management Attainment Report System LEMARS, is a nationwide database for recording incidents requiring Law Enforcement attention and more seriously citations for violations of the law. The Modoc National Forest Law Enforcement has been recording this information since its inception.

The Infrastructure Application (INFRA) - INFRA is a corporate Oracle database system. Infra includes many Engineering modules such as buildings, water systems, roads, travel routes, bridges and major culverts, dams, power systems, and communication systems. Range information and the Special Uses database are also housed in INFRA.

The Forest is making great strides in integrating information systems. Making information corporate is not always “smooth sailing” and the Forest faces a considerable challenge. The NRIS Fauna module proved exceedingly difficult to install. There are disjoints between reporting systems as former National, Regional, or Forest databases are replaced by the new corporate systems. For example, Timber Sold and Harvested and the Fire / Fuels Accomplishment information are available from functional reports, but did appear in the Management Attainment Report system. Range use statistics from the former Range Analysis Management Information System (RAMIS) database have not yet been electronically converted and entered into the present INFRA database. Employment statistics obtained (but not exhibited) for this report are counter-intuitive and will be re-analyzed in the FY 04 Monitoring and Evaluation Report.

National Strategic Objective 4d: Improve the skills, diversity, and productivity of the workforce.

The Forest allocated funds to Forest employees for training and development. Each employee completes an Employee Development Program with the approval of the employee’s supervisor. Employees attend those training classes best suited for their professional development within budget limitations. Computer security awareness training, Safety, Civil Rights, and Prevention of Sexual Harassment courses are required for all employees.

National Strategic Objective 4e: Ensure equal opportunity in employment practices.

The Modoc National Forest was in full compliance with law regulation and policy providing equal opportunity for employment for all positions filled in FY03.

National Strategic Objective 4f: Provide appropriate access to NFS lands and ensure nondiscrimination in the delivery of all USDA Forest Service programs.

The Modoc National Forest completes annual reporting outside the Forest Monitoring program on this element. The Title VI report indicates that permit holders who provide services on NFS lands are providing those services in compliance with laws and regulations, and that Forest Service programs are provided to all users without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status.

Evaluating the Need for Change

Evaluation is the feedback mechanism identifying whether there is a need to change. The Forest examines whether the Land and Resource Management Plan is being implemented to comply with existing direction, or whether there is a need to change Forest Plan direction itself through amendments or revisions. Chapters three through six presented the results from monitoring programs and projects

implementing the Forest Plan during FY03. The monitoring results were presented using the National Strategic Goals ecosystem health, multiple benefits to people, scientific and technical assistance, and effective public service. In this chapter these results are evaluated. While use of the LUCID monitoring indicators may be an imperfect system, the indicators do verify what our actual monitoring activities show.

Ecosystem Health

Here the Forest contrasts the “existing condition” to a “desired future condition” and answers the questions: What does it mean and what will we do about it?” The monitoring results for this strategic goal point out the most compelling needs for change.

Existing Condition

Forest Plan and project monitoring indicates ecosystem health is threatened by:

- First and foremost, the prolonged drought. The effects of Forest management activities, on flora and fauna diversity and habitats, water quality, timber-stand and watershed health, pale in comparison to the known effects of catastrophic wild land fire.
- Related to the continuing drought, Black Stain, Anosum, Pine Beetle and Scolytus in timber stands rising above endemic levels, thus increasing mortality and fire danger.
- Extreme fire danger from Forest stands heavily overstocked with small diameter material in many areas across the forest and related fuel load amounts and configuration.
- The expansion of Western Juniper well outside its historic range.
- The spread of Non-Native Invasive Species, especially noxious weeds.

Towards the Desired Future Condition

On the positive side ecosystem forest health is being enhanced through:

- Stand density control treatments achieved with Forest Pest Management Prevention and Suppression funds.
- Implementation of the Hackamore Project vegetative treatments through reduction of excessive fuel loading, thinning of overstocked stands, and enhancement and development of wildlife habitat.
- Wetlands development and protection on the Devil’s Garden Ranger District through partnerships and cooperation with other groups increased available waterfowl habitat.
- Improved grazing management through inclusion of Forest Plan standards and guidelines and best management practices in annual operating instructions with the range permittees.
- Effectiveness monitoring of riparian condition and adaptive management techniques to improve riparian form and function. The increasingly positive monitoring results demonstrate the collaborative effort pays dividends to Rangeland health.

Multiple Benefits to People

While visitors were generally satisfied with visits to Developed Recreations Sites, these sites continue to receive insufficient funding to make a dent in the backlog of deferred maintenance. A very wide variety of dispersed recreation activities were available to the public; hunting and fishing, gathering firewood, hiking, photography, skiing, snowmobiling and Off Highway Vehicle Use. Obsidian collection is a growing recreational pursuit.

In past years Wilderness field observations have show that certain standards are or are not currently being met and upward or downward trends have occurred, particularly due to recreation, livestock use or wild land fire suppression. Management activities have been implemented to support maintenance or

improvement of wilderness attributes. Trailhead bulletin boards are maintained at each of 8 trailheads into the SWW. Information regarding Leave-No-Trace and regulations pertaining to the use of SWW are prominently displayed on bulletin boards.

Fire management was funded at 95% MEL. The forest exceeded the target for fuel treatments accomplishing 7,022 total acres with 2,481 acres in the Wildland-Urban-Interface. . The Modoc National Forest controlled 149 fires totaling 11,277 acres burned.

The Forest Grazing programs authorized use for 67,336 AUMS yielding 78,356 Head Months. Cattle accounted for 95 % of authorized use. Allotment Management Planning began on the Big Valley RD for 5 allotments.

Commercial timber sale offered fell to a disappointing 2.2 MMBF while 8.9 MMBF was harvested from prior year sales. The Forest met the demand for commercial and personal use firewood and the demand for firewood is static. The Forest met Timber Stand Improvement targets.

The Forest issued 155 Special Use Permits, the vast majority for utilities, water transmission and impoundments. The Forest issued more than a 1000 free-use permits for Obsidian collection.

Participation in Scientific and Technical Assistance Activities

The Forest participated in a very wide variety of scientific studies and Economic and Technical assistance programs primarily through Grants, Partnerships, and Agreements.

State and Private Forestry contributed \$339,000 towards the Resource Advisory Committee projects, Economic Assistance Programs, and the South Knob Fuel Reduction Community Protection Plan. Participants in these projects contributed \$140,000.

In FY03, the Forest Supervisor participated in formal Government to Government consultation with the Ft. Bidwell Indian Community Council, council members and staff of the Klamath Tribes and the Pit River Tribal Council, in their communities. Economic and Assistance projects resulted from fruitful discussions. The Forest also offered technical training and environmental educational opportunities to Native Americans.

In prior years the Resource Advisory Committee completed eleven projects. In FY03 the RAC completed three more, all enhancing local communities. Of particular note, the RAC funded Phase II of the Western Juniper Management Strategy.

The Forest participated in 59 activities improving the ecosystem knowledge base through direct participation in studies and with grants, partnerships, and agreements promoting science.

Effective Public Service

The Forest maintains regular office hours from 8 AM to 4:30 PM.

Public Service has been increased by working with local merchants in Alturas, Davis Creek, and Likely California to sell maps, Christmas tree permits, and obsidian collection permits.

Information about the Modoc National Forest is readily available and updated on the internet at <http://www.fs.fed.us/r5/modoc/>

The Forest Facilities Master Plan began in FY03 to prioritize expenditures on facilities. Additional building construction, reconstruction projects, or demolition have been identified that will come be accomplished as the budget allows.

The Forest continues to receive insufficient funds to maintain the roads system. Only 31 % of system roads were and maintained and 21% received maintenance sufficient to meet road management objectives. As a result, road quality continues to decline.

30 Violation Notices issued during FY03 by the Forest Law Enforcement officers.

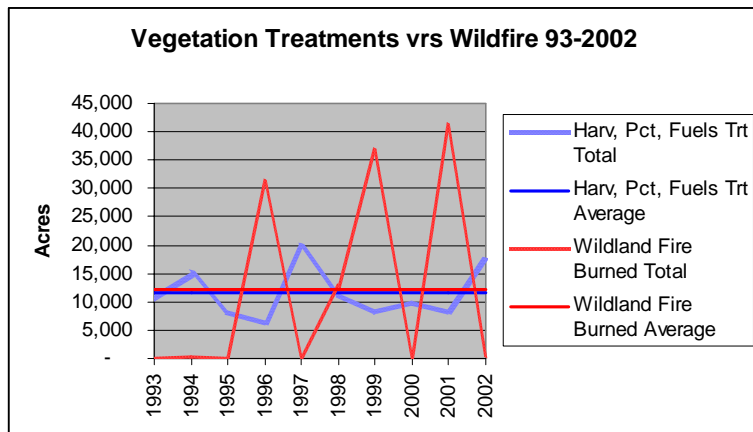
The Forest made great strides in improving and integrating informational systems making them more “corporate”, despite some inevitable frustration with the number of systems and the steep learning curve involved in installing and using them.

The Need for Change

People are an integral part of the ecosystem. Ecosystem health is necessary for economic health and community vitality. Thus where ecosystem health is most threatened, people are most threatened.

Catastrophic wild land fire and the spread of noxious weeds represent the greatest threats to ecosystem health. The drought contributes to Black Stain, Anosum, Pine Beetle and Scolytus in timber stands rising above endemic levels, thus increasing mortality and fire danger. Forest stands are overstocked with small diameter material in many areas posing a threat for catastrophic fire and reducing stand growth and overall health. Extreme Fire danger exists from fuel load amounts and configuration in the Forest. In addition, western juniper has spread well outside its historic range. It is estimated that this species currently occupies approximately 2.5 million acres of rangeland in northeastern California. This constitutes a ten-fold expansion of juniper range over the past 130 years. Even though the Forest increased fuel treatments in the last decade, biomass accumulation, both living and dead, continues to vastly exceed removals. Are we making a real difference at this rate of project activity?

To gain perspective, compare all the vegetation treatments (all commercial harvest types, pre-commercial thinning, and fuel treatments) to the acres burned in wildland fires in the figure to the left wildland fires “treated” more forested land than the Modoc National Forest, in total and on average from 1993 to 2002.



Key Findings and Certification

Key findings and the Forest Supervisor Certification are found in a separate letter. In summary the Forest Supervisor found that the Forest Plan as amended is adequate and that the actions completed comply with the direction of the Forest Plan. While the Plan is adequate the Forest Supervisor recognizes the need for minor amendments to update the Forest Plan for efficiency and effectiveness provided funds are available.

List of Contributors

The principal contributors to the 2003 Monitoring and Evaluation Report are listed below. Please contact one of us if you have questions or want further information about the reported results. Monitoring activity on the Forest involves many people, far too numerous to list here. In addition, many volunteers contributed their time and expertise, as did Ranger District employees across the Forest.

Robert Haggard	Public Services Staff Officer
Gary Barranco	Assistant Forest Planner
Jed Parkinson	Forest Engineer
Elizabeth Cavasso	Forest Fire Management Officer
Keith Bryan	Assistant Forest Fire Management Officer Fire Ecology/Fuels Division
Jim Irvin	Ecosystem Staff Officer
Marty Yamagiwa	Wildlife Biologist
Jenny Jayo	Forest Range Specialist
Cheryl Beyers	Botanist
Lynda Holloman	Chief Financial Officer
Bill Schoeppach	Timber Staff Officer
Anne Mileck	Certified Silviculturist
Mary Flores	Wildlife Biologist
Ken Romberger	Wildlife Biologist
Gerry Gates	Forest Archaeologist
Jane Moore	Resources Assistant
Colleen Russell	Resources Assistant

Glossary of Acronyms

ACS	Aquatic conservation strategy	FMU	Fire Management Unit
ADA	American with Disabilities Act	FPM	Forest Pest Management
AMP	Allotment Management Plan	FS	Forest Service
ASQ	Allowable Sale Quality	FSH	Forest Service Handbook
AUM's	Animal Unit Months	FSM	Forest Service Manual
BFES	Budget and Finance Execution System	FY	Fiscal Year
BIA	Bureau of Indian Affairs	GIS	Geographic Information System
BLM	Bureau of Land Management	GPRA	Government Performance Results Act
BMP	Best Management Practice	HWY	Highway
BV	Big Valley Ranger District	INFRA	Infrastructure Application
CCF	Cubic Feet	LEMA RS	Law Enforcement Management attainment report system
CDFG	California Department of Fish and Game	LUCID	Local Unit Criteria Indicators
CE	Categorical Exclusion	MAR	Management attainment report
C&I	Criteria and Indicators	MDF	Modoc National Forest
DEIS	Draft Environmental Impact Statement	MEL	Most Efficient Level
DG	Devils Garden Ranger District	MICC	Modoc interagency command center
EA	Environmental Assessment	MIS	Management Indicator Species
EAP	Economic Assistance Program	MMBF	Million Board feet
ER	Economic Recovery	NEPA	National Environmental Policy Act
ERA	Equivalent Roaded Acres	NFP	National Fire Plan
FACTS	Forest Service Activity Tracking System	NRIS	National resource information system
FFPC	Fire Fight Production Capability	NWFP	North West Forest Plan
FMIP	Financial Management Improvement Project	OHV	Off Highway Vehicle

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RAC	Resource Advisory Committee	TANC	Transmission Agency of Northern California
RAMIS	Range Analysis Management Information system	TES	Threatened, Endangered and Sensitive
S&G	Standards and Guidelines	TRACS	Timber Activity control system
SNA	Sierra Nevada Amendment	VQO's	Visual Quality Objectives
SUP	Special Use Permits	WM	Warner Mountain Ranger District
SWW	South Warner Wilderness		