

Cibola National Forest and National Grasslands

Monitoring and Evaluation Report

Fiscal Years 2000-2002



Forest Supervisor Certification

I certify that the Cibola National Forest Plan (Forest Plan) as amended is sufficient to guide future management of the Cibola National Forest and Grasslands and does not require an amendment at this time.

This Monitoring and Evaluation Report meets regulatory requirements for completing an annual report for the fiscal years of 2000, 2001 and 2002, based on the 1982 planning rule at 36 CFR 219.

Nancy Rose

Nancy Rose, Forest Supervisor

8/16/06

Date

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Introduction

The National Forest Management Act of 1976 (NFMA) amended several existing laws guiding management of National Forest System lands and required all National Forests to develop detailed management plans. In response to this Act, the Cibola National Forest created a Forest Plan designed to guide Forest management actions and decisions into the future.

The current *Cibola National Forest Land and Resource Management Plan* (Forest Plan) was completed July 15, 1985 and was implemented August 18, 1985. Since then, ten Plan amendments have occurred to address essential elements necessary to maintain the original intention of defining “the long-term direction for managing the Cibola National Forest and the Kiowa, Rita Blanca, McClellan Creek and Black Kettle National Grasslands” (p.1 Forest Plan, 1985). Revision of the Forest Plan is scheduled to begin in 2004 for the National Grassland units and in 2007 for the mountain Districts.

This Monitoring and Evaluation Report, for fiscal years 2000 thru 2002, documents the available results of monitoring activities that occurred during that time period, evaluates those results, describes the rationale for suggested changes in standards and guidelines, and makes recommendations for future plan amendments and/or revisions. It is important to note that changes are needed in the direction of and guidance for monitoring as methods and procedures for gathering the information have in most resource areas changed. Technological, scientific, and professional practice advances have improved since development of the Forest plan in 1985. Resource specific and updated monitoring guidelines are currently being developed and will be instituted in the future and reflected in the next monitoring and evaluation plan and in the Revised Cibola Forest Plan.

This report is not about individual project monitoring, but instead is a resource-by-resource description of Forest Plan monitoring results and findings compared against established goals and objectives.

Emerging Forest Concerns

Dynamic, interdependent forest projects and activities making up the program of work for the Cibola National Forest and National Grasslands are influenced by the need to provide and promote the following:

- healthy, ecologically sound forests and rangelands;
- safe, accessible and informative recreation areas;
- preservation of historic sites and wilderness areas;
- ongoing, responsive relationships and sensitivity to the wide range of culturally diverse peoples inhabiting and depending upon forest products and services; and
- protection and provision for wildlife.

The National and Regional leadership of the Forest Service provide guidance and direction to keep the Forest Management Strategies responsive and timely. Agency-wide concerns provide the direction and guidance for forest-wide management strategy priorities. Forest Service Chief Dale Bosworth listed four major concerns facing the Forest Service. These “four major threats are: fire and fuels, unwanted invasive species, loss of open space, and unmanaged outdoor recreation.” (Speech, 7/17/2003) The Region 3 Strategic Action Plan focuses on restoring the ecological functionality of southwestern forests and rangelands, assisting in protecting communities adjacent to national forests, and contributing to the economic vitality of communities (Southwestern Regional News, May, 2003-August 2003). These concerns are intimately interrelated and will require collaboration between and among agencies, private citizens, and special interest groups, and will require continued Congressional support.

Healthy Forests/Fire and Fuels Management

In response to restoring ecologically sound forests and rangelands through the use of fire and fuels management, President George W. Bush issued “The Healthy Forests Initiative” on August 22, 2002. This initiative implements core aspects of the National Fire Plan’s 10-year Comprehensive Strategy. It is designed to promote more active forest and rangeland management and will directly influence the direction of Forest-wide projects and activities.

Community Protection/Economic Vitality of Communities

Concerns regarding the protection of communities adjacent to the forest are not new to the Cibola National Forest. The miles of National Forest boundary that are considered Wildland Urban Interface (WUI) continue to grow at a steady rate. As the population increases in these areas, our task of managing natural resources, protecting lives and property and educating for management and prevention of catastrophic wildfires becomes even more complex.

Unwanted Invasive Species

Unwanted invasive species such as Salt Cedar (Tamarisk) and bark beetle infestations are increasing our forest. These are not new problems, however, they have become compounding elements in forested areas that demonstrate a need for broad based ecological restoration (Allen, et. al., 2002, p. 1418) “Decades of an accumulation of dense undergrowth and brush, along with drought conditions, insect infestation and disease and invasion of exotic species make forests and rangelands in many areas throughout the country vulnerable to environmentally destructive wildfires.” (The Healthy Forest Initiative, Department of Interior, Fact Sheet, August 2003)

Loss of Open Space/Unmanaged Outdoor Recreation

Chief Bosworth stated, “Every day we lose about 4,000 acres to development. That’s almost 3 acres per minute” (Speech, 7/2003). In 2001, the population of New Mexico was 1,830,935 and ranked 36th in the nation. New Mexico grew at a rate of 20 % from 1990-2000 whereas the nation grew at a rate of 13 % during the same time period. (Website, Bearfacts, 2000-

2001) Albuquerque (Bernalillo County, population 556,678) is a fast growing metropolitan area in the state. (Website, Bearfacts, 2000-2001) Results of this monitoring report in the areas of recreation and wilderness confirms that the Cibola National Forest is experiencing record numbers of visitors and there are concerns regarding increases in vandalism and user-made, non-designated roads and trails.

Highlights of this Report include:

Cultural Resources: The Cibola National Forest is home to hundreds of pre-historic and historic sites. A diverse national heritage linking traditional uses to contemporary use today has been preserved within National Forest System lands. Emphasis is placed on maintaining strict adherence to use, restoration and protection of these resources.

Protection (Law Enforcement): With a steady rate of population growth, development occurring adjacent to the forest, and record numbers of visitors; adequate Law Enforcement staffing is essential. The Region 3 Strategic Action Plan will evaluate additional law enforcement staffing requirements.

Timber and Fuelwood: With national and regional concerns for ecologically sound forests and the Forest Plan goal to provide products that contribute to community related economic vitality, management strategies are continuously being evaluated.

Recreation: The Cibola National Forest has an extremely high recreation use with Sandia Ranger District experiencing an overflow of visitors on major holidays. Emphasis in this resource area is placed on maintaining sites for public health, safety and accessibility.

Wilderness: The Cibola National Forest has approximately 245 miles of wilderness trails located within the four wilderness areas: Sandia Mountain, Manzano Mountain, Apache Kid and Withington. Monitoring emphasis is placed on evaluating user demand and environmental damage caused by user-made, non-designated trails.

Grants: Under the *Rural Community Assistance National Fire Economic Action Plan* and *Collaborative Forest Restoration Program*, the Region distributed 13 grants (totaling \$1,766,669.00) in 2000-2002 to individuals, businesses and organizations associated with the Cibola National Forest

Chapter 1

The Monitoring Process

Requirements of Monitoring

Monitoring and evaluating the Forest Plan keeps the decision maker informed of progress in achieving the goals, objectives, standards and guidelines established in the Forest Plan. A detailed annual monitoring action program is prepared as part of the total Forest annual program of work. Some of the key items to be included in the program are details on the amount and location of monitoring to be accomplished based on the approved program of work and funding available.

Monitoring is a mandated element of the Forest Plan {36 CFR 219.7 (e)}. The results of monitoring activities measure the effectiveness in the implementation of the Forest Plan in a variety of different resource areas. Not all resource areas are required to be monitored each year. Some resource conditions are measured only on a multi-year basis.

Regulation: 36 CFR Part 219.12(k) Monitoring and evaluation. This section of the regulations states that at intervals as established in the Forest Plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely standards and guidelines have been applied. Monitoring requirements identified in the Forest Plan shall provide for--

- ❖ A quantified estimate of performance comparing outputs and services with those projected by the plan. §219.12(k)(1)
- ❖ Documentation of the measured prescriptions and effects, including significant changes in productivity of the land. §219. 12(k)(2)
- ❖ Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the plan. §219. 12(k)(3)
- ❖ A description of the following monitoring activities:
 - The actions, effects, or resources to be measured, and the frequency of measurements §219.12(k)(4)(i)
 - Expected precision and reliability of the monitoring process, and §219. 12(k)(4)(ii)
 - The time when evaluation will be reported §219. 12(k)(4)(iii)

- ❖ A determination of compliance with the following standards:
 - Lands are adequately restocked as specified in the Forest Plan. §219. 12(k)(5)(i)
 - Lands identified as not suited for timber production are examined at least every 10 years to determine if they have become suited; and that, if determined suited, such lands are returned to timber production. §219. 12(k)(5)(ii)
 - Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued, and §219. 12(k)(5)(iii)
 - Destructive insect and disease organisms do not increase to potentially damaging levels following management activities. §219. 12(k)(5)(iv)

Resource Areas Monitored in this Report:

Cultural Resources: Lands in and surrounding the Forest contain archeological sites essential to the understanding of the prehistory, history, past land use patterns, environmental change, and the formation and collapse of societal groups. This resource is monitored to determine avoidance of damage to or loss of cultural resources through ground-disturbing activities, natural erosion or human vandalism.

Lands and Special Uses: Within the Forest boundaries are private lands, mineral patents and lands administered by other agencies. Land is acquired through exchange, purchase, donations and service easements. Utility and communication facilities, recreation residences, concessions and rights-of-way are authorized on the Forest by special use permits. This resource is monitored to determine the amount, type and extent of use for electronic sites and mineral resources; and the legal actions to ameliorate encroachments, rights-of way and land exchanges.

Facilities: Road construction/reconstruction and maintenance is essential for safe travel within the forest. Roads may be decommissioned to protect natural resources and historic sites.

Timber and Fuelwood: Subtle and gradual changes result from harvest activities, creating generally more healthy and diverse stands with a greater variety of age classes. This resource is monitored to determine: acres treated according to management prescription, cords of fuelwood available to the public, maximum size limits for harvest areas, adequate restocking of harvested lands, and reevaluation of unsuitable timber lands.

Wildlife: The diversity of vegetation, climate, and geology provide habitat for a variety of wildlife. This resource is monitored to determine population and habitat trends of threatened, endangered, Forest Service sensitive, and management indicator species (MIS) species.

Recreation: Population growth and an increase in outdoor recreation have met predicted expectations. The Cibola National Forest has an extremely high level of recreation use, with Sandia Ranger District being the most visited area. This resource is monitored to determine visitor use and miles of trails constructed/reconstructed.

Wilderness: Population growth has resulted in increasing wilderness use. This resource is monitored to determine effects of highly impacted areas and the number of miles of trail construction and reconstruction.

Protection (Law Enforcement): An increasing number of people depend on the forest for recreation and livelihood purposes. Unfortunately, some people engage in illegal activities such as: removal of fuelwood or Christmas trees without proper authorization and permits, vandalism, illegal garbage dumping and illegal use of off-road vehicles. This resource is monitored to determine the number of hours law enforcement officers are on duty in the forest.

Facilities: Construction, maintenance and administration of various facilities including roads, trails and structures is usually Forest Service responsibility. This resource is monitored to determine miles of road construction, miles of road maintenance, and miles of road decommissioned.

Costs: Budget totals for the Cibola National Forest and National Grasslands is shown in National Accounting Codes. This resource is monitored to show total budget and budgets per cost code.

This Annual Monitoring and Evaluation Report has been prepared to meet the requirements of Chapter V in the Forest Plan. This report summarizes the findings, conclusions, and recommendations of the Forest Interdisciplinary (ID) Team as a result of program monitoring. It also provides an important communication link with the public and across all levels within the Forest Service. By evaluating the effectiveness of implementing the Forest Plan, decisions can be made that will identify needed actions which will insure proper stewardship of natural resources on the Cibola National Forest and National Grasslands.

Forest Plan Amendments

There have been ten amendments to the Forest Plan since it was adopted in 1985. The following amendment descriptions identify the general nature of the changes and the date with which the amendment became effective.

Amendment No. 1 Dated 1/9/1987

Soon after completion in August 1985, the Forest Plan was appealed by a coalition of environmental groups. This amendment provided a resolution to respond to that appeal. This amendment provided clarifying language within all 5 chapters of the Forest Plan.

Amendment No. 2 Dated 5/29/1989

This amendment provided for an electronic site near Boise City, Oklahoma, for a long range aid to navigation (LORAN C) for the Coast Guard in Management Area 5.

Amendment No. 3 Dated 6/30/1989

This amendment implemented management strategies in Las Huertas Canyon near Placitas, New Mexico and resolved interim management decisions made in 1985.

Amendment No. 4 Dated 5/29/1990

The following were revised under this Plan amendment: the 10-Year Timber Sale Schedule; fire and wildlife management standards and guidelines; Recreation Opportunity Spectrum (ROS) acres; and the number of roads to be decommissioned. This amendment also added black bear and curlew to the MIS list and changed ROS for MAs 8 and 13.

Amendment No. 5 Dated 6/27/1990

This amendment designated Oso Ridge Lookout as an exclusive electronic site for federal agency use only in Management Area 8.

Amendment No. 6 Dated 9/6/1991

Minor changes in recreation and road capital investments were made. Additional standards and guidelines were introduced to manage winter season use and improve wilderness wildlife diversity and ecosystem health through preplanned prescribed fire and prescribed natural fire management. The grasshopper sparrow was added to the MIS list. Standards and guidelines were established for Albert's squirrel management.

Amendment No. 7 Dated 9/1996

Regional Mexican Spotted Owl and Northern Goshawk direction, S&G's

Amendment No. 8 Dated 12/20/1996

This amendment returned federal lands back to National Forest System management from Department of Energy in the vicinity of Kirkland Air Force Base.

Amendment No. 9 Dated 9/18/1997

This amendment established the Bernalillo Watershed Research Natural Area in Management Area 2.

Amendment No. 10 Dated 10/17/2002

This amendment identified potential wild and scenic rivers across the Forest.

Chapter 2

Monitoring Results

Cultural Resources 1

Item Monitored: Cultural resources listed in or eligible for nomination to the National Register of Historic Places and/or that have been allocated to categories of active management.

Method: Aerial and ground inspection in conjunction with other resource activities.

Results: There are no sites on the Cibola National Forest that have been “formally” determined eligible for nomination, thus no sites were inspected in fiscal years, 2000, 2001, or 2002.

This monitoring item does not pertain to the hundreds of sites determined “eligible” by consensus determination, i.e. a simple agreement between the State Historic Preservation Office and the Forest Service.

There are three sites on the Forest listed in the National Register. The Big Bead Mesa site and Sandia Cave were inspected and have shown no signs of vandalism, pot-hunting or undue deterioration. The Gallinas Springs site required emergency stabilization in 2001 with additional stabilization measures prescribed for 2004.

Evaluation: The Forest needs to change this monitoring item or add a new item in the Forest Plan in order to encompass the hundreds of sites determined to be eligible by consensus with the State Historic Preservation Office.



Cultural Resources 2

Item Monitored: Clearance surveys for cultural resources

Method: Ground survey of areas which may be impacted by various resources activities

Results: All Forest Service authorized projects carried out during fiscal years 2000, 2001 and 2002 received the necessary clearance documentation prior to initiation. There were five incidents of unauthorized, illegal ground-breaking projects and/or out-of-compliance activities that did occur. In all five instances, heritage resource specialist inspection revealed no sites were impacted. There was one instance of disturbance caused by a recreation residence permittee; the person was subsequently cited and fined.

Evaluation: The Forest needs to evaluate methods to ensure strict adherence to Special Use Permits and more active agency oversight of permitted activities as a way to reduce out of compliance activities by outside entities.

Lands and Special Uses 1

Item Monitored: The availability of electronic site acres

Method: A review of acres dedicated to electronic sites.

Results: There was no change in the availability of electronic sites, which remains at 133 acres.

Evaluation: In 2002, the Forest initiated a planning effort to analyze the withdrawal from mineral entry of approximately 1,400 acres at seven sites, including five existing electronic sites, one planned site and the Langmuir Principle Research Site. Withdrawal will protect the sites from the potential of incompatible effects related to mineral excavation.



Lands and Special Uses 2

Item Monitored: The effect of management practices conducted on adjacent or intermingled non-National Forest lands on the goals and objectives of the Forest Plan.

Method: Periodic interagency meetings, meetings with concerned citizens and land owners; and with local, county, state agencies and organizations. The Forest Supervisor's Lands Staff Officer will compile, receive and review reports from Rangers and staff.

Results: The L-Bar Land Exchange was completed in 2001 resulting in a net gain of 933 acres to the Forest and reducing the forest boundary by 135 miles. Subdivision development within and adjoining the Forest has resulted in encroachments by those landowners. Twenty-five miles of Forest boundary were surveyed. Private land development resulted in the need for 14 private and public road easements to be issued during FY 2000, 2001 and 2002.

Lands and Special Uses 3

Item Monitored: Miles of right-of way acquired.

Method: Work accomplishment reports.

Results: One acquisition of $\frac{1}{4}$ mile was completed. Four rights-of-way are pending.

Lands and Special Uses 4

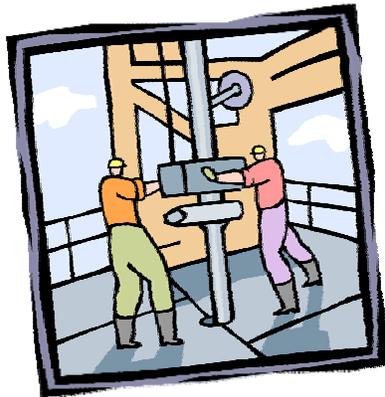
Item Monitored: Effects of goals, objectives and management activities of the Forest on adjacent intermingled and surrounding non-National Forest lands.

Method: Periodic interagency meetings, meetings with concerned citizens, local community leaders, land grant and acequia community leaders, Native American community leaders, traditional Native American religious leaders, Federal and State officials. Staff and Line Officers will compile and distribute an annual report based on meeting results and contacts.

Results: Three Small Tracts Act cases were settled regarding encroachments onto National Forest System lands. The Forest initiated land exchange on the Rita Blanca National Grassland resulted in consolidation of isolated parcels and improved management of federal and private lands. The Forest completed the withdrawal of approximately 14 acres at the Sandia Administrative Site/Tijeras Pueblo. This withdrawal from mineral entry protects archeological values of the pueblo, the public investment at the Ranger District Office and the surrounding private land.

Lands and Special Uses: Other

Minerals: Two Notices of Intent to lease National Grassland parcels for natural gas and one application to drill for natural gas were processed between 2000 and 2002.



Facilities 1, 2, and 3

Item Monitored	FY 2000	FY 2001	FY 2002
1. Miles of road construction/reconstruction	5.2	8.6	1.5
2. Miles of level 3, 4 and 5 road maintenance	307	333	373
3. Miles of road decommissioned	24.4	8.3	1.5

Method for items 1, 2 and 3: Work accomplishment reports

Evaluation: Access to the Southwestern Forests and Grasslands depends on the road system. The maintenance, building and decommissioning of roads to meet Forest Plan goals and objectives is essential.

Protection (Law Enforcement) 1

Item Monitored	FY 2000	FY 2001	FY 2002
Law enforcement person hours	Not Available	9,152 hours	10, 287 hours

Method: Maintained by the Regional Office, the LEMARS system is the database currently in use.

Evaluation: With a steady rate of population growth, development occurring adjacent to the forest and record numbers of visitors, adequate Law Enforcement staffing is essential. The Region 3 Strategic Action Plan is currently assessing law enforcement staffing needs for the Forest.

Timber 1

Item Monitored	FY 2000	FY 2001	FY 2002
Acres of overstory and final removal harvest	16	18	32
Cost of Report	\$100	\$100	\$100

Method: Timber Management Information system; Staff field reviews of 5% of treatment projects



Timber 2

Item Monitored	FY 2000	FY 2001	FY 2002
Acres of intermediate harvest	120	220	135
Cost of Report	\$100	\$100	\$100

Method: Timber Management Information system; Staff field reviews of 5% of treatment projects

Timber 3

Item Monitored	FY 2000	FY 2001	FY 2002
Acres of reforestation	39	0	0
Cost of Report	\$200	\$200	\$200

Method: Annual Reforestation Needs Report, data is generated by qualified silviculturalist using standard inventory methods.

Timber 4

Item Monitored	FY 2000	FY 2001	FY 2002
Acres of timber stand improvement (TSI)	145	175	175
Cost of Report	\$200	\$200	\$200

Method: Annual TSI Needs Report, data is generated by qualified silviculturalist using standard inventory methods.

Timber 5

Item Monitored	FY 2000	FY 2001	FY 2002
Boardfeet of net sawtimber offered (mbf)	6,308	61,784	156,004
Cost of Report	\$100	\$100	\$100

Method: PAMARS

Timber 6

Item Monitored	FY 2000	FY 2001	FY 2002
Cords of fuelwood made available	853	4,983	2,981
Cost of Report	\$200	\$200	\$200

Method: Review annual firewood sales reports, firewood advertised but not sold, and free use permits.

Timber 7

Item Monitored	FY 2000	FY 2001	FY 2002
Acres of adequate restocking	Data not available	40	17
Cost of Report	\$200	\$200	\$200

Method: Measurements taken on randomly placed plots within each regeneration area.

Timber 8

Item Monitored	FY 2000	FY 2001	FY 2002
Stands of forested lands identified and tracked under the Integrated Stand Management System	7,560	7,560	7,560
Acres of forested lands identified and tracked under the Integrated Stand Management System	490,361	490,361	490,361
Cost of Report	\$300	\$300	\$300

Method: Number of stands identified and tracked/number of timber sales operated under Integrated Stand Management System.

Evaluation: The ecological restoration of southwestern ponderosa pine forests are of great concern. The Forest Plan uses the following to provide guidance and direction:

- “The Healthy Forest Initiative” (President Bush, August 22, 2002)
- Forest Service Chief, Dale Bosworth discussion of the four major threats to our National Forests (Speech, 7/17/2003)
- Region 3 Strategic Action Plan, Southwestern Regional News, May 2003-August 2003
- Formal scientific/academic guidance contained in articles such as Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective (Allen, et. al., 2002.)

Range 1

Item Monitored: Acres of overstory modification in woodland types

Method: Review of Annual Work Accomplishment reports

Results: The Kiowa/Rita Blanca National Grassland was the only unit to complete any overstory modification of woodlands. In FY 2000 the District completed 900 acres of mechanical thinning within the Canadian River watershed and 1,800 acres of prescribed burn of younger stands.

Range 2

Item Monitored: Acres of Shinnery oak and brush conversion and reseeded.

Method: Review of Annual Work Accomplishment reports.

Results: In FY 2000, the Black Kettle National Grassland treated 4,000 acres of Shinnery oak by converting it to grass vegetation.

Range 3

Item Monitored: Range improvements

Method: Review of Annual Work Accomplishment reports

Results:

Ranger District	FY 2000	FY 2001	FY 2002
Mt. Taylor	Not available	Not available	8 miles of fence 6 drinking troughs 6.5 miles pipeline 2 water storage tanks 1 well 5 acres weed control
Magdalena	1.1 miles pipeline 4.5 miles fence	1.25 miles fence	2 miles fence
Mountainair	Not available	Not available	0.5 mile fence 1 well 1 windmill
Black Kettle/ McClellan Lake	3 miles fence 4 windmills 2 solar pumps rebuild 1 pump	4 miles of fence 3 windmills 3 solar pumps 2 stock tanks	6.75 miles fence 10 windmills 1 solar pump move 1 windmill

Kiowa/Rita Blanca	6.75 miles fence 1 windmill tank 1 windmill tower 2 windmills 1 well	15.85 miles fence 1 mile pipeline 7 water storage tanks 2 windmills 2 wells 3 gates 1 well pump 1 concrete tank pad	0.75 mile pipeline 5 miles fence 2 wells 3 windmills
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Range 4

Item Monitored: Permitted use on Mt. Taylor, Magdalena, and Mountainair Ranger Districts.

Method: Data generated from grazing permits as displayed in INFRA.

Results: Reported in head months (HMs) for authorized use.

Ranger District	FY 2000	FY 2001	FY 2002
Mt. Taylor	Not available	18,787	19,822
Magdalena	Not available	36,351	56,647
Mountainair	Not available	17,049	16,291

Range 5

Item Monitored: Grazing capacity and range condition on Mt. Taylor, Magdalena and Mountainair Ranger Districts.

Method: Production utilization studies, range analysis data and intensive inspections.

Results: No data available.



Recreation 1

Item Monitored: Miles of trail construction/reconstruction and maintenance (outside of wilderness)

Method: Work Accomplishment Reports, infrastructure reporting, visual inspection of trails, trail contracts completed and the Management Attainment Report.

Results: The Cibola National Forest now has approximately 300 miles of non-wilderness trails. An average of 200 miles has been maintained over the last 3 years. About 10 miles of new construction/reconstruction has occurred within the same time period. Trail use continues to increase and user demand exceeds the forest's ability to maintain and construct/reconstruct trails. User-made non-designated trails are increasing with most incidences occurring on the Mt. Taylor Ranger District.

Evaluation: The Forest Plan needs to reevaluate user demand and environmental damage caused by user-made non-designated trails and place emphasis on working more closely with trail user groups especially off-highway user groups. The Plan should also evaluate the use of partners and volunteers for trail maintenance.

Recreation 2

Item monitored: Developed site use, public and private sector.

Method: Recreation Information Management Report is now obsolete. Monitoring is now done utilizing Visitor Use Reports based on District Ranger estimates and on actual count of tickets sold (for Fee Demonstration areas) or other counts by private sector operators.

Results Results of the first cycle 2000 of the National Visitor Use Monitoring Project (NVUM – a national project with the goal of monitoring each Forest every four to five years) on the Cibola National Forest were received in the fall of 2001. The unit of measure for recreation is no longer the recreation visitor-day (RVD); it is now the National Forest Visit. This project estimates Forest-wide national forest visits and site visits in two categories – Wilderness and non-Wilderness – but it is not site specific, nor does it break out developed site use from general forest area (dispersed) use. The estimated figures are as follows:

National Forest Visits		Site Visits		Wilderness Visits	
Visits	Error Rate	Visits	Error Rate	Visits	Error Rate
2,880,000	18.7%	3,170,000	17.9%	707,858	37.43%

The average length of stay for visitors at overnight use developed sites was 20.6 hours; length of stay at day use developed sites was 1.5 hours.

The data collected during the project are sufficient to determine an estimate of the average daily number of visits by site type (general forest area, overnight use developed site, day use developed site, and Wilderness), but the research scientist in charge of statistical analysis of the data must make estimates. At national level, this breakout of use by site types was not possible to include in the final cycle of reports, but will be considered for inclusion in future cycles. The NVUM project leadership also recognizes the desire for site specific use figures but, for now, is unable to add that component to the project.

Evaluation: The Forest Plan needs to be reevaluated to determine how best to measure developed site-specific recreation use.

Recreation 3

Item Monitored: Condition of developed sites in the public sector

Method: Recreation Information Management Report and Facility Condition Inventory methods are now obsolete. Monitoring is now done through Infrastructure reporting for developed sites, surveys and district employees monitoring sites.

Results: Recreational use in developed sites is increasing on all districts. Currently all developed sites have been inventoried into the Infrastructure Reporting System. The Sandia Ranger District's developed sites continue to be the most visited and have the highest occurrences of vandalism. Emphasis is on maintaining health and safety of users and increasing accessibility at all developed sites. There are approximately 375 developed sites on the forest encompassing picnic and campgrounds, trailheads, boating and fishing sites, winter sports and wildlife viewing sites.

Evaluation: The Forest needs to evaluate how best to maintain sites, control vandalism and meet user demands.

Recreation 4

Item Monitored: The provision of increased developed PAOT (people at one time) for recreation use.

Method: Recreation Information Management System Special Report # 18 methods are now obsolete. Monitoring is done by Infra sites.

Results: Forest-wide the Cibola National Forest has developed site capacity for over three million visitors at one time. Overflow of visitors does occur on major holidays on the Sandia Ranger District. All other districts are within capacity capabilities.

Evaluation: The Forest Plan needs to reevaluate the usefulness of monitoring PAOT's. Emphasis should be placed on maintaining sites for health, safety and accessibility.

Wilderness 1

Item Monitored: Wilderness use by Wilderness Spectrum Class

Method: Recreation Information Management Report is now obsolete. National Visitor Use Report and District personnel estimates of use of highly impacted areas are still used as monitoring methods.

Results: The Wilderness Opportunity Spectrum, per se, is not used any more. Wildernesses have been reviewed in terms of the Recreation Opportunity Spectrum (ROS), although wilderness use figures have not been determined by ROS setting.

Results of the first cycle 2000 of the National Visitor Use Monitoring Project (NVUM – a national project with the goal of monitoring each Forest every four to five years) on the Cibola National Forest were received in the fall of 2001. The unit of measure for recreation is no longer the recreation visitor-day (RVD); it is now the National Forest Visit. This project estimates Forest-wide national forest visits and site visits in two categories – Wilderness and non-Wilderness. The estimated number of Wilderness visits for fiscal year 2000 is 707,858. The average length of a Wilderness stay was 2.2 hours.

Evaluation: Currently the National Visitor Use Monitoring Project estimates only wilderness use, not by wilderness spectrum class. The project leadership recognizes the desire to add this component in the future. The Forest needs to reevaluate how best to measure Wilderness-specific use.

Wilderness 2

Item Monitored: Miles of wilderness trail construction/reconstruction and maintenance.



Method: Work Accomplishment Reports, Infrastructure reporting, wilderness trail contacts and visual inspections of wilderness trails.

Results: The Cibola National Forest has approximately 245 miles of wilderness trails. These trails are located within the Sandia and Manzano Mountains, and the Apache Kid and Withington wildernesses. Approximately 8 miles of new construction/reconstruction has occurred in the last three years. Maintenance has occurred on approximately 45 miles of wilderness trails during the same period.

Evaluation: The Forest Plan needs to reevaluate user demand and environmental damage caused by user-made, non-designated trails and place emphasis on working more closely with trail user groups especially off-highway user groups. The plan should also evaluate the use of partners and volunteers for trail maintenance.

Wildlife 1/2

Item Monitored: Acres of browse vegetation associations treated to improve availability and productivity

Monitoring Method: Document pre-post treatments utilizing standard vegetation analysis techniques.

Results: Results available for Mt. Taylor Ranger District for FY 2000: Acres of Browse treated = 0

Wildlife 3

Item Monitored: Number of water developments

Monitoring Method: Review annual work accomplishment reports

Results: Results available for Mt. Taylor Ranger District for FY 2000: Number of water developments = 0; from Black Kettle Ranger District for FY 2000: 6 ponds

Wildlife 4

Item Monitored: Number of snags per acre

Monitoring Method: Field review of timber sale areas

Results: Results available for Mt. Taylor Ranger District for FY 2000: Number of snags per acre = less than 1 based on existing TSI

Wildlife 5

Item Monitored: Number of roost groups

Monitoring Method: Field inspection of timber sale areas

Results: Results available for Black Kettle Ranger District for FY 2000: Number of roost groups = 76

Wildlife 6

Item Monitored: Threatened or endangered animals

Monitoring Method: Christmas Audubon Bird Counts, contract, State supplied data, U.S. Fish and Wildlife Service supplied data.

Results: Reported results for birds are from the Cibola National Forest Neo-tropical Bird Specialist, Hart Schwartz.

Threatened and Endangered:

- **Mexican Spotted Owl** (Federally listed as threatened): The Cibola has about 45 PACs, or Protected Activity Centers. Monitoring is minimal, except on the Mount Taylor District where in 2002 thorough monitoring was done by a contractor, but, even so, only 4 of 12 PACs were occupied and only two showed signs of possible reproduction.
- **Peregrine Falcon** (On the Regional Forester's Sensitive List): The Cibola has twelve known eyries. Monitoring of peregrines is still mandated by the Fish and Wildlife Service for five years after delisting. New Mexico Game and Fish gathers the monitoring data for selected eyries. In 2002, the Cibola monitored six of the twelve eyries and three of these produced eight young. In NM, occupancy is holding steady or increasing, but productivity has been declining in recent years to 1.59 fledged young per adult pair in 2001 (T. Johnson). The Cibola averaged 2.0 young per adult pair from 2000 to 2002.
- **Northern Goshawk** (On the Regional Forester's Sensitive List): The Cibola has 23 known territories, of which at least half are monitored annually, but in 2002, thanks to contract work on Mount Taylor, almost all were monitored. From 2000 through 2002, a collective total of 45 territories were monitored, and of these only 15% were successful, producing a total of 14 young in those three years. However in 2000 and 2001 only one or two young were recorded on the entire Cibola!
- **Southwestern Willow Flycatcher** (federally listed as endangered): The Cibola monitors two sites annually: Bluewater Creek on the Mount Taylor District and Tajique Canyon on the Mountainair District. While the species has not been recorded at the latter, the former had a successful breeding pair in 1994. A riparian restoration project is currently underway at Bluewater to extend suitable breeding habitat for another two miles upstream.

Results: Mt. Taylor Ranger District FY 2000: Management Indicator Species

- **Mule Deer:** At carrying capacity in Zuni Mountains. It is stable at a moderate level but unable to increase in number due to limiting habitat factors. They are at a stable low level on Mt. Taylor and are probably slightly below carrying capacity. Numbers won't increase due to limiting habitat factors.
- **Elk:** The population in the Zuni Mountains is stable to slowly increasing due to New Mexico Game and Fish NMG&F) harvest strategies to keep the population in check. The population on Mt. Taylor is increasing. In winter 2000/2001, the New Mexico Department of Game and Fish made a direct count of 3,700 elk on Mt. Taylor.

Wildlife 7

Item Monitored: Threatened and endangered/sensitive plants

Monitoring Method: Surveys by Forest Service Personnel and contractors, and from data supplied by U.S. Fish and Wildlife Service and states.

Results: Mt. Taylor Ranger District FY 2000

- **Zuni Fleabane:** No new populations identified. FY 2000 was the driest year on record. Did not see flowering of this plant during normal flowering time. This area of the Zuni Mountains received virtually no precipitation for 18 months. Because of the warm winter 1999/2000, flowering may have been earlier than usual for this species. Since this is a rhizomanus species, it should have survived the drought and return to normal this coming year. Information gathered via site monitoring.
- **Parish Alkali Grass:** No new populations identified.
- **Sivinski's Fleabane:** No new populations identified
- **Zuni Milkvetch:** No new populations identified.

Wildlife 8

Item Monitored: Population and Management Trends of Management Indicator Species.

Monitoring Method: Point counting method, Monitor management guilds and single season monitoring.

Results: Monitoring method now used is to count every bird per specified transect. Reported results for birds are from the Cibola National Forest Neo-tropical bird specialist, Hart Schwartz.

Management Indicator Species (MIS) New Mexico: None of the indicator species are monitored individually, but since 1993 the Cibola has been conducting annual breeding bird surveys, which monitor all birds, including the MIS birds. Currently, the Cibola conducts *25 Forest Surveys throughout the Cibola*, each of which is about two miles in length. In any one year, five or six of these surveys are completed during the month of June when breeding birds are most easily detected. The Cibola also conducts four BBSs and compiles an additional three, for a total of *seven Breeding Bird Surveys* that occur completely or in part on Cibola Forest lands. These BBSs, each 24.5 miles in length, are nationwide and under the auspices of the US Geological Survey, and, to date, have provided the best available data on breeding birds during the last forty years.

- **Long-billed Curlew (Grasslands):** National Audubon and NM PIF consider this a High Priority Species, not because numbers are presently plummeting, but because only an estimated 20,000 remain across its relatively limited range in grassland habitat that is under pressure. Numbers appear to be stable on the Kiowa/Rita Blanca, with birds being seen every year, but in order to understand the true local dynamics, it will be necessary to conduct wide-ranging surveys either in early spring when birds are courting or in late June/July when adults are protecting their young.
- **Grasshopper Sparrow (Grasslands):** This sparrow is an indicator of mid-grass prairie, as well as short-grass, but latter must have some vertical structure. Informal observations indicate that the species is fairly common on broad expanses of prairie, but not in canyons.
- **Wild Turkey-Rio Grande (Eastern Riparian):** Occasionally seen in the Canadian River Valley, as on 9-23-02 when 23 were observed near the junction with Mills Canyon.
- **Wild Turkey-Merriam's (Ponderosa):** District biologists report that populations appear to be stable on all mountain districts, except in the Sandia Mountains, where the species is probably extirpated. The release of about 60 Wild Turkeys into the Manzanos (1992/1993) and 46 into the nearby Gallinas (1995) seems to have been successful as birds are regularly encountered by visitors and breeding bird surveys. Absolute numbers are not available, but poor mast production and the five-year drought overall may cause short-term fluctuations.
- **Pygmy Nuthatch (Ponderosa):** Four Cibola surveys and one of the USGS surveys measure this species fairly well. Based on these surveys and the overall BBS trend in NM, this nuthatch appears to be holding its own on the Cibola. However, habitat conditions could be improved by thinning dense stands of Ponderosa, while maintaining older trees and snags.
- **Juniper Titmouse (Pinyon/Juniper):** Formerly it was known as the "Plain Titmouse." The new name "Juniper" no doubt identifies the affinity the species has for that particular tree in the Southwest. Even its nest is primarily constructed out of



one-seed juniper bark. The Cibola has five Forest surveys and three USGS BBSs that track titmouse abundance. Although statewide there seems to be a negative population trend, this is not yet obvious on the Cibola. Since the species is totally non-migratory, it cannot escape from its P/J environment; thus, the current drought affecting food production no doubt has a negative, short-term impact. Over the long term, maintaining a mature woodland with many fruit-bearing trees will continue to benefit the species.

- **Hairy Woodpecker (Mixed Conifer):** This woodpecker is widespread on the Cibola, ranging from Ponderosa up through spruce/fir. Most of the surveys on the Cibola record this species, but it is most common on the 10-K Survey in the Sandias in dense mixed conifer forest, where the average count is about five birds per survey. The Claunch BBS clearly demonstrates that Hairy Woodpeckers frequent forests recently destroyed by fire. Overall, the population seems stable, although, as stated earlier, the birds range through at least three major life zones.
- **Red-breasted Nuthatch (Spruce/Fir):** Forty years ago this nuthatch was considered to be an uncommon migrant and winter visitor in NM. But today it seems fairly common in summer as a breeding species in the mountains of the Cibola NF, except in the Zuni Mountains, where white fir and corkbark fir are lacking. This is a difficult species to monitor because of its irregular and unpredictable movements. But when there is a good crop of white or corkbark fir, there can be an explosion of nuthatches that lasts into the following spring. If it is true that the Red-breasted Nuthatch is a relative newcomer to NM as a summer resident, the trend is obviously positive, but variable.
- **House Wren (Riparian):** Statewide in NM, this wren is showing a significant decline, but this does not seem to be borne out on the Cibola as yet, where, admittedly sample size is small. It is a riparian species at lower elevations, but the starting point has migrated from 7,500 feet up to around 8,000 under drought conditions. At the very highest elevations it's no longer a riparian obligate, but is associated with shrubby areas in somewhat open forest, as on Sandia Crest or Magdalena Ridge. It thrives on two Cibola transects where an average of four birds have been recorded consistently during the last ten years.
- **Red-naped Sapsucker (Deciduous woodland):** Formerly known as the "Yellow-bellied Sapsucker," this bird is local in distribution, but does occur on two Cibola survey transects, where site fidelity has persisted over many years. Primarily, the birds favor aspen and cottonwood, especially where Siberian Elm is also present, a tree which, apparently, is easy to mine for sap. Aspen regeneration projects carried out on some of the districts probably will benefit the species, especially in riparian settings, because the preference is for aspen in the context of a diversified forest, not just acres of aspen. Thus the general decline in aspen overall may not be detrimental to the Red-naped, as long as some aspen and cottonwoods remain. But even if the population is relatively stable, as on Mount Taylor, Sandia and Mountainair, it remains small and local.

Costs 1

FY 2000-2001

Item Monitored: Unit costs by Activity

Monitoring Method: Advent Report #21.

Results: This is an obsolete item. Job codes are within each of the program codes.

Costs 2 & 3

Items Monitored: Total Annual Budget and Budget by program component

Monitoring Method: Annual PAMARS reporting system (now obsolete) and Regional Forester's Program, Budgeting and Information System.

Results: Contained within the Chart below. All budget items are maintained in the FIS system. Codes are derived from the National Funding Code system.

Year	2000	2001	2002
Organizational Total Budget	\$14,823,597.02	\$17,627,436	\$19,805,309.19
Fund/Program	Total:	Total:	Total:
BDBD Fund Total	\$2,000		
CWFS Fund Total	\$55,000		\$20,000
CWKV Fund Total	\$18,000		
FDFD/FDCL	\$92,000		\$30,000
FDFD/FDDS	\$153,000		\$150,000
FDFD Fund Total	\$245,000		\$180,000
GBGB Fund Total	\$3,000		\$3,000
HTAE Fund Total	\$16,000	\$13,000	\$15,000
HWHW Fund Total	\$102,947	\$128,000	\$386,000
LALW Fund Total	\$150,149	\$163,061	(\$6,895.11)
NFEX Fund Total	\$260,000		\$300,000
NFNF/NFFV	\$65,401		
NFNF/NFGA	\$1,023,875		
NFNF/NFHR	126,351		
NFNF/NFIF	\$9,570		
NFNF/NFIM	\$613,834	\$480,755	\$674,464.66
NFNF/NFLA	\$251,981		
NFNF/NFLE	\$118,330	\$122,405	\$130,000
NFNF/NFLL	\$97,448		
NFNF/NFMG	\$120,326	\$136,764	\$140,092.88
NFNF/NFNP	\$216,670		
NFNF/NFRG	\$390,120	\$954,212	\$1,047,847.44

YEAR	2000	2001	2002
Organizational Total Budget	\$14,823,597.02	\$17,627,436	\$19,805,309.19
Fund/Program	Total:	Total:	Total:
NFNF/NFRM	\$775,587		
NFNF/NFRV	\$701,300		
NFNF/NFSI	\$354,337		
NFNF/NFSO	\$81,805		
NFNF/NFTE	\$79,237		
NFNF/NFTM	\$409,899	\$358,292	\$571,546.00
NFNF/NFWL	\$190,202		
NFNF/NFWM	\$134,868		
NFNF/NFLM		\$355,912	\$388,175.34
NFNF/NFMP		\$65,000	
NFNF/NFPN		\$513,542	\$456,394.40
NFNF/NFRW		\$1,209,409	\$1,322,097.89
NFNF/NFVW		\$1,434,229	\$1,748,644.90
NFNF/NFWF		\$466,893	\$738,920.28
NFNF/NFN3			\$105,400
NFNF Total Fund	\$5,761,141	\$6,097,413	\$7,323,583.79
PAPA/PAFC	\$2,725,132		
PAPA/PAMF	\$370,000		
PAPA/PAMR	\$913,000		
PAPA/PAMT	\$99,000		
PAPA/PARD	\$747,423		
PAPA/PATC	\$200,267		
PAPA Total Fund	\$5,054,822		
RBRB Total Fund	\$75,609	\$69,315	\$59,367.29
RIRI Total Fund	\$1,000	\$1,000	\$1,000
RTRT Total Fund	\$31,904	\$27,572	\$24,917.09
SFSF/SSSS Fund Total	\$18,000		
SPSP/SPEA	\$34,969	\$38,023	\$16,238.39
SPSP/SPFH	\$7,005	\$5,044	\$4,855.74
SPSP/SPS6		\$144,500	\$0.68
SPSP/SPS7		\$188,000	\$0.36
SPSP Total Fund	\$41,974	\$345,567	\$21,095.17
TPTP/TPCD Fund Total	\$10,426.02		\$126,000
TRTR/TRTR Fund Total	\$22,020	\$63,194	
WFEX/WFEX Fund Total	\$40,000		\$50,000
WFWF/WFHF	\$885,331	\$854,869	\$3,428,010.00
WFWF/WFPR	\$2,025,000	\$4,390,721	\$3,598,946.00
WFWF/WFW2		\$1,361,000	

YEAR	2000	2001	2002
Organizational Total Budget	\$14,823,597.02	\$17,627,436	\$19,805,309.19
Fund/Program	Total:	Total:	Total:
WFWF/WFW3			0
WFWF Fund Total	\$2,910,331	\$6,606,590	\$7,026,956.00
NWNW/NWBM Fund Total	\$4,274		
CMCM/CMC2		\$559,000	\$21,329.87
CMCM/CMFC		\$1,660,740	\$2,101,992.57
CMCM/CMRD		\$1,140,533	\$1,501,407.83
CMCM/CMTL		\$361,451	\$412,554.69
CMCM/CMII			\$184,000
CMCM Fund Total		\$3,721,724	\$4,222,284.96
DMDM/DMDM Fund Total		\$391,000	
FEFR/FEFR			\$3,000
QMQM/QMQM Fund Total			\$50,000

Evaluation: The Forest Budget has increased with the cost of living. Extreme wildfire during these years has resulted in changes in fire severity budgeting.. PAMARS has not been used since the late 1980's; budget is maintained within the FIS system. If costs vary more than plus/minus 20%, an evaluation is made. Unit cost comparisons were reviewed in conjunction with the PARS and BFES plan (Budget Formulation and Execution System). The PARS report and the BFES plan identifies outputs consistent with programs, activities and primary purpose finding. Evaluations determine if capability adjustments are required.

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