Lincoln National Forest
Land and Resource Management Plan
September 1986
Table of Contents

5. MONITORING PLAN

Table of Amended Pages

Amendment 1	30,30A, 201
Amendment 2	44, 45, 48
Amendment 3	39, 206
Amendment 4	4, 5, 9, 10, 15
Amendment 5	33
Amendment 6	19, 58, 58A, 60A, 65, 66, 67, 67A
Amendment 7	15, 15A-15H
Amendment 8	91, 93, 102
Amendment 9	32, 35, 35A, 35B, 37, 38, 38A-38C, 93, 205, 206
Amendment 9 Erata	131, 133, 137, 142, 145, 148
Amendment 10	206, 206C, 206D,
Amendment 11	55A-55B
Amendment 12	206C
Amendment 13	60, 80
Amendment 15	28, 38, 206C, 206D, 208C, 208D
Amendment 16	13, 48-52, 57-58, 60, 62, 65, 67, 70, 73, 75, 85, 88, 90, 98, 106, 113, 117, 120, 123, 126, 128, 140, 149, 151, 153, 177, 186, 196, Appendix H

Table of Corrected Pages

Correction 1	35
Correction 2	64
Correction 3	102
Correction 4 (Amend 9)	14-16, 20-25, 17-19, 93, 101, 105, 106, 109, 130, 131, 133, 137, 139, 142, 145, 148

List of Figures

List of Tables

1. INTRODUCTION

PURPOSE OF THE PLAN

This plan defines the direction for managing the Lincoln National Forest for the next 10-15 years.

The plan provides for integrated multiple use and sustained yield of goods and services from the Forest in a way that maximizes long-term net public benefits in an environmentally sound manner.

Preparation of the Forest Plan is required by the Renewable Resource Planning Act (RPA), as amended by the National Forest Management Act (NFMA).

The planning principles in the NFMA regulations [36 CFR 219.1 (b)] were integrated throughout the process. These principles are: (Based in the law)

(1) Establishment of goals and objectives for multiple-use and sustained-yield management of renewable resources without impairment of the productivity of the land:

(2) Consideration of the relative values of all renewable resources, including the relationship of nonrenewable resources, such as minerals, to renewable resources:

(3) Recognition that the National Forests are ecosystems and their management for goods and services requires an awareness and consideration of the interrelationships among plants, animals, soil, water, air, and other environmental factors within such ecosystems:

(4) Protection and, where appropriate, improvement of the quality of renewable resources;

(5) Preservation of important historic, cultural, and natural aspects of our national heritage;

(6) Protection and preservation of the inherent right of freedom of American Indians to believe, express, and exercise their traditional religions;

(7) Provisions for the safe use and enjoyment of the forest resources by the public;

(8) Protection, through ecologically compatible means, of all forest and rangeland resources from depredations by forest and rangeland pests;

(9) Coordination with the land and resource planning efforts of other Federal agencies, State and local governments, and Indian tribes;

(10) Use of a systematic, interdisciplinary approach to ensure coordination and integration of planning activities for multiple-use management;

(11) Early and frequent public participation;

(12) Establishment of quantitative and qualitative standards and guidelines for land and resource planning and management;

(13) Management of National Forest system lands in a manner that is sensitive to economic efficiency; and

(14) Responsiveness to changing conditions of land and other resources and to changing social and economic demands of the American people. (Based in the law)

The Forest Plan replaces all previous resource management plans prepared for the Forest. Upon approval of the Forest Plan, all subsequent activities affecting these lands, including budget proposals, will be based on the Forest Plan [36 CFR 219.10 (e)]. In addition, all permits, contracts, and other instruments for the use and occupancy of these National Forest System Lands must be consistent with the Forest Plan [36 CFR 219.10 (e)]. (Based in the law)

Land management prescriptions and standards and guidelines are a statement of the Plan's management direction. Projected output, services, and rates of implementation are, however, dependent on the annual budget process. Implementation schedules can be changed to reflect annual budget and amended accordingly after appropriate public notification. (S&Gs will not be used as such in the revised Plan.)

ORGANIZATION OF THE FOREST PLAN

DOCUMENTATION

Chapter 2 of the Forest Plan describes the major issues and concerns and how the planned action responds to issues and concerns. Chapter 3 summarizes the Analysis for the Management Situation (AMS). It depicts the current levels of goods and services produced and projects supply and expected future use on the Forest. Chapter 4 details the mission, goals, objectives, proposed vicinity, and timing of management practices; projects the conditions and describes management direction and prescription and associated resource management standards and guidelines. A management area map, keyed to the prescriptions in Chapter 4 is included with the EIS/Plan package. Chapter 5 is the monitoring plan. The Glossary defines terms used in the plan. Appendix A lists activity codes. Appendix B contains a discussion of road system management. Appendix C contains Forest-wide standards and guidelines for management of threatened and endangered species. (An AMS is no longer required in the revised Plan..)

Tables 2-14 have been moned to Appendix F, per Amendment 9.

2. PUBLIC ISSUES AND MANAGEMENT CONCERNS

OVERVIEW

Local issues have been identified for the Lincoln National Forest. The Forest Plan is designed to respond to these issues as well as to RPA Program objectives assigned to the Forest in the Regional Guide[1].

Issues, concerns, and opportunities were identified from the Regional Guide[1] and From comments solicited from the public and Forest Service employees. Comments were received at a number of public meetings and in response to a series of informational brochures mailed to the public.

Comments received were analyzed in a scoping process to determine issues and Concerns most relevant to the Forest Plan and DEIS [40 CFR 1501.7]. Content analysis was used to extract substantive comment from responses. Results of the analyses were compared and consolidated in a summary of responses. A list of major issues was compiled, based on whether an issue was:

Relevant specifically to the Lincoln National Forest;

Within the Forest Supervisor's authority to resolve;

Resolvable using existing technology;

Long-term in duration;

Concerned with resource management practices rather than personnel performance;

Of widespread concern.

The final list of issues was approved by the Regional Forester, and became the basis of the planning effort on the Forest. As this effort evolved, some issues were resolved, others failed to stand the test of time, and some were found to be not appropriate for resolution in the Forest Plan.

Appendix A of the EIS contains a detailed discussion of the public involvement process.

ISSUES

The following describes the issues which were selected to be addressed in the Planning process and a description of how the Forest Plan responds to them. Quantifiable comparisions for selected time periods (of 10 years each) are shown. Nonquantifiable comparisons apply to all five periods.

Dispersed, Cave, and Developed Recreation

"Demand for motorized dispersed recreation is increasing. Off-road travel by vehicles is damaging resources. There are conflicts between motorized and non-motorized uses on roads and trails."

"Current management of caves is not responding to demand. Unacceptable damage to caves is occurring."

[1] - The Regional Guide issued by the Southwestern Regional Office in August 1983 was recinded in the mid-1990s and is no longer in use as referenced in this Plan. (Eratta-2005)

Demand for developed recreation facilities exceeds current supply and is increasing as follows:

	Use Supplied Period 1	5
Dispersed - MRVDs	**975**	**1341**
Percent of potential	**99**	**89**
Caves - MRVDs	6.8	7.6
Percent of potential	**100**	**100**
Developed - MRVDs	569	**1046**
Percent of potential	91	**86**

Wilderness trails are maintained at level II, or moderate. The Osha, Rim, and Dog Canyon trails are maintained at level III. A total of 120 miles of trail are maintained by Volunteers under the Adopt-A-Trail program. All vehicles will be restricted to system roads and trails signed as open, except they are allowed up to 300 feet from roads and trails for dispersed camping. Eight trailheads will be constructed and maintained to provide access to wilderness. Known and newly-discovered caves will be gated when necessary. Use will be limited by a permit system which will also provide some protection of cave features.

Campgrounds, picnic grounds, winter sports and snowplay areas, and other Developments will be constructed, almost all on Cloudcroft and Smokey Bear Ranger Districts, to augment existing facilities. Two existing ski areas will be allowed to expand and a new one constructed after appropriate environmental analysis and feasibility studies are performed. Service level will vary by type of facility, level of use, and location to maintain about 96
percent of developed facilities at standard service levels.

Wilderness

"A recommendation for or against wilderness designation for the Guadalupe Escarpment Wilderness Study Area (WSA) must be made."

The WSA will be recommended for designation as nonwilderness. It will be managed To protect its wilderness values pending a decision by Congress.

Range

"Grazing use exceeds capacity. Large areas of rangeland are in unsatisfactory Condition Wildlife and domestic livestock often compete for forage. Grazing capacity has not been fully defined in relation to other resource values."

"A large number of small grazing allotments complicates implementation of effective grazing management systems."

	Period 1	5
Use- MAUMs	147	157
Capacity - MAUMs	118	157
Percent of maximum		73

Use will decline at an average rate of 6 MAUMs per period for two periods and will balance capacity in the third period. Capacity will increase until the end of the fourth period through the use of structural and nonstructural improvements, and because of the reduction in grazing use. Over 224 miles of fences, 113 miles of pipelines and about 162 waters will be developed in the first period, to apply intensive and moderately intensive management practices on about 68 percent of suitable range acres. Allotments will be combined into efficient, effective units whenever opportunity arises.

Timber

"A sustained yield level of sawtimber and other timber products has not been developed for the Forest."

"There is an uneven distribution of age classes with a disproportionate amount of immature sawtimber."

	Period 1	5
Sawtimber produced-MMBF	15.0	15.0
Perrcent of maximum	40.0	38.0
Long-term Sustained:		
Yield Capacity-MMCF	3.9	
Percent of maximum	**37.0**	

About 139,000 acres will be managed for timber, or 54 percent of the tentatively suitable land. About 122,000 acres will be managed using the even-aged system, about 3,500 acres of aspen will be managed to perpetuate the type, and about 17,400 acres of the conifer will be managed for old-growth. There will continue to be an excess of immature sawtimber, but the relative proportions of size classes present will stabilize. Other size classes will be evenly distributed.

Fuelwood

"Demand for fuelwood is increasing rapidly."

"Fuelwood gatherers often create unauthorized roads in their search for new sources. Theft is a serious problem.

"Unmerchantable byproducts of sawtimber harvest provide a source of fuelwood."

	Annual Volume by Period 1	5
CFL - MMBF	5.7	6.8
PJ - MMBF	2.0	2.0
Total	7.7	8.8
Percent of maximum	55.0	86.0

To supply fuelwood, half of the products (material smaller than sawlogs) from timber Sales will be available for fuelwood. Pinyon-juniper fuelwood will be produced at levels near maximum without construction of additional roads. Creation of unauthorized roads and theft of fuelwood will be reduced by concentration of harvest areas and increased level of enforcement.

Minerals	"The Forest has a number of dangerous abandoned mine workings." An inventory of hazardous abandoned mines will be prepared in the first period
Lands	"There are many parcels of private land in and adjacent to the Forest." "Rights-of-way are inadequate to efficiently protect, manage, and provide public access to the Forest." Budget for land ownership adjustments includes dollars for land exchange and acquisition consistent with restrictions on these activities, and funding for acquiring about 45 miles of rights-of-ways.
Fire	"The Forest had a history of large disastrous person-caused fires which have resulted in property and resource damage. The probability of serious losses is increasing because of increasing use of the Forest, numbers of improvements on the Forest, and development of private land in and adjacent to it." "The present fire program appears to be inefficient." Risk of fire caused by use of the Forest, and hazard caused by creation of fuels as a result of management activities, will increase significantly. Damage to property will be minimized by aggressively suppressing fires in or near developments, or which may spread to developed areas. Fires occurring in other areas will be suppressed when resource values threatened are greater than the cost of suppression. Activity-generated fuels will be treated in and near developed areas, and in other areas as needed to accomplish overall management objectives.
Insects and Disease	"A significant portion of the Forest is infected by dwarf mistletoes, or is susceptible to damage caused by western spruce budworm." Prescriptions designed to control dwarf mistletoes and prevent significant losses caused by western spruce budworm are applied to about 50,000 acres of mixed conifer and ponderosa pine on the Sacramento Division, most in areas highly valued for recreation and timber. Other, less intensive, prescriptions are applied to an additional 41,000 acres of mixed conifer and ponderosa pine to provide a degree of control of dwarf mistletoes. Acres managed for old-growth will be free of dwarf mistletoes, or so lightly infected that the parasite can be eliminated in the first harvest entry.
Law Enforcement	"Laws and regulations are not being consistently or uniformly enforced." Enforcement of Federal laws will be done by a Level Four Officer assigned to each of the Forest's three divisions, and one to the Supervisor's Office. Cooperative funds to Otero, Lincoln, and Eddy Counties will provide 2.5 person-years by local agencies to enforce State and local laws and regulations on the Forest.
Transportation	"There is a lack of understanding between the Forest and other agencies about jurisdiction of existing roads."

	"Management of the transportation system is inefficient." Deeded rights-of-ways and easements to counties and the State will be negotiated whenever opportunities arise. Road maintenance objectives will be met on all managed system roads.
Local Residents	"Interests and needs of local residents are often at odds with those of regional users."
and Regional Users	Lifestyles of local residents will undergo little direct change because of activities on the Forest. Increased opportunities for dispersed recreation and timber production will slightly favor those residents using the Forest for these purposes; decreases in grazing use will affect local ranchers slightly. Regional users and those local residents involved in or using developed recreation facilities, especially those involved in the tourist industry, will be favored by an emphasis on this resource.

(Page 8 Intentionally Left Blank)

3. SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

OVERVIEW

A analysis of the Management Situation (AMS) was prepared and documented in September 1982. The document was then used to determine the Forest's capacity to supply various goods and services. Copies of the AMS are filed at Ranger District offices, the Forest Supervisor's Office and the Regional Office.

This chapter summarizes supply and projected future use for various Forest goods and services which were analyzed to identify necessary improvements, resolve issues, and prevent future conflicts. A goal of the Plan is to identify the level and type of Forest uses that would help meet projected future use while enhancing or maintaining resources in a cost effective and integrated resource manner. Table 1 compares key outputs proposed for the first and fifth periods with the maximum which can be supplied and projected future use and supply.

Table 1. Comparison of Key Outputs with Projected Future Use and Supply

		Proposed Plan		Annual Average Supply		Projected Future Use	
Resource Output	Unit of Measure	Period 1	Period 5	Period 1	Period 5	Period 1	Period 5
Allowable Sale Quantity Sawtimber	MMBF	15000	15000	37337	39347	37337	39347
Allowable Sale Quantity of Wood Products (Roundwood)	MBF	1024	1202	3135	2475	3135	2475
Fuelwood Sold	MBF	7717	8887	15470	11404	**8400**	**17000**
Grazing Capacity	MAUM	118	157	139	218	---	---
Permitted Livestock Use	MAUM	147	157	---	---	150	218
Wilderness Recreation (excluding wildlife)	MRVD	23	36	31	49	22	**56**
Developed Recreation (including skiing)	MRVD	569	1046	625	1210	**531**	**1457**
Dispersed Recreation (Dispersed and Wildlife)	MRVD	982	**1349**	988	1515	1001	1952
Water Yield	ACF	123	123	123	123	123	123

Supply represents the amount of a good or service which could be supplied if that output were emphasized at the expense of other goods and services. Since trade-offs are necessary to satisfy laws, policies and issues, only one resource, water, is produced at the maximum amount possible without significant environmental degradation. Some outputs are slightly below supply, as in the case of dispersed recreation. Other outputs are produced at levels well below their potential supply. An example of this is the allowable sale quantity for sawtimber, which is less than half of the potential supply.

Outputs, as well as supply, are in most cases well below projected use. Projected use was determined to be that level of output of a given resource which would satisfy future need**. SENTENCE DELETED BY AMENDMENT 4**. Although the **WORD "Proposed" DELETED BY AMENDMENT 4** Plan emphasizes developed and dispersed recreation, projected future use for both resources is so high that, even with maximum emphasis, shortages will develop.

4. Management Direction

MISSION

A mission is a guiding principle toward which all activities focus and contribute. The mission of the Forest is to manage resources under multiple use and sustained yield principles in a way that maximizes long-term net public benefits consistent with resource integration, environmental quality, and management considerations.

GOALS

A goal is defined as a "concise statement of the state or condition that a land and resource management plan is designed to achieve. A goal is usually not quantifiable and may not have a specific date for completion" [36 CFR 219.3]. The goals necessary to achieve the mission of the Forest follow. Some of these goals will be reached during the 10-15 years the plan is in effect. Others will require longer times to accomplish, and then only if the direction contained in the plan is continued beyond the effective period.

Timber

Manage suitable timber land to provide a sustained yield of quality timber, provide a range of habitats for wildlife and visual resources, and to minimize impacts of insects and diseases on resources. Manage pinyon-juniper lands to provide a sustained yield of fuelwood. Provide fuelwood from suitable timber land as a by-product of timber management activities. Use integrated **resource** management concepts to direct all timber management activities.

Maintain and perpetuate aspen species through silvicultural management. Timber management activities are consistent with water quality, soil productivity, wildlife, recreation, visual, and cultural values. Specific standards and guidelines for utilization, restocking, openings, and coordination of manipulation of the vegetation resource are found in the Regional Guide, and later in this chapter under individual management area prescriptions and Forest-wide Standards & Guidelines, Activities C01, D03, E00, E03, E05-E07, P34.

Wilderness

Manage wilderness to achieve the intent of the Wilderness Act of 1964. Develop wilderness access points.

Allow fire to play a natural role.

Manage air quality in conformance with the Clean Air Act and consistent with wilderness values.

Specific standards and guidelines are found in prescriptions for individual wildernesses under Activities A03, B01, and B02.

Wildlife And Fish

Manage habitat for wildlife populations consistent with goals outlined in the New Mexico Comprehensive Plan and consistent with other resource values.

Provide for a diversity of plant and animal species through improved habitat management.

Provide for the improvement of habitat for threatened and endangered species to meet the goals and intent of the Endangered Species Act of 1973.

Provide for management of sensitive species in accordance with Regional requirements.

Specific standards and guidelines are found in individual management area prescriptions and Forest-wide Standards & Guidelines under Activities C01-C03, C06, C09, C12, E00, E03, **and in Appendix C, Forest-wide Standards and Guidelines for Federal and State Threatened Species.**

Range

Manage and enhance the vegetation resource and bring permitted grazing use in balance with the forage allocated for use by domestic livestock. Place all allotments under appropriate levels of management.

Produce livestock forage consistent with other resources and uses.

Specific standards and guidelines are found in Forest-wide Standards & Guidelines and individual management area prescriptions under Activities D01-D06.

Recreation

Manage for a variety of developed and dispersed recreation experiences, while maintaining the current spectrum of opportunities. Encourage opportunity for private sector to meet part of recreation demand. Provide a system of roads and trails for motorized recreation use, while protecting other resources.

Preserve and protect cave resources to provide a wild caving experience and to provide quality information and interpretive services related to this unique resource.

Protect and manage historical and cultural resources.

Emphasize visual resources through application of landscape management principles.

Coordinate with the New Mexico Natural Resources Department to contribute to goals and objectives specified in the State Comprehensive Outdoor Recreation Plan.

Specific standards and guidelines are found in individual management area prescriptions and Forest-wide Standards & Guidelines under Activities A01-A08 A10, A14, A16, A18, A21.

Minerals

Accommodate energy and minerals exploration and development while encouraging practices that protect the environment.

Specific standards and guidelines are found in the Regional Guide, Forest-wide Standards & Guidelines, and management area standards and guidelines under Activities G01-G07, G09-G11.

Water and Soils

Provide direction and support to all resource management activities with emphasis on maintaining water quality and quantity.

Secure and provide an adequate supply of water for the protection and management of the Forest.

	Manage for a favorable flow of water for users by improving or maintaining all watersheds to a satisfactory or higher condition. Maintain water quality to meet or exceed appropriate standards. Maintain on-site soil loss within established tolerance levels. Manage riparian areas to provide optimum vegetation and ecological diversity. Specific standards and guidelines are found in the Regional Guide; Region 3 Threatened and Endangered Note 23 and Hydrology Notes 11 and 14; individual management area prescriptions, and Forest-wide Standards & Guidelines under Activities F01-F05, K01, K03-K06.
Human and Community Development	Use human resource programs when possible to meet the goals and objectives for resources and activities. Provide opportunities to satisfy local demand for Forest resources.
Lands	Use land ownership adjustment to accomplish resource management objectives and respond to public needs. Provide identifiable property boundaries. Authorize, by means of permit, use of National Forest land by private or commercial interests when private land is not available and the requested use is compatible with other resources and activities. Resolve unauthorized occupancy and obtain needed right-of-ways. Specific standards and guidelines are found in the Forest-wide Standards & Guidelines and individual management area prescriptions under Activities J01-J07, J10-J15, J18 and J29.
Facilities	Provide administrative improvements to meet resource and management needs. Work with counties and State to obtain rights-of-ways (ROW's) and easements as a means of establishing jurisdictional responsibility for roads. Operate and maintain the transportation system to meet administrative, public and resource needs. Manage vehicle traffic on a designated system of roads and trails while closing routes as needed to manage and protect resources. Specific standards and guidelines are found in the Regional Guide, Forest-wide Standards & Guidelines and individual management area prescriptions under Activities L01-L13, L16-L20, L23-L25, and J01, J02.
Protection	**Amendment 16: Protect life, property, and resources from wildland fire. Where feasible and appropriate, utilize unplanned ignitions and other mechanical means to accomplish management goals and objectives**. Apply integrated pest management (IPM) to minimize losses due to insects and iseases, emphasizing silvicultural methods.

Cooperate with State and local law enforcement agencies in the protection of the public, Forest lands and facilities.

Comply with the Federal Clean Air Act in cooperation with other Federal, State and local agencies. Specific standards and guidelines can be found in the Forest-wide Standards & Guidelines and individual management area prescriptions under Activities P08-P11, P15, P34-P36.

OBJECTIVES

An objective is defined as "a specific statement of measurable results to be achieved within a stated time period" [36 CFR 219.3 (w)]. Forest objectives are quantitative. They are time-oriented outputs associated with a given budget level. Objectives are needed to meet missions and goals.

Standards and guidelines to achieve the objectives are found in the management prescriptions section. The objectives for the Forest are shown in the following tables, which are located in **Appendix F and F1.**

Table 2.	Proposed Plan Output
Table 3.	Recreation Site Construction
Table 4.	Recreation Site Reconstruction
Table 5.	Trailhead Construction and Reconstruction
Table 6.	Right-of_way Acquisition
Table 7.	Administrative Facilities Construction/Reconstruction
Table 8.	Route Closure - Priorities
Table 9.	**Standard Vegetation Management Table**
Table 10	**Deleted**
Table 11.	Road Construction

Tables 2-8, New Table 9, 10, and 11 are located in Appendix F and F1, new pages 217-225

Page 15 through 24 intentionally blank

Table 11. Road Reconstruction (cont'd) ((Table 11, moved to Appendix F)

Management Prescriptions

The mission, goals, and objectives for the Forest are attained through applying groups of management activities to specific units of land. Groups of management activities are called "prescriptions" and the land units are called "management areas". This portion of the proposed Forest Plan describes the prescriptions to be applied.

Prescriptions are management practices selected and scheduled for application on a specific area to attain multiple use and other goals and objectives [36 CFR 219.3]. A management area is a unit of land where a given prescription is to be applied. These areas are outlined on the Management Area Map accompanying the proposed Forest Plan. An index of Management Areas is provided in Table 12.

All proposed prescriptions developed for the Forest Plan integrate a number of resource and support element activities and will produce a variety of outputs when applied to a management area. Each prescription is broken down into the categories listed below.

Management Area Description

A brief description of the physical, biological, and administrative characteristics of the management area to which the prescription applies.

Management Description

A brief statement regarding the resource management emphasis for the prescription.

Activities

A list of resource management activities applicable to management practices. These activities are grouped into resource or support elements and are identified by alpha/numeric code (e.g., A01, B01, etc.). Each activity has a unique code, title, and unit of measure for the work performed. A complete list of activity FSH 1309.11, Management Information Handbook.

Standards and Guidelines

A description of standards and guidelines which apply to each activity are:

Timing and intensity of planned activities.

Specific policies that apply to activities in each prescription.

Mitigation Measures and coordinating requirements need to protect the resources and the environment.

How to Apply the Prescriptions

When a resource manager wishes to apply a planned action to a specific location in the field, the first step is to locate the site on the management area map, then determine the prescription that applies to that area. All activities which apply under that prescription must be reviewed to establish that the planned action can be coordinated with all standards and guidelines. The next step is to field-check the proposed site.

If the planned action is consistent with the prescriptions, the manager implements it without further analysis.

If a planned action is not adequately covered in the Plan, the responsible official, either the District Ranger or Forest Supervisor, conducts an environmental analysis consistent with the implementing procedures for the National Environmental Policy Act. The environmental analysis evaluates the proposal and alternatives to it, coordinates all activities associated with the project, and specifies additional management constraints not covered by the standards and guidelines in the plan.

A planned action may be in conflict with standards and guidelines for the management area, or may be unsuitable for application. In this case, the manager must consider redesigning or relocating the project. Major unforeseen practices or activities which cannot be changed and which conflict with the Plan may result in an amendment or revision. Amendments or revisions are accomplished by the Forest Supervisor after appropriate public notification. [36 CFR 219.1 (f)].

The Forest used the following areas as the basis for analysis during the planning process. A narrative description of each is included in this Chapter with the management area standards and guidelines

Table 12. Management Area Index

Management Area	Name	Acres (Thousands)
1A	Jicarilla Mountains	58.7
1B	North Capitans	38.3
1C	Capitan Wilderness	34.5
1D	South Capitans	69.6
1E	Carrizo Mountain/Nogal Canyon	22.3
1F	White Mountain Wilderness	48.4
1G	Rio Bonito	11.6
1H	South Fork Bonito	1.2
1H-RNA	William G. Telfer RNA	(0.7)[1/]
1I	Upper Ruidoso	16.6
1J	Lower Ruidoso	60.1
2A	La Luz	24.5
2B	Alamo	51.2
2C	Grapevine	32.5

[1/] Acreage included in management area 1H and 1I.

Table 12. Management Area Index (con't)

Management Area	Name	Acres (Thousands)
2D	Sacramento River	19.9
2E	Upper Penasco	40.5
2F	Mountain Park	13.8
2F-RNA	Haynes Canyon RNA	(0.6)[2/]
2G	Silver Spring	8.8
2H	Upper James	18.4
3A	South Guadalupe	21.3
3A-RNA	Upper McKittrick RNA	(0.8)[3/]
3B	West Guadalupe	28.7
3C	Dark Canyon	26.6
3D	Central Guadalupe	70.5
3E	East Guadalupe	47.0
3F	North Guadalupe	89.1
4I	James/Penasco	24.8
4J	Upper Agua Chiquita	20.5
4K	Carrisa	37.8
4M	Bluewater	20.6
4N	Lower Agua Chiquita	19.4
4O	Sixteen Springs	39.6
4Q	Cuevo Canyon	28.4
4U	Snow Canyon	27.8

[2/] Acreage included in Management Area 2F

[3/] Acreage included in Management Area 3A.

	Activities	Standards and Guidelines
Recreation	A02, E06 D05	Conduct cultural resources inventories for proposed ground disturbing projects.
	A02	Evaluate sites found during inventories and other activities in terms of National Register of Historic Places eligibility criteria and prepare avoidance or mitigation measures. Nominate at least one site per year to the National Register of Historic Places.
	A02, E06	Protect significant sites through avoidance, monitoring and signing based upon the probability of the extent of cultural resource disturbance or damage.
	A03	Manage for visual quality objectives (VQOs) ranging from preservation to maximum modification as defined in the Forest Visual Resource Inventory. Apply guidelines foundin USDA Handbooks, National Forest Landscape Management Volume 2 Series.
	A02	The Forest will comply with the National Historic Preservation Act (NHPA) and with Executive Order (EO) 11593.
	A03, A04 E06	Design and construct improvements and permanent structures in foreground areas with natural appearing materials. Improvements, permanent structures, vegetation manipulation, and ground-disturbing activities will be compatible with the natural landscape. Apply design guidelines found in USDA Handbook, National Forest Landscape Management Series.
	A03, A04 E06	In retention and partial retention (VQO) middleground and background distance zones, create or maintain a diversified texture of forested landscape in relation to the existing landscape character type. All improvements, permanent structures, vegetation manipulation, ground-disturbing activities and/or construction will be compatible with the Visual Quality Objective for the area.
	A03, A04 E06	In retention and partial retention foreground distance zone, activities will be compatible with the natural landscape.
		Amendment 15: The Perk-Grindstone Fuel Reduction Project area is exempted from meeting retention and partial-retention VQOs until slash disposal treatments and rehabilitation of landings, skid trails and temporary roads are completed.
	A03	Acceptable variation in VQO classifications from the acreages presented in the standards and guidelines for specific management areas are as follows: Preservation: No Change Retention: ±2 percent in foreground, ±5 percent in middle ground and background Partial Retention: ±5 percent in foreground, ±10 percent in middleground and background Modification+: ±10 percent in all zones

A03, A04 E06, P34	Retain in foreground an average of 2 snags or unmerchantable trees over 12" dbh. per acre, with the exception of those requiring removal for public safety.
A03, A04 A06	Place timber marking on the side opposite the viewer in all foreground Sensitivity Level 1 areas and along the National Recreation Trails.
A03, A04 E06	Manage ponderosa pine foregrounds for diversity varying from openings to multistoried stands, with an average of 5 overmature yellow-barked trees per/acre, in an open park-like stand. Group selection within the front 200' of foreground should not exceed 1 acre and the shapes should be designed to achieve the characteristics of natural openings.
A11	No improvements will be constructed within potential recreation sites which will detract from the future value of those sites for development.
A03, A04 E06	Maintain a variety of species, age classes and size classes in mixed conifer foregrounds through the use of various silvicultural prescriptions and stand marking guides.
A03, A04	Perpetuate aspen foregrounds by patch cuts not exceeding two acres.
A03, A04 E07	Dispose of all activity slash in first 200' of Sensitivity Level 1 foregrounds.
A03, A04	Retain or create diversity in pinyon-juniper foregrounds by emphasizing open stands of mature (12" dbh. or more) trees with a variety of other size classes. A minimum of 40 percent of existing canopy should be retained.
A03, A04 E06	Retain a mix of non-commercial species (oak, locust, etc.) in foreground areas, whenever these species are present.
A11, A14	Prepare Recreation Opportunity Guide for sites and management areas under full service management.
A11, A13 A14, A15	Multiple use management will be emphasized in interpretive service programs and other activities.
A11, A13 A14, A15	Direct interpretive services towards management and use of the Forest.
A14, A15	Emphasize "low impact" or "no trace" concepts for recreation use in the information and education services.
A14, A15 A11, A13 J01	Permit concessionaire operations that provide public services.

A14, A15 Compare the anticipated changes in Recreation Opportunity Spectrum

E06 ROS) class of all project proposals with the ROS objectives for the area.
Keep ROS classes within 15 percent of existing acres.

A14, A15 **The standard and guidelines pertaining to travel and use of motor vehicles within the Forest are in accordance with standards and guidelines contained in the Regional Guide for the Southwestern Region. Motorized vehicle use will be allowed on designated roads and trails only. Transportation system planning will consider existing and future needs for both motorized and non-motorized uses. Interested users will be contacted annually prior to closing roads or trails to existing uses, and to construction or designation of additional roads and trails.**

The logging transportation system will be integrated with the designated open road and trail system. Criteria will be equitably applied to all uses including logging, road construction and other forms of ground disturbance.

The interested users will include but not be limited to:

- **-Motorcycle user groups (Prairie Dogs & Post Enduro Assoc.,etc.)**
- **-American Motorcycle Association (Don Sanford)**
- **-Pecos Valley Horsemen (Sid Goodloe): N.M. Trailriders Assoc.**
- **-Sierra Club (Hal Reynolds)**
- **-NMSU - Range Improvement Task Force**
- **-Lincoln Forest Permittee Association**

The following criteria will be applied when considering changes in existing motorized vehicle use:

1. **The management emphasis of a specified area.**
2. **The level of conflict between existing types of uses.**
3. **The required level of resource protection**
4. **Seasonal constraints needed to maintain road and trail investments, and/or to meet needs of other resources.**
5. **The presence of appropriate right-of-ways.**
6. **Special limitations affecting use.**
7. **Special needs of user and management.**

Individual road and trail designations will be shown on the Forest Transportation System Map. Signing of roads and trails will be in accordance with standard transportation management direction. Roads and trails will be signed opened using route markers.

Periodic adjustments to the Transportation Map will be made if Forest Plan monitoring indicates any of the criteria for a particular road or trail has changed.

A14, A15 L20 **Prepare a trail management plan for each District, considering all uses, including motorized and nonmotorized vehicles, horses and hiking.**

A14, A15 **Allow over-the-snow vehicle travel except in wilderness or areas signed closed to this use in order to protect other resources, such as administrative sites, reforestation and sensitive plant and wildlife areas.**

A14, A15 A permit for competitive events shall be issued only when supported by an environmental analysis and appropriate documentation which determines the potential impacts of the event. The analysis must also determine whether the specific event is appropriate or inappropriate in the National Forest setting.

Events which are planned to minimize adverse effects and promote vehicle operation in harmony with the natural terrain and enhance the experience with, and appreciation of, the Forest environment are generally appropriate. Events will be restricted to routes specified in the permit, either on- or off designated roads and trails.

Inappropriate events might include obstacle courses, hill climbing, drag or acceleration capability, weight or vehicle to vehicle pulls or events based on minimum times.

A14, L24 Potable water will be tested monthly. Procedures will be in accordance with applicable Federal and State regulations as well as Forest Service direction as outlined in the Regional potable water supply program guide.

L20 Evaluate La Posada Encantada, Sitting Bull Falls and extensions of Dog Canyon and Rim Trails for nomination to the National Recreation Trails System.

Wildlife [1/]	C01, C12	Manage for the following indicator species where key vegetation occurs:

Grama Galleta Grassland (Open weedy grasslands)	Meadowlark
Desert Shrub (Brushy mountain slopes)	Rufous Crowned Sparrow
Woodland (Scrubby cover, browse species present, closed landscape)	Mule Deer
Woodland (Trees with natural cavities)	Plain Titmouse
Ponderosa Pine (Snags and large trees)	Pygmy Nuthatch
Mixed Conifer (Conifer forest, mountain meadows and areas with little or no grazing)	Elk
Mixed Conifer (Mesic mountain meadows)	Mexican Vole
Aspen (Aspen snags and mature aspen)	Hairy Woodpecker
Engelmann Spruce (Mixed conifer forest with interlocking crowns and trees of cone bearing age)	Red Squirrel

	C01, C12	Evaluate plant species and additional wildlife species for inclusion in list of managment indicator species. Plants to be evaluated include those species indicative of range trend. Complete evaluation and recommend additions by end of second year.
	C01	Areas selected for creation of wildlife openings will have the following characteristics:

All Areas	High probability of uncontrollable fire.
Woodland Type	Crown density greater than 40 percent. Wildlife water within one mile.
Oak Type	Crown density greater than 35 percent. Wildlife water within one mile.
Aspen Type	50 percent crown closure. Average diameter greater than 4 inches. One acre minimum size clearcuts.

[1/] Standards and guidelines for Threatened, Endangered and Sensitive Species are listed separately in Appendix C.

C01, C02, C03, E00, E03, E05, E06, E07, L02, L04, L08, L12, L14, P11, P12, P13	Manage to achieve representation of all vegetational stages (sere) by plant community, with cut unit sizes 100 acres or less with at least one age class (30 years) difference between adjacent cutting units.
C01, C02 C12	Prohibit the introduction of exotic or non-indigenous wildlife species onto the Forest unless appropriate studies and experience indicate minimal impacts on indigeneous and native species.
C01, C02 C03, E00 E03, E05 E06, E07 L02, L04 L08, L12 L14, P11 P12, P13	Provide protection of squirrel caches and raptor nests during nesting periods with the following buffers consistent with integrated stand management concepts. /2 squirrel caches 1/10 acre (37.3 ft. radius) raptor nests 7.9 acres (5 chain buffer)
C03, D03, E00, E03, E06, E07, P11, P12 P13, P14, P34.	Retain two trees with obvious wildlife cavities, live culls, or lightning scars per 5 acres, consistent with integrated **resource** management concepts.
C03, E00 E03, E05 E07, J01 P11, P12 P13, P14	**Retain all snags 18" or greater within the spruce-fir, mixed-conifer, or ponderosa pine habitat types unless removal is necessary for safety.**
C03, D03 E00, E05 P11, P12 P13	Retain a minimum of one large (12" diameter) tree per 3 acres in woodland areas. In areas with alligator juniper, retain 2 alligator junipers per acre.
C03, E00 E03, E05 E07, J01 P11, P12 P13, P14	Protect and enhance riparian habitat consistent with riparian area management policy set forth in the Regional guidelines.

/2 Buffer zones are areas in which activities are modified to provide a transition from the wildlife situation to adjoining prescribed activities or provide protection for specific species.

C03, E03, E04, D07, P11, P12, P13	Retain at least one down log (minimum 12" diameter 8' long) per acre after any timber removal activity.
CO3, E00, E05, E07, P11, P12, P13, P14	Retain one loosely packed hand pile and unlopped top per acre and 1 acre block lopped slash per 20 acres of slash.
C03, D01, D02, D03, D04	Protect revegetation areas on wildlife project from livestock damage as needed until perennial groundcover is established.
C03, D03, D04, D05, E07, K05 L01, P11 P12, P13 P14, P15	Reseed areas disturbed by activities as appropriate, using plant species which provide forage and cover for wildlife. Seed mixtures will be determined by site, and may include legumes, browse, and cool season bunch grasses.
C06, D05, E03, E05, E07, E13	Provide for protection of wildlife values on livestock and wildlife water developments.
C06, D05, D06	Provide escape and entrance ramps on water developments as developed or maintained.
C06, D05, D06	Remove fences and loose wire as abandoned or replaced.
C06, D05, D06, G02,	Cover all sumps and drainage pits by such means as necessary to prevent wildlife access and not to inhibit evaporation. Cover will be maintained until liquid materials have evaporated or have been transported out of the area. Sumps and pits then will be recontoured and revegetated.
C01, C02, C03, C06, D03, D04, D05, D06, E00, E05, E07, G01 G07, L11, L22	Protect natural openings that are significant to wildlife by: 1) prohibiting developments that may conflict with wildlife and 2) providing an adequate buffer zone around the areas.
C01, C02, C03, C04, C05, C06	**When additional funding sources become available (such as volunteer groups, cost share, or Sikes Act), the Forest may take advantage of that funding when appropriate. Wildlife improvements available through outside funding will be implemented after site-specific analysis and appropriate NEPA documentation has been completed. Any project implemented using outside funding sources will be considered additional projects and will not be substituted for projects identified in the Plan.**

	C01, C02 C03, D03 D05, E07 E05, P11 P12, P13 P14, G01 G07, L11 L22	Use indigenous species in revegetation of riparian areas.
	C02, C04 C07, C10 C03, D05 L04, L08 L12, E07 E05, E04	Maintain and enhance fish habitat. Avoid causing disturbances to existing habitats.
	C02, C06 J01	Incorporate state-of-the-art specifications on powerlines and towers to prevent electrocution of wildlife species.
Range	D01, D02	Initiate at least 2 allotment management plans, range analyses, production/utilization and capacity studies per District per year.

a. Management plans, development and implementation will use the following criteria for priority setting guidelines.

1. Implementation of plans occurs on allotments where estimated capacity is satisfactory, investment costs are minimal, and moderate to high management can be obtained to maintain or improve range conditions.

2. Implementation of plans occurs on allotments where estimated capacity is satisfactory, but investments in range developments are required to properly harvest the forage and result in an upward change in range condition.

3. Implementation of plans occurs on allotments where permit obligation and estimated grazing capacity are brought into line, but major improvement investments are required to obtain moderate to high management levels.

b. The following guidelines apply to establishment of priorities for completion of range allotment analysis and production/utilization surveys.

1. Highest priority on those allotments or portions having binding agreements.

2. Allotments with unsatisfactory range conditions and lack of forage to properly support permitted livestock numbers, without further deterioration of the resources.

3. Allotments where an increase in numbers appears to be justified.

4. Allotments where range condition, trend, capacity and management is satisfactory, but resource information and data need to be updated.

c. The following guidelines apply to establishment of priorities for range examination:

1. Allotments or areas where unauthorized grazing is known or suspected.

2. Problem allotments where management and proper stocking is lacking and priority for range allotment analysis and production/utilization surveys are high.

3. Allotments where agreed-upon management is in effect, management levels B, C and D (See Appendix D).

D01, D02	Update six allotment management plans per year.
D02	Check permit compliance on a minimum of 30 percent of the allotments annually.
D02	Protect and maintain 14 range study plots to insure their continued information value for range management.
D02	Maintain all Forest Service horse pastures in fair or better range condition.
D02	Actively pursue opportunities to combine allotments into more efficient units. The need to do this is greatest on Smokey Bear and Mayhill Districts.
D02	**(Sentence deleted by Amendment 9) Alternative G, Grazing Guidelines**

GRAZING MANAGEMENT:

Standards: Forage use by grazing ungulates will be maintaine at or above a condition which assures recovery and continued existence of threatened and endangered species.

Guidelines: Identify key ungulate forage monitoring areas. These key areas will normally be 1/4 to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing. Size of the key forage monitoring areas could be 20 to 500 acres. In some situations, such as high mountain meadows with perennial streams, key areas may be closer than 1/4 mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.

In consultation with US Fish and Wildlife Service, develop site-specific forage use levels. In the event that site-specific information is not available, average key species forage utilization in key forage monitoring areas by domestic livestock and wildlife should not exceed levels in the following table during the forage growing season.

ALLOWABLE USE GUIDE (percent) BY RANGE CONDITION AND MANAGEMENT STRATEGY *

Range Condition **	Continuous Season-long Use	Defer 1 Year in 2	Defer 1 Year in 3	Defer 2 Years in 2	Rest 1 Year in 2	Rest 1 Year in 3	Rest 2 Years in 3	Rest over 2 Years in 3
Very Poor	0	10	5	15	15	10	20	25
Poor	**10**	**20**	**15**	**20**	**20**	**15**	**30**	**35**
Fair	20	25	20	30	30	25	40	45
Good	30	35	35	35	35	35	45	50
Excellent	30	35	35	35	35	35	45	50

*** Site-specific data may show that the numbers in this table are substantially high or low. These numbers are purposefully conservative to assure protection in the event that site-specific data is not available.**

**** Range Condition as evaluated and ranked by the Forest Service is a subjective expression of the status or health of the vegetation and soil relative to their combined potential to produce a sound and stable biotic community. Soundness and stability are evaluated relative to a standard that encompasses the composition, density, and vigor of the vegetation and physical characteristics of the soil.**

The above table is based on composition and climatic conditions typical of sites below the Mogollon Rim. On sites with higher precipitation and vegetation similar to sites above the Mogollon Rim, allowable use for ranges in poor to excellent condition under deferment or rest strategies may be increased by 5%. The guidelines established in the above table are applicable only during the growing season for the identified key species within key areas. Allowable use for key forage species during the dormant season is not covered in the above table. These guidelines are to be applied in the absence of more specific guidelines currently established through site specific NEPA analysis for individual allotments.

Guidelines for allowable use for specific allotment(s) management or for grazing strategies not covered in the above table will vary on a site-specific basis when determined through the Integrated Resource Management (IRM) process.

Allowable use guidelines may be adjusted through the land management planning revision or amendment process. Guidelines established through this process to meet specific ecosystem objectives, will also employ the key species and key area concept and will be monitored in this manner.

	In cooperation with New Mexico Livestock Board provide for removal of Feral animals.
D02 C12	Allow predator control measures where livestock losses are documented. **Control measures include preventative and corrective measures for all classes of livestock. Documented losses are predator-caused livestock losses which have been investigated and confirmed in writing by USDA Animal Plant Health Inspection Service.**
D03, D05	Meet T&E species requirements in all range or grazing activities.
D03 D05	Prohibit forage improvement activities which disturb the integrity of prairie dog burrows and towns.
D02	Develop a plan to monitor acreage change by management levels. This will be accomplished as allotment management plans are developed or modified.

	D02	Prepare annual operating plans for all obligated allotments on the National Forest.
	D05, C06	New fences will provide for free movement of wildlife.
Timber	E00	Extensively inventory all timber lands every 10 years. Develop timber harvest action plans on a continuous 5 year interval.
	E03	Continue to complete compartment examination to regional standards to provide data for the detailed stand prescriptions and for moniter. Complete compartment examination on all compartments.
	E03	Minimum stand size (except aspen) 10 acres Maximum stand size 100 acres
	E03	Planting will be preceded or accompanied by appropriate site preparation, including mechanical or chemical methods. Planting may be by machine, auger, hand tools, or a combination. Examine reforestation sites 1, 3, and 5 years after planting to ensure adequate stocking.
	E03	Collect cones from appropriate seed cones to maintain a 10 year supply of seed in the seed bank.
	E03, P34	Priorities of stands for timber management treatment will be based on silvicultural examinations, stand diagnosis and environmental analysis for project areas.
	E03	Leave meadows currently producing forage in forage production.
	E03	Protect regeneration areas from browsing and trampling damage until stands are established by means of fencing, adjustments in season of use, reducing cattle numbers and other methods which protect seedlings.
	E03	Manage the woodland type without use of artificial regeneration or pre-commercial thinning.
	E04	Accomplish reforestation on suitable timber lands within 5 years following natural disaster.
	E04	Use natural regeneration on all timber harvest areas where possible. If regeneration is unsuccessful within three years, artificial regeneration by native species will be used.
	E04, P34	Site preparation for artificial reforestation will be required where needed and preparation methods will be determined by specific site conditions and environmental analysis.

E04 Research and trial plantations using germinants or other means of artificial regeneration will be encouraged and continued on dry rocky sites that will not reforest using conventional methods.

E04 Plant in spring with bare root stock in areas where winter moisture is adequate, and with container stock where soil or site conditions are not conducive to survival of bare root stock.

E05 Use the following guidelines for thinning spruce-fir, mixed conifer and ponderosa pine:

a. In the mixed conifer and ponderosa pine types, thin to 200-300 well-spaced acceptable trees per acre using one pre-commercial entry. In the spruce-fir type, thin to 500-600 trees per acre.

b. Non-commercial species will be retained if needed for wildlife or other resource purposes, and if not in conflict with timber management objectives; otherwise, non-commercial species over 4" dbh will be cut during pre-commercial thinning.

c. When timber growth and production is a primary concern, the following ranges of growing stock levels (GSL) will be used.

	PP Type	Mixed Conifer	
Spruce-fir	50-90	60-120	70-150

The higher GSL's will be used on areas with higher site productivity. GSL's outside of the above ranges, but not to exceed 150 in mixed conifer and 200 in spruce-fir, may be used when other resource considerations have priority.

E05 P34 Plan for slash treatment on an area basis. Slash disposal objectives will not be met on every acre as long as they are met on the area as a whole. Objectives will be determined by the needs for fire protection, wildlife visual and soil and water resources, utilization for fuelwood, and insect and disease control.

Evaluate the cost of slash disposal against the risk of loss to determine project feasibility.

E06 (**Two sentences deleted by Amendment 9) Use Uneven-aged silvicultural methods as the primary timber harvest system.**

E06, E07 P34	Salvage harvesting operations will be prescribed as needed to meet conditions imposed by wild fire, insect or disease epidemics, blow down, or other catastrophes. Salvage prescriptions will consider timber salvage values, harvesting costs, and environmental impacts of the harvesting.
E06 E07	Forest products such as Christmas trees, posts, poles, and vigas, will be available if removal does not conflict with other resource objectives.
E07	Close all local roads not essential for management needs upon completion of sale. Roads will be reopened for any post-sale activity, then closed following completion of that activity.
E06 F03	Limit wheeled or tracked logging equipment to slopes less than 40 percent.
	Amendment 15: Mechanized equipment will be allowed on slopes greater than 40 percent in the perk-Grindstone Fuel Reduction Project area where necessary to reduce crown fire hazard ratings to acceptable levels in the wildland-urban interface.
E06	Use cable logging systems for slopes generally over 40 percent.
E06, C01, C02	**(Two sentences and one table deleted by Amendment 9)** **Insert Alternative G, Old Growth Standards and Guidelines:**

OLD GROWTH: Standards: Until the forest plan is revised, allocate no less than 20 percent of each forested ecosystem management area to old growth as depicted in the table below.

In the long term, manage old growth in patterns that provide for a flow of functions and interactions at multiple scales across the landscape through time.

Allocations will consist of landscape percentages meeting old growth conditions and not specific acres.

Guidelines: All analyses should be at multiple scales - one scale above and one scale below the ecosystem management areas. The amount of old growth can be provided and maintained will be evaluated at the ecosystem management area level and be based on forest type, site capability, and disturbance regimes.

Strive to create or sustain as much old growth compositional, structural, and functional flow as possible over time at multiple-area scales. Seek to develop or retain old growth function on at least 20 percent of the naturally forested area by forest type in any landscape. Use information about pre-European settlement conditions at the appropriate scales when considering the importance of various factors. Consider the effects of spatial arrangement on old growth function, from groups to landscapes, including de facto allocations to old growth such as goshawk nest sites, Mexican spotted owl protected activity centers, sites protected for species behavior associated with old growth, wilderness, research natural areas, and other forest structures managed for old growth function.

activity centers, sites protected for species behavior associated with old growth, wilderness, research natural areas, and other forest structures managed for old growth function.

In allocating old growth and making decisions about old growth management, use appropriate information about the relative risks to sustaining old growth function at the appropriate scales, due to natural and human-caused events.

Use quantitative models at the appropriate scales when considering the importance of various factors. These models may include, but are not limited to: Forest Vegetation Simulator, BEHAVE, and FARSITE.

Forested sites should meet or exceed the structural attributes to be considered old growth in the five primary forest cover types in the southwest as depicted in the table on the following page.

Remainder of page intentionally left blank.

The Minimum Criteria for the Structural Attributes Used to Determine Old-Growth

Forest Cover-type	Pinon-Juniper		Interior Ponderosa Pine		Aspen	Mixed-Species Group		Englemann Spruce Subalpine Fir	
Forest Cover Type, SAF Code	239		237		217	210,211,216,219		206,209	
Site Capability Potential Break Between Low and High Sites			55 minor			50 Douglas Fir Edminster/Jump		50 Engelmann Sp. Alexander	
Site	Low	High	Low	High	All	Low	High	Low	High
1. Live Trees in Main Canopy									
Trees/Acre	12	30	20	20	20	12	16	20	30
DBH/DRC	9"	12"	14"	18"	14"	18"	220"	10"	14"
Age (Years)	150	200	180	180	100	150	150	140*/ 170**	140*/ 170**
2. Variation in Tree Diameters									
(Yes/No)	ND	ND	ND	ND	No	ND	ND	ND	ND
3. Dead Trees									
Standing									
Trees per acre	0.5*	1	1	1	ND	2.5	2.5	3	4
Size, DBH/DRC	9"	10"	14"	14"	10"	14"	16"	12"	16"
Height (feet)	8'	10'	15'	25'	ND	20'	25'	20'	30'
Down									
Pieces/Acre	2	2**	2	2	ND	4	4	5	5
Size (diameter)	9"	10"	12"	12"	ND	12"	12"	12"	12"
Length (feet)	8'	10'	15'	15'	ND	16'	16'	16'	16'
4. Tree Decadence									
Trees/Acre	ND	ND	ND	ND	ND	ND	ND	ND	ND
5. Number of Tree Canopies	SS/MS	SS/MS	SS/MS	SS/MS	SS	SS/MS	SS/MS	SS/MS	SS/MS
6. Total BA, Sq. Ft./Acre	6	24	70	90	ND	80	100	120	140
7. Tot. Canopy,Cover,Percent	20	35	40	50	50	50	60	60	70

Pinon-Pine-

***Dead limbs help make up dead material deficit.**
****Unless removed for firewood or fire burning activities.**

Spruce-Fir-

***In mixed corkbark fir and Engelmann spruce stands where Engelmann spruce is less than 50 percent composition in the stand.**
****In mixed corkbark fir and Engelmann spruce stands where Engelmann spruce is 50 or more percent composition in the stand.**
ND is not determined; SS is single-storied; and MS is multi-storied.

E06, P34	Clearcuts may be used in the mixed conifer and ponderosa pine types to control dwarf mistletoe when overstory trees will not provide an adequate seed source, and the presence of the parasite will prevent establishment of adequate uninfected regeneration. Clearcuts larger than 40 acres require a biological evaluation by Regional forest pest management experts and Regional Forester approval.
E06, P34	Clearcuts not exceeding 20 acres will be used in the aspen timber type.
E06	**Integrated resource management concepts will be used to coordinate all resources.**
E06	Management of old-growth stands will be accomplished using individual and/or group selection. Non-commercial species will be retained. Old-growth stands will contain trees of all age classes including standing snags and down dead logs. Stands selected for old-growth management will be free of dwarf mistletoe, or so lightly infected that the parasite can be reduced to innocuous levels in the first entry.

E06, E07 Make activity slash available for fuelwood or other products either by charge or free use permits.

E06, E07 **Yarding unmerchantable material (YUM) will be done on areas where the return in fuelwood sales will recover the extra cost of yarding and where material YUMed is not needed for other resources. (NEXT SENTENCE DELETED BY AMENDMENT 3.)**

E06, P34 Apply silvicultural practices as the primary method of suppressing or preventing insect and disease outbreaks.

E03, E06 C01 Apply even-age management using the shelterwood system for regeneration:

1. Precommercially thin stands by age 40 to appropriate growing stock levels.

2. Intermediate commercial harvests at 10-40 year intervals to control for appropriate GSL.

3. Preparatory cut if needed 5-20 years before rotation age. Remove 30 percent of overstory volume.

4. Seed cut at rotation age. Remove 65 percent of remaining volume.

   Site preparation, if needed, by appropriate method.

5. Final removal of all remaining overstory before regeneration reaches age 20. Plant if natural regeneration is inadequate for fully stocked conditions.

6. Modify above treatments when silvicultural examinations indicate management objectives cannot be met.

E06 Use rotation ages as follows for even-aged management on commercial Forest lands:

Mixed Conifer & Ponderosa Pine	Aspen
100-140 years	60-80 years

Normally there is not a rotation age specified for uneven-aged management.

E06 Manage the woodland type primarily with even-aged management using the shelterwood system and patch cuts for regeneration. Manage fuelwood trees to obtain a 12-inch basal diameter which is normally achieved in a 220 year rotation. **(NEXT SENTENCE DELETED BY AMENDMENT 4.)**

	E07	Grant free use of convertible products in remote areas where wood is plentiful and/or free use is required to accomplish management objectives.
	E07, P34	Use sales of convertible and non-convertible products to help accomplish management objectives, such as thinning, fuel reduction, and insect and disease control.
Soil and Water	D02	Manage areas of unsatisfactory watershed condition to bring condition to the satisfactory level by the fourth period.
	E07	Limit motorized vehicles used in fuelwood harvest to areas less than 20 percent slope, unless specifically authorized.
	F02	Inventory and analyze watershed by priority for watershed condition improvement projects.
	F04	Update water rights inventory, maintain and protect existing water rights.
	F04	Obtain water rights for developments that provide water for Forest uses.
	F05	Minimize impacts to the soil and water resources in all ground-disturbing activities. Where disturbance cannot be avoided, provide stabilization as part of the project.
	F05	Select treatment methods for plant control or revegetation projects according to the following criteria:

a. Mechanical methods may be used:
   1. on slopes less than 40 percent,
   2. on soils with moderate or high revegetation potential, and
   3. when they will not adversly affect stream channels.

b. Chemical treatments may be applied:
   1. on areas away from municipal watershed and human habitation,
   2. on soils with moderate or high revegetation potential,
   3. on areas that would benefit from selective control of plant species,
   4. on areas where the chemicals will not violate State water quality standards.

c. Fire treatment may be used:
   1. on areas with suitable fuel types,
   2. on areas where the proper vegetative response can be expected,
   and,
   3. where the fire will not pose a threat to human safety or surrounding property.

d. Biological controls may be used:

1. on areas with suitable host types,
2. on areas that would benefit from selective control of plant species, and
3. where the biological agent can be contained within the project areas.

e. Hand treatment should be used on areas where the other methods:

1. would disturb fragile soils on steep slopes, or
2. would cause other unacceptable impacts, or
3. would pose threats to human health or safety, or
4. would be too costly.

F05 Maintain water quality within minimum State and Federal standards.

F06 Maintain watershed structures when discounted benefits of watershed protection exceed discounted costs of maintenance.

L04, L05
L12, L13
L22, L23
L14, L29 Prohibit road construction on unstable soils and slopes greater than 40 percent if it cannot be done in a manner which maintains or enhances water quality (sediment, thermal) or quantity objectives.

K03 Through the use of best management practices, the adverse effect of planned activities will be mitigated and site productivity maintained. These practices are determined (after problem assessment, examination of alternatives and appropriate review by local or State agencies and public participation) to be the most effective practicable means of preventing or reducing the amount of pollutants generated by non-point sources to levels compatible with water quality goals. These practices are involved in activities affecting the Forest and grassland source and include:

a. Install water control structures and/or interseed on poor and very poor condition ranges where revegetation potential is moderately high to high on slopes less than 40 percent.

b. Stream courses will be designated within timber sales to protect watershed values. This protection will include controls on skidding within riparian areas and along or across designated stream courses.

c. Rehabilitation will be applied when needed to minimize loss of site productivity following activities or wild fire.

E06, E07
L04 Provide necessary water drainage structures as road construction proceeds. Road runoff should not be discharged directly into streams, but should be diverted over stable vegetated areas. Seeding and mulching of cut and fill slopes should be considered.

Minerals	G01, F03 K04	Require a reclamation bond adequate to cover the reclamation cost in all Notices of Intent and Plans of Operation approved under 1872 Mining Act Regulations that provide for surface disturbance.
	G02	Require special stipulations for oil and gas leases only where needed for special resource protection.
	G02, A12 A13	Recommend oil and gas leasing without surface occupancy for all developed recreation sites.
	G02, J01	Recommend oil and gas leasing without surface occupancy for all electronic sites.
	G07, F03 K04	Locate borrow areas and quarries where they will serve long term needs. Include mining and reclamation plan in all permits for mineral material pits.
	G07	Provide common variety mineral materials for local, County, State and Forest roads on or providing access to the Forest. Material will be made available for other roads only upon adequate documentation that other sources are not available.
	G07	Mineral material will be available for personal and commerical use when it has been determined through an enviornmental analysis that it will not be in conflict with other resources or activities.
	G02, G06 F03, K04 E04, C11 D03	Mineral Leasing Category. Control surface uses in mineral operations through plans of operation and permits which provide for: preservation of water quality, protection of watershed values, monitoring of pertinent water quality constituents when water quality is adversely affected by mining activities, reclamation to original or characteristic contours (when practical), or provide opportunities for new landforms that are beneficial for both human and animal populations, reforestation or revegetation with appropriate species to attain soil stability and protect Threatened, Endangered and Sensitive species.
Research Natural Area	J11	Identify potential research natural areas as a part of timber and range management activities. Biotic communities which are underrepresented in the Region, and which might occur on the Forest are: 153.22 Whitehorn, 143.11 Scrub-grassland, 143.12 Grama-tobosa, 122.41 Pinyon-juniper and 121.31 Spruce-fir. Evaluate for designation using standards contained in the Regional Guide and FSM 4063.
	J04	Process mineral withdrawal recommendation.
Lands	J01, J02	Review special use permit fees on a 5 year, rotating basis.

J01, A03 Require burial of new utility transmission lines in all foreground areas of retention or partial retention VQO areas along State and Federal highways, unless an environmental analysis indicates that it would be infeasible.

J01, A03 Limit electronic installations to existing sites, as identified in the management areas. Above-ground utilities will be placed below ground at the earliest opportunity unless site or other factors are limiting.

A03 Management emphasis for electronic sites will be as follows:

a. Maximize joint use of existing buildings.

b. Encourage formation of user improvement associations and administer sites in cooperation with associations.

c. Incorporate site operation technical standards into all permits developed by user groups after being reviewed and recommended by Forest Supervisor.

d. Complete site plans for each electronic site in accordance with the total reguired facilities concept.

e. Implement cooperatively-developed site management standards for each site to provide for frequency and power separation.

f. Manage structural density at electronic sites in accordance with Forest Service policies, sound engineering practices, and approved site operation technical standards.

g. Maintenance of individual electronic site roads and trails will be accomplished through the terms and conditions of a special use authorization issued to the user group.

h. Clearing of vegetation will be limited to that which poses a hazard to facilities and operational efficiency.

J01, J02
A03, L01 Designate no corridors for highways, telephone lines, powerlines and pipelines except those listed below. Locate, relocate, or expand facilities in existing corridors where environmentally and visually acceptable, and technically feasible. Applications for new rights-of-ways outside designated corridors will be approved only if locating them within corridors is not feasible and acceptable. Utilities will not be located in exclusion and avoidance areas in any case. Design and construction practices will meet the standards defined in National Forest standards defined in National Forest Landscape Management, Volume 2, Chapter 2, USDA, Handbook 47B. Future utility systems when authorized would result in a Plan amendment and revision and be incorporated

at the Plan's update. A corridor plan will be prepared during the second decade to consider future needs.

The existing corridors are:

Route of U.S. 70, 82 and 380.
Route of State Roads 24, 37, 48 and 137.
Route of Forest Road 64 and 537.

J01, J02 L01 — Grant permits or easements for road and utility access to interior private land only if other practical routes are unavailable on private land and impact on the Forest is acceptable as a result.

J01, A16 — **THIS STANDARD AND GUIDELINE DELETED BY AMENDMENT 2.**

J01, J02 A16 — Limit special use permits to only necessary public utilities on land identified as base-in-exchange.

J02, L01 — Grant easements for all County and State road systems where there are no unacceptable conflicts with National Forest Management.

J02, L01 — Cooperate with counties on a case-by-case basis in the preparation of easement plats for County roads so that legal jurisdiction can be transferred.

J04, A01 L24 — Evaluate and review the need for mineral withdrawals according to the following criteria:

a. Minimum area needed to protect improvements or purpose of withdrawal.

b. Protection cannot be assured by other methods.

c. There is immediate use of the area for a specific purpose.

J06, J07 J09, J10 — Locate and post land survey monuments and property lines according to the following priority:

a. Resource management projects.

b. Encroachments and title claims.

c. Potential trespass prevention.

d. Other areas.

Complete entire Forest by the end of the second decade.

J06, E06	Locate and post all land line needed for outputs two-to-three years in advance of resource output production years.
J07	Maintain survey monuments and property lines on a 5 year schedule for heavy public use areas and a 10-15 year schedule for the remainder of the Forest.
J07, J10	Maintain fencing along the boundary of the Mescalero Apache Indian Reservation according to approved agreements.
J13, J18 J17	Reserve needed rights-of-way in land exchanges and sales.
J14	**Accomplish land exchanges under the following conditions:** **a. Opportunities to acquire private land within wilderness or with access to wilderness.** **b. Community expansion needs.** **c. Isolated tracts or tracts substantially surrounded by private land.** **d. Land in areas where the predominant land ownership is private and needed to block up ownership.** **e. Land with substantial improvements under permit to local governments or private parties and where the land has lost its National Forest character.**
J14	**THIS STANDARD AND GUIDELINE DELETED BY AMENDMENT 2.**
P24	Identify and resolve occupancy trespass cases.
J15, C11	Suitable and/or occupied T&E habitat on private lands within Forest boundary will be recommended for acquisition or easement.
J17, J09 J10	Respond to Small Tract Act applications with objective to complete case within six months.
J17, J09 J10	Pursue special use permit cases that qualify for disposal under the Act of 12/4/67 (81 Stat. 531; 16 USC 484a), as amended by Section 8 of Small Tracts Act of 1/22/83 (96 Stat. 2535; 521c-521c) with objective of completing all cases.

J09, J17	Process through title claims procedures those cases of encroachment where the owner of the improvements declines to purchase the land or remove the improvements.
J17, J09 J10	Execute only those sales under the Small Tracts Act which qualify under the law and regulations, and are administratively acceptable by increasing management efficiency.
J18	Acquire or assist in acquisition of rights-of-way by purchase, donation or condemnation. Rights-of-ways will be acquired for the following purposes: a. Resource outputs. b. Administration. c. Public access. d. Local government jurisdiction.
J18	Base right-of-way acquisitions on a 5 year acquisition schedule. Opportunities for unscheduled acquisitions will be considered.

TABLE 13 DELETED BY AMENDMENT 2

	Activities	Standards and Guidelines
Facilities	L01	Roads needed for private land access, special uses, or mineral activities will be built and maintained by the permittee to minimum standards for the intended use on permanent locations, and closed, drained, and revegetated after use. Maintainence by counties will be permitted when arranged by permittee.
	L01, L02 L03, L06	Local terminal roads will be constructed with a 12 foot width, except in cable logging area where the minimum width will be 14 feet.
	L02, L06 L10	Design roads so that straight alignment does not exceed 1/2 mile.
	L02, L06 L10	Emphasize relocating roads out of canyon bottoms during construction and reconstruction activities.
	L02, L06 L10	Construct new roads and trails at least 1/4 mile from prairie dog towns, whenever possible.
	L02, L06 L10	Avoid new road development within essential bald eagle habitat which would increase public access and use from November 1 to March 31, whenever possible. Restrict public access and use on existing roads within each habitat during this period should adverse impacts on eagles occur.
	L19	Solidify jurisdictional responsibility for roads by issuing USDA easements to the State and counties. Cooperate with counties in obtaining deeded ROWs for Forest roads they maintain. Acquire ROWs for Forest roads maintained by the Forest.
	L19	Establish road management prescriptions for all Forest roads. Operate and maintain the road system according to these prescriptions. Public safety, resource protection and seasonal use will be emphasized, with user comfort being a secondary consideration.
	L19	Accommodate vehicular traffic by a designated system of roads and trails. Travel will be allowed off this system only by permit or to reach a dispersed campsite (within 300 feet of the road or trail). A signing system will be designed with positive emphasis and informational signs at major Forest entry points.
	L19, K05 F05, C03	Close, obliterate or restore 100 miles of roads and travelways identified for such action through scoping and public involvement.
	D03	Closure will be by physical barriers and/or signing.
	L25, L28	Maintain administrative facilities in a safe condition to prevent disinvestment.

	L30, L31	Operate and maintain potable water systems in conformance with state standards.
Fire and Protection	P01, P04	Exchange initial attack zones with the State of New Mexico when an analysis shows that cost effectiveness can be improved.
	P01	**Amendment 16: Evaluate all planned and unplanned ignitions for coordination with other resource activity needs (See Appendix H).**
	P03	Use fixed detection points (lookouts) as the primary method to detect fires. Aerial patrols or detection flights will supplement fixed detection when conditions warrant.
	P04	Human-caused ignitions will be suppressed utilizing the appropriate management response for fire.
	P04	**Amendment 16: Fire management activities would be designed to sustain ecosystems, including the interrelated ecological, economic, and social components.**
	P04	**Amendment 16: Utilize planned and unplanned ignitions where feasible and appropriate, to accomplish resource management goals and objectives.**
	P04	**Amendment 16: All unplanned ignitions will receive an appropriate management response (AMR). Fire suppression objectives are established for four fire suppression zones which cover the Lincoln National Forest. The fire management strategies maps (see Figures 1, 2, and 3 [in the LRMP]) illustrate how MAs are allocated to each fire suppression zone. The objectives by suppression zone are:** **a. <u>Zone A</u> - Suppression Objective--10 acres or less: This category applies to the suppression of wildland fires that pose a threat to life or property in developed areas. Planned ignitions will be used to accomplish fuel treatment and resource management objectives in these areas. Suppression tactics will be selected as an AMR that prioritize firefighter and public safety, and have the least impact on the land while still meeting the suppression objective.** **b. <u>Zone B</u> - Suppression Objective--1,000 acres or less: A calculation of probabilities will be made based on fuels, weather, and knowledge of the terrain where the wildland fire occurs. Suppression tactics will be selected as an AMR that prioritize firefighter and public safety, have least impact on the land, and are most cost effective. Planned ignitions will be used to accomplish fuel treatment and resource management objectives. Suppression action will give protection to private in-holdings and other land ownership whenever possible.** **c. <u>Zone C</u> - With option to use unplanned ignitions for resource benefit.**

Suppression objective: A calculation of probabilities will be made on each fire based on existing fuels, predicted weather, and known terrain. Suppression tactics, when necessary, will be chosen prioritizing firefighter and public safety, minimizing impact on the land, and are the most cost effective. Suppression action will give protection to private in-holdings and other land ownerships whenever possible.

Planned and unplanned ignitions will be used to accomplish fuel treatment and resource management objectives. The use of human-caused ignitions for resource benefit will not be allowed. Unplanned ignitions for resource benefit are not constrained by acre limitations. In order to maximize benefits of using such unplanned ignitions as a management tool, while avoiding unwanted fire effects on the landscape, the following parameters would be utilized to determine whether or not the fire would produce desired environmental effects:

<u>Pinyon-Juniper Vegetation</u>: Based on actual and predicted fire weather and fire behavior modeling, unplanned ignitions for resource benefit would be considered if less than 60 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 40 percent of the area will survive the associated fire behavior.

<u>Mixed Conifer Vegetation</u>: Based on actual and predicted fire weather and fire behavior modeling, utilizing unplanned ignitions for resource benefit would be considered if less than 20 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 80 percent of the area will survive the associated fire behavior.

<u>Ponderosa Pine Vegetation</u>: Based on actual and predicted fire weather and fire behavior modeling, utilizing unplanned ignitions for resource benefit would be considered if less than 30 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 70 percent of the area will survive the associated fire behavior.

a. Zone D-No longer applies. Deleted.

b. Zone E-No longer applies. Deleted.

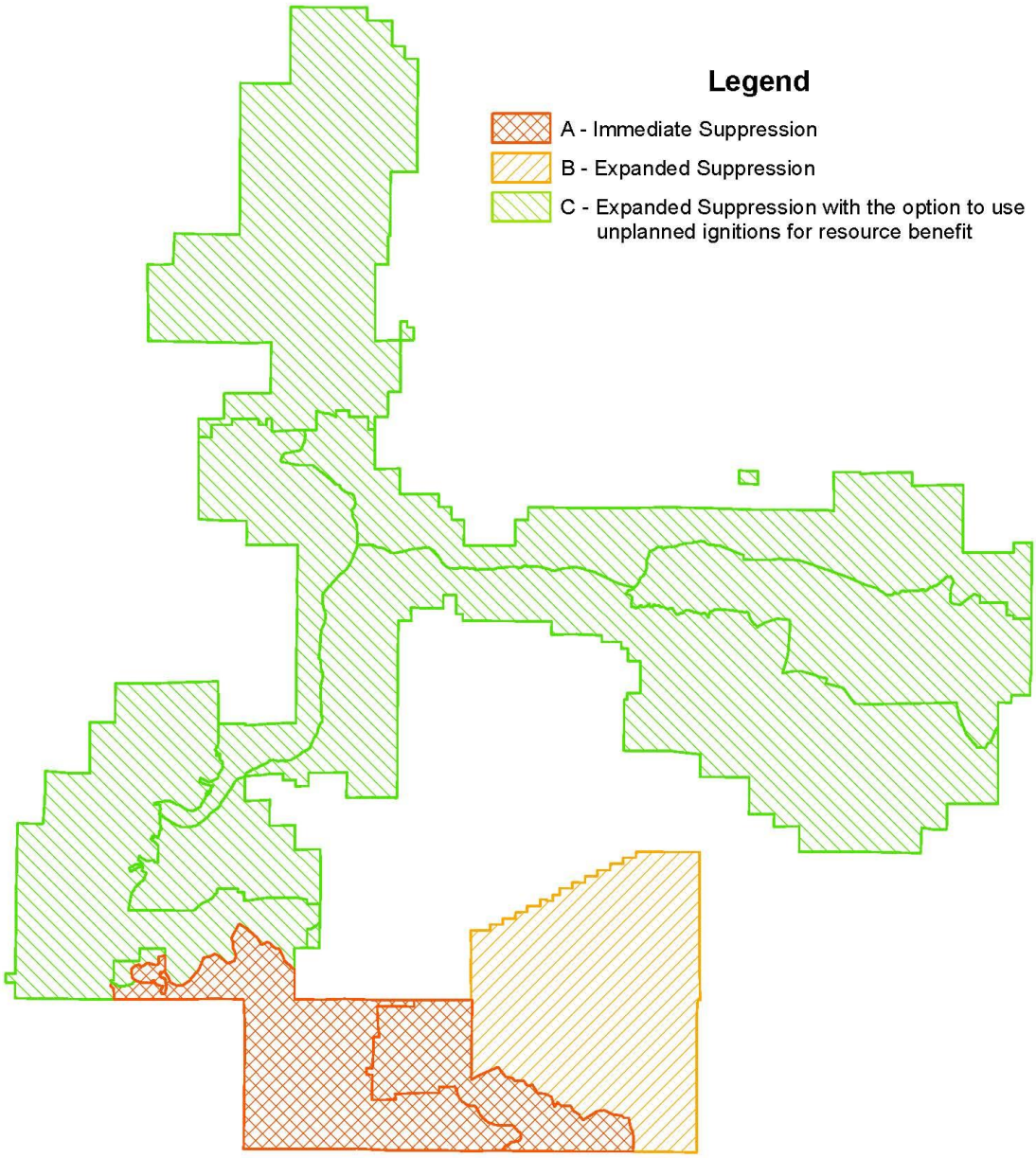

Figure 1. Fire Suppression Zones - Smokey Bear Ranger District

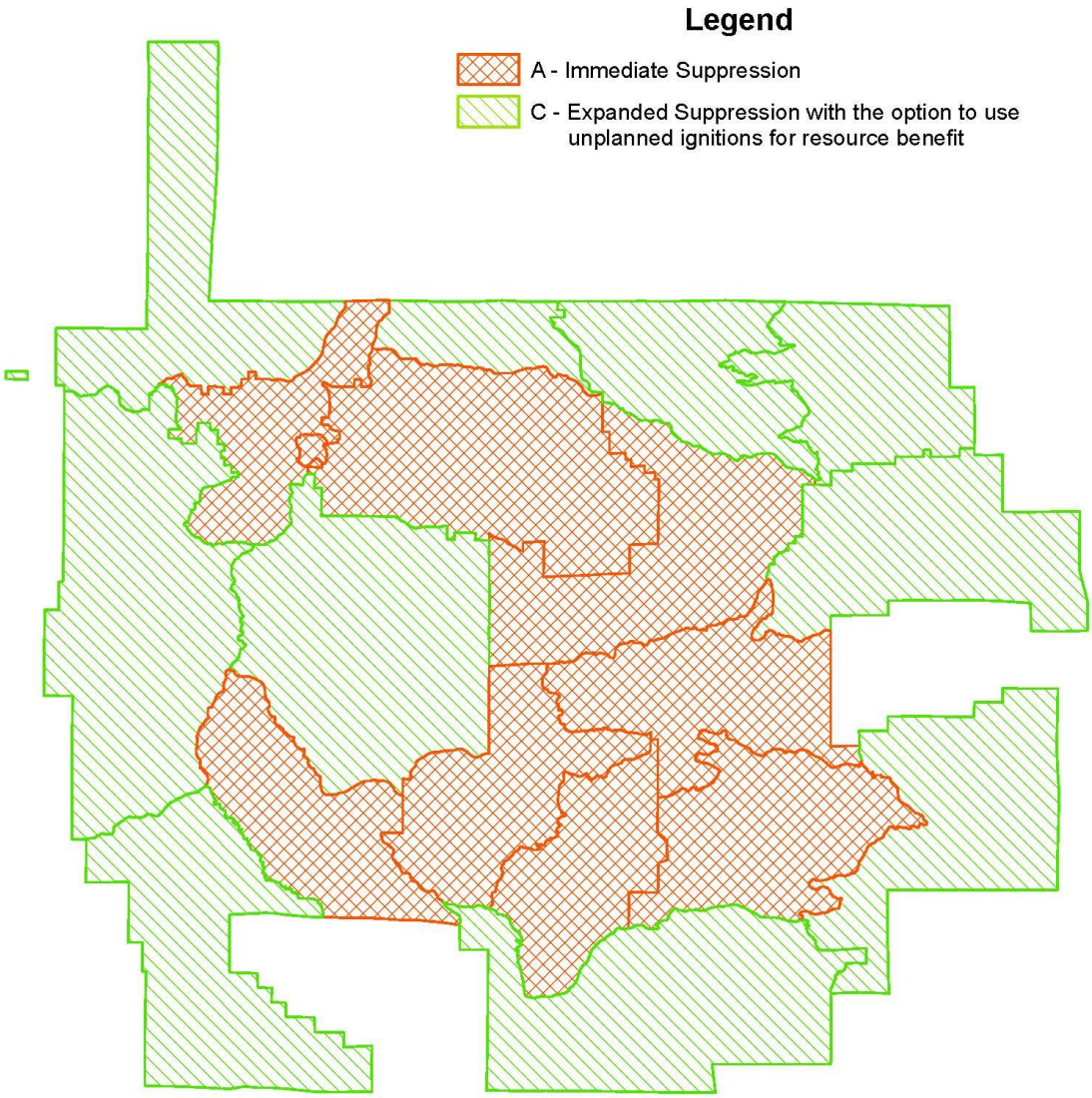

Figure 2. Fire Suppression Zones - Sacramento Ranger District

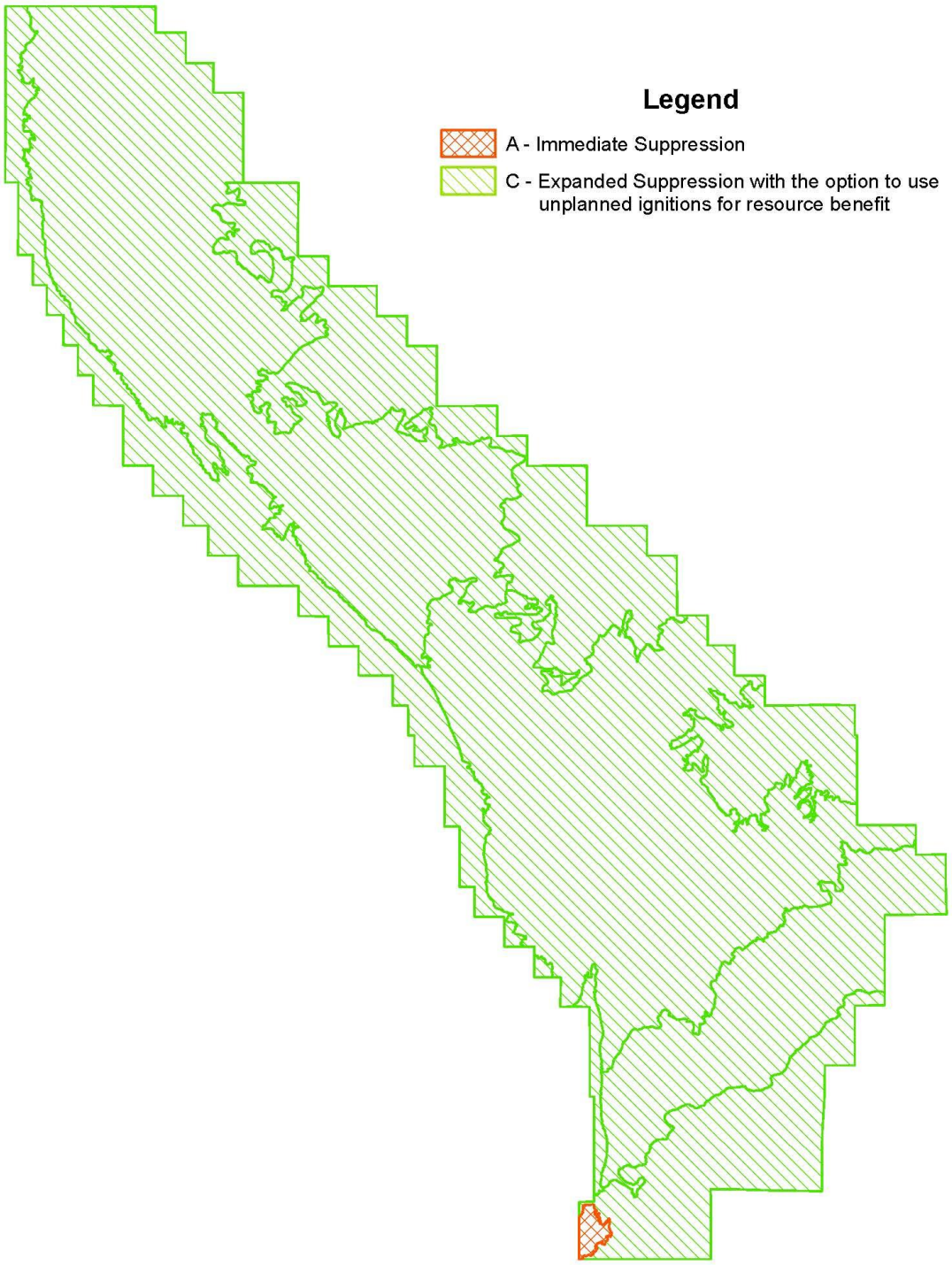

Figure 3. Fire Suppression Zones - Guadalupe Ranger District

P04	Maintain fire forces and their equipment with fire funds allocated for immediate action in the suppression of Forest fires which meet the preceding objectives and have a pre-determined action plan.
P04	Assign initial attack forces to project work which can be accomplished without impairing their ability to meet pre-established initial attack objectives.
P04	Assign priority to necessary fire and fuels management projects over other project work. Other project work will be assigned if fire and fuels projects are not available within the area that will permit the crews to meet pre-established suppression objectives.
P12	Plan fuel treatments on an area basis, i.e., fuel treatment does not have to meet the objectives on every acre as long as the objectives are met on the area as a whole.
P12	Limit the treatment of natural fuels to areas where fuel buildups are a threat to life, property, or high resource value areas.
P12	Limit fuel treatment activities to those necessary to meet suppression objectives.
P13, P14	Maintain existing fuel breaks and construct additional fuel breaks as needed for protection of life and property. The need for additional fuel breaks will be determined by the needs for fire protection and the loss of property evaluated against the risk of loss to determine project feasibility.
P16	Plan management activities so that air quality will be equal to or better than that required by the applicable Federal, State and local standards or regulations.
P17	Review and make recommendations to the State on air quality and visibility redesignation proposals. Monitor air quality at the minimum level necessary to comply with the Clean Air Act.
P14	Provide law enforcement at a level which protects human health and safety, property, and resource values in coordination with appropriate law enforcement agencies.
P24	Permit only level II or above law enforcement officers with authorization from the Forest Supervisor to issue violation notices.
P24	Assign a level IV law enforcement officer to cases involving significant personal risks.

P25 Use public education and cooperation as the primary prevention method for carrying out law enforcement responsibilities. Advertise and maintain a contact point for the public to report suspected violations on the Forest.

P25 Use cooperative law enforcement agreements to get assistance from local law enforcement agencies in the protection of people and property while on the Forest.

P34, E03 Treat dwarf mistletoe on suitable commercial Forest land as
P34, E03 follows:

a. In regenaration cuts leave only uninfected trees for seed trees, except that enough lightly infected trees may be left to maintain a GSL of 30 in ponderosa pine stands and a GSL of 40 in Douglas-fir stands. Infected trees remaining in the overstory will be cut or girdled as soon as possible after stand is regenerated. Infection in the regenerated stand will be removed in pre-commercial thinnings.

b. In intermediate treatments, growth and yield models will be used to select GSLs which maximize fiber production over the length of the rotation and maintain dwarf mistletoes at levels low enough to allow for natural regeneration.

c. Infected stands may be clearcut when; growth and yield models indicate that infected stands will not produce acceptable yields; there are not enough uninfected or lightly infected overstory trees to act as a seed source; and site conditions are favorable for replanting with a reasonable chance of success.

d. If site conditions on heavily infected stands are not favorable for clearcutting, the stand will be artificially regenerated, using non-host species if they are suited to the site. Infected overstory trees will be used as necessary to provide shelter for seedlings.

P34, E03 Manage mixed conifer type to reduce susceptibility of stands to
E05, E06 western spruce budworm. Susceptible mixed conifer stands are multi-storied, overmature stands with a high percentage of true fir.

Direct suppression, using insecticides, will be carried out during outbreaks when it is necessary to prevent or minimize stand damages. Suppression will receive priority consideration in areas where harvesting has or will be focused or accelerated.

In the highly susceptible mixed conifer type, even-aged stands dominated by Douglas-fir, ponderosa pine, and aspen will be created. This can be accomplished by use of the silvicultural prescription below:

-Patch cutting followed by site preparation, broadcast burning, and planting a mixture of ponderosa pine and Douglas-fir.

-Regeneration cuts which retain a uniformly spaced overstory, composed principally of dominant and co-dominant Douglas-fir. Advance regeneration is destroyed by tractor scarification or underburning. Regneration is accomplished by planting ponderosa pine and Douglas-fir. The overstory is removed as soon as the regeneration becomes established.

-Regeneration cuts which retain a mixture of species in the overstory. Dominant and co-dominant, mistletoe-free or lightly infested trees are used for seed trees; advance reproduction will be protected during site preparation, and will be supplemented by natural seed fall.

-Removal of all trees larger than sapling size. Advance regeneration to be protected during logging activities. Supplemental planting of ponderosa pine and Douglas-fir on all disturbed, understocked areas.

P34, P39 **The principles of integrated pest management (IPM) will be utilized to treat areas that are, or become, infested by insects or diseases, and to reduce susceptibility of host-types to future infestations. The IPM process will be used to evaluate the trade-offs between treatment versus TES habitat manipulation. TES habitat considerations are a higher priority than insect and disease considerations.**

P35 Use pesticides only when they are the most economical, biologically sound and environmentally acceptable means of preventing or suppressing pest outbreaks which threaten the attainment of objectives.

When pesticides are used for pest control, project plans will contain appropriate and necessary monitoring procedures and mitigation measures.

P34
P39
E03 Conduct annual surveys to detect important insects and diseases. Supplement surveys by training field-going personnel to recognize insect and disease, and stress inportance of early detection. When conditions warrant, conduct evaluation designed to develop alternatives to prevent or reduce damage to acceptable levels.

T02 Staffing to process minimum business management needs and provide support to line officers for decision-making. Add support staff as needed to efficiently handle an intensive level of resource management.

A02, A03
C01, D02 Monitor implementation of management prescriptions as defined in Monitoring Plan, Chapter 5.

A01, F02
J12, T01

Wild and Scenic Rivers

River corridors identified in the National River Inventory, or otherwise identified for suitability study, will be protected in the following ways:

Manage wild and scenic river study areas to protect existing characteristics through the study period and until designated or released from consideration. [FSM 2354.21]

Rivers identified for study are managed to maintain their outstanding values. [FSM 1924.03]

To the extent the Forest Service is authorized under law, control stream impoundments and diversions. The free flowing characteristics of the identified river cannot be modified. [FSH 1909.12, Section 8.12]

Outstandingly remarkable values of the identified river area must be protected and, to the extent practicable, enhanced. [FSH 1909.12, Section 8.12]

Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from wild to scenic or scenic to recreational). [FSH 1909.12, Section 8.12]

The protection requirements will continue until a decision is made as to the future use of the river and adjacent lands. [FSH 1909.12, Section 8.12]

Congressionally authorized rivers will be protected, as specified in Section 12(a) of the Wild and Scenic Rivers Act, until action is taken by the Congress. [FSH 1909.12, Section 8.12]

Congressionally-authprized rivers will be protected, as specified in Section 12(a) of the Wild and Scenic Rivers Act, until the Congress Takes action. [FSH 1909.12, 8.12]

Specific management guidance for each of the river classifications Can be found in the revised USDA-USDI Guidelines for Eligibility, Classification, and Management of River Areas (Chapter 9), and in the additional statements for the study river assessment and management in Section 8.2 of the Forest Service Handbook 1909.12. (See Appendix G -Wild, Scenic, and Recreation River Guidelines). These guidelines should be applied to the extent of the Forest Service's jurisdiction over federal lands, Federal scenic or access easements, and other interests. They do not apply to privately owner lands.

MANAGEMENT AREA 1A JICARILLA MOUNTAINS

Description Jicarilla Mountains - Smokey Bear Ranger District. This analysis area is bounded on the north, west, and east by the Forest boundary, and on the south by private land and Management Area 1B. Elevations range from approximately 6,000 to 7,600 feet. It includes 2,651 acres of tentatively suitable timber land with 187 acres of aspen, 1,316 acres of mixed conifer and 1,148 acres of ponderosa pine. There are 49,328 acres of pinyon-juniper woodland. The area contains 9 grazing allotments: Hightower, Jacks Peak, Wilson, Coyote, Haskins, Lone Mountain, Patos, Welch, and a portion of the Bar-W Allotment.

Management Primary emphasis is on range management, using construction of improvements and increased management to balance permitted livestock with capacity. Unauthorized buildings will be removed and hazards eliminated on mining claims.

Timber Suitability Areas	
Total National Forest	58,691
Non-forest	6,712
Legislatively or administratively withdrawn	0
Physically unsuited	49,328
Tentatively suitable	2,651
Non-appropriate	1,809
Suitable (No entry first period)	842

Recreation

Activities	Standards and Guidelines
A02	Retain Jicarilla Schoolhouse and manage to maintain its natural state.
A03	Manage to retain the following acres of Visual Quality Objectives: Partial Retention: 3,977 acres Modification: 37,881 acres Maximum Modification: 16,833 acres
A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level with maximum of 10 percent change from current ROS acres. Current ROS Classes: Semi-primitive motorized: 50,061 acres Roaded natural: 8,630 acres
L23	Maintain 10 miles of trails, three times at priority 1.

Wildlife

C03	Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

	C06	Develop the following structures for improvement of wildlife habitat. Water Development (Ea.) 4 Fencing (Mi.) 10
Range		Range Condition (in acres) by end of period Unsatisfactory condition 22,991 Satisfactory condition 20,905 NAC1 11,566 Non Allotment 3,234 1/ No allowable capacity and unsuitable range land.
	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range.
	D02	Unsatisfactory range condition will be treated through development of improved allotment management including range improvements.
	D04	Re-treat 290 acres of pinyon-juniper plant control project areas to retain forage production.
	D05	Develop and replace structural improvements needed to attain levels C and D management. Fence (Mi.) 10.0 Pipelines (Mi.) 10.0 Storage Tanks (Ea.) 2 Drinkers (Ea.) 4
Timber	E06, E07	Manage woodland for production of 1,000 MBF of PJ fuelwood and non-convertible products.
Minerals	G01	Complete inventory of unauthorized buildings and corresponding action plan.
	G02	Include a limited surface-use stipulation in oil and gas leasing for original log Jicarilla Schoolhouse. 1 acre.
	G09	Inventory abandoned mining areas for hazards and historical information and prepare plan for hazard elimination.
Protection	P04	**Amendment 16: Zone C**
	P04	Consider the protection of improvements and maintenance of forage base for individual range allotments in determining suppression tactics for wildfires.

P08, P09 **Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

Carrizo Integrated Resource Area

Description The Carrizo Integrated Resource area is designated as a pilot for development and implementation of land management strategies. Primary objectives are to restore watersheds to satisfactory condition, increase forage production for wildlife and livestock, improve the health of the ecosystem and increase biological diversity. The activities shown below are part of scheduled projects to meet the primary objectives. These activities, such as watershed improvement, have not been listed in the current Management Area Standards and Guidelines, or they contain different quantities of outputs. Other activities, such as structural range improvement, fit within the framework of the current Standards and Guidelines, and are not listed below.

The portion of 1A within the Carrizo Integrated Resource Area included the Patos Mountains. Elevations range from 6,500 to 8,500 feet. Approximately 90% of this Area consists of pinyon-juniper woodland, while the remaining 10% is made up of mixed conifer, ponderosa pine and non-forest. The area contains four grazing allotments: Welch, and portions of the Lone Mountain, Bar W, and Spencer Allotments. The area also includes the Patos Allotment, which is closed to grazing.

	Activities	Management Direction For Carrizo Integrated Resource Area
Wildlife	C03	Develop at least 2 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
Range	D03	Unsatisfactory range condition will be treated through development of improved allotment management including approximately 600 acres of non-structural range improvement.
Timber	E06 E07	Manage woodland for production of approximately 250 MBF of PJ fuelwood and non-convertible products.
Soil/Water	F02 F03 F09	Unsatisfactory watershed condition will be treated through evaluation, implementation and monitoring of structural and non-structural watershed improvements on approximately 625 acres.
	F03 L19	Close or obliterate about 8 miles of roads and travelways identified for such action through the Resource Access Travel Management Plan.

Carrizo Integrated Resource Area

Description **The Carrizo Integrated Resource area is designated as a pilot project for development and implementation of land management strategies. Primary objectives are to restore watersheds and to satisfactory condition, increase forage production for wildlife and livestock, improve the health of the ecosystem and increase biological diversity. The activities shown below are part of scheduled projects to meet the primary objectives. These activities, such as watershed improvement, have not been listed in the current Management Area Standards and Guidelines, or they contain different quantities of outputs. Other activities, such as structural range improvement, fit within the framework of the current Standards and Guidelines, and are not listed below.**

The portion of 1B within the Carrizo Integrated Resource Area includes Benado Gap, Carrizo Canyon, Tucson Mountain, and Capitan Divide. Elevations range from 6,600 to 8,300 feet. Approximately 90% of this area consists of pinyon-juniper woodland, while the remaining 10% is made up of mixed conifer, pondersa pine, and non-forest. The area contains portions of six grazing allotments: Benado Gap, Bar W, Tucson, Capitan Divide, Welch, and Indian Divide.

Management Direction

	Activities	**For Carrizo Integrated Resource Area**
Wildlife	**C02**	**Utilize prescribed fire on approximately 650 acres to increase forage production for wildlife.**
	C03	**Develop at least 1 water for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.**
Range	**D03**	**Unsatisfactory range condition will be treated through development of improved allotment management including approximately 600 acres of non-structural range improvement.**
Timber	**E06, E07**	**Manage woodland for production of approximately 1,300 MBF of PJ fuelwood and non-convertible products.**
Soil/Water	**F02, F03 F09**	**Unsatisfactory watershed condition will be treated through evaluation, implementation, and monitoring of structural and non-structural watershed improvements on approximately 750 acres.**
	F03, L19	**Close or obliterate about 5 miles of roads and travelways identified for such action through the Resource Access Travel Management Plan.**

MANAGEMENT AREA 1B NORTH CAPITANS

Descriptions North Capitans - Smokey Bear Ranger District
This analysis area is bounded on the north and east by the Forest boundary, on the south by the Del Macho/Salt Creek Watershed boundary and the Capitan Mountains Wilderness, and on the west by the Del Macho/Salt Creek Watershed boundary and private land. Elevations range from approximately 5,500 to 8,000 feet. It includes 12,249 acres of tentatively suitable timber land with 112 acres of aspen, 1,967 acres of mixed conifer, and 10,170 acres of ponderosa pine. There are 23,896 acres of pinyon-juniper woodland. The area contains five grazing allotments: Brill, Arroyo Seco, Block, Merchant and Jacob Springs; and portions of six others: Benado Gap, Tucson, Capitan Divide, West Capitan Arabella and Bar-W Allotments.

Management Direction Primary emphasis is on management of wildlife habitat and production of fuelwood. Waters will be developed and openings created to benefit game and non-game species. Structural range improvements will be constructed to improve management. Three rights-of-way will be obtained to provide access to the wilderness. A high level of pinyon-juniper fuelwood will be produced.

Timber Suitability Areas	
Total National Forest	38,346
Non-forest	2,201
Legislatively or administratively withdrawn	0
Physically unsuited	23,896
Tentatively suitable	12,249
Non-appropriate	4,011
Suitable (No entry first period)	8,238

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	147 acres
Partial Retention:	9,633 acres
Modification:	26,281 acres
Maximum Modification:	2,285 acres

A15 Manage for SPM and RN ROS classes. Service will be at less than standard service level with maximum of 10 percent change from current ROS acres.

Current ROS Classes:	
Semi-primitive motorized:	37,007 acres
Roaded natural:	1,339 acres

L23 Maintain six miles of trails three times at level 1.

Wildlife C03 Develop 660 acres of openings to best accomplish management goals and objectives by reducing limiting habitat factors.

	C06	Develop 10 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
	C07	Develop 18 structural fish habitat improvements.
Range		Range Condition (in acres) by end of period

Unsatisfactory Condition	8,274
Satisfactory Condition	14,873
NAC	13,746
Non Allotment	1,453

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by end of second period.
	D02	Unsatisfactory range condition will be treated through development of improved allotment management including range improvements.
	D05	Develop and replace structural improvements to achieve management levels C and D.

Fence (Mi.)	15.0
Pipeline (Mi.)	3
Drinkers (Ea.)	4
Trick Tanks (Ea.)	1

Timber	E06, E07	Manage woodland for production of 5,375 MBF of PJ fuelwood and non- convertible products.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for Pine Lodge Summer Home area (80 acres).
Lands	J01	Retain and manage Carrizo Peak and two sites on Boy Scout Mountain as general use electronic sites.
	J01	Provide for continuation of existing summer home area at Pine Lodge. Permits will not be issued for unoccupied lots or for reconstruction. **Existing permits may be reissued upon acceptance of an application for renewal and completion of the appropriate level of environmental analysis.**
	J04	Review Smokey Bear Lookout withdrawal. Period 1.
Protection	P04	**Amendment 16: Zone C**
	P04	Consider the protection of improvements and maintenance of forage base for individual range allotments in determining suppression tactics for wildfire.
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 1C CAPITAN MOUNTAINS WILDERNESS

Description

Capitan Wilderness - Smokey Bear Ranger District
This analysis area is bounded on the north by a line that divides lower slopes of pinyon-juniper from the steeper slopes of rock talus and mixed conifer, on the east by the Forest boundary, on the south by Forest Road 56 and a line that divides the lower slopes of pinyon-juniper from the steeper slopes of rock talus and mixed conifer, and on the west by Capitan Pass. Elevations range from approximately 5,600 to 10,000 feet. Terrain is steep and rugged with numerous talus slopes and rock slides. The predominant vegetation types include aspen, ponderosa pine and spruce-fir. Lower elevations may have some pinyon-juniper.

Management Direction

Primary emphasis is on wilderness management. Trails will be maintained at level 2 , and some trails will be reconstructed.

Timber Suitability Areas	
Total National Forest	34,513
Non-forest	0
Legislatively or administratively withdrawn	34,513
Physically unsuited	0
Tentatively suitable	0

Recreation/ Wilderness

Activities	Standards and Guidelines
A03	Manage for the Visual Quality Objective of Preservation, except for legally permitted activities involving range and mineral resources which will be mitigated to the extent practical.
A15, B02 J01	Horses will be limited to 15 for any overnight party entering the wilderness. Outfitter-guide parties, and all non-commercial parties with more than five horses, will carry and use processed horse feed.
B03	Manage for SP ROS class except transition zones adjacent to trail heads, exterior private developments and where roads mark the wilderness boundary.
B03	Manage wilderness use at standard service levels.
B03 L23	Provide interior signs made of oak and native post material. The number of signs will be limited to those needed to provide the minimum required information to the user.
B03 J06	Annually post wilderness boundary at major entry points and problem areas where motor vehicle entry occurs.
L22	Reconstruct two miles of trails.
L23	Maintain 30 miles of trails annually at priority 2.

	L22, L23 G01, C06 D05	Use native plant species in revegetation and restoration projects.
Wildlife	C01	Provide maintenance activities in conformance with the Wilderness Act.
Range		Range condition (in acres) by end of period

Unsatisfactory condition	2,083
Satisfactory condition	315
NAC	7,976
Non Allotment	24,139

	D02	Unsatisfactory range condition will be treated through improved management.
	D02	Achieve moderate (C) level management on all full capacity range by end of first period. Unobligated portions of the wilderness will remain ungrazed (level A management).
	D05	Permit new improvements if they are needed to maintain capacities or to protect wilderness resources. Existing improvements may be reconstructed.
Lands	J02	Authorize access to privately-owned property provided that mitigating measures will be taken to protect wilderness values and access is unavailable across other private or public land.
	J15	Acquire 240 acres of private land.
Protection	P01, L01	Evaluate existing helispots in light of wilderness designation and maintain only those needed to meet current fire management prescriptions. New helispots for fire pre-suppression will not be constructed.
	P04	**Amendment 16: Zone C**
	P04	**Amendment 16: Deleted.**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish pre-planned**
	P35	Control insects and diseases only if they pose a significant threat to resource values outside the wilderness. Choose control methods that will not impair the wilderness character of the area.

MANAGEMENT AREA 1D SOUTH CAPITANS

Description South Capitans - Smokey Bear Ranger District
This analysis area is bounded on the north by the Capitan Mountain Wilderness and by the Rio Bonito Watershed, on the east and south by the Forest boundary, and on the west by the Rio Bonito Watershed. Elevations range from approximately 6,000 to 9,800 feet. It consists of 12,016 acres of tentatively suitable timber land with 499 acres of aspen, 5,2 58 acres of mixed conifer and 6,259 acres of ponderosa pine. There are 52,926 acres of pinyon-juniper woodland. The area contains eight grazing allotments: Latham, Baca, Matney Springs, Salazar, V.I., Capitan Gap, Comery, and Nogal Lake; and portions of six others: Skinner, Alienated, Kudner, Indian Divide, Capitan Divide, and West Capitan Allotments; two administrative pastures - Baca and Boone; Mesa Administrative Site; and a portion of the Capitan Watershed.

Management Direction Primary emphasis is on range management and production of fuelwood. E xisting structures will be maintained and additional fences and water storages developed to distribute and control livestock. A high level of pinyon-juniper fuelwood will be produced.

Timber Suitability Areas	
Total National Forest	69,644
Non-forest	4,702
Legislatively or administratively withdrawn	0
Physically unsuited	52,926
Tentatively suitable	12,016
Non-appropriate	5,164
Suitable (No entry first period)	6,852

Recreation

Activities	Standards and Guidelines
A02	Provide for limited cultural resources signing or interpretation at trailhead facilities.
	Retain the Bonito Pipeline and manage to maintain its natural state.
A03	Manage to retain the following acres of Visual Quality Levels:

Retention:	2,550 acres
Partial Retention:	33.484 acres
Modification:	25,784 acres
Maximum Modification:	7,826 acres

A15 Manage for only SPM and RN ROS classes. Service will be at less than standard at service level.

Current ROS classes are:	
Semi-primitive non-motorized:	6,072 acres
Semi-primitive motorized:	56,775 acres
Roaded natural:	6,797 acres

	A15, L23	Maintain eight miles of trails annually at level 1.
	L23	Close the Mitt-Bar Trail to motorized use.
Wildlife	C03	Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Browse Release (Ac.)	130
Openings (Ac.)	200

	C06	Develop 3 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
Range		Range condition (in acres) by end of period

Unsatisfactory condition	4,785
Satisfactory condition	47,916
NAC	7,810
Non Allotment	9,133

	D02	**Achieve moderate (C) level and high (D) level management on all full range by the end of second period.**
	D03	**Unsatisfactory condition range will be treated through development of improved allotment management including structural and non-structural improvements.**
	D05	Develop and replace structural improvements needed to attain level C and D management.

Fence (Mi.)	28.0
Pipeline (Mi.)	22.0
Storage Tanks (Ea.)	6
Drinkers (Ea.)	13

Timber	E06 E07	Manage woodland for production of 2,198 MBF of PJ fuelwood and non-convertible products.
Soil and Water	F04	Process 10 applications for water rights needed for Forest management.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following areas:

VQO Retention (foreground)	1,699 acres

Lands	J01	Retain and manage Summit Peak as an electronic site.
	J04	Review the following existing withdrawals Padilla Point, Baca Administrative site, Baca Recreation Site, Mesa Ranger Station,Capitan heliport.

Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

Carrizo Integrated Resource Area

Description The Carrizo Integrated Resource Area is designated as a pilot project for development and implementation of land management strategies. Primary objectives are to restore watersheds to satisfactory condition, increase forage production for wildlife and livestock, improve the health of the ecosystem and increase biological diversity. The activities shown below are part of scheduled projects to meet the primary objectives. These activities, such as watershed improvement, have not been listed in the current Management Area Standards and Guidelines, or they contain different quantities of outputs. Other activities, such as structural range improvement, fit within the framework of the current Standards and Guidelines, and are not listed below.

The portion of 1D within the Carrizo Integrated Resource Area includes Indian Divide, Tucson Mountain, Read Mesa, and Capitan Divide. Elevations range from 6,400 to 8,300 feet. Approximately 90% of this area consists of pinyon-juniper woodland, while the remaining 10% is made up on mixed conifer, ponderosa pine, and non-forest. The area contains portions of seven grazing allotments: Benado Gap, Bar W, Tucson, Capitan Divide, Fritz, Comery, and Indian Divide.

	Activities	Management Direction For Carrizo Integrated Resource Area
Wildlife	C02	Utilize prescribed fire on approximately 1,300 acres to increase forage production for wildlife.
	C03	Develop at least 3 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
Range	D03	Unsatisfactory range condition will be treated through development of improved allotment management including approximately 2,300 acres of non-structural range improvement.
Timber	E06 E07	Manage woodland for production of approximately 1,100 MBF of PJ fuelwood and non-convertible products.
Soil/Water	F02 F03	Unsatisfactory watershed condition will be treated through evaluation, implementation, and monitoring on approximately 2,500 acres.
	F03 L19	Close or obliterate about 8 miles of roads and travelways identified for such action through the Resource Access Travel Management Plan.

MANAGEMENT AREA 1E CARRIZO PEAK/NOGAL PEAK

Description Carrizo Peak/Nogal Canyon - Smokey Bear Ranger District.
This analysis area is bounded on the north by private land, on the east and south by the Rio Bonito Watershed, and on the west by private land and Forest Roads 400 and 108. Elevations range from approximately 5,900 to 8,600 feet. It consists of 3,434 acres of tentatively suitable timber land, with 230 acres of aspen, 2,629 acres of mixed conifer, and 575 acres on ponderosa pine. There are 15,618 acres of pinyon-juniper woodland. The area contains three grazing allotments: Spencer, Pino, and Roberts; and portions of five others: Bar W, Indian Divide, Kudner, Alienated, and Nogal Lake.

Management Direction: **All resources are managed at levels compatible with preserving soil productivity**.

Timber Suitability Areas	
Total National Forest	22,291
Non-forest	3,239
Legislatively or administratively withdrawn	0
Physically unsuited	15,618
Tentatively suitable	3,434
Non-appropriate	2,275
Suitable (No entry first period)	1,159

	Activities	Standards and Guidelines
Recreation	A03	Manage to retain the following acres of Visual Quality Objectives:
		Retention: 1,002 acres
		Partial Retention: 13,587 acres
		Modification: 6,709 acres
		Maximum Modification: 993 acres
	A05	Construct a trailhead (24 PAOT) at Nogal or Tortolita.
	A15	Manage for SP, SPM, and RN, ROS classes. Service will be at less than standard service level with a maximum reduction of existing acres of 10 percent for the SP class.
		Current ROS Classes:
		Semi-primitive non-motorized: 6,425 acres
		Semi-primitive motorized: 13,802 acres
		Roaded natural: 2,064 acres
Range		Range condition (in acres) by end of period
		Unsatisfactory condition 6,058
		Satisfactory condition 10,969
		NAC 5,264
		Non Allotment ---

	D02	Achieve low (B) level of management on all full capacity range.
	D02	Unsatisfactory range conditions will be treated by implementing improved management.
Minerals	D02	Include a limited surface use stipulation in oil and gas leases for the following areas: Ranchmen's Camp 20 acres VQO Retention (foreground) 773 acres
Lands	J04	Evaluate the need for continuance of Nogal Lake mineral withdrawal.
	J15	Acquire private land on an opportunity basis.
Protection	P04	**Amendment 16: Zone C (entire MA)**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

Carrizo Integrated Resource Area

Description

The Carrizo Integrated Resource Area is designated as a pilot project for development and implementation of land management strategies. Primary objectives are to restore watersheds to satisfactory condition, increase forage production for wildlife and livestock, improve the health of the ecosystem and increase biological diversity. The activities shown below are part of scheduled projects to meet the primary objectives. These activities, such as watershed improvement, have not been listed in the current Management Area Standards and Guidelines, or they contain different quantities of outputs. Other activities, such as structural range improvement, fit within the framework of the current Standards and Guidelines, and are not listed below.

The portion of 1E within the Carrizo Integrated Resource Area includes the Carrizo Mountain area and the Vera Cruz Mountains. Elevations range from 6,200 to 9,600 feet. Approximately 70% of this area consists of pinyon-juniper woodland, while the remaining 30% is made up of mixed conifer, ponderosa pine and non-forest. The area contains portions of six grazing allotments: Spencer, Pino, Roberts, Bar W, Indian Divide, and Vera Cruz.

Activities		Management Direction For Carrizo Integrated Resource Area
Wildlife	C03	Develop at least 2 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.

Range	**D03**	**Unsatisfactory range condition will be treated through development of improved allotment management including approximately 150 acres of non-structural range improvement.**
Timber	E06 E07	Manage woodland for production of approximately 200 MBF of PJ fuelwood and non-convertible products.
Soil/Water	F02 F03 F09	Unsatisfactory watershed condition will be treated through evaluation,implementation, and monitoring of structural and non-structural watershed improvements on approximately 200 acres.

MANAGEMENT AREA 1F WHITE MOUNTAIN WILDERNESS

Description

White Mountain Wilderness - Smokey Bear Ranger District
This analysis area is bounded on the north by the Forest boundary, on the east by private land and Forest Roads 400, 108, and 107, on the south by the Rio Ruidoso/Rio Bonito Watershed and the Mescalero Apache Indian Reservation (MAIR), and on the west by the Forest boundary. Elevations range from approximately 6,600 to 11,000 feet. It is composed of high, rugged peaks with several sub-alpine peaks in the interior. The vegetation consists of virgin stands of mixed conifer and spruce-fir with large areas of grasslands. A band of pinyon-juniper is located along the western one-third of the area. The area provides excellent game habitat, including five miles of trout stream. It contains four grazing allotments: Elder Canyon, Finley, Diamond Peak and Church Mountain; portions of four others Tortolita, Nogal Canyon, Lower Bonito and Loma Grande; and portions of two watersheds.

Management Direction

Primary emphasis is on wilderness management. Two trailheads will be constructed and one will be reconstructed. Trails will be maintained at level 2 and some will be reconstructed.

Timber Suitability Areas	
Total National Forest	48,366
Non-forest	0
Legislatively or administratively withdrawn	48,360
Physically unsuited	0
Tentatively suitable	0
Non-appropriate	0

Recreation/ Wilderness

Activities	Standards and Guidelines
A02	Maintain high quality visual conditions in the Class I air quality areas (White Mountain wilderness lands prior to 1980). The form, line, texture, and color of characteristic landscapes will be clearly distinguishable when viewed as middleground. Also, cultural resources and ecosystems will remain unmodified by air pollutants. Impacts of air pollution generating activities will be predicted using current modeling techniques.
A03	Manage for Visual Quality Objective of Preservation except for legally permitted activities involving range and mineral resources which will be mitigated to the extent practical.
A05	Construct trailhead at Water (24 PAOT) or Elder Canyon (60 PAOT).
A05	Reconstruct trailhead at Three Rivers.
A05	Manage Three Rivers Campground at standard service level.

	A15, B02	Horses will be limited to 15 for any overnight party entering the wilderness. Outfitter-guide parties, and all non-commercial parties with more than 5 horses, will carry and use processed horse feed.
	B03	Manage for SP ROS class except transition zones adjacent to trailheads, exterior private developements and where roads mark wilderness boundary.
	B03	Manage wilderness use at standard service level.
	B03 L23	Provide interior signs made of oak and native post material. The number of signs will be limited to those needed to provide the minimum required information to the user.
	B03 J06	Annually post wilderness boundary at major entry points and problem areas where motor vehicle entry occurs.
	All Ls	Maintain trails and trailheads in such a manner as to meet the protection needs of the resource while providing opportunities for recreational use and meeting the required VQO prescribed for the area. On an opportunity basis, inform hikers of trailheads most commonly used by equestians.
	L23	Maintain 55 miles of trails at level 2.
	L23	Reconstruct one mile of trail.
	C01, C06 G01, D05 L22, L23	Use native plant species in revegetation and restoration projects.
Wildlife	C01	Provide maintenance activities in conformance with the Wilderness Act.
Range		Range condition (in acres) by end of period

Unsatisfactory condition	2,261
Satisfactory condition	4,469
NAC	17,436
Non Allotment	24,200

	D02	Achieve moderate (C) level management on all full capacity range. Unobligated portions of the wilderness will remain ungrazed (level A management).
	D02	Unsatisfactory condition range will be treated by improved allotment management.
	D01 D02	Maintain existing improvements necessary to maintain level C management.

	B01, B02 D01, D02	Include forage needs of recreation livestock in determining AUM grazing capacity.
Lands	J02	Authorize access to privately-owned property provided that mitigating measures will be taken to protect wilderness values and access is unavailable across other private or public land.
	J04	Review existing withdrawals and evaluate need for withdrawals at the following Locations: Elder Canyon, Spring Cabin, Water Canyon, Spring Canyon, Windy Canyon.
	J15	Acquire private land on an opportunity basis (160 acres).
Facilities	L24	Construct no additional administrative structures. Spring Cabin L25 and related existing facilities will be maintained. If maintenance does not keep cabin to acceptable standard or there is 50 percent or more destruction by an accident, the cabin and related facilities will be removed.
Protection	P01 L01	Construct no helispots for fire presuppression.
	P04	**Amendment 16: Zone C (entire MA)**
	P04	**Amendment 16: Deleted.**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P35	Control insects and disease only if they pose a significant threat to resource values outside the wilderness. Choose control methods that will not impair the wilderness character of the area.

MANAGEMENT AREA 1G RIO BONITO

Description Rio Bonito - Smokey Bear Ranger District
This analysis area is bounded on the north by the Rio Bonito Watershed, on the east by the Forest boundary, on the south by private land, and on the west by Forest Roads 400 and 108. Elevations range from approximately 7,000 to 9,000 feet. There are 6,3**66** acres of tentatively suitable timber land, with 235 acres of aspen, 3,873 acres of mixed conifer and 2,258 acres of ponderosa pine. There are 2,513 acres of pinyon-juniper woodland. The area contains portions of Loma Grande and Lower Bonito Grazing Allotments. Bonito Lake and Rio Bonito both provide trout habitat.

Management Direction Primary emphasis is on dispersed and developed recreation, and wildlife management. A right-of-way will be obtained and two trailheads constructed to provide access to the adjoining wilderness. A campground will be reconstructed. Structural improvements include water developments to benefit game and non-game animals.

Timber Suitability Areas	
Total National Forest	11,613
Non-forest	2,712
Legislatively or administratively withdrawn	0
Physically unsuited	2,513
Tentatively suitable	6,3**66**
Non-appropriate	4,937
Suitable (No entry in first period.)	1,4**29**

Recreation

Activities	Standards and Guidelines
A01	Coordinate recreation use fees and other recreation activities with City of Alamogordo recreation management around Bonito Lake.
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	8,720 acres
Partial Retention:	2,744 acres
Modification:	137 acres
Maximum Modification:	12 acres

A05	Construct trailheads at Mills Canyon (18 PAOT) and either Nogal Peak or Argentina (30 PAOT).
A06, L19	Rehabilitate South Fork Campground (300 PAOT), including 1.2 miles road.

	A14	Manage for only SPM, RN and R ROS classes. Service will be at standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	218 acres
Semi-primitive motorized:	8,736 acres
Roaded natural:	2,491 acres
Rural:	105 acres

	A11	Manage developed recreation sites at standard service level.
	A14	Evaluate need and implement dispersed management, including traffic control and parking, along Rio Bonito above and below Bonito Lake.
	A11 - L's	Locate, construct and maintain trails and trailheads in such a manner as to meet the protection needs of the resource while providing maximum opportunities for recreational use.
Wildlife	C06	Develop 2 waters for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
	C05	Install one project to protect and enhance T&E species habitat.
Range		Range condition (in acres) by end of period

Unsatisfactory condition	200
Satisfactory condition	439
NAC	3,834
Non Allotment	7,140

	D02	Achieve moderate (C) level management on all full capacity range. Management level A will remain in force on those allotments now closed to livestock grazing.
	D05	Maintain structural improvements needed for C and D level management.
Timber	E06, E07	Manage woodland for production of 125 MBF of fuelwood and non-convertible products.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following areas:

South Fork Campground	39 acres
VQO Retention (foreground)	2,186 acres

	G09	Inventory abandoned mining areas for hazards and prepare plan for hazard elimination.

Lands	J04 J15	Review the South Fork Campground withdrawals. Acquire, on an opportunity basis, the land identified in the Bonito recreation acquisition composite.
Protection	P04	**Amendment 16: Zone C (entire MA)**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P08, P09	**Amendment 16: Deleted.**

MANAGEMENT AREA 1H SOUTH FORK BONITO

Description South Fork Bonito - Smokey Bear Ranger District
This analysis area is bounded on the north and west by a portion of the White Mountain Wilderness, and on the east and south by the Rio Ruidoso Watershed. Elevations range from approximately 8,400 to 10,000 feet. There are 1,046 acres of tentatively suitable timber land with 192 acres of aspen, 854 acres of mixed conifer, predominantly corkbark fir, and some ponderosa pine. This area has no grazing activity.

Management Direction Primary emphasis is on developed recreation. Ski Apache Ski Area will expand into the area and will be managed at standard service level.

Timber Suitability Areas	
Total National Forest	1,240
Non-forest	194
Legislatively or administratively withdrawn	0
Physically unsuited	0
Tentatively suitable	1,046
Non-appropriate	1,046

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Preservation:	367 acres
Retention:	440 acres
Partial Retention:	433 acres

A11 Manage for only RN and R ROS classes (alpine skiing). Service will be at standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	652 acres
Roaded Natural:	588 acres

A11 Provide for expansion of Ski Apache with implementation based upon a master plan and detailed environmental analysis. Roads will not be constructed into Bonito drainage to install facilities.

A14 Existing trails (15 and 25) will be left open and maintained but new facilities will not be constructed.

L23 Maintain two miles of trails three times at level 2.

Minerals G02 Include a limited surface use stipulation in oil and gas lease for:

Expansion of Ski Apache Ski Area	433 acres
VQO Retention (foreground)	258 acres

Lands	J04	Evaluate area allocated to expansion of Ski Apache for a withdrawal.
Facilities	L01	Construct no new roads to facilitate expansion of Ski Apache into the South Fork of the Bonito.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P08, P09	**Amendment 16: Deleted.**

MANAGEMENT AREA 1H-RNA WILLIAM G. TELFER RESEARCH NATURAL AREA

Description

William G. Telfer Research Natural Area - Smokey Bear Ranger District
This management area is bounded on the north, east and west by Analysis Area 1H and on the east, south and west by Analysis Area 1I. It consists of 727 acres. This Management Area was established after analysis area boundaries were determined and for convenience, the 367 acres originally contained in Management Area 1H and the 360 acres originally contained in Management Area 1I are described and counted in those areas.

The proposed William G. Telfer Research Natural Area (RNA) consists of high mountain meadows and stands of predominantly corkbark fir and spruce straddling a ridge just to the west of Buck Mountain.

William G. Telfer, a Forest Service entomologist, lost his life in an airplane accident on July 21, 1984 in the White Mountain Wilderness, while performing an aerial pest detection survey. Bill was a tireless and enthusiastic worker whose last months on earth were devoted to western spruce budworm management on the Lincoln National Forest. The William G. Telfer Research Natural Area is named in his honor as a living memorial to a loyal Forest Service employee who died in the performance of his duty.

Management Direction

Primary emphasis is on providing conditions suitable for research on natural ecosystems. A research natural area (RNA) will be established for the protection and study of spruce-fir and thurber fescue vegetation types.

Activities	Standards and Guidelines
J11	Complete RNA designation for the protection and study of spruce-fir and thurber fescue vegetation types. The objectives will be to emphasize natural processes, protect natural features, and preserve examples of naturally occurring ecosystems in an unmodified condition for research and educational purposes. Research activities will be approved on a case by case basis. If the area is designated as an RNA, the following standards and guidelines will apply:
A03	Maintain Visual Quality Objective at the preservation level.
A15	Allow nonmotorized dispersed recreation activities provided they do not modify the area or threaten or impair the research or educational value of the study areas.
A15	Require recreation users to pack out all their trash.
A15	Prohibit recreation signs or marking within the area.
C03	Allow vegetation manipulation only when needed to preserve the vegetation for which the area is being established.

D02	Prohibit livestock grazing.
E00	Prohibit all timber management activities.
E00	Prohibit all fuelwood harvest.
J01	Issue no special use permits which would modify the area or threaten or impair its research or educational value.
J01	Maintain Road 5625 to Buck Mountain Electronic Site for permittee access and administrative access. Close it to all other vehicles.
J04	Process mineral withdrawal recommendation.
J06, J07	Post boundaries and fence where necessary.
L04, L08 A03	Allow no new road construction.
L22	Allow no new trail construction.
P04, P08 P09	Suppress all fires at 10 acres or less unless research purposes require other suppression objectives.
	Limit suppression action to the use of hand tools and prohibit fire retardant chemicals unless necessary to protect life and property outside the study areas.
P35	Allow insect and disease management suppression activities only when necessary to protect resource values outside the area.

MANAGEMENT AREA 1I UPPER RUIDOSO

Description Upper Ruidoso - Smokey Bear Ranger District
This analysis area is bounded on the north by the Rio Ruidoso Watershed, Management Area 1H-RNA, and the Forest boundary, on the east by private land and a ridge top, and on the south and west by the MAIR. Elevation ranges from approximately 6,500 to 11,000 feet. It consists of 12,330 acres of tentatively suitable timber land with 257 acres of aspen, 6,231 acres of mixed conifer and 5,842 acres of ponderosa pine. There are 2,651 acres of pinyon-juniper woodland. The area contains Cedar Creek Grazing Allotment. The communities of Ruidoso and Ruidoso Downs are located within this area as well as Ski Apache and large blocks of private land.

Management Direction Primary emphasis is on developed recreation. Developed recreation sites will be managed at standard service levels.

Timber Suitability Areas	
Total National Forest	16,575
Non-forest	1,594
Legislatively or administratively withdrawn	0
Physically unsuited	2,651
Tentatively suitable	12,330
Non-appropriate	5,775
Suitable (No entry first period)	6,555

Recreation

Activities	Standards and Guidelines
A02	Protect the Wizard's Roost site and manage to maintain its natural state.
A02	Nominate Monjeau Lookout to the National Register of Historic Places.
A03	Manage to retain the following acres of Visual Quality Objectives:

Preservation:	360 acres
Retention:	8,815 acres
Partial Retention:	4,643 acres
Modification:	2,757 acres

A05	Construct Cedar Creek Group Site (360 PAOT).
A05	Rehabilitate Oak Grove Campground.
A05	Rehabilitate VIS site.
A11	Manage developed recreation sites at standard service level.

	A11	Manage and authorize improvements and expansion of Ski Apache according to an approved Master Plan and environmental analysis. Management will be coordinated with development of adjacent land on the Mescalero Apache Indian Reservation.
	A14	Existing trails (15 and 25) will be left open and maintained but new facilities will not be constructed.
	A14	Manage for only SPM, RN, and R ROS classes. Service will be at standard service level. Allow only a 10 percent change in acres between classes except those resulting from private land development.

Current ROS Classes:	
Semi-primitive Motorized:	3,641 acres
Roaded Natural:	11,941 acres
Rural:	993 acres

	L23	Maintain one mile of trail to level 2, three times each period.
Wildlife	C06	Develop 1 water for wildlife, dispersed to reach objective of providing maximum travel distance of one mile.
	C07	Manage/construct eighteen stream structures to maintain and enhance fish habitat.
Range		Range condition (in acres) by end of period

Unsatisfactory condition	5
Satisfactory condition	316
NAC	3,262
Non Allotment	12,992

	D02	Maintain moderate (C) level mangement.
		Maintain level A management on those allotments now closed to grazing.
	D05	Maintain structural improvements needed to maintain Level C management.
Timber	E06, E07	Manage woodland for production of 125 MBF of PJ fuelwood and non-convertible products.
Soil and Water	F04	Process applications for two water rights needed for Forest management.

Minerals	G02	Include a limited surface-use stipulation for oil and gas leasing for these areas:

Ski Apache	767 acres
Monjeau Campground	10 acres
Oak Grove Campground	40 acres
Skyline Campground	20 acres
Cedar Creek Picnic Area and planned facilities	80 acres
Smokey Bear Ranger Station and Administrative Site	80 acres
Wizard's Roost	10 acres
Eagle Creek Summer Home Area	80 acres
VQO Retention (foreground)	3,961 acres

Lands	J01	Retain and manage Buck Mountain as an electronic site.
	J01	**Provide for continuation of existing summer home area at Eagle Creek. Existing permits may be reissued upon acceptance of an application for and completion of the appropriate level of environmental analysis.**
	J04	Review the following withdrawals: Ski Apache, Monjeau, Oak Grove, Skyline, Cedar Creek, and Ruidoso Administrative Site and Lookout.
	J15	Acquire, on an opportunity basis, land identified in the Ruidoso Recreation Acquisition Composite.
Facilities	L01	Construct no new roads to facilitate expansion of Ski Apache into the South Fork of Rio Bonito.
Protection	P04	Zone A. Suppression objective is 10 acres or less. (See Figure 1)
	P08, P09	Use prescribed fire with planned and unplanned ignition throughout the management area to accomplish resource management objective**s.**

MANAGEMENT AREA 1J LOWER RUIDOSO

Description Lower Ruidoso - Smokey Bear Ranger District
This analysis area is bounded on the north, east and south by the Forest boundary, and on the west by private land and a series of ridge tops. Elevations range from approximately 5,600 to 7,800 feet. There are 3,341 acres of tentatively suitable timber land with 62 acres of aspen, 899 acres of mixed conifer and 2,380 acres of ponderosa pine. There are 49,862 acres of pinyon-juniper woodland. The area contains eleven grazing allotments: North Coe, Devil's Canyon, Eagle Creek, South Coe, Hightower Mountain, Eagle Creek Complex, Payton, East Hale, Hale Lake Complex, Perry Canyon and Cavanaugh.

Management Direction All resources are managed at moderately low levels, with emphasis on preserving soil productivity. Present range and wildlife habitat improvements will be maintained. A large amount of fuelwood will be produced.

Timber Suitability Areas	
Total National Forest	60,125
Non-forest	6,922
Legislatively or administratively withdrawn	0
Physically unsuited	49,862
Tentatively suitable	3,341
Non-appropriate	1,883
Suitable (No entry first period)	1,458

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	4,018	acres
Partial Retention:	11,237	acres
Modification:	44,729	acres
Maximum Modification:	141	acres

A15 Manage for only SPM, RN and R ROS classes. Service will be at less than standard service level. Permit a maximum of 10 percent reduction in acres in SPM except that resulting from private land development.

Current ROS Classes:	
Semi-primitive non-motorized:	2,989 acres
Semi-primitive motorized:	48,817 acres
Roaded natural:	7,686 acres
Rural:	633 acres

A15 Manage caves to protect and preserve cave ecology and resources while providing opportunities for visitor use in a wildland cave situation through Interpretive Service (I.S.) activities and cave development. Caves will be managed according to the cave classification system. Caves will be made available for public use under a permit system. Caves having unique contents or constituting hazards to cavers will be gated.

Wildlife C06 Construct 5 miles of fence. Develop 1 water for wildlife, dispersed to accomplish objective of providing a maximum travel distance of one mile.

Range		Range condition (in acres) by end of period
		Unsatisfactory condition 4,414 Satisfactory condition 34,305 NAC 13,462 Non Allotment 7,944
	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by end of second Period.
	D02	Unsatisfactory range condition will be treated through improved allotment management including range improvements.
		Maintain level A management on those allotments now closed to grazing.
	D05	Develop and replace structural improvements needed to maintain Level C and D management.
		Fences (Mi.) 5.0 Pipelines (Mi.) 5.0 Drinkers (Ea.) 7
Timber	E06, E07	Manage woodland for production of 1,070 MBF of PJ fuelwood and non-convertible products.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for: VQO Retention (foreground) 3,303 acres
Protection	P04	Suppression Zone A is in that portion of the management area that lies west and south of a north-south section line between sections 4 & 5, 9 & 10, and 16 & 15 in T. 11 S., R. 14 E. to its intersection with Highway 70, then follows Highway 70 to Palo Verde Canyon, then follows Road 443 in Palo Verde Canyon to its intersection with Road 589.1, then along Road 589.1 to the center of section 34, then south to the Forest boundary. The suppression objective is 10 acres or less. That portion of the management area east and north of the above line is suppression Zone B. The suppression objective is 1,000 acres or less. (See Figure 1)

P08, P09	Use prescribed fire with planned and unplanned ignitions throughout the management are to accomplish resource management objectives.

MANAGEMENT AREA 2A LA LUZ

Description La Luz - Cloudcroft Ranger District
This analysis area is bounded on the north and west by the Forest boundary, on the east by the MAIR, and on the south by private land and a series of ridge tops. Elevations range from approximately 8,000 to 8,600 feet. There are 7,262 acres of tentatively suitable timber land, with 6,852 acres of mixed conifer and 410 acres of ponderosa pine. There are 15,959 acres of pinyon-juniper woodland. The area contains three grazing allotments: Nogal, Laborcita and South La Luz; and the La Luz Watershed.

Management Direction All resources are managed at low levels, with emphasis on preserving soil productivity.

Timber Suitability Areas	
Total National Forest	24,489
Non-forest	1,268
Legislatively or administratively withdrawn	0
Physically unsuited	15,959
Tentatively suitable	7,262
Non-appropriate	7,262

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	3,046 acres
Partial Retention:	14,089 acres
Modification:	3,363 acres
Maximum Modification:	3,991 acres

A15 Manage for only SPM, RN and R ROS classes. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	83 acres
Semi-primitive motorized:	9,261 acres
Roaded natural:	15,011 acres
Rural:	134 acres

Range Range condition (in acres) by end of period

Unsatisfactory	482
Satisfactory	3,468
NAC	3,826
Non Allotment	16,713

D02 Achieve level B management on all allotments.

Maintain level A management on La Luz watershed and Laborcita allotment.

Minerals	G02	Include a limited surface use stipulation for the following area: VQO Retention (Foreground) 1,108 acres
Lands	J04	Revoke the La Luz administrative site withdrawal.
Protection	P04	**Amendment 16: Zone C (entire MA)**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P08, P09	**Amendment 16: Deleted.**

MANAGEMENT AREA 2B ALAMO

Description Alamo - Cloudcroft Ranger District
This analysis area is bounded on the north by U.S. Highway 82 and private land, on the west by the Forest boundary, on the east by a line that divides the west-facing steep slopes with pinyon-juniper from the less steep, mixed conifer areas, and on the south by a timber compartment. Elevations range from approximately 4,300 to 8,900 feet. The area consists of 9,637 acres of tentatively suitable timber land with 36 acres of aspen, 6,866 acres of mixed conifer, and 2,733 acres of ponderosa pine. There are 37,949 acres of pinyon-juniper woodland. The area contains Dry Canyon and San Andres Grazing Allotments, and portions of the Sacramento and Escondido Allotments.

Management Direction The primary emphasis is on range management. Existing range improvements will be maintained and some additional fences, waters, water storage and distribution facilities, and a driveway will be constructed to distribute and control livestock. The woodland type will be managed to produce livestock forage and a small amount of fuelwood.

Timber Suitability Areas	
Total National Forest	51,166
Non-forest	3,580
Legislatively or administratively withdrawn	0
Physically unsuited	37,949
Tentatively suitable	9,635
Non-appropriate	9,635

Recreation

Activities	Standards and Guidelines
A01, L23	Evaluate the need for dispersed recreation developments (trails) to serve Alamogordo population. Dog Canyon Trail activities will be coordinated with the State of New Mexico Parks and Recreation Division.
A02	Protect Fresnal Shelter and nominate to the national Register of Historic Places.
A0	Manage to retain the following acres of Visual Quality Objectives: Retention: 15,535 acres Partial Retention: 29,290 acres Modification: 6,341 acres
A15	Manage for SP, SPM, RN and R ROS classes. Service will be at less than standard service level. Maintain present acres of SP ROS class acres.

		Current ROS Classes:	
		Semi-primitive non-motorized:	17,294 acres
		Semi-primitive motorized:	22,480 acres
		Roaded natural:	10,887 acres
		Rural:	505 acres
	L23	Maintain trails at level 3 including six miles of Dog Canyon Trail five times each period.	
	L23	Close Dog Canyon, Mule Canyon, and San Andreas Trails to motorized use.	
Wildlife	C06	Construct three miles of fence. Develop 3 waters for wildlife, located so as to contribute to objective of providing maximum travel distance of one mile.	
	C08	Protect and enhance T&E species habitat. Collect and plant seed. Protect riparian habitat.	
Range		Range Condition (in acres)	
		Unsatisfactory	5,078
		Satisfactory	17,163
		NAC	24,044
		Non Allotment	4,881
	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by end of second period.	
	D02	Unsatisfactory range condition will be treated through improved allotment management and range improvements.	
	D02	Maintain level A management on Alamogordo watershed.	
	D05	Develop and replace structural improvements needed for Level C and D management.	
		Fence (Mi.)	9.0
		Pipelines (Mi.)	1.25
		Stock Tank (Ea.)	4
		Water Lot (Ea.)	1
		Drinkers (Ea.)	4
		Stock Driveway (Ea.)	1
		Spring Dev. (Ea.)	1
Timber	E06, E07	Manage woodland for production of 200 MBF of PJ fuelwood and nonconvertible products.	
Soil and Water	F01	Provide for protection of water quality and quality in all project activities In Alamo municipal watershed.	

	F04	Process applications for water rights needed for Forest management.
Minerals	G02	Include limited surface use stipulations in oil and gas lease applications for: VQO Retention (foreground) 3,089 acres
	G09	Determine hazard potential of abandoned mines.
Lands	J01	Long Ridge is an approved and available electronic site.
	J01	Review the Indian Wells withdrawals.
Protection	P04	**Amendment 16: Zone C (entire MA)**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P08, P09	**Amendment 16: Deleted.**

MANAGEMENT AREA 2C GRAPEVINE

Description

Grapevine - Cloudcroft Ranger District

This analysis area is bounded on the north by a timber compartment boundary, on the east by private land and a line that divides the west-facing steep slopes with pinyon-juniper from the less steep, mixed conifer areas, and on the west and south by the Forest boundary. Elevations range from approximately 4,200 to 7,000 feet. There are 2,813 acres of mixed conifer timber land and 20,939 acres of pinyon-juniper woodland. The area contains portions of Escondido and Sacramento Grazing Allotments.

Management Direction

All resources are managed at low levels, with emphasis on preserving soil productivity.

Timber Suitability Areas	
Total National Forest	32,469
Non-forest	8,717
Legislatively or administratively withdrawn	0
Physically unsuited	20,939
Tentatively suitable	2,813
Non-appropriate	2,813

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	5,130 acres
Partial Retention:	6,785 acres
Modification:	19,563 acres
Maximum Modification:	991 acres

A15 Manage for SP and SPM ROS classes. Service will be at less than standard service level. Maintain present distribution of ROS class acres.

Current ROS Classes:	
Semi-primitive non-motorized:	18,585 acres
Semi-primitive motorized:	13,884 acres

L23 Close Escondida and Pasture Ridge Trails to motorized use.

Range

Range Condition by Period (in acres)

Unsatisfactory	1,870
Satisfactory	12,180
NAC	18,204
Non Allotment	215

D02 Achieve low (B) levels of management on all full capacity range.

Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**
	P08, P09	**Amendment 16: Delete.**

MANAGEMENT AREA 2D SACRAMENTO RIVER

Description

Sacramento River - Cloudcroft Ranger District
This analysis area is bounded on the north and west by the Sacramento / Salt Flat Watershed, on the east by the Cloudcroft-Mayhill Ranger District boundary, and on the south by private land. Elevations range from approximately 7,600 to 9,000 feet. It consists of 15,954 acres of tentatively suitable timber land with 30 acres of aspen, 14,936 acres of mixed conifer, and 988 acres of ponderosa pine. There are 218 acres of pinyon-juniper woodland. The area contains portions of Sacramento and Scott Able Grazing Allotments.

Management Direction

Primary emphasis is on management of wildlife habitat and timber management. Structural and nonstructural improvements include openings, vegetation management, prescribed burning, water developments and fences to benefit game animals. All T&E plant will be protected. Existing dispersed recreation facilities will be maintained and protected from deterioration. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	19,936
Non-forest	3,764
Legislatively or administratively withdrawn	0
Physically unsuited	218
Tentatively suitable	**15,951**
Non-appropriate	**7,655**
Suitable	**8,296**

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	10,562 acres
Partial Retention:	9,036 acres
Modification:	338

A14 Manage for only SPM and RN ROS classes. Service will be at standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	1,271 acres
Semi-primitive motorized:	11,071 acres
Roaded natural:	7,594 acres

A15 Manage dispersed sites along the Sacramento River to prevent degradation of riparian habitat in conjunction with other resources.

Wildlife

C03 — Develop non-structural habitat improvement projects to accomplish management goals and objectives by reducing limiting habitat factors.

Plant & Seed (Ac.)	100
Openings (Ac.)	100
Willow Planting (Ac.)	50

C03, D03 — Complete revegetation projects by mechanical and hand treatments. Treatment will only occur on areas of 0-15 percent slope, which have a soil productivity rating of moderate or higher.

C05 — Release four acres of T&E habitat.

C06 — Protect and enhance riparian areas to meet restoration goals in Regional Guide.

C06 — Construct the following wildlife habitat improvements:

Spring Dev. (Ea.)	7
Trick Tank (Ea.)	17
Brush Piles (Ac.)	75
Fence (Mi.)	10
Potholes (Ea.)	6
Dams (Ea.)	20
Spreader Ditches (Ea.)	15

C07 — Construct 20 structural fish habitat improvements.

Range

Range condition (in acres) by the end of the period.

Unsatisfactory	622
Satisfactory	944
NAC	18,337
Non Allotment	33

D02 — Achieve moderate (C) and high (D) levels of management on all full capacity range.

D02 — Achieve management level A on wetlands in Sacramento River drainage by first period.

D03 — Control gophers with chemical treatment for forage protection.

D03 — Treat 625 acres of mountain grassland using mechanical methods.

D05 — Develop and replace structural improvements needed for C and D management levels.

Fence (Mi.)	15.5
Stock Tank(s)	6

Timber	**TimberHarvest System table deleted.**	
Soil and Water	F01	Provide for protection of water quality for municipal water supplies.
	F04	Process applications for water rights needed for Forest management.
	F05	Maintain watershed structural improvements, primarily channel stabilization. Five projects.
Minerals	G02	Include limited surface use stipulation for oil and gas leases in the following areas:

Sacramento Solar Observatory	1,775 acres
VQO Retention (foreground)	2,611 acres
Scott Able 4-H Camp	20 acres

Lands	J01	**Provide for adequate visitor services at the Sacramento Peak Observatory area.**
	J01	Prepare master plan for Scott Able 4-H Camp.
	J01	Allow Athena site to be used as an electronic site.
	J04	Prepare withdrawals as requested for Sacramento Peak Observatory area.
	J04	Review withdrawal for the Sacramento Peak Side Camp in the first decade.
Facilities	L19	Maintain the Sacramento River Road at the existing standard or less. Review withdrawal for the Sacramento Peak Side Camp in first period.

Protection

P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
P08, P09	Use prescribed fire with planned ignition to accomplish resource management objectives.

MANAGEMENT AREA 2E UPPER PENASCO

Description Upper Penasco - Cloudcroft Ranger District
This analysis area is bounded on the north by private land, on the west by a ridge top, on the south by the Sacramento/Salt Flats Watershed and the Ranger District boundary, and on the east by the Ranger District boundary. Elevations range from approximately 7,600 to 9,500 feet. It consists of 36,284 acres of tentatively suitable timber land with 1,452 acres of aspen, 34,650 acres of mixed conifer, and 182 acres of ponderosa pine. There are 11 acres of pinyon-juniper woodland. The area contains portions of Sacramento and Scott Able Grazing Allotments, and the Alamo Watershed.

Management Direction Primary emphasis will be on developed and dispersed recreation, wildlife habitat management and timber management. All recreation facilities will be managed at full service levels, a winter sports facilities will be constructed and maintained. Land is allocated for a downhill ski area to be developed by the private sector. Structural and nonstructural improvements for wildlife habitat include openings, water developments and fences to benefit game and non-game animals. Habitat for a T&E plant will be improved and maintained. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	40,485
Non-forest	4,190
Legislatively or administratively withdrawn	0
Physically unsuited	11
Tentatively suitable	36,284
Non-appropriate	12,185
Suitable	24,**099**

Recreation

Activities	Standards and Guidelines
A02	Inventory existing railroad trestles to determine which ones should be left undisturbed.
A03	Manage to retain the following acres of Visual Quality Objectives: Retention: 7,970 acres Partial Retention: 32,515 acres
A05	Limit designated snowplay areas to non-hazardous locations.
A05	Construct a winter sports facility at Upper Karr (450 PAOT)
A05	Assist private sector in developing ski area in Rice or Russia Canyon (2000 PAOT).
A07	Prepare a Visitor Information Services sign plan.

	A08	Provide standard service level Visitor Information Services at developed recreation sites.
	A10	Install or construct VIS facilities not on VIS sites - signs and vistas.
	A14	Manage for SPM and RN ROS classes. Service will be at standard service level.

Current ROS Classes:

Semi-primitive motorized:	26,796 acres
Roaded natural:	13,689 acres

A14, J01 L23	Manage Bluff Springs for dispersed recreation while providing for T&E species management and maintenance of water quality.
A14	Manage for dispersed winter sports activities by providing parking areas and marked snowmobile and cross country ski routes.

Maintain cross-country ski and snowmobile routes at level 2 and 3 at the following rate:

4 miles RIM, five times
2 miles Willie White, three times
8 miles Telephone, five times

A14, L19	Maintain roads to Level 3 in areas of dispersed recreation at the following rate:

7 miles FR #164 (Bluff Springs), once.
6 miles FR #223 (Benson Ridge), once.
9 miles FR #169 (Hubell), once.
8 miles FR #257 (Hay Canyon), once.

	A16	Encourage and accommodate private development for recreation activities.
	A16	Provide for the administration of outfitter guide type permits for snowmobile, cross country skiing, horse rentals.
	L23	Maintain 18 miles of trails at level 3 two times each period.
Wildlife	C03	Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Plant & Seed	(Ac.)	300
Browse Release	(Ac.)	200
Willow Planting	(Ac.)	200

C05 Develop the following nonstructural T&E improvements:
Plant and seed (Ac.) 4
(Includes collection and planting of all T&E species.)

C06 Construct the following habitat improvements:

Spring Dev. (Ea.)	23
Trick Tank (Ea.)	17
Brush Piles (Ac.)	200
Fencing (Mi.)	13
Potholes (Ea.)	8
Dams (Ea.)	20
Spreader Ditches (Ea.)	30

C07 Construct 50 structural fish habitat improvements.

C08 Construct one mile of fence to protect and enhance T&E species habitat.

Range Range condition (in acres) by the end of the period.

Unsatisfactory	1,638
Satisfactory	2,654
NAC	35,507
Non allotment	686

D02 Achieve moderate (C) and high (D) levels of management on all full capacity range.

D02 Unsatisfactory condition range will be treated through improved allotment management along with both structural and non-structural range improvements.

D03 Control gophers with chemical treatment for forage protection.

D05 Develop and replace structural improvements needed for C and D management levels.

Fence recon. (Mi.)	30
Corrals (Ea.)	5
Drinkers (Ea.)	5
Earthern Stock Dam (Ea.)	6

Timber Harvest System table deleted.

Soil and Water	F04	Process applications for water rights needed for Forest management.
	F05	Plan and implement one watershed structural improvement project.
	F06	Maintain six watershed structural improvements, primarily channel stabilization, annually.
Minerals	G02	Include limited surface use stipulations in oil and gas lease applications for the following areas: VQO Retention (foreground) 4,068 acres Bluff Springs 40 acres
Lands	J01	Approved and available electronic sites are Benson Ridge and Alamo Peak.
	J04	Review the Alamo Peak withdrawals in Period 1.
	J15	Acquire, on an opportunity basis, the land identified in the Cloudcroft Recreation Acquisition Composite.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 2F MOUNTAIN PARK

Description Mountain Park - Cloudcroft Ranger District
This analysis area is bounded on the north by the MAIR and private land, on the west and east by private land and grazing allotment boundaries, and on the south by ridge tops and private land. Elevations range from approximately 7,000 to 9,300 feet. It consists of 11,695 acres of tentatively suitable timber land, with 401 acres of aspen 9,933 acres of mixed conifer and 1,361 acres of ponderosa pine. There are 358 acres of pinyon-juniper woodland. The area contains portions of the James Canyon and Sacramento Grazing Allotments, large blocks of private land, and a portions of the La Luz Watershed.

Management Direction Primary emphasis will be on developed and dispersed recreation, wildlife habitat management, and timber management. All recreation facilities will be managed at standard service levels. Structural wildlife habitat improvements include water developments and fences to benefit game and non-game animals. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases. A 610 acre portion has been incorporated into Management Area 2F-RNA and will be recommended for designation as the Haynes Canyon Research Natural Area.

Timber Suitability Areas	
Total National Forest	13,806
Non-forest	1,753
Legislatively or administratively withdrawn	0
Physically unsuited	358
Tentatively suitable	11,695
Non-appropriate	5,112
Suitable	6,583

Recreation

Activities	Standards and Guidelines
A02	Protect the Cloudcroft Trestle and manage to maintain its natural state.
A03	Manage to retain the following acres of Visual Quality Objectives:

Preservation:	610 acres
Retention:	9,083 acres
Partial Retention:	3,780 acres
Modification:	333 acres

A11	Manage developed sites at standard service level .
A14	Manage for RN, and R ROS classes. Service will be at standard service level.

Current ROS Class:	
Roaded natural:	13,806 acres

A14, L19 Maintain roads to level 3 and 4 in areas of recreation at the following rate:

3.5 miles FR #63 (Karr Canyon), two times.
2 miles FR #206 (Bailey Canyon), two times.

A14, L23 Maintain trails at level 3 and 4 at the following rate:

2 miles (RIM NRT), two times.
3 miles (other), once.

Wildlife C03 Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Plant & Seed (Ac.)	50
Browse Release (Ac.)	40
Burn Oak (Ac.)	100
Willow Planting(Ac.)	0
Browse Openings(Ac.)	100

C06 Construct the following to improve wildlife habitat:

Spring Dev. (Ea.)	2
Trick Tanks (Ea.)	14
Fences (Mi.)	4
Dams (Ea.)	4
Brush Piles (Ac.)	100

Range Range condition (in acres) at the end of the period

Unsatisfactory	127
Satisfactory	376
NAC	9,965
Non Allotment	3,338

D02 Achieve moderate (C) and high (D) levels of management on all full capacity range by end of Second Period.

D02 Maintain level A management on currently unobligated areas.

D05 Develop and replace structural improvements needed for Level C and D management.

Fence reconst. (Mi.)	9
Stock Tanks (Ea.)	2

Timber	**Harvest System table deleted.**	
Soil and Water	F01	Provide for protection of water quality for municipal water supplies.
	F04	Acquire water rights needed for Forest management.
	F05	Plan and implement one watershed structural improvement project.
	F06	Maintain six watershed structural improvements, primarily channel stabilization.
Minerals	G02	Include limited surface use stipulation in oil and gas leases for the following areas:

Karr Canyon Picnic Area	10 acres
VQO Retention (foreground)	3368 acres
Cloudcroft Trestle	10 acres
Cloudcroft Observatory	40 acres

	G02	Process withdrawal for Cloudcroft Observatory.
Lands	J04	Review withdrawals in the first decade for Karr Canyon.
	J15	Acquire, on an opportunity basis, the land identified in the Cloudcroft Recreation Acquisition Composite.
Protection	P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
	P08, P09	Use prescribed fire with planned ignitions to accomplish resource management objectives.

MANAGEMENT AREA 2F-RNA HAYNES CANYON RNA

Description Haynes Canyon RNA
This Management Area is located on the east side of analysis area 2F, and is bounded by it on the south, west, and north. **A line 200 feet from the centerline of** State Highway 64 forms its eastern boundary. This Management Area was established after analysis area boundaries were determined, and for convenience, the 610 acres originally contained in Management Area 2F are counted in that area.

Management Direction Primary emphasis is on providing conditions suitable for research on natural Ecosystems. A Research Natural Area (RNA) will be established for the protection and study of Abies concolor/Acer glabrum vegetation type.

Activities	Standards and Guidelines
J11	Complete RNA designation for the protection and study of the white fir vegetation type. The objectives will be to emphasize natural processes, protect natural features, and preserve examples of naturally occurring ecosystems in an unmodified condition for research and educational purposes. Research activities will be approved on a case by case basis. If the area is designated as an RNA, the following standards and guidelines will apply:
A03	Maintain the Visual Quality Level at the preservation level.
A15	Rim Trail is open to single-track motor vehicles. Allow nonmotorized dispersed recreation activities on the rest of the area provided they do not modify the area or threaten or impair the research or educational value of the study areas.
A15	Require recreation users to pack out all their trash.
A15	Prohibit recreation signs or marking within the area.
C03	Allow vegetation manipulation only when needed to preserve the vegetation for which the area is being established.
D02	Prohibit livestock grazing.
E00	Prohibit all timber management activities.
E00	Prohibit all firewood activities within the study areas.
J01	Issue no special use permits within areas which would affect potential RNA status.
J04	Process mineral withdrawal recommendation.
J06, J07	Post boundaries and fence where necessary.

L04, L08 A03	Allow no new road construction.
L22	Allow no new trail construction.
P04, P08 P09	Suppress all fires at 10 acres or less unless research purposes require other suppression objectives. Limit suppression action to the use of hand tools and prohibit fire retardant chemicals unless necessary to protect life and property outside the study areas.
P35	Allow insect and disease management suppression activities only when necessary to protect resource values outside the area. If suppression measures are necessary, the most target-specific means of accomplishing management objectives will be selected.

MANAGEMENT AREA 2G SILVER SPRING

Description Silver Springs - Cloudcroft Ranger District
This analysis area is bounded on the north by the Mescaler Apache Indian Reservation, on the east by the Ranger District boundary, on the south by the Upper Rio Penasco Waterhsed, and on the west by private land. Elevations range from approximately 7,800 to 9,200 feet. There are 7,987 acres of tentatively suitable timber land, with 41 acres of aspen, 7,800 acres of mixed conifer and 146 acres of ponderosa pine. The area contains portions of the Summer Pasture and James Canyon Grazing Allotments.

Management Direction Primary emphasis is on management of wildlife habitat and timber. Structural and nonstructural improvements to be constructed and maintained for wildlife include openings, vegetation management, prescribed burning, water develepments and fences to benefit game and non-game animals. Habitat for a T&E plant will be improved and maintained. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	8,771
Non-forest	784
Legislatively or administratively withdrawn	0
Physically unsuited	0
Tentatively suitable	7,987
Non-appropriate	2,083
Suitable	5,904

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives: Retention: 2,538 acres Partial Retention: 4,672 acres Modification: 1,561 acres
A05	Limit designated snowplay areas to non-hazardous locations.
A15	Manage for SPM, RN and R ROS classes. Service will be at less than standard service level. Current ROS Classes: Semi-primitive motorized: 2,963 acres Roaded natural: 5,772 acres Rural: 36 acres
A16	Provide for the administration of outfitter guide permits for horses and snowmobiles.
A14, L23	Maintain three miles of trails twice at level 2.

Wildlife C03 Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Burn Oak (Ac.)	100
Browse Openings (Ac.)	50
Willow Planting (Ac.)	100
Seed & Plant (Ac.)	200

C05 Seed and plant four acres of Cirsium vinaceum.

C06 Construct the following to improve wildlife habitat:

Spring Dev. (Ea.)	2
Trick Tanks (Ea.)	4
Brush Piles (Ac.)	10
Fence (Mi.)	6
Potholes (Ea.)	5
Dams (Ea.)	8
Spreader Ditches (Ea.)	10

C08 Build 0.5 miles of fence to protect and enhance Argemone pleiacantha habitat.

Range Range condition (in acres)

Unsatisfactory	251
Satisfactory	382
NAC	7,979
Non Allotment	159

D02 Achieve moderate (C) and high (D) levels of management on all full capacity range by end of second decade.

D05 Develop and replace structural improvements needed for Level C and D management.

Fence reconst. (Mi.)	10
Stock Tanks (Ea.)	5

Timber **Timber Harvest System table deleted**.

Timber	**Timber Harvest System table deleted (Cont'd)**	
Soil and Water	F04	Acquire water rights needed for Forest management.
	F06	Maintain two watershed structural improvements per year, primarily channel stabilization.
Minerals	G02	Include limited surface use stipulation in oil and gas leases for the following areas: VQO Retention (foreground) 1,191 acres.
Lands	J01	Approved and available electronic site is Wofford.
	J04	Review withdrawals in the first decade for the Wofford area.
	J15	Acquire, on an opportunity basis, the land identified in the Cloudcroft Recreation Acquisition Composite.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 2H UPPER JAMES

Description Upper James – Cloudcroft Ranger District
This analysis area is bounded on the north by the Upper Penasco Watershed boundary, on the east by the Ranger District boundary, on the south by private land and Ranger District boundary, and on the west by private land. Elevations range from approximately 7,200 to 9,000 feet. There are 17,454 acres of tentatively suitable timber land with 228 acres of aspen, 16,500 acres of mixed conifer and 728 acres of ponderosa pine. The area contains three grazing allotments: Pumphouse, Hyatt and Russia Canyon and large blocks of private land.

Management Direction Primary emphasis is on developed and dispersed recreation, wildlife habitat and timber. All recreation facilities will be managed at standard service levels. A snowplay area and an amphitheater will be constructed, and Ski Cloudcroft will be allowed to expand. Structural and nonstructural wildlife habitat improvements include openings, vegetation management, prescribed burning, water developments and fences to benefit game and non-game animals. A T&E plant will be protected. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	18,446
Non-forest	992
Legislatively or administratively withdrawn	0
Physically unsuited	0
Tentatively suitable	17,454
Non-appropriate	5,588
Suitable	11,866

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives: Retention: 9,550 acres Partial Retention: 8,679 acres Modification: 217 acres
A05	Construct Silver Amphitheater (150 PAOT) and Silver Snowplay Area (100 PAOT).
A05	Limit designated snowplay areas to non-hazardous locations.
A08	Provide Visitor Information Service at standard service level.
A10	Construct VIS facilities not on VIS sites.
A11	Manage developed recreation sites at standard service levels.

	A14, A16	Manage for SPM, RN, and R ROS classes. Service will be at standard service level.

Current ROS Classes:	
Semi-primitive motorized:	7,960 acres
Roaded natural:	9,294 acres
Rural:	1,192 acres

	A14, J01 L23	Manage for winter sports activities by providing parking areas and marked snowmobile and cross-country ski routes.
	A16	Encourage and accommodate private development for recreation activities.
	A16	Provide for expansion of the Cloudcroft Ski area according to approved master plan and environmental analysis. Management will be coordinated with base facilities located on Village of Cloudcroft land.
	A14,L23	Maintain 0.3 miles of trails to level 5 annually.
	L23	Close La Pasada Encantada to motorized use.
Wildlife	C03	Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Plant & Seed (AC.)	200
Burn Oak (Ac.)	100
Browse Openings (Ac.)	50
Willow Plantings (Ac.)	50

	C06	Construct the following to improve wildlife habitat:

Spring Dev. (Ac.)	8
Trick Tanks (Ea.)	32
Brush Piles (Ea.)	200
Fencing (Mi.)	3
Dams (Ea.)	4
Spreader Ditches (Ea.)	4

	C08	Build two miles of fence to protect and enhance T&E species habitat.
Range		Range condition (in acres) by the end of the period.

Unsatisfactory	649
Satisfactory	639
NAC	13,212
Non Allotment	4,166

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range.
	D05	Develope and replace structural improvements as needed for (C) and (D) level management.

Fence reconst.	(Mi.)	11
Earthern Stock Tank	(Ea.)	1

Timber **Timber Harvest System table deleted**.

Soil and Water	F01	Provide for protection of water quality for municipal water supplies.
	F04	Acquire water rights needed for forest management.
	F05	Plan and implement watershed structural improvements project.
	F05	Maintain watershed structural improvements, primarily channel stabilization.
Minerals	G02	Include limited surface use stipulation in oil and gas leasing for the following areas:

Cloudcroft Ski Area	120 acres
Cloudcroft Administrative Site	20 acres
Silver Campground	100 acres
Saddle Campground	100 acres
Apache Campground	100 acres
Silver Snowplay/Overflow C.G.	20 acres
Pines Campground	60 acres
Deerhead Campground	80 acres
Fir Campground	40 acres
Slide Campground	20 acres
Sleepy Grass Campground	160 acres

		Dale Reslar Boy Scout Camp	80 acres
		VQO Retention (foreground)	3,777 acres
		Cloudcroft Observatory	40 acres
Lands	J01	Special use management, Dale Reslar Boy Scout Camp Master Plan preparation.	
	J04	Evaluate and, if needed, prepare withdrawal for Cloudcroft Observatory and Slide Campground.	
	J04	Review withdrawals for the following areas in the first period: State Highway 83 (US #82), Sacramento Peak Road, **C**ox Canyon Road (S.H. #24), Ski Cloudcroft, Cloudcroft Administrative Site, Vista Point, Deerhead Campground, Sleepy Grass Campground.	
	J04	Revoke withdrawals for Cloudcroft and Cox Canyon by the end of the first period.	
	J15	Acquire, on an opportunity basis, the land identified in the Cloudcroft Recreation Acquisition Composite.	
Protection	P04	Zone A. Suppression objective 10 acres or less (See Figure 2).	
	P08, P09	Use prescribed fire with planned ignitions to accomplish resource management objectives.	

MANAGEMENT AREA 3A SOUTH GUADALUPE

Description South Guadalupe (Guadalupe Escarpment Wilderness Study Area) - Guadalupe Ranger District This analysis area is bounded on the north by Guadalupe Ridge, and on the east, south and west by the Forest boundary. Elevations range from approximately 4,800 to 7,400 feet. Over 72 percent of the area has slopes greater than 40 percent including escarpments with vertical cliffs. There are 9,206 acres of pinyon-juniper woodland, with some areas of desert shrub. There is no suitable timber land. Isolated riparian areas are located in North McKittrick Canyon and Black River Canyon. The area contains Black River Grazing Allotment and portions of Soldier Springs, Dark Canyon and McCollaum grazing allotments.

Management Primary emphasis is on cave management and dispersed recreation activities compatible with management of the cave resource. Some caves will be protected by gating and a permit system. An 827-acre portion, identified as Management Area 3A-RNA, will be recommended for designation as the Upper McKittrick Research Natural Area, but the acres contained in the research natural area will continue to be included in Management Area 3A. Wilderness values will be preserved until Congress designates the area wilderness or nonwilderness. If so designated by Congress, this area will be managed as wilderness.

Timber Suitability Areas	
Total National Forest	21,251
Non-forest	12,045
Legislatively or administratively withdrawn	0
Physically unsuited	9,206
Tentatively suitable	0
Non-appropriate	0

Recreation

Activities	Standards and Guidelines
A01	Manage area to recognize its unique geologic and cave resource.
A02	Protect cultural resource values associated with cave management.
A03	Manage to retain the following acres of Visual Quality Objectives:

Preservation:	827 acres
Retention:	208 acres
Partial Retention:	20,216 acres

A14 Manage for SP, SPM and RN ROS classes. Service will be at standard service level.

Current ROS Classes:

Semi-primitive non-motorized:	16,153 acres
Semi-primitive motorized:	4,609 acres
Roaded natural:	489 acres

	A14	Encourage public use and enjoyment while managing caves to protect and preserve cave ecology and resources. Provide interpretive services to enhance understanding and appreciation of the area's special features.
	A14	Caves will be managed in a wild state according to the cave classification system, and permits will be required for those available for public use. Caves will be gated according to their unique content and hazard to cavers.
	A14	Close and obliterate five miles of travelways to protect visual resources and caves. Designate nine miles of trails and travelways as roads and maintain in condition suitable for travel by high-clearance vehicles.
	A19	Cooperate with public and private organizations conducting cave research. Approve research projects on a case by case basis.
	B01	Prepare a legislative environmental impact statement recommending nonwilderness designation for the area.
	B01, B02 J22	Prepare a plan for wilderness management if it is so designated by Congress and manage at full service level.
	L22	Construct three miles of trails on Camp Wilderness Ridge.
	L23	Maintain 15 miles of trails at level 1.
Wildlife	C01	Conduct T&E plant species survey on 6,000 acres.
	C06	Construct the following to improve wildlife habitat: Water Dev. (Ea.) 5 Enclosures (Ea.) 1 Access/Escapes(Ea.) 5
	C06	Locate improvements so they have no adverse impacts on caves or cave management.
Range		Range Condition (in acres) by the end of the period. Unsatisfactory 289 Satisfactory 7,385 NAC 13,577 Non Allotment ---
	D02	Achieve moderate (C) level management on all full capacity range.
Soil and Water	F04	Process applications for water rights needed for management.

Minerals	G01, J04	Notify the House Committee on Interior and Insular Affairs and Senate Committee on Energy and Natural Resources of intent to withdraw the area from application of mining laws.
	G02	Recommend against oil and gas leasing pending withdrawal.
Lands	J04	Process recommendation for mineral withdrawal of entire area.
Planning	J22	If designated nonwilderness, transfer approximately 540 acres to Management Area 3C. The acres to be transferred are those in the SE 1/4 Sec. 10, NW 1/4 Sec. 11, W 1/2 Sec. 15, and Sec. 16, T. 26 S., R. 21 E., located south and east of the northern boundary.
	J22	If designated nonwilderness, transfer approximately 40 acres from Management Area 3C to Management Area 3A. The acres to be transferred are those in the NW 1/4 Sec. 11 and the NE 1/4 Sec 15., T. 26 S., R. 21 E., located south and east of the northern boundary.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate (except in North McKittrick RNA), to accomplish resource management objectives.**

MANAGEMENT AREA 3A-RNA UPPER MCKITTRICK RNA

Description This management area is located on a ridge between North McKittrick and Upper Dog canyons, about one mile north of the Texas border. It is bounded on all sides by Management Area 3A. It consists of 827 acres of the mountain mahogony vegetation type. Elevations range from 6600 to 7200 feet. This management area was established after analysis area boundaries were determined and for convenience, the 827 acres originally contained in Management Area 3A are counted in that area.

Management Direction The area will be recommended for designation as the Upper McKittrick Research Natural Area. If it is so designated, primary emphasis will be on providing conditions suitable for research on natural ecosystems. If it is not designated an RNA, it will revert to Management Area 3A.

Activities	Standards and Guidelines
J11	Complete RNA designation for the protection and study of the mountain mahogany vegetation type. The objectives will be to emphasize natural processes, protect natural features, and preserve examples of naturally occurring ecosystems in an unmodified condition for research and educational purposes. Research activities will be approved on a case by case basis. If the area is designated as an RNA, the following standards and guidelines will apply:
A03	Maintain Visual Quality Objective of preservation.
A15	Allow nonmotorized dispersed recreation activities provided they do not modify the area or threaten or impair the research or educational value of the study areas.
A15	Require recreation users to pack out all their trash.
A15	Prohibit recreation signs or marking within the area.
C03	Allow vegetation manipulation only when needed to preserve the vegetation for which the area is being established.
D02	Prohibit livestock grazing.
E00	Prohibit all timber management activities.
E00	Prohibit all firewood activities.
J01	Issue no special use permits which would modify the area or threaten or impair its research or educational value.
J04	Process mineral withdrawal recommendation.

J06, J07	Post boundaries and fence where necessary.
L04, L08 A03	Allow no road construction.
L22	Allow no new trail construction.
P04, P08 P09	Suppress all fires at 10 acres or less unless research purposes require other suppression objectives.
	Limit suppression action to the use of hand tools and prohibit fire retardant chemicals unless necessary to protect life and property outside the study areas.
P35	Allow insect and disease management suppression activities only when necessary to protect natural resource area valuels.

MANAGEMENT AREA 3B WEST GUADALUPE

Description West Guadalupe - Guadalupe Ranger District
This analysis area is bounded on the north, west and south by the Forest boundary, and on the east by a natural escarpment. The western escarpment is composed of rugged steep slopes. Elevations range from approximately 5,800 to 6,300 feet. There are 481 acres of pinyon-juniper woodland and some desert shrub, but no acres of suitable timber land. The area contains Rim and Woods Grazing Allotments, portions of Irabarne and Soldier Springs Allotments, and a wildlife/watershed area.

Management Direction Emphasis is on management of wildlife habitat. Structural improvements include water developments and fences to benefit game animals. Other resources are managed at low levels, with emphasis on preserving soil productivity.

Timber Suitability Areas	
Total National Forest	28,726
Non-forest	28,245
Legislatively or administratively withdrawn	0
Physically unsuited	481
Tentatively suitable	0
Non-appropriate	0

	Activities	Standards and Guidelines
Recreation	A01	Manage to retain the following acres of Visual Quality Objectives:

Retention:	1,481 acres
Partial Retention:	22,132 acres
Maximum Modification:	5,113 acres

A15 Manage for SP, SPM and RN ROS classes. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	21,386 acres
Semi-primitive motorized:	6,134 acres
Roaded natural:	1,206 acres

Wildlife C06 Construct two water developments to improve wildlife habitat:

Range Range condition (in acres) by the end of the period.

Unsatisfactory	---
Satisfactory	9,755
NAC	13,675
Non Allotment	5,296

D02 Achieve moderate (C) level management on all full capacity range.

Soil and Water F04 Acquire water rights needed for management.

Minerals	G02	Provide for a limited surface use stipulation in oil and gas leases for: VQO Retention (foreground) 110 acres
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 3C DARK CANYON

Description

Dark Canyon - Guadalupe Ranger District

This analysis area is bounded on the north by steep drainages, ridge tops and Forest Road 540, on the west by grazing allotments, on the east by the Forest boundary and on the south by Guadalupe Ridge. Elevations range from approximately 6,000 to 6,800 feet; 67 percent of the area has slopes greater than 40 percent. There are 18,662 acres of pinyon-juniper woodland and some desert shrub, but no acres of suitable timber land. Dark canyon is an important riparian area. The area contains portions of five grazing allotments: Sitting Bull, McCollaum, Dark Canyon, Board Tree/Last Chance, and Soldier Springs.

Management Direction

Primary emphasis is on dispersed recreation, range, wildlife habitat management, and fuelwood. Approximately 5,300 acres are managed to preserve a world-famous cave resource. Dispersed recreation activities are compatible with management of the cave resource. Caves will be protected by gating and a permit system. Some structural improvements will be constructed and maintained for wildlife and range purposes. A small amount of fuelwood will be produced.

Timber Suitability Areas	
Total National Forest	26,647
Non-forest	7,985
Legislatively or administratively withdrawn	0
Physically unsuited	18,662
Tentatively suitable	0
Non-appropriate	0

Recreation

A02 Protect cultural resource values associated with cave management.

A03 Manage to retain the following acres of Visual Quality Objectives:

Retention:	2,034 acres
Partial Retention:	9,718 acres
Modification:	14,287 acres
Maximum Modification:	608 acres

A14 Encourage public use and enjoyment while protecting and preserving caves. Provide interpretive services to enhance understanding and appreciation of the area's special features.

A14 Caves will be managed according to the cave classification system, and permits will be required for those available to public use. Caves will be gated according to their unique content and hazard to cavers.

	A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level except in areas having known caves, where it will be standard service level.

Current ROS Classes:	
Semi-primitive non-motorized:	1,674 acres
Semi-p rimitive motorized:	21,979 acres
Roaded natural:	2,994 acres

	A19	Cooperate with public and private organizations conducting cave research. Research activities will be approved on a case by case basis.
Wildlife	C01	Conduct survey for T&E plant species on 2,500 acres.
	C03	Conduct prescribed burns on 2,500 acres to improve wildlife habitat.
	C06	Construct the following to improve wildlife habitat:

Water Dev. (Ea.)	3
Enclosures (Ea.)	1
Fence removal/reconst. (Mi.)	4
Access/Escape (Ea.)	10

	C06, D06	Locate improvements so they have no adverse impacts on caves or cave management.
Range		Range Condition (in acres) by the end of the period.

Satisfactory	408
Unsatisfactory	17,288
NAC	8,951
Non Allotment	---

	D02	Achieve moderate (C) level of management on all full capacity range.
	D05	Develop and replace structural improvements for level C management.

Fence (Mi.)	9
Trick Tank (Ea.)	2
Storage Tank (Ea.)	2
Troughs (Ea.)	2
Pipelines (Mi.)	5.5

Timber	E06, E07	Manage woodlands for the production of 275 MBF of PJ fuelwood and non-convertible products.
Soil and Water	F04	Acquire water rights needed for management.

Minerals	G01, J04	Notify the House Committee on Interior and Insular Affairs and Senate Committee on Energy and Natural Resources of intent to withdraw 5,300 acres from application of mining laws.
	G02, J04	Recommend against oil and gas leasing on 5,300 acres until withdrawn.
	G02	Provide for the use of the Cave Protection Stipulation (Appendix F) in all oil and gas leases.
	G02	Provide for a limited surface use stipulation for all VQO Retention (foreground).
Lands	J01	Dark Canyon is an approved and available electronic site.
	J04	Process recommendation for mineral withdrawal of 5,300 acres as follows: All lands in the S 1/2 Sec. 13; the S 1/2 Sec. 14; the SE 1/4 and W 1/2 Sec. 15; the E 1/2 and SW 1/4 Sec. 16; the SE 1/4 SW 1/4 and the SE 1/4 Sec. 20; all of Secs. 21, 22, 23, 27, and 28; all but the NW 1/4 NW 1/4 Sec. 29; the E 1/2 SE 1/4 Sec. 30; the E 1/2 Sec. 31; the NE 1/4, SE 1/4, and SW 1/4 the SW 1/4 Sec. 31; and Secs. 32 and 33; T. 25 S., R. 22 E., NMPM. All lands in the S 1/2 S 1/2 Sec. 36, T. 25 S., R. 21 E., NMPM. All lands in Sec. 1; the NE 1/4, SE 1/4 and SW 1/4 NE 1/4, and SE 1/4 Sec. 2; the NE 1/4 and SW 1/4 Sec. 11; the NE 1/4 and SW 1/4 NE 1/4 Sec. 15; T. 26 S., R. 21 E., NMPM.
Planning	J22	If Management Area 3A is designated nonwilderness, transfer approximately 540 acres of it to Management Area 3C. The acres to be transferred are those in the SE 1/4 Sec. 10, NW 1/4 Sec. 11, W 1/2 Sec. 15, and Sec. 16, all in T. 26 S., R. 21 E., located south and east of the present northern boundary of 3A.
	J22	If Management Area 3A is designated nonwilderness, transfer approximately 40 acres of Management Area 3C to Management Area 3A. The acres to be transferred are those in the NW 1/4 Sec. 11 and the NE 1/4 Sec 15., T. 26 S., R. 21 E., located south and east of the present northern boundary of 3A.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 3D CENTRAL GUADALUPE

Description Central Guadalupe - Guadalupe Ranger District
This analysis area is bounded on the north by contours of steep drainages, on the east by the Forest boundary and contours of steep drainages, on the south by steep drainages, ridge tops and Forest Road 540, and on the west by a natural escarpment boundary. Elevations range from approximately 5,800 to 6,400 feet; 98 percent of the area has slopes of less than 40 percent. There are 55,140 acres of pinyon-juniper woodland and some grama/galleta grassland, but no acres of suitable timber land. The area contains portions of seven grazing allotments: National, Montgomery, Irabarne, Soldier Springs, Dark Canyon, Board Tree/Last Chance and Sitting Bull.

Management Direction Primary emphasis is on dispersed recreation, range management, and fuelwood production. All recreation facilities will be managed at standard service levels. Existing structures will be maintained and fences, waters, water storages and pipelines will be constructed to distribute and control livestock. Vegetation management will be used to improve range condition. A large amount of fuelwood will be produced.

Timber Suitability Areas	
Total National Forest	70,516
Non-forest	15,376
Legislatively or administratively withdrawn	0
Physically unsuited	55,140
Tentatively suitable	0
Non-appropriate	0

Recreation

Activities	Standards and Guidelines
A02	Protect the Queen Site until a cultural resources evaluation is conducted.
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	149 acres
Partial Retention:	23,354 acres
Modification:	1,828 acres
Maximum Modification:	45,185 acres

A14 Manage for only SPM and RN ROS classes. Service will be at standard service level. Allow a maximum of 10 percent change from current ROS acres.

Current ROS Classes:	
Semi-primitive non-motorized:	187 acres
Semi-primitive motorized:	56,529 acres
Roaded natural:	13,800 acres

	A11	Manage caves to protect and preserve cave ecology and resources while providing opportunities for visitor use in a wildland cave situation through I.S. activities and cave development. Caves will be managed according to the cave classification system. Caves will be made available for public use under a permit system. The caves will be gated according to their unique content and hazard to cavers.
Wildlife	C03	Conduct prescribed burns on 3,000 acres to improve wildlife habitat.
	C06	Construct the following to improve wildlife habitat:

Water Dev. (Ea.)	3
Enclosures (Ea.)	1
Fence removal/reconst. (Mi.)	2
Access/Escape (Ea.)	10

Range Range Condition (in acres) by the end of the period:

Unsatisfactory	899
Satisfactory	65,885
NAC	3,732
Non-Allotment	---

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range.
	D03	Treat 1800 acres of desert shrub using prescribed fire and herbicide. Treatment will only occur on areas of 0-15 percent slope, which have a soil productivity rating of moderate or higher.
	D05	Develop and replace structural improvements needed for C and D management levels.

Trick Tank (Ea.)	2
Storage Tank (Ea.)	7
Troughs (Ea.)	8
Wells (Ea.)	1
Pipelines (Mi.)	16
Fence (Mi.)	3

Timber	E06, E07	Manage woodlands for the production of 1950 MBF of PJ fuelwood and nonconvertible products.
Minerals	G02	Provide for special stipulations (see Appendix F) in all oil and gas leases to protect cave resources.

	G02	Provide for limited surface use stipulation in oil and gas leases in the following areas: VQO Retention (foreground) 51 acres Guadalupe Administrative Site 80 acres
Soil and Water	F04	Process applications for water rights needed for management.
Lands	J01	Approved and available electronic site is Picket Hill.
	J04	Review the Guadalupe and Queens withdrawals in first decade. Guadalupe Queens
Protection	P04	**Amendment 16: Zone C**
	P08, P09	Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.

MANAGEMENT AREA 3E EAST GUADALUPE

Description East Guadalupe - Guadalupe Ranger District
This analysis area is divided into two areas; the largest is bounded on the north and east by the Forest boundary, and on the west and south by the contours of steep drainages. The smaller area is bounded on the north and east by the Forest boundary, and on the west and south by contours of steep drainages. Elevations range from approximately 5,200 to 6,300 feet; 78 percent of the area has slopes of less than 40 percent. There are 9,238 acres of pinyon-juniper woodland and some desert shrub grassland, but no suitable timber land. The area contains Acrey Grazing Allotment and portions of seven others: Sitting Bull, Montgomery, National, Panama, Hardin, Sargent Seep and Prude Allotments.

Management Direction Primary emphasis is on developed recreation. Sitting Bull Falls picnic ground will be managed at standard service levels. Some structural improvements will be constructed and maintained for wildlife and range purposes. Habitat for a T&E plant will be protected by fencing.

Timber Suitability Areas	
Total National Forest	47,042
Non-forest	37,804
Legislatively or administratively withdrawn	0
Physically unsuited	9,238
Tentatively suitable	0
Non-appropriate	0

Recreation

Activities	Standard and Guidelines
A02	Protect cultural resources values associated with cave management.
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	2,171 acres
Partial Retention:	9,268 acres
Modification:	67 acres
Maximum Modification:	35,536 acres

A11	Manage the Sitting Bull Falls developed recreation site at standard service level.
A14	Manage caves to protect and preserve cave ecology and resources while providing opportunities for visitor use in a wildland cave situation through I.S. activities and cave development. Caves will be managed according to the cave classification system. Caves will be made available for public use under a permit system. The caves will be gated according to their unique content and hazard to cavers.

	A15	Manage for SP, SPM and RN ROS classes. Service will be at less than standard service level. Maintain present acres in each ROS class.

Current ROS Classes:	
Semi-primitive non-motorized:	4,569 acres
Semi-primitive motorized:	40,250 acres
Roaded natural:	2,223 acres

	L23	Maintain two miles of trails at level 3.
Wildlife	C01	Conduct survey on 2,500 acres for T&E plant species.
	C03	Prescribe burn 5,000 acres to improve wildlife habitat.
	C06	Construct the following to improve wildlife habitat:

Water Dev. (Ea.)	1
Enclosures (Ea.)	1
Fence (Mi.)	1
Access/Escape	5

	C08	Construct one mile of fence to protect and enhance T&E species habitat.
Range		Range Condition (in acres) by the end of the period:

Unsatisfactory	---
Satisfactory	34,802
NAC	12,143
Non Allotment	97

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by end of the first decade.
	D03	Treat 1200 acres of PJ by fire and chemical treatments. Treatment will only occur on areas of 0-15 percent slope, which have a soil productivity rating of moderate or higher.
	D05	Develop and replace structural improvements needed for Level C and D management.

Fence (Mi.)	2.5
Spring Dev. (Ea.)	2
Trick Tank (Ea.)	3
Storage Tank (Ea.)	5
Troughs (Ea.)	6
Pipelines (Mi.)	5.25

Soil and Water	F04	Process applications for water rights needed for management.

Minerals	G02	Provide for special stipulations (see Appendix F) in all oil and gas leases to protect cave resources.
	G02	Include limited surface use stipulations in oil and gas leases for the following areas: Sitting Bull Falls 80 acres VQO Retention (foreground) 1,118 acres
Lands	J04	Review withdrawal in the first period for Sitting Bull Falls.
	J11	Evaluate Last Chance Canyon for designation as a special botanic area.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 3F NORTH GUADALUPE

Description North Guadalupe - Guadalupe Ranger District
This analysis area is bounded on the north by the Forest boundary, on the east and south by contours of steep drainages, and on the west by a natural escarpment. Elevations range from 5,500 to 6,400 feet; 99 percent of the area has slopes of less than 40 percent. There are 66,101 acres of pinyon-juniper woodland and some grama/galleta grassland, but no acres of suitable timber land. The area contains the Bear Springs Grazing Allotment, and portions of six others: Bullis Springs, Prude, Sargent Seep, Hardin, Panama and National Allotments.

Management Direction Primary emphasis is on grazing and production of fuelwood. A large amount of fuelwood will be produced. Some structural improvements will be constructed and maintained for wildlife and range purposes.

Timber Suitability Areas	
Total National Forest	89,121
Non-forest	23,020
Legislatively or administratively withdrawn	0
Physically unsuited	66,101
Tentatively suitable	0
Non-appropriate	0

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Partial Retention:	1,042 acres
Maximum Modification:	88,079 acres

A15	Manage for SPM ROS class. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive motorized:	89,121 acres

Wildlife C06 Construct the following to improve wildlife habitat:

Water Dev. (Ea.)	1
Access/Escape (Ea.)	5

Range Range Condition (in acres) by the end of the period:

Unsatisfactory	1,181
Satisfactory	86,691
NAC	987
Non Allotment	262

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range.
	D02	Unsatisfactory range condition will be treated through improved allotment management including structural and non-structural improvements.
	D05	Develop or replace 8.3 miles of pipelines needed for Level C and D management.
Timber	E06, E07	Manage woodlands for the production of 4,820 MBF of PJ fuelwood and nonconvertible products.
Soil and Water	F04	Process applications for water rights needed for management.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 4I JAMES/PENASCO

Description James/Penasco - Mayhill Ranger District
This analysis area is bounded on the north by the Upper Rio Penasco Watershed, on the east by private land, on the south by the Upper Rio Penasco Watershed, and on the west by the Ranger District boundary. Elevations range from approximately 6,500 to 8,600 feet. The area consists of 15,618 acres of tentatively suitable timber land, with 11,542 acres of mixed conifer and 4,076 acres of ponderosa pine. There are 6,170 acres of pinyon-juniper woodland. The area contains three grazing allotments: Curtis, Bounds and Davis; and portions of seven others: Lewis/McGee, Hunter, Smith, Miller Flats, Scott, Denny Hill and Bear Creek Allotments.

Management Direction Primary emphasis is on management of wildlife habitat and timber. Waters will be developed, fences built and roads closed to benefit game species. Areas will be fenced and a sensitive plant species planted. James Canyon Campground will be managed at less than standard service level. Existing range improvements will be maintained and new water storages constructed. Timber will be intensively managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	24,753
Non-forest	2,965
Legislatively or administratively withdrawn	0
Physically unsuited	6,170
Tentatively suitable	15,618
Non-appropriate	5,598
Suitable	10,020

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:
	Retention: 6,245 acres
	Partial Retention: 11,843 acres
	Modification: 6,665 acres
A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level.
	Current ROS Classes:
	Semi-primitive motorized: 9,227 acres
	Roaded natural: 15,526 acres
All	Manage James Canyon Campground at less than standard service level.

Wildlife	C06	Develop waters needed to provide a maximum travel distance of one mile.

Fence (Mi.)	.25
Road Closure (Mi.)	15.0
Trick tank (Ea)	1

	C09	Wildlife habitat maintenance.

Springs (Ea.)	4
Fence exclosures (Mi.)	1

Range		Range condition (in acres) by the end of the period.

Unsatisfactory	1,707
Satisfactory	6,868
NAC	14,883
Non Allotment	1,295

	D02	Achieve moderate (C) level management on one allotment, low (B) on remaining full capacity range by end of period.
	D02	Unsatisfactory range condition will be treated through improved allotment management.
	D02	Manage the Denny Hill and Scott allotments at (A) level management.
	D05	Develop and replace structural improvements needed for (C) and (D) level management.

Fence (Mi.)	3
Storage Tanks (Ea.)	2
Pipelines (Mi.)	4
Spring (Ea.)	1

Timber	**Timber Harvest System table deleted**.

Timber	**Timber Harvest System table deleted (Cont'd)**	
	E08	Collect 100 bushels of cones.
Soil and Water	F04	Process 15 applications for water rights needed for management.
Minerals	G02	Include limited surface use stipulation in oil and gas leases for the following areas:

James Canyon C.G.	20 acres
Mayhill Administrative Site	40 acres
VQO Retention (foreground)	3,215 acres

Lands	J01	Approved and available general use electronic site is Mayhill.
	J04	Review the James Canyon and Mayhill withdrawals in the first decade.
	J18	Acquire ROW.

Road	Area	Miles
FR	#169 Wills Canyon	2.5
FR	#541 Prestridge	0.75

Protection	P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
	P08, P09	Use prescribed fire with planned ignitions throughout the management area to accomplish resource management objectives.

MANAGEMENT AREA 4J UPPER AGUA CHIQUITA

Description Upper Agua Chiquita - Mayhill Ranger District
This analysis area is bounded on the north by the Upper Rio Penasco Watershed, on the east and south by the Agua Chiquita Watershed, and on the west by the Ranger District boundary. Elevations range from approximately 7,600 to 9,200 feet. There are 18,186 acres of tentatively suitable timber land, with 86 acres of aspen, 16,848 acres acres of mixed conifer and 1,252 acres of ponderosa pine. The area contains portions for four grazing allotments: E.K./North Bluewater, Pendleton, Perk and Agua Chiquita.

Management Direction Primary emphasis is on management of wildlife habitat and timber. Structural and nonstructural improvements include fences, waters, openings, and road closures to benefit game and non-game species. Timber will be intensively managed to produce sawlogs and fulewood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	20,461
Non-forest	2,275
Legislatively or administratively withdrawn	0
Physically unsuited	0
Tentatively suitable	18,186
Non-appropriate	6,004
Suitable	12,182

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	1,413 acres
Partial Retention:	18,708 acres
Maximum Modification:	340 acres

A15 Manage for SPM and RN ROS classes. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive motorized:	9,039 acres
Roaded natural:	11,422 acres

Wildlife C03 Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Aspen Cut (Ac.)	25
Road closures (Mi.)	30

	C06	Develop waters needed to provide for a maximum travel distance of 1 mile.

Fence (Mi.)	0 .75
Spring dev. (Ea.)	2
Trick tank (Ea.)	1

Range Range condition (in acres) by the end of the period.

Unsatisfactory	1,560
Satisfactory	1,244
NAC	17,454
Non Allotment	203

	D02	Achieve moderate (C) or high (D) level management on one allotment, and low (B) on remaining full capacity range.
	D02	Unsatisfactory condition range will be treated by improved allotment management and structural range improvements.
	D03	Control gophers with chemical treatment for forage protection.
	D05	Develop and replace structural improvements needed for C and D management.

Fence (Mi.)	7
Trick tank (Ea.)	5

Timber **Timber Harvest System table deleted**.

	E08	Collect 150 bushels of cones.
Soil and Water	F04	Process 15 applications for water rights needed for management.
Lands	J04	Review withdrawal for Aqua Chiquita in the first decade.

	J18	Acquire ROW

Road	Area	Miles
FR #265	Pendleton Canyon	1.25
FR #433	Wayland Canyon	.5
FR #437	Pepper Canyon	.25
FR #64	Aqua Chiquita	.25

Protection	P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
	P08, P09	Use prescribed fire with planned ignitions throughout the management area to accomplish resource management objectives.

MANAGEMENT AREA 4K CARRISA

Description Carrisa -Mayhill Ranger District
This analysis area is bounded on the north, west and south by Bluewater Creek Watershed, and on the east by grazing allotments. Elevations range from approximately 7,400 to 8,800 feet. It consists of 15,024 acres of tentatively suitable timber land with 526 acres of aspen, 11,644 acres of mixed conifer, and 2,872 acres of ponderosa pine. There are 742 acres of pinyon-juniper woodland. The area contains portions of three grazing allotments: Pendleton, Perk and Agua Chiquita.

Management Primary emphasis is on management of wildlife habitat and timber. Structural and nonstructural improvements include fences, waters, openings and road closures to benefit game and non-game species. Timber will be managed to produce sawlogs and fuelwood, and to prevent losses caused by insects and diseases.

Timber Suitability Areas	
Total National Forest	19,730
Non-forest	3,964
Legislatively or administratively withdrawn	0
Physically unsuited	742
Tentatively suitable	15,0**42**
Non-appropriate	2,204
Suitable	12,8**38**

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	6 acres
Partial Retention:	17,204 acres
Modification:	2,520 acres

A15 Manage for SPM and RN ROS classes. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive motorized:	17,707 acres
Roaded natural:	2,023 acres

Wildlife C03 Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Aspen Cut (Ac.) 25

C03, E00 E03, E05 E06, E07 L02, L04 L08, L12 L14, P11 P12, P13	Retain a minimum of 4 active or potential roost sites per section within known turkey range. Provide appropriate buffer at each site.
C03, E00 E03, E05 P11, P12 P13, P14	Retain two loosely packed hand piles or two, unlopped tops per acre within one-half mile of water. Retain one pile or one unlopped top per two acres in all other areas. Also, retain one block (one-half acre in size) of lopped slash per 10 acres.
C03, D02 D03, E00 E05, E06 E07, P11 P12, P13	In areas with alligator juniper, retain the five largest trees per acre. The five trees will be irregularly spaced.
C03, D03 E04, E05 E07, J01 P13	Ensure that artificial openings created by management activities will not exceed 1200 ft. in width or 40 acres in size. Edges of openings will be feathered and irregular.
C03, D03 D04, E07 P11	In chained, pushed or harvest areas, retain the 2 largest downed logs per acre.
C03, E00 E03, E05 E07, L01	Keep road development to a minimum everywhere. If presently located in drainages, openings or stringers, they should be relocated to maximize wildlife benefits. Open road densities should not exceed: summer range - 3.0 mi/sq. mile or winter range - 2.0 mi/sq. mile. An estimated 15 miles of road will be closed to reduce limiting habitat factors.
C03, L01 L02, L03 L06, L10	Design roads to minimize long distances of straight sections. Straight sections will not exceed 1/4 mile.
C06	Develop waters needed to provide for a maximum travel distance of 1 mile.

Spring Dev. (Ea.)	1
Fence (Mi.)	0.5
Trick Tank (Ea.)	1

Range		Range condition (in acres) by the end of the period.
		Unsatisfactory 1,394 Satisfactory 1,307 NAC 16,901 Non Allotment 128
	D02	Achieve low (B) level management on all full capacity range by end of period.
	D02	Unsatisfactory condition range will be treated through improved allotment management.
	D03	Control gophers with chemical treatment for forage protection.
	D05	Develop and replace structural improvements needed for low level management.
		Fence (Mi.) 3
Timber	**Timber Timber Harvest System table deleted**.	
	E08	Collect 150 bushels of cones.
Soil and Water	F04	Process 15 applications for water rights needed for management.
Lands	J04	Review withdrawal for the New Carrisa in the first decade.
Protection	P04	Zone A. Protection objective 10 acres or less. (See Fig. 2)
	P08, P09	Use prescribed fire with planned ignitions throughout the management area to accomplish resource management objectives.

MANAGEMENT AREA 4L LICK RIDGE

Description

Lick Ridge - Mayhill Ranger District
This analysis area is bounded on the north by the Sacramento/Salt Flat and on the west by the Ranger District boundary. Elevations range approximately 6,400 to 8,200 feet. It consists of 14,804 acres of tentatively suitable timber land with 7,570 acres of mixed conifer and 7,234 acres of ponderosa pine. There are 21,323 acres of pinyon-juniper. The area contains the Carrisa and Jeffers Grazing Allotments and portions of the Agua Chiquita, Pinon, and North Harbert Allotments.

Management Direction

All resources except timber are managed at low levels, with emphasis on preserving soil productivity. A small amount of timber is produced.

Timber Suitability Areas	
Total National Forest	37,803
Non-forest	1,767
Legislatively or administratively withdrawn	0
Physically unsuited	21,**323**
Tentatively suitable	14,804
Non-appropriate	6,962
Suitable	7,842

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives: Retention: 1,904 acres Partial Retention: 8,359 acres Modification: 27,540 acres
A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level with maximum of 10 percent change from current ROS acres. Current ROS Classes: Semi-primitive motorized: 33,636 acres Roaded natural: 4,167 acres

Wildlife

C03, E00 E03, E05 E06, E07 L02, L04 L08, L12 L14, P11 P12, P13	Retain a minimum of 4 active roost sites per section within known turkey range. Provide appropriate buffer at each site.

	C03, E00 E05, E07 P11, P12 P13, P14	Retain two loosely packed hand piles or two unlopped tops per acre within one-half mile of water. Retain one pile or one unlopped top per two acres in all other areas. Also retain one block (one-half acre in size) of lopped slash per 10 acres.
	C03, D03 E04, E05 E07, J01 P13	Ensure that artificial openings created by management activities will not exceed 1200 ft. in width or 40 acres in size. Edges of openings will be feathered and irregular.
	C03, D03 D04, E07 P11	In harvest areas, retain the 2 largest downed logs per acre.
	Range	Range Condition (in acres)

Unsatisfactory	15,554
Satisfactory	13,214
NAC	8,865
Non Allotment	170

	D02	Achieve moderate (C) and high (D) level management on all full capacity range by end of second decade.
	D02	Unsatisfactory range condition will be treated through implementing improved allotment management along with structural and non-structural range improvements.
Timber	**Timber Timber Harvest System table deleted**.	
Soil and Water	F04	Process applications for six water rights needed for management.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following area:

VQO Retention (foreground)	62 acres

Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 4M BLUEWATER

Description

Bluewater - Mayhill Ranger District

This analysis area is bounded on the north by the contours of several major drainages, on the east by grazing allotments, on the south by Sacramento/Salt Flat Watershed, and on the west by grazing allotment boundaries. Elevations range from approximately 6,400 to 8,000 feet. The area consists of 4,490 acres of tentatively suitable timber land with 1,269 acres of mixed conifer and 3,221 acres of ponderosa pine. There are 15,460 acres of pinyon-juniper woodland. The area contains portions of ten grazing allotments: Ehart, E.K./North Bluewater, Cueva/Rough, Dog Canyon, Antelope, South Bluewater, Sowell, North Harbert, West Avis and Pinon.

Management Direction

Primary emphasis is on management of wildlife habitat. Structural and nonstructural improvements include fences, water developments, and openings to benefit game and non-game species. A moderate amount of fuelwood will be produced from the woodland type.

Timber Suitability Areas	
Total National Forest	20,608
Non-forest	658
Legislatively or administratively withdrawn	0
Physically unsuited	15,460
Tentatively suitable	4,490
Non-appropriate	1,089
Suitable	3,401

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Levels:

Partial Retention:	2,559 acres
Modification:	18,049 acres

A15 Manage for SPM and RN ROS classes. Service will be at less than standard service level with a maximum of 10 percent change from current ROS acres.

Current ROS Classes:	
Semi-primitive motorized:	15,108 acres
Roaded natural:	5,500 acres

Wildlife

C03 Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors.

Prescribed Burn (Ac.)	150

	C06	Develop waters needed to provide for a maximum travel distance of 1 mile.

Fence (Mi.)	0.75
Trick Tank (Ea.)	3

	C09	Wildlife habitat maintenance.

Trick Tank (Ea.)	1
Fence (Mi.)	0.25

Range		Range Condition (in acres) by the end of the period.

Unsatisfactory	4,914
Satisfactory	11,586
NAC	3,262
Non Allotment	864

	D02	Achieve low (B) level management on all full capacity range by end of period.
Timber	**Timber Harvest System table deleted.**	
	E06	Fuelwood - PJ (MBF 1100 acres
	E07	
Soil and Water	F04	Process applications for eight water rights needed for management.
Lands	J01	Designate a general use electronic site and prepare a site plan in the first decade for Bluewater.
	J04	Review withdrawal for the Bluewater area in the first decade. Bluewater
	J18	Acquire ROW

Road	Area	Miles
FR #239	Lewis	.5

Protection	P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
	P08, P09	Use prescribed fire with planned ignitions throughout the management area to accomplish resource management objectives.

MANAGEMENT AREA 4N LOWER AGUA CHIQUITA

Description Lower Agua Chiquita - Mayhill Ranger District
This analysis area is bounded on the north by a ridge top and the Agua Chiquita Watershed, on the east by the Forest boundary, on the south by a ridge top and private land, and on the west by ridge top and grazing allotments. Elevations range from approximately 6,600 to 8,500 feet. It consists of 6,355 acres of tentatively suitable timber land with 2,974 acres of mixed conifer, and 3,381 acres of ponderosa pine. There are 9,361 acres of pinyon-juniper woodland. The area contains four grazing allotments: Potter Hill, Prather, Akers and McEwan; and portions of six others: Ehart, Criderbring, Bear Creek, Denny Hill, Scott and Miller Flats Allotments.

Management Direction Primary emphasis is on range management. The large numbers of existing structures will be maintained and additional fences and water storages developed to distribute and control livestock. Some timber will be produced and the woodland type will be intensively managed to produce a moderate amount of fuelwood.

Timber Suitability Areas	
Total National Forest	19,372
Non-forest	3,656
Legislatively or administratively withdrawn	0
Physically unsuited	9,361
Tentatively suitable	6,355
Non-appropriate	2,650
Suitable	3,705

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	3,408 acres
Partial Retention:	6,390 acres
Modification:	9,574 acres

A15 Manage for SPM, RN and R ROS classes. Service will be at less than standard service level.

Current ROS Classes:	
Semi-primitive motorized:	7,548 acres
Roaded natural:	11,777 acres
Rural:	47 acres

Range Range Condition (in acres) by the end of the period.

Unsatisfactory	3,323
Satisfactory	8,731
NAC	5,314
Non Allotment	2,004

	D02	Achieve moderate (C) or high (D) levels of management on three allotments, and low (B) on all others by the end of the period.
	D02	Unsatisfactory range condition will be treated through improved allotment management along with structural range improvements.
	D02	Utilize goat grazing as a biological method to control oak brush to favor forage (grass) production.
	D05	Develop and replace structural improvements needed for C and D level management.

Fence (Mi.)	13
Trick Tank (Ea.)	4
Storage Tank (Ea.)	1
Pipelines (Mi.)	6
Troughs (Ea.)	8
Spring Dev. (Ea.)	4

Timber **Timber Harvest System table deleted.**

	E06	Fuelwood - PJ (MBF) 700 acres
Soil and Water	F04	Process applications for 15 water rights needed for management.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following areas:

Sacramento Administrative Site	36 acres
VQO Retention (foreground)	2,366 acres

Lands	J04	Review withdrawal for the Weed area in the first decade.
Protection	P04	Zone A. Suppression objective 10 acres or less. (See Figure 2)
	P08, P09	Use prescribed fire with planned ignitions throughout the management area to accomplish resource management objectives.

MANAGEMENT AREA 4O SIXTEEN SPRINGS

Description

Sixteen Springs - Mayhill Ranger District
This analysis area is bounded on the north by the MAIR, on the east by the Forest Boundary, on the south by the Upper Rio Penasco Watershed, a ridge top and private land, and on the west by the Ranger District boundary. Elevations range from a pproximately 6,200 to 8,400 feet. It consists of 18,530 acres of tentatively suitable timber land with 44 acres of aspen, 11,614 acres of mixed conifer and 6,872 acres of ponderosa pine. There are 20,518 acres of pinyon-juniper woodland. The area contains five grazing allotments: C.C. Walker, Upper Sixteen Springs, Lower Sixteen Springs, Bell, and Burnt Canyon, and portions of Upper Burnt Canyon and Lewis/McGee Allotments.

Management Direction

Primary emphasis is on management of wildlife habitat. Structural and nonstructural improvements include fences, prescribed burns and water developments to benefit game and non-game species. A small amount of timber will be produced and the woodland type will produce a small amount of fuelwood.

Timber Suitability Areas	
Total National Forest	39,611
Non-forest	563
Legislatively or administratively withdrawn	0
Physically unsuited	20,518
Tentatively suitable	18,530
Non-appropriate	12,873
Suitable	5,657

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives: Retention: 673 acres Modification: 34,533 acres
A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level with a maximum of 10 percent change from current ROS acres. Current ROS Classes: Semi-primitive motorized: 24,548 acres Roaded natural: 15,063 acres

Wildlife

C03	Develop non-structural habitat improvement projects to best accomplish management goals and objectives by reducing limiting habitat factors. Prescribed Burn (Ac.) 62

C03, E00 E03, E05 E06, E07 L02, L04 L08, L12 L14, P11 P12, P13	Retain a minimum of 4 active or potential roost sites per section within known turkey range. Provide appropriate buffer at each site.
C03, E00 E05, E07 P11, P12 P13, P14	Retain two loosely packed hand piles or two unlopped tops per acre within one-half mile of water. Retain one pile or one unlopped top per two acres in all other areas. Also, retain one block (one-half acre in size) of lopped slash per 10 acres.
C03, D02 D03, E00 E05, E06 E07, P11 P12, P13	In areas with alligator juniper, retain the five largest trees per acre. The five trees will be irregularly spaced.
C03, D03 E04, E05 E07, J01 P13	Ensure that artificial openings created by management activities will not exceed 1200 ft. in width or 40 acres in size. Edges of openings will be feathered and irregular.
C03, D03 D04, E07 P11	In harvest areas, retain the 2 largest downed logs per acre.
C03, E00 E03, E05 E07, L01	Keep road development to a minimum everywhere. If presently located in drainages, openings and stringers, they should be relocated to maximize wildlife benefits. Open roads densities should not exceed: summer range - 3.0 mi/sq. mile or winter range - 2.0 mi/sq. mile.
C03, L01 L02, L03 L06, L10	Design roads to minimize long distances of straight sections. Straight sections will not exceed 1/4 mile.
C06	Develop waters needed to provide for a maximum travel distance of 1 mile. Trick Tank (Ea.) 1 Fence (Mi.) 0.5
C09	Wildlife habitat maintenance. Springs Ea.) 1 Trick Tanks (Ea.) 1 Fence (Mi.) .50

Range Condition (in acres) by the end of the period.

Unsatisfactory	10,539
Satisfactory	17,123
NAC	11,637
Non Allotment	312

D02 Achieve moderate (C) and high (D) level management on three allotments, low (B) on remainder of full capacity range by end of period.

D02 Unsatisfactory condition range will be treated through improved allotment management along with structural and non-structural range improvements.

D03 Treat 150 acres of mountain grassland by mechanical treatment. Treatment will only occur on areas of 0-15 percent slope, which have a soil productivity rating of moderate or higher.

D05 Develop and replace structural improvements needed for C and D level management.

Fence	(Mi.)	22
Trick Tank	(Ea.)	3
Storage Tank	(Ea.)	2
Pipelines	(Mi.)	12
Troughs	(Ea.)	7

Timber **Timber Harvest System table deleted.**

E06 Fuelwood - PJ (MBF) 360 acres

Soil and Water F04 Process applications for seven water rights needed for management.

Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following area:			
		VQO Retention (foreground)		594 acres	
Lands	J18	Acquire ROW.			
		Road	Area	Miles	
	Period	FR #620	Walker Canyon	1	1
		FR #175	Sixteen Springs	2	1
Protection	P04	**Amendment 16: Zone C (entire MA)**			
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**			

MANAGEMENT AREA 4Q CUEVO CANYON

Description Cuevo Canyon - Mayhill Ranger District
This analysis area is bounded on the north, east and south by the Forest boundary, and on the west by grazing allotments. Elevations range from approximately 6,200 to 7,300 feet. It consists of 350 acres of tentatively suitable timber land with 245 acres of mixed conifer and 105 acres of ponderosa pine. There are 26,659 acres of pinyon-juniper woodland. The area contains Cueva/Rough, Dog Canyon, Antelope and Avis Grazing Allotments, and a portion of West Avis Allotment.

Management Direction All resources are managed at low levels, with emphasis on preserving soil productivity. Habitat for a T&E plant will be protected. The woodland type will produce small am unts of fuelwood.

Timber Suitability Areas	
Total National Forest	28,382
Non-forest	1,373
Legislatively or administratively withdrawn	0
Physically unsuited	26,659
Tentatively suitable	350
Non-appropriate	350

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives: Partial Retention: 7,769 acres Modification: 20,613 acres
A15	Manage for SPM and RN ROS classes. Service will be at less than standard service level with a maximum of 10 percent change from current ROS acres. Current ROS Classes Semi-primitive motorized: 26,246 acres Roaded natural: 2,136 acres

Range

Range Condition (in acres) by the end of the period.

Unsatisfactory	1,271
Satisfactory	20,534
NAC	6,565
Non Allotment	12

D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by the end of second decade.
D02	Unsatisfactory range condition will be treated through improved allotment management along with structural range improvements.

	D05	Develop and replace structural improvements needed for Level C and D management. Fence (Mi.) 5.5 Pipeline)Mi.) 4 Storage Tank (Ea.) 1 Troughs 2
Timber	E06, E07	Manage woodland for production of fuelwood and nonconvertible products. Fuelwood - PJ (MBF) 475
Soil and Water	F04	Process applications for five water rights needed for management.
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

MANAGEMENT AREA 4U SNOW CANYON

Description Snow Canyon - Mayhill Ranger District
This analysis area is bounded on the north by private land, on the east and south by the Forest boundary, and on the west by private land and grazing allotments. Elevations range from approximately 6,000 to 7,300 feet. It consists of 1,205 acres of tentatively suitable timber land with 743 acres of mixed conifer and 462 acres of ponderosa pine. There are 26,560 acres of pinyon-juniper woodland. The area contains eight grazing allotments: Turpin, Cady, Mule Canyon, Cox, Jackson, Hunter, Smith and Miller Flats.

Management Direction All resources are managed at low levels, with emphasis on preserving soil productivity.

Timber Suitability Areas	
Total National Forest	27,765
Non-forest	0
Legislatively or administratively withdrawn	0
Physically unsuited	26,560
Tentatively suitable	1,205
Non-appropriate	1,103
Suitable	102

Recreation

Activities	Standards and Guidelines
A03	Manage to retain the following acres of Visual Quality Objectives:

Retention:	1,604 acres
Partial Retention:	1,842 acres
Modification:	24,319 acres

A15 Manage for SP, SPM and RN ROS classes. Service will be at less than standard service level and maintain present acres in each class.

Current ROS Classes:	
Semi-primitive non-motorized:	5,599 acres
Semi-primitive motorized:	15,616 acres
Roaded natural:	6,550 acres

Wildlife C09 Wildlife habitat maintenance.

Troughs (Ea.)	4
Fence (Mi.)	1

Range Range Condition (in acres)

Unsatisfactory	2,337
Satisfactory	23,930
NAC	767
Non Allotment	731

	D02	Achieve moderate (C) and high (D) levels of management on all full capacity range by end of second decade.
	D02	Unsatisfactory range condition will be treated through improved allotment management along with structural range improvements.
	D05	Develop and replace structural improvements needed for Level C and D management.
		Fence (Mi.) 5.5
Timber	E06, E07	Manage woodland for production of fuelwood and nonconvertible products.
		Fuelwood - PJ (MBF) 250
Soil and Water	F04	Process applications for five water rights needed for management.
Minerals	G02	Include a limited surface use stipulation in oil and gas leases for the following area:
		VQO Retention (foreground) 1,012 acres
Protection	P04	**Amendment 16: Zone C**
	P08, P09	**Amendment 16: Use planned and unplanned ignitions, where feasible and appropriate, to accomplish resource management objectives.**

5. MONITORING PLAN

INTRODUCTION

The purpose of monitoring and evaluating the implementation of the Forest Plan is to inform the decision maker of the progress toward achieving the goals, objectives, and standards and guidelines.

Monitoring will determine if:
- the management prescriptions are applied as directed.
- standards are being followed.
- the Forest is achieving the objectives of the Forest Plan.
- the application of management prescriptions is responding to public issues and management concerns.
- the effects of implementing the Forest Plan are occurring as predicted.
- the costs of implementing the Forest Plan are as predicted and are acceptable.
- management practices on adjacent or intermingled non-Forest lands are affecting the Forest Plan goals and objectives.

A detailed annual monitoring action plan will be prepared. This annual monitoring action plan will include the details on the amount and location of monitoring to be accomplished. Specific applications, intensity of sampling, person-days required, and costs will be identified in the annual monitoring action plan. The activities to be monitored will be selected from the list in the rest of this chapter.

Evaluation of the results of the site-specific annual monitoring action plan will be documented in the annual evaluation report. The significance of the results of the monitoring action plan will be analyzed and evaluated by the Forest interdisciplinary team.

Based on the evaluation, any need for further action is recommended to the Forest Supervisor. The recommendations can include:

- no action needed. Monitoring indicates goals, objectives, and standards are being reasonably achieved;
- refer recommended action to the appropriate line offices for improvement of application of management prescriptions;
- modify the management prescription as a Forest Plan amendment;
- revise the projected schedule of outputs;
- initiate revision of the Forest Plan.

The documented file of the Forest Supervisor's decisions resulting from monitoring and evaluation is maintained for future use in amending or revising the Forest Plan. An annual evaluation report of these decisions will be prepared and sent to the Regional Forester for his consideration.

The Forest Plan's monitoring requirements follow. For each activity practice or effect to be monitored, one or more measurement techniques and the expected future condition to be met is specified. Frequency for the condition to be met is specified. Expected precision and reliability of that measurement is stated. (Precision is the exactness or accuracy with which the data will be collected; reliability is the degree to which the monitoring accurately reflects the total Forest situation.

TIMBER 1

1. ITEM MONITORED: Acres of regeneration harvest.
2. PURPOSE: Federal regulation; measure prescriptions and effects, including insect and disease control.
3. EXPECTED FUTURE CONDITION: Achieve a balanced age class distribution, appropriate growing stock levels, appropriate rotations.
4. MONITORING METHOD: Timber Management Information system; Forest staff field review of 5 percent of treated projects.
5. FREQUENCY Annual.
6. EXPECTED PRECISION/RELIABILITY: +10 percent / +10 percent.
7. TIME FOR REPORTING**:** 5th and 10th year.
8. EVALUATION: If planned treatment varies +25 percent from forest-wide schedule at 5 year intervals, the ID Team will evaluate, and Plan modification may be necessary.

TIMBER 2

1. ITEM MONITORED: Acres of intermediate harvest.
2. PURPOSE: Federal regulation; measure prescriptions and effects and insect and disease control.
3. EXPECTED FUTURE CONDITION: Achieve a more balances age class distribution, appropriate growing stock levels, appropriate rotations, and provide wildlife habitat needs.
4. MONITORING METHOD: Timber Management Information system; Forest staff field reviews of 5 percent of treatment projects.
5. FREQUENCY: Annual
6. EXPECTED PRECISION/RELIABILITY: +10 percent / +10 percent.
7. TIME FOR REPORTING: 5th and 10th year.
8. EVALUATION: If planned treatment varies +25 percent from forest-wide schedule at 5 year intervals, the ID Team will evaluate, and Plan modification may be necessary.

TIMBER 3

1. ITEM MONITORED: Adequate restocking of regeneration harvests and other reforestation projects.

2. PURPOSE: Federal regulation to insure restocking and determine success of planting projects.

3. EXPECTED FUTURE CONDITION: All regeneration cuttings within a sale area are minimally restocked within 5 years after final harvest. Minimally restocked means 70 percent of the timber sale area has at least 60 percent of the recommended trees per acre. Planting projects will be to the same stocking standard.

4. MONITORING METHOD: Measurements will be taken on randomly placed plots within each regeneration area.

5. FREQUENCY: At 3rd and 5th year following harvest and planting.

6. EXPECTED PRECISION/RELIABILITY: +20 percent/ +20 percent.

7. TIME FOR REPORTING: Beginning third year and annually thereafter.

8. EVALUATION: If samples at the fifth year indicate inadequate stocking, and evaluation of plan will be completed by the ID Team, and Plan modification may be necessary.

TIMBER 4

1. ITEM MONITORED: Timber stand improvement acres.

2. PURPOSE: Federal regulation; change in productivity of land, control of insects and disease.

3. EXPECTED FUTURE CONDITION: Controlled stocking levels for accelerated growth.

4. MONITORING METHOD: Annual TSI Needs Report, data for which is generated by qualified silviculturist using standard inventory methods.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME FOR REPORTING: Annually.

8. EVALUATION: If cumulative deviation for 5 years falls 20 percent below planned program, the ID Team will evaluate, and Plan modification may be necessary.

TIMBER 5

1. ITEM MONITORED: Board feet of new sawtimber offered.

2. PURPOSE: Federal regulation; measured output.

3. EXPECTED FUTURE CONDITION: Annual sale offerings will be made on a sustained yield basis.

4. MONITORING METHOD: PAMARS (MAR 17.1).

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +10 percent.

7. TIME FOR REPORTING: Annually.

8. EVALUATION: Evaluations by the ID Team will be made at 3rd and 6th years during each period to insure that cumulative deviation for the period does not vary by +10 percent. Plan modification may be necessary if +10 percent is exceeded.

TIMBER 6

1. ITEM MONITORED: Review maximum size limits for harvest areas to determine whether such size limits should be continued.

2. PURPOSE: Federal regulation.

3. EXPECTED FUTURE CONDITION: Wildlife habitat will be improved through timber harvest by manipulation of stand sizes, methods of cut, and juxtaposition of stands.

4. MONITORING METHOD: A sample of openings will be checked to see if reason may exist to change the size of stands. The ID Team will be the sampling team. Ten percent of openings created per year will be sampled.

5. FREQUENCY: Every third year.

6. EXPECTED PRECISION/RELIABILITY: +25 percent / +20 percent.

TIMBER 7

1. ITEM MONITORED: Re-evaluation of unsuitable timber lands.

2. PURPOSE: Federal regulation.

3. EXPECTED FUTURE CONDITION: Better define those areas which may be unsuitable for sustained yield timber production.

4. MONITORING METHOD:
   1) Review new or updated soil survey data,
   2) Development of better technology for regeneration establishment,
   3) Stand exams,
   4) Timber inventory results.

5. FREQUENCY: At time of Plan revision, 10th year.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME FOR REPORTING: As part of revised Forest plan or the tenth year of the decade.

8. EVALUATION: The data monitored will be used as the basis for an evaluation to determine which lands are suited to timber production.

TIMBER 8

1. TIME MONITORED: Cords of fuelwood made available.

2. PURPOSE: Federal regulation; Forest related issue.

3. EXPECTED FUTURE CONDITION: Green wood sales will continue on a sustained yield basis, Residues from commercial timber sales will be available for firewood and is expected to meet demand.

4. MONITORING METHOD: Review annual a total of firewood sale reports, (by species and live versus dead) and free use.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: + 30 percent / +30 percent.

7. TIME FOR REPORTING: Annually.

8. EVALUATION: Compare cords made available to the projected output. If firewood sales by category exceeds +20 percent at the 5th year, the ID Team will evaluate, and plan modification may be necessary.

RANGE 1

1. ITEM MONITORED: Acres of overstory modification in woodland type

2. PURPOSE: Federal regulation; measure prescription and effects. Forest-related issue.

3. EXPECTED FUTURE CONDITION: Increase forage production in analysis areas where overstory modification is scheduled.

4. MONITORING METHOD: Review of annual work accomplishment reports.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME FOR REPORTING: 5th and 9th year.

8. EVALUATION: The acres of overstory modification completed for the evaluation period (ending at the 9th year) should be within 10 percent of projection. If not, the ID Team will evaluate, and Plan modification may be necessary.

RANGE 2

1. ITEM MONITORED: Acres of brush conversion and/or reseeding.

2. PURPOSE: Federal Regulation; measure prescription and effects. Forest Management Concern.

3. EXPECTED FUTURE CONDITION: Increased forage production.

4. MONITORING METHOD: Review of annual work accomplishment reports.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME OF REPORTING: 5th and 9th year.

8. EVALUATION: The acres of brush conversion and/or reseeding completed for the evaluation period (ending the ninth) should be within 25 percent of projection. If not, the ID Team will evaluate, and Plan modification may be necessary.

RANGE 3

1. ITEM MONITORED: Range development.

2. PURPOSE: Federal regulation; sample prescription and effects.

3. EXPECTED FUTURE CONDITION: Structural and non-structural improvements will be added or re-constructed.

4. MONITORING METHOD: Data on completed range improvements (fences, waters, and pipelines) can be tracked through annual work accomplishment reports.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME FOR REPORTING: 5th and 9th year.

8. EVALUATION: If at lease 90 percent of the planned improvements are not accomplished at the end of the ninth year, the ID Team will evaluate, and recommend modification as necessary.

RANGE 4

1. ITEM MONITORED: Permitted use on National Forest only.

2. PURPOSE: Federal regulation; measure prescriptions and effects. Forest issue related.

3. EXPECTED FUTURE CONDITION: Range permitted use will be balance with capacity by the end of the third period.

4. MONITORING METHOD: Data generated from grazing permits and displayed in Annual Grazing Statistical Report.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 5th and 9th year.

8. EVALUATION: Evaluate at 5 year intervals. If permitted use exceeds projected levels or is more than 5 percent below projected levels, the ID Team will evaluate, and Plan modification may be necessary.

RANGE 5

1. ITEM MONITORED: Range condition and trend.

2. PURPOSE: Forest issue related.

3. EXPECTED FUTURE CONDITION: Range conditions will be improved at 2030 by decreasing unsatisfactory range to **62,000** acres; satisfactory range **544,000** acres and increasing.

4. MONITORING METHOD: Range Analysis conducted per R-3 standards by qualified Range Conservationists.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +20 percent / +20 percent.

7. TIME FOR REPORTING: Year 10.

8. EVALUATION: If the number of acres with satisfactory condition and trend is not within 80 percent of the acres targeted, the ID Team will evaluate and recommend changed.

RANGE 6

1. ITEM MONITORED: Grazing capacity on National Forest only.

2. PURPOSE: Federal regulation; sample output. Forest issue related.

3. EXPECTED FUTURE CONDITION: Through improved management and additional structural and non-structural range improvements, range capacity is expected to increase.

4. MONITORING METHOD: Production/utilization studies and range analysis data.

5. FREQUENCY: 5th year.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +20 percent.

7. TIME FOR REPORTING: 5th and 9th year.

8. EVALUATION: Evaluate at 5 year intervals to determine rate in meeting expected capacity. If below anticipated capacity or more than 10 percent above anticipated capacity, the ID Team will evaluate and Plan modification may be necessary.

CULTURAL RESOURCES 1:

1. ITEM MONITORED: Cultural resources listed in the National Register of Historic Places and/or that have been allocated to categories of active management.
2. PURPOSE: Comply with law and executive order; resource protection.
3. EXPECTED FUTURE CONDITION: Assure protection of cultural resource sites.
4. MONITORING METHOD: Aerial and ground inspection in conjunction with other resource activities.
5. FREQUENCY: Biannually
6. EXPECTED PRECISION/RELIABILITY: No variance allowed.
7. TIME FOR REPORTING: Annually.
8. EVALUATION: Protective action will be taken if vandalism or natural deterioration threatens the integrity of the site.

CULTURAL RESOURCES 2:

1. ITEM MONITORED: Clearance surveys for cultural resources.
2. PURPOSE: Comply with law and executive order; resource protection.
3. EXPECTED FUTURE CONDITION: Timely clearance surveys will prevent disturbance of previously identified and/or unidentified cultural resources.
4. MONITORING METHOD: Ground survey of areas which may be impacted by various resource activities.
5. FREQUENCY: Prior to every resource activity having a potential to disturb cultural resources.
6. EXPECTED PRECISION/RELIABILITY: No variance allowed.
7. TIME FOR REPORTING: Annually.
8. EVALUATION: No ground disturbing resource activities will be permitted until an archeological clearance survey is completed and mitigating requirements developed.

SOIL AND WATER 1:

1. ITEM MONITORED: Watershed condition acres (satisfactory or unsatisfactory).
2. PURPOSE: Federal regulation.
3. EXPECTED FUTURE CONDITION: Increased acres of watershed in satisfactory condition.

4. MONITORING METHOD: Review of acres in unsatisfactory watersheds treated; management plans implemented; terrestrial ecosystem survey; and watershed condition inventory.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: + 10 percent / +15 percent.

7. TIME FOR REPORTING: 5th and 9th year.

8. EVALUATION: Estimated improvement acres must be no less than 20 percent of the predicted at the end of the ninth year or the ID Tam will evaluate, and Plan modification may be necessary.

SOIL AND WATER 2:

1. ITEM MONITORED: Best management practices.

2. PURPOSE: To assure compliance with New Mexico State water quality standards: Public Law 92-500.

3. EXPECTED FUTURE CONDITION: Production of water from forest lands will meet State water quality standards.

4. MONITORING METHOD: Established Best Management Practices (i.e., seeding disturbed areas, water barring roads, etc.) will be checked for implementation on the ground by designated qualified personnel.

5. FREQUENCY: Annually, one project will be checked.

6. EXPECTED PRECISION/RELIABILITY: +20 percent / +10 percent.

7. TIME FOR REPORTING: Years 3, 5 and 7.

8. EVALUATION: Failure to implement at least 80 percent required best management practices will require evaluation by the ID Team.

PROTECTION 1

1. ITEM MONITORED: Determine that destructive insects and disease organisms do not increase to potentially damaging levels following management activities.

2. PURPOSE: Federal regulation/Forest issue related.

3. EXPECTED FUTURE CONDITION: Through various silvicultural activities, slash treatment and various control methods, insect and disease problems are not expected to have serious adverse effects on the Forest. Monitoring of insect and disease levels will provide information necessary to determine future impacts.

4. MONITORING METHOD: a) Periodic aerial surveys, b) Ground check by qualified personnel.

5. FREQUENCY: As needed through 1) yearly aerial flights and 2) ground checks on an opportunity basis.

6. EXPECTED PRECISION/RELIABILITY: +40 percent / +30 percent.

7. TIME FOR REPORTING: Annually.

8. EVALUATION: Data will evaluated to determine if the buildup results from a management practice. If the buildup occurs, and evaluation of significance will be made by the ID Team. If potentially damaging, the ID Team will modify management prescriptions.

FIRE MANAGEMENT 1

1. ITEM MONITORED: Fire suppression effectiveness.

2. PURPOSE: Federal regulations; measure prescriptions and effects in relation to budgets and resource losses.

3. EXPECTED FUTURE CONDITION: Fire risk will increase if the projected increase in population is realized.

4. MONITORING METHOD: a) Periodic inspections and reviews to determine if the fire management organization is effective in controlling fire losses within prescription; b) the use of the fire budget analysis process to determine fire management efficiency; and, c) fire reviews of selected fires.

5. FREQUENCY: Annual inspections, periodic reviews, and fire budget analysis process as needed.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / + 10 percent.

7. TIME FOR REPORTING: Annual for inspections and every third year for the fire budget analysis.

8. EVALUATIONS: **Periodic evaluation will be made to determine if the fire management organization is insuring compliance with standards and guidelines applied to 90 percent of the wildland fires.**

FIRE MANAGEMENT 2

1. ITEM MONITORED: Project generated fuel treatment.

2. PURPOSE: Federal regulations, measure prescriptions and effects.

3. EXPECTED FUTURE CONDITION: Fuel treatment will follow the various timber activities as a means of reducing fire hazard and insect and disease potential.

4. MONITORING METHOD: Annual fuel treatment report. Data is generated from field personnel who monitor and/or direct fuel treatment by Forest Service crews, logging companies, contractors, etc.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +10 percent.

7. TIME FOR REPORTING: Every five years.

8. EVALUATION: Evaluation will be made of project fuels. If 80 percent of the fuels are not being treated within 2 years of generation, an adjustment in the Plan will be necessary.

RECREATION 1

1. ITEM MONITORED: Actual dispersed recreation use in Recreation Opportunity Spectrum (ROS) settings.

2. PURPOSE: Federal regulation; measure prescriptions and effects.

3. EXPECTED FUTURE CONDITION: Demand for dispersed recreation use will be within capacity. Quality of experience will increase due to more intensive management.

4. MONITORING METHOD: a) Recreation Information Management Report; b) Inspections of heavily used dispersed areas, including evaluation of vegetative deterioration and soil erosion.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +**25** percent / +**25** percent.

7. TIME FOR REPORTING: 3rd, 6th and 9th year.

8. EVALUATION: Compare actual use records for a five year time period to project use by ROS setting. If use exceeds 30 percent of projected use, the ID Team will evaluate and make recommendations to management.

RECREATION 2

1. ITEM MONITORED: Developed site use, public and private sector.

2. PURPOSE: Federal regulation; sample output Forest related issues.

3. EXPECTED FUTURE CONDITION: The projected annual demand for developed recreation by the end of the fifth period is 1,210 RVDs. The Plan will provide 1,069 RVDs or 88 percent of the demand. During the first five planning periods, 7, 178 PAOT capacity will be added.

4. MONITORING METHOD: Recreation Information Management Report, Use Report. (Based on District Ranger estimates and on actual count of tickets sold or other counts by private sector operators.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +20 percent / +20 percent.

7. TIME FOR REPORTING: 3rd, 6th, and 9th year.

8. EVALUATION: Compare actual use to projected use. Average actual use for each 3 year reporting period. If actual use is under by 10 percent or is over by 30 percent, the ID Team will evaluate and Plan modification may be necessary.

CAVES

1. ITEM MONITORED: Cave use and resource protection.

2. PURPOSE: Assure the cave resource is protected from vandalism and overuse.

3. EXPECTED FUTURE CONDITION: Caves will be subject to vandalism and the resource deteriorate without protection.

4. MONITORING METHOD: Use reports and number of incidence reports.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 3rd, 6th and 9th year.

8. EVALUATION: Compare actual use records and incidence reports every third and sixth year to track trend of use. If damage exceeds 20 percent, and evaluation will be completed by an ID Team and recommendations to management will be made.

LANDS

1. ITEM MONITORED: Miles of rights-of-way acquired.

2. PURPOSE: Federal regulations; measure prescriptions and effects. Forest related issues.

3. EXPECTED FUTURE CONDITION: An estimated **45** miles of rights-of-way to be acquired in the first period.

4. MONITORED METHOD: MAR #69.4.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 5th year.

8. EVALUATION: Failure to acquire projected needed rights-of-way at the end of the fifth year will require ID Team evaluation, and Plan modification may be necessary.

VISUAL QUALITY

1. ITEM MONITORED: The effect of management activities on acres of visual quality levels.

2. PURPOSE: Federal Regulations, measure prescriptions and effects.

3. EXPECTED FUTURE CONDITION: The plan requires the VQL's to be managed at current inventory levels with emphasis on maintenance of retention and partial retention VQL's. Activities such as timber harvest, vegetation modification and road construction generally occur on modification and maximum modification acreages.

4. MONITORING METHOD: The Visual Resource Management System will be used as a basis of monitoring activity.

5. FREQUENCY: 4th and 9th year.

6. EXPECTED PRECISION/RELIABILITY: +10 percent / +10 percent.

7. TIME FOR REPORTING: 4th and 9th year.

8. EVALUATION: If visual quality level acres in Retention or Partial Retention is reduced 20 percent, and the ID Team will evaluate and Plan modification may be necessary.

WILDERNESS 1

1. ITEM MONITORED: Wilderness use by Wilderness Opportunity Spectrum Class or Recreation Opportunity Spectrum Class.

2. PURPOSE: Federal regulation; measure prescriptions and effects. Forest issue related.

3. EXPECTED FUTURE CONDITION: Wilderness use, **exclusive of wildlife recreation use**, is expected to be less than practical capacity at 2030 on a Forest-wide basis. Wilderness use will increase at an average annual rate of **4** percent.

4. MONITORING METHOD: Recreation Information Management Report, Visitor Use Report, (based on District Range estimates).

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +20 percent / +20 percent.

7. TIME FOR REPORTING: 3rd, 6th, and 9th years.

8. EVALUATION: Compare actual use record for a 3-year time period to projected use for each wilderness. If use exceeds 30 percent of total projected use, ID Team will evaluate, and Plan modification may be necessary.

WILDERNESS 2

1. ITEMS MONITORED: Miles of wilderness trail reconstruction and maintenance.

2. PURPOSE: Federal regulations; measure prescriptions and effects. Forest issue related.

3. EXPECTED FUTURE CONDITIONS: Wilderness use is expected to be less than practical capacity at 2030 on a Forest-wide basis. An improved trail system through reconstruction and maintenance and construction of trail heads is expected to provide a better distribution of visitor use and improve wilderness opportunities.

4. MONITORING METHOD: Work Accomplishment Reports.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY: +5 Percent / +5 percent.

7. TIME FOR REPORTING: 3rd, 6th and 9th years.

8. EVALUATION: Evaluation by the ID Team will be made at the third and sixth years during the period to insure that cumulative deviation for the period does not vary by +25 percent. Plan modification may be necessary if +25 percent is exceeded.

WILDLIFE

1. ITEM MONITORED: Changes in riparian habitat quality. Population and habitat trends of management indicator species. Changes in horizontal and vertical diversity. Population trends in wintering Bald Eagle populations. Productivity and utilization of Peregrine Falcon eyries. Population and habitat trends of State and Federally listed plants and animals and sensitive species.

2. PURPOSE: Federal and State regulations. Forest related issues.

3. EXPECTED FUTURE CONDITION: Wildlife habitat will be maintained of increased. Sensitive species will be protected.

4. MONITORING METHOD:

Riparian:
Site analysis and environment analysis of riparian habitat.

Nongame Birds (Indicator species):
Point-counting method developed by Reynolds et. al. (1980)
Single-season monitoring (Verner 1980).
Monitor trends in habitat (Thomas et. al. 1979)

Game Animals (Indicator species:
State Game and Fish Department surveys.
Monitor trends in habitat.

Habitat Diversity:
Monitor changes in habitat.
Range analysis reports.
Compartment examination reports.

Bald Eagle:
Direct count.
Monitor habitat condition:

Peregrine Falcon:
Direct Count.
Nest count.

Other T&E Species:
Direct count.
Monitor habitat trend.

Sensitive Species:
Direct count.
Monitor habitat trend.

5. FREQUENCY:

Riparian:
Annually.

Nongame Birds (Indicator species):
Monitor indicator species annually.

Game animals (Indicator species):
Monitor indicator species annually.
Monitor improvement of game habitat annually.

Habitat Diversity:
Monitor diversity changes every 10 years.

Bald Eagle:
Annually

Peregrine Falcon:
Annually.

Other T&E Species:
Annually.

Sensitive Species:
Annually.

6. EXPECTED PRECISION/RELIABILITY: +20 percent / +20 percent.

7. TIME FOR REPORTING: Base-line DATA; end of first period (1990).

8. EVALUATION: The monitoring system includes wildlife O&M costs of management, analysis, and interpretation of the data obtained from monitoring. Monitoring as described is tentative and exploratory; modifications may be needed to better indicate the effects of management activities on the wildlife resource.

FACILITIES

1. ITEM MONITORED: Amount and distribution of use of the Forest transportation system open for public use.

2. PURPOSE: A transportation system that is adequate to meet the needs of the public without causing undue resource damage.

3. EXPECTED FUTURE CONDITION: There are currently **2,960** miles of routes on the Forest of which **100** miles (**3** percent) would be closed by the **first** period.

4. MONITORING METHOD: Engineering will submit data on roads constructed, reconstructed, maintained, and obliterated which are entered on the National Forest Transportation Inventory System. Similar update data on the trail system will be entered in the Recreation Information Management System.

5. FREQUENCY: Annually.

6. EXPECTED PRECISION/RELIABILITY:

   a) Size: +20 percent / +30 percent
   b) Use: (Roads and Highways)
      1) +5 percent / +5 percent
      2) +5 percent / +5 percent
   c) Use: (Trail System)
      RIM

7. TIME FOR REPORTING: 3rd, 6th and 9th years.

8. EVALUATION: Evaluation at 3 year intervals will indicate the effectiveness of road or trail management. Changes in size of the system exceeding +25 percent of planned levels may require evaluation by the ID Team for Plan modification.

COST 1

1. ITEM MONITORED: Unit costs by selected activities (MIH).

2. PURPOSE: Verify ability to implement Forest Plan.

3. EXPECTED FUTURE CONDITION: Unit costs as derived from FORPLAN.

4. MONITORING METHOD: PAMARS.

5. FREQUENCY: At the end of each fiscal year.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 3rd, 6th, and 9th year.

8. EVALUATION: If cost vary more than -10 percent or +10 percent from an average annual over 3 years, an evaluation will be made by the ID Team and Plan modification may be necessary.

COST 2

1. ITEM MONITORED: Total annual budget.

2. PURPOSE: Verify ability to implement Forest Plan.

3. EXPECTED FUTURE CONDITION: An average annual budget of $5,300,000 (in 1980 $) for the first period.

4. MONITORING METHOD: Annual PAMARS reporting system and Regional Forester's Program, Budgeting and Information System.

5. FREQUENCY: At end of each fiscal year.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 3rd, 6th and 9th years.

8. EVALUATION: If budget varies more than -5 percent or +10 percent from an average annual over 3 years, and evaluation will be made by the ID Team and Plan modification may be necessary

COST 3

1. ITEM MONITORED: Budget by program component.

2. PURPOSE: Verify ability to implement Forest Plan.

3. EXPECTED FUTURE CONDITION: Average annual appropriation equal to amount allocated in cost tables of planning system.

4. MONITORING METHOD: Annual PAMARS reporting system and Regional Forester's Program, Budgeting, and Information system.

5. FREQUENCY: At the end of the fiscal year.

6. EXPECTED PRECISION/RELIABILITY: +5 percent / +5 percent.

7. TIME FOR REPORTING: 3rd, 6th, and 9th years.

8. EVALUATION: If budget varies more than -5 percent or +10 percent from an average annual over 3 years, and evaluation will be made by the ID team for Plan modification.

OUTPUTS

1. ITEM MONITORED: Management attainment report items.

2. PURPOSE: Verify achievement of output targets.

3. EXPECTED FUTURE CONDITION: At the end of the first decade outputs should by those shown in Table 2 in Chapter 4.

4. MONITORING METHOD: Management Attainment Report.

5. FREQUENCY: Once per year.

6. TIME FOR REPORTING: +5 percent / +5 percent.

7. TIME FOR REPORTING: End of fiscal year.

8. EVALUATION: If outputs fall outside the schedules range of implementation, on evaluation will be made by the ID Team and Plan modification may be necessary.

GLOSSARY

A

Access - See public access.

Acre-Foot - A water measurement term, equal to the amount of water that would cover an area of one acre to a depth of one foot (43,560 cubic feet).

Affected Environment - The natural and physical environment and the relationship of people to that environment that will or may be changed by proposed actions.

Allotment - See range allotment.

Allowable Sale Quantity (ASQ) - The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

Alternative - In Forest planning, a mix of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives.

Amenity - The pleasurable, educational, or aesthetic features of the land or resources.

Analysis Area - The basic land unit of analysis which is used to allocate and schedule management prescriptions.

Analysis of the Management Situation (AMS) - A determination of the ability of the planning area to supply goods and services in response to society's demand for these goods and services.

Animal Unit Month (AUM) - The quantity of forage required by one mature cow (1,000 lbs.) or the equivalent for one month.

Arterial Roads - Roads comprising the basic access network for National Forest System administrative and management activities. These roads serve all resource elements to a substantial extent, and maintenance is not normally determined by the activities of any one element. They provide service to large land areas and usually connect with public high ways or other Forest arterial roads to form an integrated net work of primary travel routes. The location and standard are determined often by a demand for maximum mobility and travel efficiency rather than by a specific resource management service. Usually they are developed and operated for long-term land and resource management purposed and constant service.

B

Basic Area - The cross-sectional area of a stand of trees measured at breast height.

Benchmark - A category of Forest planning alternatives used to establish standards by which to compare alternatives considered in detail. Benchmark alternatives include minimum level, minimum acceptable level, maximum resource levels, and maximum present net value levels.

Big Game - Those species defined by law which are managed as sport hunting resource.

Biological Growth - The average net growth attainable in a fully stocked natural forest stand.

Board Foot - A unit of timber measurement equaling the amount of wood contained in an unfinished board 1 inch thick, 12 inches long, and 12 inches wide.

C

Canopy - The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.

Capability Area - Those areas of land delineated for the purpose of estimating responses to various management practices, resource values, output coefficients, and multi-resource or joint production functions. Capability areas may be synonymous with ecological land units, ecosystems, or land response units.

Carrying Capacity - The optimum density of an animal species which a given environment or range is capable of sustaining, without deteriorating that environment or range.

Clearcut - Removal of all standing trees over a given area of land in a single cut. Clearcut areas may occur in large or small blocks, patches or strips.

Closure - The administrative order restricting either location, timing, or type of vehicle or person use in a specific area.

Collector Roads - Roads constructed to serve two or more elements but which do not fit into the other two categories (arterial or local). Construction costs if these facilities are prorated to the respective element served. These roads serve smaller land areas and are usually connected to a Forest arterial or public highway. Forest collector roads are operated for constant service.

Commercial Forest Land (CFL) - Forest land which is producing or capable of producing crops or industrial wood and has not been reserved or deferred for other uses.

Competition - When organisms of the same or different species utilize a common resource that is in short supply; or, when organisms seeking a common resource that is not in short supply nevertheless harm one another in the process.

Consumptive Use - A use of resources that reduces the supply, such as logging and mining. (See also non-consumptive use.

Cord - A unit of gross volume measurement for staked roundwood based on external dimensions, generally implies a stack 4 feet high by 4 feet wide and 8 feet long. The solid content of this measurement would equal 128 cubic feet. The actual volume of the above measurement is approximately 80 cubic feet.

Corridor - A linear strip of land which has ecological, technical, economic, social or similar advantages over other areas for the present or future location of transportation or utility rights-of-way.

Critical Habitat - That portion of a wild animal's habitat that is critical for the continued survival of the species.

Cubic Foot - A unit of measure usually referring to wood volume (1 ft. x 1 ft. x 1 ft.).
Culmination of mean annual increment (CMAI) - See Mean Annual Increment.

Cultural Resources - The physical remains (artifacts, ruins, burial mounds, petroglyphs, etc.,) and conceptual content or context (as a setting for legendary, historic, or prehistoric events, as a sacred area of native peoples, etc.,) of an area associated with human use capable of providing scientific or humanistic understand ing of past human behavior, cultural adaptation and related topics through the application of scientific or scholarly techniques of investigation.

Cutting Cycle - The planned, recurring period of time between successive cuttings or harvests in a stand of trees.

D

DE-FORPLAN - A specific linear programming computer model designed for use in Forest Service planning.

Demand - The quality of goods or services called for, given a price or other combination of factors.

Departure - A schedule which deviates from the principle of non-declining flow by exhibiting a planned decrease in the timber sale and harvest schedule at any time in the future.

Developed recreation - Recreation use that utilizes constructed facilities and that con centrates at developed sites, e.g., campgrounds, picnic grounds, downhill ski areas, and observation sites.

Development - Working the improvements to physically expose or define locatable minerals.

Diameter at Breast Height (DBH) - Diameter of a tree approximately 4 1/2 feet above the ground.

Diameter Root Collar - This measurement is usually within 12 inches of ground level. The point of measurement is located just above the normal swelling of the tree stem.

Dispersed recreation - Recreation use that occurs outside of developed sites and requires few, if any, facilities other than roads and trails. Dispersed recreation activities include hiking, backpacking, cross-country skiing, snowmobiling, viewing scenery and driving for pleasure.

District - See Ranger District.

Diversity - The distribution and abundance of different plant and animal communities, habitat components, and species within the area covered by a land and resource management plan.

Draft Environmental Impact Statement (DEIS) - The statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for comment and review.

E

Ecosystem - A complex of living organisms interacting with their environment.

Edge - The more or less well-defined boundary between two elements of the environment, e.g., field/woodland.

Endangered Species - Any species which is in danger of extinction through all or a significant portion of its range and which has been designated in the Federal Register by the Secretary of the Interior as an endangered species.

Enduros - Mechanized or non-mechanized competition over a designated course with terrain ranging from difficult to open roads. Scoring is based upon maintaining as assigned speed average or averages and is done at checkpoints on the course. Speed is not the only object.

Environmental Assessment - A document of an environmental analysis which provides a basis for determining whether to prepare an environmental impact statement or a finding of no significant impact, and includes a discussion of alternatives and their impacts adequate to allow an alternative to be chosen.

Ephemeral Stream - A stream which flows only at certain times of the year when it receives water from springs or from some surface source, such as melting snow in mountainous areas.

Erosion - The wearing away of the land surface by running water, wind, ice, or other glacial agents. Erosion includes detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

Even-aged Management - The combination of actions that results in the creation of stands in which trees of essentially the same age grow together.

Even-Flow - Maintaining a relatively constant supply of timber from decade to decade.

Experience Levels - The range of opportunities for satisfying basic recreation needs of people. A scale of six experience levels ranging from "primitive" to "urban" is planned for the National Forest System.

Exploration - The broader term for mineral exploring or investigation of newly discovered areas.

Extensive Grazing - Season-long use of rangelands with distribution of livestock occurring through riding, salting, etc.

F

Facility Condition Class - The rating system used in the Recreation Information Management System to classify the condition and maintenance needs of recreation improvements.

Feral Goats - Goats escaped from domestication and have become wild.

Final Cut - Removal of the last seed bearers on shelter trees after regeneration is considered to be established under a shelterwood system.

Fire Management Plan (FMP) – a plan that identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire and prescribed fire). The plan is supplemented by operational plans, including but not limited to preparedness plans, preplanned dispatch plans, prescribed fire burn plans and prevention plans. Fire Management Plan's assure that wildland fire management goals and components are coordinated.

Fire Risk - Land adjacent to a channel which is covered with water when the stream overflows its banks.

Floodplain - Land adjacent to a channel which is covered with water when the stream overflows its banks.

Forage - Edible portions of plants containing some nutrient value.
Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974- An act of Congress requiring the preparation of a program for the management of the National Forest's renewable resources and of land and resources management plans for units of the National Forest System. It also requires a continuing inventory of all National Forest System lands and renewable resources.

Forest land - Land at least ten percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for non-forest use.
Forest-wide Standard - A performance criterion indicating acceptable norms, specifications, or quality that actions must meet to maintain the minimum considerations for a particular resource. This type of standard applies to all areas of the Forest regardless of the other prescriptions applied.

FSH - Forest Service Handbook.

FSM - Forest Service Manual.

Fuels Management: The practice of planning and executing treatment or control of any vegetative material, which adversely affects meeting fire management direction based upon resource management goals and objectives.

Fuel Treatment - The rearrangement or disposal of natural or activity fuels to reduce the fire hazard. Fuels are defined as both living and deadvegetative materials consumable by fire.

Fuelwood - CFL Fuelwood - Fuelwood generated by timber sales and/or natural mortality of species such as Douglas fir, ponderosa pine, etc., from commercial Forestlands.

PJ Fuelwood - Fuelwood, primarily pinyon pine and juniper, produces primarily in the woodland zone.

Full-service Management - Management of developed recreation facilities and dispersed recreation areas to the established standards and objectives for public service and use.

G

Game species - Any species of wildlife or fish normally harvested by hunters, trappers, and fishermen under State or Federal Law.

Goals - A concise statement of the state or condition that the land and resource management plan is designed to achieve. A goal is usually not quantifiable and may not have a specific date for completion.

Goods and Services - The various outputs produced by forest and rangeland renewable resources, the tangible and intangible values of which are expressed in market and non-market terms.

Grazing Capacity - The maximum number of animals that can graze an area without damage to the vegetation or related resources.

Grazing Permittee - An individual or other legal entity who has been granted a term grazing permit to graze a specified number of livestock for a specific period on a range allotment.

Ground Water - Water in a saturated zone or a geologic stratum.

Group Selection - A modification of the selection silvicultural system in which trees are removed in small groups at a time.

Growing Season - The months of the year a species of vegetation grows.

Growing Stock Level (GSL) - The number or volume of trees growing in a forest or in a specified part of it.

Guideline - Any issuance that assists in determining the course of direction to be taken in any planned action to accomplish a specific objective.

H

Habitat - The natural environment of a plant or animal. The locality where the organism may generally be found, and where all essentials for its development or existence are present. Habitats are described by their geographical boundaries, or with such terms as "shady woodlands", "banks of streams", "dry hillsides", etc.

Habitat Grouping - Grouping of habitat types in logical categories to facilitate resource planning and public presentations.

Habitat Type - An aggregation of all land areas potentially capable of producing similar plant communities at climax.

Harvest Level - The quantity of timber that may be sold from the area of land covered by a Forest Plan for a time period.

Herbicide - A chemical compound used to kill or control growth of undesirable plant species.

Herbivore - An animal that feeds on plant substances.

Human Resource Unit (HRU) - A human geographic area characterized by particular patterns of cultural life-styles, economic conditions, institutional arrangements, and topography.

I

Incidental Grazing - Grazing use that occurs on lands not managed for the production of domestic livestock. May occur as a result of natural herd movement, trailing of livestock, or the use of domestic livestock for recreation.

Indicator Species - A wildlife species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species.

Individual Tree Selection - Involves the removal of selected trees from specified age classes over the entire stand in order to meet predetermined goals of age class and species distribution in the remaining stand.

Integrated Pest Management - A systematic decision making process and the resultant management actions which derive from consideration of pest-host systems and evaluation of alternatives for managing pest populations at levels consistent with resource management objectives. Forest Service Manual FSM 3400.

Integrated Stand Management - A concept used to design timber sales to accomplish multi-resource objectives by utilizing existing and potential vegetation types. Application of ISM results in mosaics of vegetation consisting of stands in different stages of growth and with contrasting conditions, arranged in a manner which satisfies special needs of resources such as wildlife, timber, soil, watersheds, and recreation. Treatments are developed for stands and aggregated into alternatives designed to satisfy various objectives. That alternative which best satisfies objectives is selected and applied on the ground.

A timber stand, as the term is used here, refers to a community of trees with similar characteristics which differentiate it from other communities of trees. Timber stands range in size from 10 to 100 acres, with an optimum size between 20 and 40 acres (aspen stands are often smaller than 10 acres). Each timber sale area consists of a number of stands, some of which are considered possible cutting units. A cutting unit is an area which may receive a specific treatment, for instance removal of an over story. Cutting units may consist of one or more individual stands or may part of a large stand.

Cutting unit boundaries are established by means of a sale area field reconnaissance. Cutting unit boundaries may and often do redefine stand boundaries to facilitate management objectives such as visual quality or dwarfmistletoe management, or activities such as fuels management and timberharvest. Cutting units are assembled into various sets, using an interdisciplinary approach, to create a range of timber sale alternatives. Each alternative is designed to achieve one or more objectives. Cutting unitsare distributed especially to create desired age-class distribution, lessen the area impacted by timber management activities, or to provide habitat diversity for wildlife. Stands not selected for treatment may be scheduled for entry in subsequent ten year timber sale programs.

Typically, foresters delineate timber stands, and by means of extensive examinations, describe present conditions and possible treatments. About three years before the scheduled date of a sale, a reconnaissance is completed and possible cutting units are developed. For instance, a unit might consist of two adjacent dwarf mistletoe-infested stands and the proposed treatment might consist of removing all overstory trees to protect an understory.

An interdisciplinary team, consisting of specialists representing appropriate resources, examines the potential cutting units, and assembles them in combinations to achieve various objectives. For instance, road construction may be minimized in one alternative by selecting only cutting units located in one part of the sale area. All cutting units having a high priority for treatment may be selected, without regard to their distribution, to achieve the objectives of another alternative.

The interdisciplinary team also determines the effects of each alternative on all resources. For instance, concentrating all cutting units in one part of a sale, although it may minimize road construction costs and soil loss, might increase visual impacts and reduce habitat diversity for wildlife. On the other hand, treating all high priority stands may satisfy the objective of creating and maintaining healthy stands, but with significantly higher road costs and reduced habitat diversity.

The responsible official (usually the Forest Supervisor) selects that alternative which best satisfies the objectives for the sale, and at the same time, best achieves the objectives stated in the Forest Plan.

Intensive Grazing - Grazing management that controls distribution of cattle and duration of use on the range, usually by fences, so parts of the range are rested for a prescribed period.

Interdisciplinary Team (ID Team) - Collective participation or two or more disciplines or fields of specialized technical knowledge for natural resources management.

Note: Duplicate glossary terms in the original plan have been removed from this document to avoid confusion and duplication.

Interpretive Services (IS) - Visitor information services designed to present inspirational, educational, and recreational values to Forest visitors to provide the utmost in understanding, appreciation, and enjoyment from their Forest experience.

Issue - See Public Issue.

J

K

K-V Funds - Monies generated from timber sale receipts which are retained for improvements (timber, wildlife, watershed and recreation) on the sale area. Authorized by Kuntson and Vandenberg Act of 1930.

L

Land Exchange - The conveyance of non-Federal land or interests to the United States in exchange for National Forest System land or interests in land.

Land Line - For Forest planning purposes, National Forest property boundaries.

Late Forest Succession - A stage of forest succession where the majority of trees are mature or overmature.

Leasable Minerals - See Minerals, Leasable.

Linear Programming - A mathematical method used to determine the most effective allocation of limited resources between competing demands when both the objective (e.g., profit or cost) and the restrictions in its attainment are expressible as a system of linear equalities or inequalities (e.g., $y = a + bx$).

Local Dependent Industries - Industries relying on National Forest outputs for economic activity.

Local Roads - Roads constructed, maintained, and used for the activities of a given resource element. Some use may be made by other element activities, but normally maintenance is not affected by such use. These roads connect terminal facilities with Forest collector or Forest arterial roads or public highways. The location and standard usually are determined by the requirement of a specific resource activity rather than by travel efficiency. Forest local roads may be developed and operated for constant or intermittent service depending on land use and resource management objectives for the area served bythe facility.

Locatable Minerals - See Minerals, Locatable.

Long-Term Sustained Yield Capacity - The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified intensity of management consistent with multiple-use objectives.

M - Thousand.

MM - Million.

Management Action - Any activity undertaken as part of the administration of the Forest.

Management Area - An area of similar management goals and a common management prescription. Consists of a grouping of capability areas selected through evaluation procedures and used to locate decisions and resolve issues and concerns.

Management Concern - An issue or problem requiring resolution, or condition constraining management practices identified by the interdisciplinary team.

Management Direction - A statement of multiple use and other goals and objectives, the management prescriptions, and the associated standards and guidelines for attaining them.

Management Indicator Species (MIS) - See indicator species.

Management Opportunity - A statement of general actions, measure or treatments that address a public issue or management concern in a favorable way.

Management Practice - A specific measure, action, or treatment.

Management Prescription - Management practices selected and scheduled for application in a specific area to attain multiple use and other goals and objectives.

Mass Movement – Down slope unit movement of a portion of the land's surface, i.e., a single landslide or the gradual simultaneous downhill movement of the whole mass of loose earth material on a slope face.

Mature Timber - Trees that have attained full development, particularly height, and are in full seed production.

MBF - Thousand board feet. A measure of wood volume.

MCF - Thousand cubic feet. A measure of wood volume.

Mean Annual Increment of Growth - The total increment of volume growth per acre, usually expressed in cubic feet per acre, up to a given age, divided by that age. Culmination of mean annual increment (CMAI) of growth is the age at which the mean annual increment is greatest or reaches its highest point.

Mineral Entry Withdrawal - Public lands withdrawn from operations of the general mining laws and/or the mineral leasing laws to protect administrative sites, recreation areas or other areas with special values.

Mineral Exploration - The search for valuable mineral deposits on lands open to mineral entry.

Mineral Production - Extraction of minerals from their deposits.

Minerals, Leasable - Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur (in Louisiana and New Mexico), and a geothermal steam.

Minerals, locatable - Those minerals which are disposed by the mining laws from public domain. May include certain nonmetallic minerals and uncommon varieties of mineral materials. May include any solid, natural inorganic substance occurring in the crust of the earth, except for the common varieties of mineral materials and leasable minerals.

Minimum Stream Flow - A specified level of flow through a channel that must be maintained by the users of a stream for biological, physical, or other purposes.

Mining Claims - That portion of the public estate held for mining purposes in which the right of exclusive possession of locatable mineral deposits is vested in the locator of a claim. It does not convey any ownership right to the land surface except for what is needed for mining purposes.

Monitoring and Evaluation - The periodic evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met and how closely management standards have been applied.

Multiple Use - The management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration given to the relative values of the various resources, and not necessarily the combination of the uses that will give the greatest dollar return.

N

National Environmental Policy Act (NEPA) - An act to declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the nation and to establish a Council on Environmental Quality.

National Forest Management Act (NFMA) - A law passed in 1976, as amendments to the Forest and Rangeland Renewable Resources Act, that requires the preparation of regulations to guide resource development.

National Forest System Land - National Forests, National Grasslands, and other related lands for which the Forest Service is assigned administrative responsibility.

National Recreation Trails (NRT) - Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the national system of trails authorized by the National Trails System Act. National Recreation Trails provide a variety of out door recreation uses in or reasonably accessible to urban areas.

National Register of Historic Places - A listing (maintained by the U.S. National Park Service) of areas which have been designated as being of historic significance. The Register includes places of local and state significance as well as those of value to the nation as a whole.

National Wilderness Preservation System - All lands covered by the Wilderness Act and subsequent wilderness designation, irrespective of the department or agency having jurisdiction.

No Action Alternative - The most likely condition expected to exist in the future if current management direction would continue unchanged.

Noncommodity Outputs - Use of a resource that does not reduce the supply, such as many types of recreation.

Nonconsumptive Use - Use of a resource that does not reduce the supply, such as many types of recreation.

Nondeclining Yield - A level of timber production planned so that the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade.

Nongame - Any species (wildlife or fish) not formally recognized or designated by the State of New Mexico as game or endangered.

Notice of Intent - Written notice to the authorized Forest Officer by those who intend to engage in mining activity on the Forest that may cause significant surface disturbance.

O

Objective - A specific statement of measurable results to be achieved within a stated time period. Objectives reflect alternative mixes of all outputs or achievements which can be attained at a given budget level. Objectives may be expressed as a range of outputs..

Occupancy Trespass - The illegal occupation or possession of National Forest land or property.

Road Vehicle Use (ORV) - Use of vehicles off of National Forest development roads, trails, travel ways, and developed sites.

Old Growth - A stand that is past full maturity and showing decadence. 15 or more live trees per acre over 21 inches D.B.H. and with 0.5 snags per acre over 21 inches D.B.H. Two or more canopy levels with overstory closure of 10-40%, usually with a shrub-sapling layer combined exceeding 70% closure. Logs obvious on the ground.

Operations Plan - A written plan, approved by a Forest Officer, prepared by those engaged in mining activity on the Forest for prospecting, exploration, extraction and mineral processing activities that will likely cause a significant disturbance of surface resources; includes a description of methods to minimize disturbance and reclamation plans.

Outputs - The goods, services, products, and concerns which are measurable and capable of being use to determine the effectiveness of programs and activities in meeting objectives. Also goods, end products, or services that are purchased, consumed, or utilized directly by people. A broad term for describing any result, product, or service that a process or activity actually produces.

Overmature Timber - Trees that have attained full development, particularly in height, and are declining in vigor, health, and soundness.

Overstory - That portion of the trees in a forest of more than one story, forming the upper or upper-most canopy.

P

Patented Mining Claim - A patent is a document which conveys title to land. When patented, a mining claim becomes private property and is land over which the United States has no property rights except as may be reserved in the patent. After a mining claim is patented, the owner does not have to comply with requirements of the General Mining Law or implementing regulations.

Permit Grazing - Use of a National Forest range allotment under the terms of a grazing permit.

Personal Income - Income earned by all households within a region (salaries, wages. profit, rent, royalties, interest, etc.)

Persons At One Time (POAT) - A recreation capacity measurement term indicating the number of people that can use a facility or area at one time.

Person-Year - Approximately 2,000 working hours. May be filled by one person working year long or several people filling seasonal positions.

Planned Ignition –the intentional initiation of a wildland fire by hand-held, mechanical or aerial device where the distance and timing between ignition lines or points and the sequence of igniting them is determined by environmental conditions (weather, fuel, topography), firing technique, and other factors which influence fire behavior and fire effects (see prescribed fire).

Planning Area - The area covered by a Regional or Forest Plan.

Planning Criteria - Standards, tests, rules, and guidelines by which the planning process is conducted and upon which judgements and decisions are based.

Planning Period - The 50-year time frame (1980-2020) for which goods, services, and effects were projected in the development of the Forest Plan.

Planning Question - A major policy question of long range significance, derived from the public issues and management concerns, to be decided when selecting among alternative Forest plans.

Planning Record - A system that records decision and activities that result from the process of developing a forest plan, revision or significant amendment.

Practical Capacity - The effective upper use limit of recreation. It is 40 percent of theoretical capacity and is based upon usable versus unusable acres, weekend versus weekday use and peak season versus low use season.

Preferred Alternative - The alternative recommended for implementation as the Forest Plan based on the evaluation completed in the Planning process.

Preparatory Cut - Removal of trees near the end of a rotation so as to open the canopy and enlarge the crowns of seed bearers, with intent to improve conditions for seed production and natural regeneration, as typically in shelterwood systems.

Prescribed Fire - Any fire ignited by management actions to meet specific objectives. Prescribed fires are conducted in accordance with prescribed fire plans. Prescribed fires are conducted to dispose of slash or fuels, control unwanted vegetation, or stimulate grasses, forbs, shrubs or trees for range, wildlife, recreation, or timber management purposes.

Prescribed Fire Plan - A plan for each prescribed fire. Plans are documents prepared by qualified personnel, approved by the agency administrator, and include criteria for the conditions under which the fire will be conducted (a prescription).

Prescription - See Management Prescription.

Presuppression - Activities required in advance of fire occurrence to ensure effective management action.

Primitive Road - A two track road that has evolved primarily through use by off-road, high clearance vehicles. Usually no planning, design, or construction has occurred and the road snakes its way between obstacles to reach the user's destination.

Production - Removal (by mining) of ore from ground for processing and/or sale, also pumping of a well.

Productive Potential - The largest possible amount of output that are source can supply without degrading the production capability of the resource.

Program Development and Budgeting - The process by which activities for the Forest are proposed and funded.

Programmed Harvest - The volume that is scheduled for harvesting. It is based on current demand, funding, and multiple use considerations.

Proposed Action - In terms of the National Environmental Policy Act, the project, activity, or decision that a Federal agency intends to implement or undertake which is the subject of an environmental impact statement.

Prospecting - A somewhat narrower scope of mineral search of exploring (a region), i.e., one mountain range, valley, drainage system, etc.

Public Access - Usually refers to a road or trail route over which a public agency claims a right-of-way available for public use.

Public Issue - A subject or question of widespread public interest relating to management of the National Forest System lands identified through public participation.

Q

Quad Maps - Standard U.S. Geological Survey quadrangle maps.

R

Range Allotment - A designated area of land available for livestock grazing upon which a specified kind and number of livestock may be grazed. It is the basic land unit used to facilitate management of the range resource on National Forest System and associated land administered by the Forest Service.

Range Condition - The state of health of the range based on what it is naturally capable of producing.

Range Improvement - Any structure or nonstructural improvement to facilitate management of range lands or livestock.

ÌRange Suitability - Land which is suitable for range, i.e., has allowable capacity. This is terrain which is or has potential to be grazed by domestic livestock on a sustained-yield basis under reasonable management goals.

Rangeland - Land where the vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for livestock grazing and browsing.

Range District - Administrative subdivision of the Forest supervised by a District Range who reports to the Forest Supervisor.

Real Income - Income based on real dollar values (values from which the effect of change in purchasing power of the dollar over time has been removed).

Record of Decision - A document separate from, but associated with an environmental impact statement that publicly and officially discloses the responsible official's decision on which alternative assessed in the Environmental Impact Statement to implement.

Recreation Information Management (RIM) - The Forest Service system for recording recreation facility condition and use.

Recreation Opportunity Spectrum (R0S) - A method of delineating types of recreation settings and experience opportunities. There are six ROS settings (primitive is not evident on the Lincoln National Forest.

Primitive - An essentially unmodified natural environment of a size or remoteness that provides significant opportunity for isolation from the sights and sounds of man, and a feeling of vastness of scale. Visitors have an opportunity to be part of the natural environment, encounter a high degree of challenge and risk, and use a maximum of out door skills but have minimum opportunity for social interaction.

Semi-primitive Nonmotorized - A predominantly unmodified natural environment of a size and location that provides a good to moderate opportunity for isolation from sights and sounds of man. The area is large enough to permit overnight foot travel within the area and present opportunities for interaction with the natural environment with moderate challenge, risk, and use of a high degree of outdoor skills. Motorized use is not present.

Semi-primitive Motorized - A natural or natural appearing environment. Concentration of users is low but there is evidence of other users. Vehicle travel is on primitive roads and trails on areas of moderate to large size.

Roaded Natural - A predominantly natural environment where the evidence of the sights and sounds of man is moderate, but in harmony with the natural environment. Opportunities exist for both social interaction and moderate isolation from sights and sounds of man.

Rural - A substantially modified natural environment. Sights and sounds of man are evident. Renewable resource modification and utilization practices enhance specific recreation activities or provide soils and vegetative cover protection.

Urban - An urban environment but with a background that may appear natural. Sights and sounds of humans are predominant with large numbers of people.

Recreation Residences - Houses or cabins on National Forest land that are not the primary residence of the owner.

Recreation Visitor Day (RVD) - A unit for measuring recreation activities which aggregate 12 visitor hours. May consist of one person for 12 hours, 12 persons for one hour, or any equivalent combination of continuous or intermittent recreation use by individuals or groups.

Reduced-Service Management - Management of developed recreation facilities and dispersed recreation areas below the established standards and objectives for public service and use.

Reforestation - The planting of seedlings, transplants, tree seeds, or for certain species, cuttings, for the establishment of a forest stand or tree cover.

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also the young crop itself.

Region - For regional planning purposes, the standard administrative region of the Forest Service administered by the responsible official for preparing a regional plan.

Regional Forester - The official responsible for administering a single region.

Regional Land and Resource Management Plan - The plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given region. It also disaggregates the RPA objectives for the Region to the Forests within the region.

Regulated Timber - Timber on commercial forest land that is included in the base used for calculating annual harvest.

Research Natural Area (RNA) - An area set aside by the Forest Service to preserve a representative sample of an ecological community; primarily for scientific and educational purposes. Commercial exploitation is not allowed and general public use is discouraged.

Resource Allocation Model - A mathematical model using linear programming which will allocate land to prescriptions simultaneously. The end purpose of the model is to find a schedule and allocation that meets the goals of the Forest and optimizes some objective function such as "minimize costs."

Resource Management Plan - A plan developed prior to the Forest Plan, that outlined the activities and projects for a particular resource element independently of considerations for other resources. Such plans are superseded by the Forest Plan.

Rights-of-Way (ROW) - Easements in the lands of other obtained for public access by donation, purchase, or condemnation. Generally does not apply to absolute purchase of ownership.

Riparian - Land areas which are directly influenced by water. Usually they have visible vegetative or physical characteristics showing this water influence. Stream sides, lake borders, or marshes are typical riparian areas.

Road Maintenance levels -

> Level 1. Basic custodial care as required to protect the road investment and to ensure the damage to adjacent land and resources is held to a minimum. Level 1 maintenance often requires an annual inspection to determine what work, if any, is needed to keep drainage functional and the road stable. This level is the normal prescription for roads that are opened for traffic. Level 1 is to maintain drainage facilities and runoff patterns.

Level 2. Basic custodial care plus logging out, brushing out, and restoring road prism as necessary to provide passage, and maintenance of route markers and regulatory signs. This level is used on roads where management requires that the road be open for limited passage of traffic. Traffic is normally minor, usually consisting of one or a combination of administrative use, permitted use, or specialized traffic.

Level 3. Maintenance of roads for safe and moderately convenient traffic suitable for passenger cars. This level is used on roads which are opened for public traffic and generally applies when use does not exceed 15 average daily traffic (ADT). ADT should be used as a guide in determining the level and not as a sole criterion. A road may receive only one or two vehicles a day for most of the year. However, during a brief period, such as hunting season, the road may receive 20 to 30 vehicles.

Level 4. This level generally applies when use of a road is between 15 ADT and 100 ATT (See comment concerning ADT under Level 3). At this level, more consideration is given to the comfort of the user. These roads are frequently surfaced with aggregated material, but some routes may be paved because of limited aggregate sources and surface replacement cost factor.

Level 5. This level is generally maintained for use of 100 ADT and greater (see comment concerning ADT under Level 3). Roads in this category include both paved and aggregated surfaces. Safety and comfort are important considerations. Abrupt changes in maintenance shall be posted to warn travelers until deficiencies are corrected.

Roadless Area Review and Evaluation (RARE II) - The assessment of "primitive" areas within the National Forests as potential wilderness areas as required by the National Wilderness Act. This refers to the second such assessment which was documented in the final environmental impact statement of the Roadless Area Review and Evaluation, January 1979.

Rotation - The planned number of years between the formation or regeneration of a crop stand and its final cutting at a specified stage of maturity.

Roundwood - Timber and fuelwood manufactured in the round state--from felled trees to material trimmed, barked and crosscut, e.g., logs, transmission poles, and pulpwood.

RPA - See Forest and Rangeland Renewable Resources Planning Act.

S

Salvage - The harvesting of trees that are dear, dying, or deteriorating (e.g., because overmature or materially damaged by fire, wind, insects, fungi, or other injurious agents) before their timber becomes worthless.

Sawtimber - Trees suitable in size and quality for producing logs that can be processed into lumber. For planning purposes in the Forest, trees with nine inch or greater diameter were classified as sawtimber.

Sedimentation - The deposition of fragmental material transported by or suspended in water.

Seed Tree Cut - Similar to clear-cutting except that a few of the better trees are left scattered over the area to provide seed for regeneration.

Sensitive species - Those species which (1) have appeared in the Federal Register as nominations or proposals for classification and are under consideration for official listing as endangered or threatened species, or (2) are recognized by the Regional Forester to need special management to prevent the need for their replacement on Federal or State lists.

Sensitivity Level - Degree or measure of viewers interest in the same qualities of the landscape.

Seral - The plant and animal community which is the transitional stage of succession. If left alone, the seral stage will pass, and another plant and animal community will replace it. Aspen represents a seral stage that would eventually be replaced by conifers such as spruce.

Shelterwood Cutting - A regeneration method under an even-aged silvicultural system. A portion of the mature stand is retained as a source of seed and/or protection during the period of regeneration. The mature stand is removed in two or more cuttings.

Simulated Shelterwood - A cutting method that removes the overstory in one or more cuts from fully stocked understory of advanced regeneration. This method is used in

stands of existing, unplanned regeneration.

Silvicultural System - The entire process by which forest stands are tended, harvested, and replaced. It includes all cultural practices performed during the life of the stand such as thinning, salvage and regeneration cutting. Silvicultural systems can be distinguished as either even or uneven-aged.

Site Preparation - Removing unwanted vegetation and debris from a site and preparing the soil before reforestation by chemical or mechanical means.

Slash - The residue left on the ground after felling and other silvicultural operations and/or accumulating there as a result of storm, fire, girdling, or poisoning.

Small Game - Birds and small mammals normally hunted or trapped.

Snag - A standing dead tree.

Soil Productivity - The capacity of soil to produce a specific crop such as fiber, forage, etc., under defined levels of management. It is generally dependent on available soil moisture and nutrients and length of growing season.

Special Use Permits - Permits, memorandums of understanding, and granting of easements authorizing the occupancy and use of land.

Stand - A group of trees of uniform species composition, age, condition and arrangement.

Standard - A principal requiring a specific level of attainment; a rule to measure against.

Standard Service Level (SS) - A level of service in recreation areas which provides an optimal level of operation and maintenance. For developed sites this includes hazard removal, periodic patrol during high-use periods, and cleaning sites in accordance with the USDA publication, "Cleaning Recreation Sites." In dispersed areas, this includes periodic patrol and litter pick-upon high use trails and areas, monitoring of use, imposing user restrictions where appropriate and necessary, and minor repair of resource damage.

State Endangered Species - Species whose prospects of survival or recruitment within the state are in jeopardy (Group I) or are likely within the foreseeable future to become so. (Group II).

Subdivisions - Areas divided into individual home sites and/or blocks of lot with streets or roads and open spaces.

Successional Stage - A place in the gradula supplanting of one community of plants by another.

Suitability - The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses forgone. A unit of land may be suitable for a variety of individual or combined management practices.

Sustained Yield - The achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of the National Forest without impairment of the productivity of the land.

Targets - Objectives assigned to the Forest by the Regional Plan.

Theoretical Capacity - A measure of maximum potential supply for recreation based upon each acre of the forest being utilized at its upper physical and/or social capacity limit.

Threatened Species - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been designated in the Federal Register by the Secretary of the Interior as a threatened species.

Timber - A general term for the major woody growth of vegetation in a Forest area.

Timber Base - The lands within the Forest suitable for timber production.

Timber Production - The growing, tending, harvesting, and regeneration of regulated crops of industrial wood. Industrial wood includes logs, bolts, or other round selections cut from trees for industrial or consumer use.

Timber Stand Improvement (TSI) - The elimination or suppression of the less desirable vegetation in favor of the more desirable tree growth. It includes thinning, clearing, weeding and release cutting.

Trailhead - The parking, signing, and other facilities available at the terminus of a trail.

Trail Maintenance -

Level 1 - Trails maintained for primitive experience level. Custodial care only. No tread maintenance. Drainage functional and not likely to fail. Trail sides not brushed but tread is kept passable. Small slides may remain except for those with erosion potential. Structures maintained as needed.

Level 2 - Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structures may be provided at stream crossings. Drainage same as Level 1. Signing at a minimum level commensurate with level of trail use.

Level 3 - Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as Level 1. Trail-sides brushed out at Handbook standards. Structures maintained to original design standards. Signing same as Level 2.

Level 4 - Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm, and may require stabilization. Signing at high level, all other elements same as Level 3. These trails are generally maintained for family or senior citizen use.

Level 5 - Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for the handicapped, etc. Basic care same as Level 4, but patching of paved tread may be needed annually. Trail sides maintained to meet high visual quality standards by brushing and clean-up of debris beyond the trail limits. Vista are maintained.

U

Understory - The trees and other woody species growing under a more or less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth.

Uneven-aged Management - The combination of actions that result in the creation of forests in which trees of several or many ages may grow together.

Unregulated Timber - Timber on commercial forest land that is not included in the base used for calculating annual harvest because of the preponderance of other re source values such as recreation, aesthetics, endangered species habitat, etc.

Utilization Standards - Standards guiding the use and removal of timber.

V

Variety Class - A classification system for establishing three visual landscape categories according to the relative importance of the visual features. This classification system is based on the premise that all landscapes have some visual value, but those with the most variety or diversity of visual features have the greatest potential for having or attaining high scenic value.

Vegetation Treatment - Any activities undertaken to modify the existing condition of the vegetation.

Vertical Diversity - The distribution and abundance of different plant and animal communities from the ground level up.

Vigas - Heavy rafters, often a log used to support the roof of Spanish colonial architecture of the southwest.

Visual Absorption Capability - The ability of the landscape to conceal evidence of human modification. Rated as high, moderate, and low.

Visual Quality Objectives (VQO) - Measurable standards for the management of visual resources of the landscape. Refers to the degree of acceptable alterations of the characteristic landscape based on the importance of aesthetics. Objectives used in the Proposed Plan are:

Preservation - Provides for ecological change only.

Retention - Man's activities are generally not evident to the casual visitor.

Partial Retention - In general man's activities may be evident but must be subordinate to the characteristic landscape.

Modification - Man's activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color and texture. Man's activities should appear as natural occurrences when viewed from foreground or middle ground.

Maximum modification - Man's activity may dominate the characteristic landscape but should appear as natural occurrences when viewed as background.

Visual Resource - The composite of basic terrain, geological features, water features, vegetative patterns, and land use effect that typify a land unit and influence the visual appeal the unit may have for visitors.

W

Water Rights - Rights given by State government for the diversion an use of water.

Watershed - A land area which collects and discharges excess surface water through a single outlet.

Water Yield - The measured output of the Forest's surface water, usually measured in acre-feet.

Wetland - Land where water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.

Wilderness - All National Forest lands included in the National Wilderness Preservation System; an area where the earth and it community of life are untrammeled by man, where man himself is a visitor who does not remain.

Wilderness Study Area (WSA) - One of the areas selected by Congress from an inventory of unroaded and undeveloped national forest lands as having apparent high qualities for wilderness. The areas are studied during the land management planning process to determine whether they should be recommended for addition to the National Wilderness Preservation System.

Wildfire – unplanned ignition of a wildland fire (such as a fire caused by lightning, volcanoes, unauthorized and accidental human-caused fires) and escaped prescribed fires. (See unplanned ignition).

Wildland Fire – a general term describing any non-structure fire that occurs in the wildland.

Wildland Fire Use - The management of wildland fires to accomplish specific pre-stated resource management objectives in pre-defined geographic area outlined in Fire Management Plans.

Wildland Urban Interface (WUI) – The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels.

Wildlife - All non-domesticated mammals, birds, reptiles, and amphibians living in a natural environment, including both game species and non-game species. Animals, or their progeny, which one were domesticated but escaped captivity and are running wild (i.e., feral animals), such as horses, burros, and hogs, are not considered wildlife.

Wildlife Habitat Diversity - The distribution and abundance of different plant and animal communities and species within a specified area.

Withdrawal - An order removing specific land areas from availability for certain uses.
Woodland - Pinyon, oak and juniper forest usually growing at low elevations (less than 7500 feet).

APPENDIX A

ACTIVITY CODE INDEX

	Primary Code	
	A01	Recreation Planning and Inventory
	A02	Cultural Resource Management
	A03	Visual Resource Inventory and Planning
	A04	Visual Resource Improvement
	A05	Recreation or VIS (Visitor Interpretive Services)
Site Construction		
	A06	Recreation or VIS Site Rehabilitation
	A07	Visual Information Services--Planning
	A08	VIS--SSM (Standard Service Management).
	A09	VIS--LSM (Less than Standard Service Management)
	A11	Developed Recreation --SSM
	A13	Developed Recreation--LSM
	A14	Dispersed Recreation--SSM
	A15	Dispersed Recreation--LSM
	A16	Recreation Management
	B01	Wilderness Area--Planning and Inventory
	B02	Wilderness Area--SSM
	BO3	Wilderness Area--LSM
	C01	Fish and Wildlife Prescriptions
	C02	Fish and Wildlife Impact Studies
	CO3	Nonstructural Wildlife Habitat Improvement
	C04	Nonstructural Fish Habitat Improvement
	C05	Nonstructural T&E Plant Habitat Improvement
	C07	Structural Fish Habitat Improvement
	C08	Structural T&E Plant Habitat Improvement
	C09	Wildlife Habitat Maintenance
	C10	Fish Habitat Maintenance
	C11	T&E Plant Habitat Maintenance
	C12	Fish and Wildlife Cooperative with State
	C13	Habitat Access Controlled by Closure
	D01	Range Resource Inventory and Planning
	D02	Range Resource Management
	D03	Range Forage Improvement
	D04	Range Forage Improvement Maintenance
	D05	Range Structural Improvement
	D06	Maintenance of Range Structural Improvements.

E00	Timber Resource Planning and Inventory
E03	Silvicultural Examination and Prescriptions
E04	Reforestation
E05	Timber Stand Improvement
E06	Timber Sale Preparation
E07	Timber Harvest Administration
E08	Nursery Management
E09	Genetic Forest Tree Improvement Program
F01	Water Resource Inventory
F02	Water Resource Inventory
F03	Water Resource Monitoring
F04	Water Uses Management
F05	Water Resource Improvement
F06	Water Resource Improvement Maintenance
G01	Mining Law Compliance and Administration
GO2	Minerals Management - Oil and Gas
G03	Minerals Management--Coal
G04	Minerals Management--Geothermal
G05	Minerals Management--Uranium
GO6	Minerals Management--Nonenergy
GO7	Minerals Management --Minerals Materials
GO9	Mined Area Reclamation
G10	Mineral Character or Potential Evaluation
G11	Geological Planning and Inventory
J01	Special Use Management (Nonrecreation)
J02	ROW Grants for Roads and Trails
J03	Federal Energy Regulatory Commission License and Permits
J04	Withdrawals, Modifications, and Revocations
J05	Land Status Management
J06	Property Boundary Location
J07	Property Boundary and Corner Maintenance
J09	Other Land Title Claims Management
J10	Encroachment
J11	Land Ownership Planning/Land Classification
J12	Land Adjustment Planning
J13	Land Exchange
J15	Land Acquisition
J18	ROW Acquisition
J22	Forest Land and Resource Planning
K01	Soil Resource Inventory
K03	Soil Resource Planning
K04	Soil Monitoring
K05	Soil Resource Improvement Maintenance

L01	Transportation System Planning and Inventory
L02	Arterial Road Preconstruction
L03	Arterial Road Construction Engineering
L04	Arterial Road Construction
L05	Arterial Road Reconstruction
L06	Collector Road Preconstruction
L07	Collector Road Construction Engineering
L08	Collector Road Construction
L09	Collector Road Reconstruction
L10	Local Road Preconstruction
L11	Local Road Construction Engineering
L12	Local Road Reconstruction
L13	Timber Purchaser Road Construction
L15	Timber Road Construction Supplementation and Contribution
L16	Bridge and Major Culvert Construction Engineering
L18	Bridge and Major Culvert Construction/Reconstruction
L19	Road Maintenance
L20	Trail Inventory and Planning
L21	Trail Reconstruction
L22	Trail Construction/Reconstruction
L23	Trail System Management
L24	FA&0 Construction/Reconstruction
L25	FA&0 Facility Maintenance
L26	FA&0 Radio Maintenance
L27	Radio Sustem Replacament/Expansion
L28	Dam Administration and Management
L29	Timber Purchaser Road Reconstruction
L30	Potable Water Systems Construction/Reconstruction
L31	Potable Water Systems Operation and Maintenance
P01	Fire Management Planning and Analysis
P02	Fire Prevention
P03	Fire Detection
P04	Primary-Initial Attack Forces
P07	Forest Fire Support and Facility Service
P08	Initial Attack Fire Suppression Action
P10	Fuel Management Inventory
P11	Treatment of Activity Fuels
P12	Treatment of Natural Fuels
P13	Fuelbreak Construction
P14	Fuel Treatment Area Maintenance
P15	Vegetation Treated by Burning
P16	Air Resource Management
P17	Air Quality and Visibility Coordination
P19	Aerial Transport of Personnel
P20	Aerial Transport of Goods
P21	Aerial Applications of Materials
P22	Aerial Platform

P24	Law Enforcement
P25	Cooperative Law Enforcement
P27	Cooperative Search and Rescue
P34	Insect and Disease Management-Surveys and TechnicalAssistance
P35	Insect and Disease Management-Suppression
P36	Insect and Disease Management Plan Inputs
T01	Program Management
T02	General Administration
254	Administration of Water Uses
255	Water Uses Inventory
306	Cultural Resources Inventory
443	Plant and Replant on Prepared Site or Without SitePreparation
447	Site Preparation for Planting
449	Site Preparation for Natural Regeneration
479	Free Use and Administration of Free Use and All AssociatedActivities
552	Soil Resource Inventory --Order 3
779	FA&0 Structure Maintenance
921	Administration, Maintenance and Operation of Recreation and VIS Potable Water System

B. MANAGEMENT OF TRANSPORTATION SYSTEM

The transportation system on the Forest will be managed to provide adequate access for public use and administrative needs while reducing resource losses and optimizing management costs. This will involve several actions. The most important action is the closing of duplicate routes. Three methods exist:

Restoration - complete closure including returning the route to original ground contours and seeding. To be used in areas of great visual significance.

Obliteration - complete closure with only structures removed, drainage returned to original and seeded. To be used where further use of the route is not foreseen.

Put-to-bed - route is moved to Level 1 maintenance, drainage enhanced and physical barriers or signs erected. To be used for roadways where future use is foreseen.

All opportunities will be taken to involve State, County and local governments, through the use of cooperative agreements, in the management and maintenance of routes that are logically their responsibility. Specific users (i.e., Federal agencies, special use permit holders and major users of a particular route) will be encouraged to participate in Road Use Permits or Agreements as a means of sharing or redeeming maintenance responsibilities.

Routes will be managed according to "road or trail management prescriptions" as a means of reducing resource impacts and optimizing available funding. Certain routes will be managed for "single tract use" (i.e., hikers, trail bikes and horses).

A Forest "ORV Policy" will be instituted which restricts motor vehicle travel to designated "Open System" roads and trails. However, no motor vehicle travel will be allowed within wilderness areas of semi-primitive non-motorized (see Management areas 1E, 2B, 2C, and 4U) and on the following trails: Dog Canyon, La Posada Encantada and Mitt-Bar. Vehicles may travel to and from dispersed camping sites less than 300 feet from open system roads and trails. **Access to dispersed camping sites may be identified and designated beyond the 300 foot limit in specified areas. Any request for these areas will be addressed in an expeditious manner.** Snowmobiles are allowed off the designated open system, but may be restricted from certain areas; e.g., campgrounds, wildlife habitat, endangered species areas, etc.

DESIGNATED SYSTEM

The designated transportation system will consist of 2,950 miles of roads and trails of which 2,270 miles will be open for use. The summary below contains system statistics of interest:

Transportation System:	2,950 miles existing
	2,950 miles proposed

A net of change of 10 miles results from elimination of some routes (a total decrease of 110 miles of roads) and addition of 100 miles of trails.

Open Transportation System: 2,960 miles existing
2,270 miles proposed

The 690 mile difference includes the net decrease of 10 miles mentioned above plus 680 miles of roads that will be placed in Level 1 maintenance (put-to-bed for future use).

Road System: 2,720 miles existing
2,590 miles proposed

There will be a net decrease of 130 miles due to elimination of some roads and addition of others.

Open Road System: 2,720 miles existing
2,080 miles proposed

The 640 mile net decrease is the result of an addition of 40 miles and placement of 680 miles in "put to bed" status.

Open Trail System: 237 miles existing
360 miles proposed

The 123 mile increase results from converting some retained travelways to single tract use and inclusion of some routes in the managed system.

The designated system will be reviewed periodically and adjustments made for Changing conditions. Designated system roads and trails are classified by type and maintenance level. Travelways are classified as local roads and are in either maintenance levels 1 or 2.

ROAD SYSTEM

The current road system is classified according to intended function and maintenance level. Function classification are:

Forest Arterial Roads - These provide service to large land areas and usually connect with public highways or other Forest arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than specific resource-management service. They are usually developed and operated for long-term land and resource-management purposes and constant service.

Forest Collector Roads - These serve smaller land areas and are usually connected to a Forest arterial or public highway. They collect traffic from Forest local roads or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs, as well as travel efficiency. Forest collector roads may be operated for either constant or intermittent service, depending on land-use and resource management objectives for the area served by the facility.

Forest Local Roads - These roads connect terminal facilities (FSM 7705.24) with Forest collector or Forest arterial roads, or public highways. The location and standard are usually determined by that required to serve a specific resource activity, rather than travel efficiency. Forest local roads may be developed and operated for either long- or short-term service.

ROAD MAINTENANCE LEVELS

Level 1. Basic custodial care are required to protect the road investment and to see the damage to adjacent land and resources is held to a minimum. Level 1 maintenance often requires an annual inspection to determine what work, if any, is needed to keep drainage functional and the road stable. This level is the normal prescription for roads that are opened for traffic. Level 1 is to maintain drainage facilities and runoff patterns.

Level 2. Basic custodial care plus logging out, brushing out, and restoring road prism as necessary to provide passage, and maintenance of route markers and regulatory signs. This level is used on roads where management requires that the road be open for limited passage of traffic. Traffic is normally minor, usually consisting of one or a combination of administrative use, permitted use, or specialized traffic.

Level 3. Maintenance of roads for safe and moderately convenient traffic suitable for passenger cars. This level is used on roads which are opened for public traffic and generally applies when use does not exceed 15 average daily traffic (ADT). ADT should be used as a guide in determining the level not as a sole criterion. A road may receive only one or two vehicles a day for most of the year. However, during a brief period, such as hunting season, the road may receive 20 to 30 vehicles.

Level 4. This level generally applies when use of a road is between 15 ADT and 100 ADT (see comment concerning ADT under Level 3). At this level, more consideration is given to a comfort of the user. These roads are frequently surfaced with aggregated material, but some routes may be paved because of limited aggregate sources and surface replacement cost factor.

Level 5. This level is generally maintained for use of 100 ADT and greater (see comment concerning ADT under Level 3). Roads in this category include both paved and aggregated surfaces. Safety and comfort are important considerations. Abrupt changes in maintenance shall be posted to warn travelers until deficiencies are corrected.

C. FOREST-WIDE STANDARDS AND GUIDELINES FOR FEDERAL AND STATE THREATENED AND ENDANGERED SPECIES

Habitat management for Federally-listed species will take precedence over unlisted species. Habitat management for endangered species will take precedence over threatened species. Habitat management for sensitive species will take precedence over all other species.

ALL SPECIES

1/ Protect and manage essential and critical habitats of threatened, endangered, and sensitive species through ensuring that legal and biological requirements of designated plant and animal species are met; further, identify data needs for threatened, endangered, and sensitive species.

1/ Identify, protect and enhance existing and potential habitat of all T&E and sensitive species.

1/ Activities likely to cause disturbance, including public use, will be prohibited in the vicinity of any essential habitat for T&E species.

CO1, CO2 C11, C12	Evaluate the need for consultation with the U.S. Fish and Wildlife Service when management practices are proposed which are likely to cause disturbance to T&E species and/or their habitat.
C01, C02 C03, E00 E03, E05 E07, J01, P11 P12, P13	Provide for bald eagle winter roost requirements in known. eagle habitat by retaining or recruiting snags in those. areas.
C01, C02 C12, EO5 E07, E00, P11 P12, P14	Discourage fuelwood gathering activities within salamander habitat.
C0l, C08 C11, C12	Manage T&E species habitats in a manner consistent with all Management, Recovery Plans and Action Plans.
C02, C12	Consult and cooperate with New Mexico Department of Game and Fish to achieve management objectives for State listed T&E species.
C02, C05 C08, C11 C12, E05 E07	Manage T&E species to attain total recovery levels overtime. Existing and proposed T&E species that have been found on the forest are noted by Management Area in Table 14. Evaluations will be made to ascertain desirability or re-introduction of endangered native species to suitable habitat not presently occupied.

C02, CO8 C11, C12 E00, E07 P11, P12 P14	In cooperation with other agencies, determine habitat requirements for Sacramento Mountain salamander affected by timber harvest, including canopy cover and density of down logs and small residual material. Until specific requirements are determined and appropriate standards established, the following interim guidelines will apply: Unmerchantable downed conifer logs > 4" dbh should be left having maximum contact with the soil. Preferred log density should provide a spacing of one meter. Measures for log recruitment should be taken. Slash cleanup after harvest should be restricted to material < 4" in diameter. If adequate log densities are not available on the site, then material > 4" should remain as cover. Prescribed burning will be avoided until known fire effects are documented. Timber harvest activities will occur during periods when the salamanders are underground, and methods will be used which minimize ground disturbances.
C02, C07 C10, C11 F04. F05	Protect and improve riparian and wetland areas to provide a suitable aquatic environment for threatened and endangered species using measures such as log dams, rock fence structures, tree, shrub and hydrophyte plantings, etc.
C06, C07, C10 F03, F04, F05 F06	Determine sources of water quality degradation when water quality may effect threatened and endangered species habitat. Remedy the situation where needed.
C11, C12 P35, P36	Prohibit use of pesticides, herbicides or other contaminants harmful to any T&E species present on the project area or areas affecting prey base.

In the event new species or new population of known species are identified to occur in the planning area, the Forest Plan will be modified to accommodate protection or enhancement of such species and/or their habitat.

Mexican Spotted Owl Standards and Guidelines

Standards and guidelines to be added to each forest plan for Mexican spotted owl habitat, northern goshawk habitat, grazing utilization, and old growth designation follow. Standards and guidelines are the bounds or constraints within which all management activities are to be carried out in achieving forest plan objectives. The following standards and guidelines are packaged in parallel format. Parallel format means that a set of standards is described first which gives the primary constraint. Following the standards are guidelines that provide additional details on how each standard will be implemented. For example, one of the Mexican spotted owl standards is to "Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989."

The corresponding guidelines read, "Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided."

"The Protected Activity Center boundary should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest or activity center located near the center."

"The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat."

"Protected Activity Center boundaries should not overlap."

"Submit protected activity center maps and descriptions to the recovery unit working group for comment as soon as possible after completion of surveys."

As the foregoing example shows, the guidelines are the detailed Information about implementation of the standards. While standards and guidelines both specify the management bounds and constraints, the standards contain no discretionary elements and the guidelines may occasionally contain discretionary elements. For example, one of the Mexican spotted owl guidelines is "The Protected Activity Center should enclose the best possible owl habitat...." The terms "should" and "best" imply some discretion on the part of the person implementing the guideline,

MEXICAN SPOTTED OWL

Standards: Provide three levels of habitat management -protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape.

Protected areas include delineated protected activity centers; mixed conifer and pine-oak forests with slopes greater than 40% where timber harvest has not occurred in the last 120 years; and reserved lands which include wilderness, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas.

Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas.

Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forests outside protected and restricted areas.

Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area 1/2 mile beyond the perimeter of the proposed treatment area.

Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989.

Allow no timber harvest except for fuel wood and fire risk abatement in established protected activity centers. For protected activity centers destroyed by fire, windstorm, or other natural disaster, salvage timber harvest or declassification may be allowed after evaluation on a case-by-case basis in consultation with US Fish and Wildlife Service.

Allow no timber harvest except for fire risk abatement in mixed conifer and pine-oak forests on slopes greater than 40% where timber harvest has not occurred in the last 20 years.

Limit human activity in protected activity centers during the breeding season.

In protected and restricted habitat areas, when activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements, consult with the U.S. Fish and Wildlife Service to resolve the conflict.

Monitor changes in owl populations and habitat needed for de-listing.

Guidelines:

A. GENERAL

Conduct surveys following Region 3 survey protocol.
Breeding season is March 1 to August 31.

B. PROTECTED AREAS

Protected Activity Center: Delineate an area not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided.

The Protected Activity Center boundary should enclose the best possible owl habitat configured In as compact a unit as possible, with the nest or activity center located near the center.

The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat.

Protected Activity Center boundaries should not overlap.

Submit protected activity center maps and descriptions to the recovery unit-working group for comment as soon as possible after completion of surveys.

Road or trail building in protected activity centers should be avoided but may be permitted on a case-by-case basis for pressing management reasons.

Generally allow continuation of the level of recreation activities that was occurring prior to listing.

Require bird guides to apply for and obtain a special use permit. A condition of the permit shall be that they obtain a sub-permit under the U.S Fish and Wildlife Service Master endangered species permit. The permit should stipulate the sites, dates, number of visits, and maximum group size.

Harvest fuel wood when it can be done in a way that effects on the owl are minimized. Manage within the following limitations to minimize effects on the owl.

Retain key forest species such as oak.

Retain key habitat components such as snags and large downed logs.

Harvest conifers less than 9" in diameter only within those protected activity centers treated to abate fire risk as described below.

Treat fuel accumulations to abate fire risk.

- In Mexican spotted owl protected activity centers (PAC), vegetation treatments will only be considered after all appropriate NEPA analysis and consultation with the U.S. Fish and Wildlife Service has been completed. When vegetation treatment within a PAC is deemed necessary, the PAC will be monitored for effects of treatment.

  Amendment 10: For the Rio Peñasco, La Luz Watersheds, 38 total protected activity centers will have vegetative treatments and will be monitored for effects of treatment.

  Amendment 12: A total of 19 protected activity centers in the Elk Canyon Watershed will have vegetation treatments and will be monitored for effects of treatment.

- Designate a 100-acre "no treatment" area around the known nest site of each selected protected activity center. Habitat in the "no treatment" area should be as similar as possible in structure and composition as that found in the activity center.

- Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the 100-acre "no treatment" area.

  Amendment 10: The nine-inch diameter limit is exempted in the Rio Peñasco/La Luz Watershed study where scientific studies are designed to test the best fuels management prescriptions in MSO protected activity centers.

- Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation, and hardwood trees larger than 10 in. in diameter at the root collar.

- Use light prescribed burns in non-selected protected activity centers on a case-by-case basis. Burning should avoid a 100-acre "no treatment" area around the activity center. Large woody debris, snags, clumps of broad-leafed woody vegetation should be retained and hardwood trees larger than 10 inches diameter at the root collar.

- Pre and post treatment monitoring should be conducted in all protected activity centers treated for fire risk abatement. (See monitoring guidelines)

Steep Slopes (Mixed conifer and pine-oak forests outside protected activity centers with slopes greater than 40% that have not been logged within the past 20 years): No seasonal restrictions apply.

Treat fuel accumulations to abate fire risk.

- Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel removal, and prescribed fire.
- Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation, and hardwood tress larger than 10 inches in diameter at the root collar.
- Pre- and post-treatment monitoring should occur within all steep slopes treated for fire risk abatement. (See monitoring guidelines)

Reserved Lands (Wilderness, Research Natural Areas, Wild and Scenic Rivers, and Congressionally Recognized Wilderness Study Areas): Allow prescribed fire where appropriate.

C. RESTRICTED AREAS (Mixed conifer, pine-oak, and riparian forests)

Mixed Conifer and Pine-oak Forests (See glossary definition): Manage to ensure a sustained level of owl nest/roost habitat well distributed across the landscape. Create replacement owl nest/roost habitat where appropriate while providing a diversity of stand conditions across the landscape to ensure habitat for a diversity of prey species. The following table displays the minimum percentage of restricted area that should be managed to have nest/roost characteristics. The minimum mixed conifer restricted area includes 10% at 170 basal area and an additional amount of area at 150 basal area. The additional area of 150 basal area is + 10% in BR-E and + 15% in all other recovery units. The variables are for stand averages and are minimum threshold values and must be met simultaneously. In project design, no stands simultaneously meeting or exceeding the minimum threshold values should be reduced below the threshold values unless a district-wide or larger landscape analysis of restricted areas shows that there is a surplus of restricted area acres simultaneously meeting the threshold values. Management should be designed to create minimum threshold conditions on project areas where there is a deficit of stands simultaneously meeting minimum threshold conditions unless the district-wide or larger landscape analysis shows there is a surplus.

Variable	MC All RU	MC BR-E RU	MC Other RU	Pine-Oak
Restricted area %	+10%	+10%	+15%	+10%
Stand Averages for:				
Basal Area	170	150	150	150
18" +trees/acre	20	20	20	20
Oak Basal Area	N/A	N/A	N/A	20
Percent total existing stand density index by size class:				
12"-18"	10	10	10	15
18"-24"	10	10	10	15
24"- +	10	10	10	15

Attempt to mimic natural disturbance patterns by incorporating natural variation, such as irregular tree spacing and various patch sizes, into management prescriptions.

Maintain all species of native trees in the landscape including early seral species.

Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.

Emphasize uneven-aged management systems. However, both even-aged and uneven- aged systems may be used where appropriate to provide variation in existing stand structure and species diversity. Existing stand conditions will determine which system is appropriate.

Extend rotation ages for even-aged stands to greater than 200 years. Silvicultural prescriptions should explicitly state when vegetative manipulation would cease until rotation age is reached.

Save all trees greater than 24 inches dbh.

In pine-oak forests, retain existing large oaks and promote growth of additional large oaks.

Encourage prescribed and prescribed natural fire to reduce hazardous fuel accumulation. Thinning from below may be desirable or necessary before burning to reduce ladder fuels and the risk of crown fire.

Retain substantive amounts of key habitat components:

Snags 18 inches in diameter and larger
Down logs over 12 inches midpoint diameter
Hardwoods for retention, recruitment, and replacement of large hardwoods

Riparian Areas: Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should move degraded riparian vegetation toward good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.

Domestic Livestock Grazing: Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhibiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range conditions.

Old Growth: Except where other wise noted, implement forest plan old growth standards and guidelines to maintain and promote development of owl habitat.

D. OTHER FOREST AND WOODLAND TYPES

Apply ecosystem approaches to manage for landscape diversity mimicking natural disturbance patterns, incorporating natural variation in stand conditions and retaining special features such as snags and large trees, utilizing appropriate fires, and retention of existing old growth in accordance with forest plan old growth standards and guidelines.

E. GUIDELINES FOR SPECIFIC RECOVERY UNITS

Basin and Range-East: Emphasize restoration of lowland riparian habitats

Management activities necessary to implement the Sacramento Mountain thistle recovery plan, which may conflict with standards and guidelines for Mexican spotted owl, will take precedence and will be exempt from the conflicting Mexican spotted owl standards and guidelines.

F. MONITORING GUIDELINES

Population and habitat monitoring and evaluation, collaboratively planned and coordinated with Involvement from each national forest, USFWS Ecological Services Field Office, USFWS Regional Office, USFS Regional Office, Rocky Mountain Research Station, recovery team, and recovery unit working groups, should be implemented on the Lincoln National Forest.

Prepare an annual monitoring and evaluation report covering all levels of monitoring done in previous years. The annual report should be forwarded to the Regional Forester with copies to the recovery unit working group, USFWS Ecological Services field office, and the USFWS Regional Office.

PEREGRINE FALCON

The American Peregrine Falcon Recovery Plan (see references) contains habitat requirements for the peregrine falcon which will be incorporated into the guidelines on the Forest. Additional standards and guidelines for the Forest are as follows:

1/ Monitor management practices within occupied and potential peregrine falcon habitat and ensure that there are no adverse impacts.

1/ Prohibit land-use practices and development that significantly alter or eliminate the character of essential peregrine falcon hunting habitat or prey base (generally within four miles of nest sites) will be prohibited. All activities proposed within four miles of potential or existing nesting habitat will be carefully evaluated for potential effects.

1/ Prohibit activities likely to cause disturbance, including public use in the vicinity of essential peregrine falcon nesting habitat between March 1st and May 20th. This may mean having a seasonal closure between those dates unless other mitigating measures are determined. Should peregrines remain strongly attached to nest sites after May 20th this period will be extended; alternately, should peregrines disperse earlier than May 20th this period may be shortened. Seasonal restrictions will be applied to all essential habitat unless the Forest Biologist determines that a site is not occupied. Activities likely to cause a disturbance include, but are not limited to, human presence within ¾ mile, light motorized vehicle or equipment within 1 mile and heavy motorized equipment within 2 miles. If peregrine falcons are found occupying habitat in other known areas, similar restrictions on activities will be imposed.

C01, C02	Continue to identify existing and potential habitat for peregrine falcons as outlined in the Species Recovery Plan.
C01, A05	Locate and develop recreation facilities at least 1-1/4 miles from essential peregrine falcon nesting habitat.
E05, E07	Discourage fuel wood gathering activities at least ¾ miles of essential peregrine falcon habitat.
E05, E07	Manage areas within 200 feet of canyon rims in essential peregrine falcon hunting habitat under a modified silvicultural prescription jointly determined by the Forest Biologist and District TMO.
P02, P03 P07, P08 P09	Make all reasonable efforts during fire detection and suppression or other emergency activities, such as search and rescue operations, from March 1 through August 15th to protect peregrine falcon nesting sites, consistent with jeopardy to human life and property and confidentiality of nest sites. Other activities will be limited in critical nesting habitat as appropriate during nesting season.

The following documents provide information on the status and management direction for the peregrine falcon:

Bednarz, James C. 1981. Peregrine Falcon habitat evaluation and proposed management plan for the Guadalupe Mountains, New Mexico and Texas. Unpub. report prepared for U.S. Forest Service and National Park Service. On file at the Lincoln National Forest Office.

Fiala, Frank. 1981. Final Report: Status of Peregrine Falcons, Aqua Dulce Eryie, Lincoln National Forest, New Mexico. Unpub. report on file at the Lincoln National Forest Office.

Rocky Mountain/Southwestern Peregrine Falcon Recovery Team. 1977, American Peregrine Falcon Rocky Mountain and Southwest Population Recovery Plan. Report prepared for U.S. Fish and Wildlife Service.

USDA Forest Service. 1985. Peregrine Falcon Management, Master Interagency Agreement between USDA Forest Service - Region 3, the New Mexico Dept. of Game & Fish and USDI Fish and Wildlife Service - Region 2, No.16-R3-85-0019, March 5, 1985.

Table 14. Existing and Proposed Federal Threatened, Endangered or Sensitive Species and/or Official State Listed Species by Management Area.

Common Name	Scientific Name	Management Area
Fauna		
Aplomado Falcon	Falco femoralis septentriondis	---
Peregrine Falcon	Falco peregrinus	3A
Bald Eagle	Haliaeetus leucocephalus	1A,1E,1G,2B,2D,4J,4M, 4O,4Q,4U
Black-footed Ferret	Mustela nigripes	---
Desert Bighorn Sheep	Ovis canadensis	3B
Black-striped Least Chipmunk	Eutamias minimus atristriatus	2D,2E,4I,4J
Meadow Jumping Mouse	Zapus hudsonius luteus	2D,2E,4I,4J
Gray Vireo	Vireo vicinior	**1A,1B,1D.1I,1J,2A-2C,3A,3C 3D,3F,4I,4L,4N,4Q,4U**
Baird's Sparrow	Ammordramus bairdii	3D
McCown's Longspur	Calcarius mccownii	3D
Varied Bunting	Passerina versicolor	3A
New Mexico Ramshorn Snail	Pecosorbis kansasensis	3E
Spotted Owl	Strix occidentalis	1A,1B,1E,1F,2D-2H,4I,4J
Mottled Rock Rattlesnake	Crotalus lepidus lepidus	3A-3C
Trans-Pecos Rat Snake	Elaphe subocularis	3A-3C
Plain-bellied Water Snake	Nerodia erythrogaster	3A-3F
Western Ribbon Snake	Thamnophis proximus diabolicus	3A
Headwater catfish	Icatalurus lupus	3E
Sacramento Mountain Salamander	Aneides hardyi	2A,2H,4J
Spotted Owl	**Strix occidentalis**	**1A,1B,1E,1F, 2D-2H, 4I,4J**
Northern goshawk	**Accipiter gentilis atricapillas**	**1A,1B,1E,1F, 2D-2H, 4I,4J**

Ecosystem Management in Northern Goshawk Habitat (Alternative G)

Applicability

The northern goshawk standards and guidelines apply to the forest and woodland communities described below that are outside of Mexican spotted owl protected and restricted areas. Within Mexican spotted owl protected and restricted areas, the spotted owl standards and guidelines take precedence over northern goshawk standards and guidelines. One or the other set of standards and guidelines apply to all forest and woodland communities but the Mexican spotted owl standards always take precedence in areas of overlap.

Standards

Survey the management analysis area prior to habitat modifying activities including a 1/2 mile beyond the boundary.

Establish, and delineate on a map, a post-fledgling family area that includes 6 nesting areas per pair of nesting goshawks for known nest sites, old nest sites, areas where historical data indicates goshawks have nested there in the past, and where goshawks have been repeatedly been sighted over the past two year or greater period of time but no nest sites have been located. Manage for un-even-age stand condition for live trees and retain live reserve trees, snags, downed logs, and woody debris levels throughout woodlands. ponderosa pine, mixed-conifer, and spruce-fir cover types. Manage for old age trees such that as much old forest structure as possible is sustained over time across the landscape. Sustain a mosaic of vegetation densities (overstory and understory), age class, and species composition across the landscape. Provide foods and cover for goshawk prey.

Limit human activity in nesting areas during the breeding season.

Manage the ground surface layer to maintain satisfactory soil condition i.e., minimize soils compaction; and to maintain hydrologic and nutrient cycles.

When activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements, consult with the U.S. Fish and Wildlife Service to resolve the conflict.

Within the range of the Kaibab pincushion cactus, *pediocactus paradinei*, and the Arizona leatherflower, *clematis hirsutissima arizonica*, management activities needed for the conservation of

these two species that may conflict with northern goshawk standards and guidelines will be exempt from the conflicting northern goshawk standards and guidelines until conservation strategies or recovery plans 9if listed) are developed for the two species.

Guidelines

General

Emphasize maintenance and restoration of the healthy riparian ecosystems through the conformance with forest plan riparian standards and guidelines. Management strategies should restore degraded riparian areas to good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.

Refer to USDA Forest Service General Technical Report RM-217 entitled "Management Recommendations for the Northern Goshawk in the Southwest United States" for scientific information on goshawk ecology and management which provide the basis for the management guidelines. Supplemental information on goshawk ecology and management may be found in "The Northern Goshawk: Ecology and Management" published by the Cooper Ornithological Society as Studies in Avian Biology No. 16. In woodland forest cover types, use empirical data to determine desired habitat conditions.

Inventory

Use the R3 survey protocol to get complete coverage of the management analysis area (Kennedy and Stahlecker, 1993, as modified by Joy, Reynolds, and Leslie, 1994) Management analysis areas should be entire ecosystem management areas if possible.

Complete at least 1 year of survey, but 2 years of surveys should be done to verify questionable sightings, unconfirmed nest sites, etc. If nesting goshawks are found during the first year, a second year of inventory is not needed in that territory.

For areas where complete inventories cannot be done, use aerial photographs to locate vegetative structural stages (VSS) 4-6 within the project area and inventory just those sites for goshawk nest areas using R3 inventory protocol. All uninventoried areas (VSS 1-3) will be managed to post-fledgling family areas (PFA) specifications while in that stage. If while using this inventory option evidence suggests goshawks are present (such as finding plucking perches or molted goshawk feathers), conduct a complete inventory as outlines above.

If forests have goshawks commonly nesting in stands classified as VSS 1-3, use the complete inventory method for those areas. There may be situations where an area is classified as a VSS 3, based on predominant VSS class, but in actuality a combination of VSS 4 & 5 predominate the area. For those situations, use
complete inventory methods.

Home Range Establishment

Post-fledgling family areas (PFA) will be approximately 600 acres in size. Post-fledgling family areas will include the nest sites and consist of the habitat most likely to be used by the fledgling during their early development.

Establish a minimum of 3 nest areas and 3 replacement nest areas per post-fledgling family area. The nest areas and replacement nest areas should be approximately 30 acres in size. A minimum total of 180 acres of nest area should be identified within each post-fledgling family area.

Nest site selection will be based first on using active nest sites followed by the most recently used historical nest areas. When possible, all historical nest areas should be maintained.

Manage for the nest replacement sites to attain sufficient quality and size to replace the three suitable nest sites.

Management Scale

Distribution of habitat structure (tree size and age classes, tree groups of different densities, snags, dead and down woody material, etc.) should be evaluated at the ecosystem management area level, at the mid-scale such as drainage, and at the small scale of site.

Vegetation Management

Landscape Outside Goshawk Post-fledgling Family Areas

General: The distribution of vegetation structural stages for ponderosa pine, mixed-conifer, and spruce-fir is 10% grass/forbes/shrub (VSS 1), 10% seedling-sapling (VSS 2), 20% young forest (VSS 3), 20% mid-aged forest (VSS 4), 20% mature forest (VSS 5), 20% old forest (VSS 6). NOTE: The specified percentages are a guide and actual percentages are expected to vary + or - up to 3%.

The distribution of VSS, tree density, and tree age are a product of site quality in the ecosystem management area. Use site quality to guide in the distribution of VSS, tree density and tree age. Use site quality to identify and manage dispersal PFA and nest habitat a 2 to 2.5 miles spacing across the landscape.

Snags are 18" or larger dbh and 30 feet or larger in height, downed logs are 12 inches in diameter and at least 8 feet long, woody debris is 3 inched or larger on the forest floor, canopy cover is measured with vertical crown projecting on the average across the landscape.

The order of preferred treatment for woody debris is: 1) prescribed burning, 2) lopping and scattering, 3) hand-piling or machine grapple, and 4) dozer piling.

Canopy Cover: Canopy cover guidelines apply only to mid-aged forest structural stages (VSS 4, VSS 5, and VSS 6) and not to grass/forbs/shrub to young forest structural stages (VSS 1, VSS 2, and VSS 3).

Spruce-fir: Canopy cover for mid-aged forest (VSS 4) should average 1/3 60% and 2/3 40%, mature forest (VSS 5) should average 60+%, and old forest (VSS 6) should average 60+%. Maximum opening size is 1 acre with a maximum width of 125 feet. Provide two groups of reserve trees per acre with 6 trees per group when opening size exceeds 0.5. Leave at least 3 snags, 5 downed logs, and 10-15 tons of woody debris per acre.

Mixed-conifer: Canopy cover for mid-aged forests (VSS 4) should average 1/3 60+% and 2/3 40+%, mature forest (VSS 5) should average 50+%, and old forest (VSS 6) should average 60+%. Maximum opening size is up to 4 acres with a maximum width of up to 200 feet. Retain one group of reserve trees per acre of 3-5 trees per group for openings greater than 1 acre, and 10-15 tons of woody debris per acre.

Ponderosa Pine: Canopy cover for mid-aged forest (VSS 4) should average 40+%, mature forest (VSS 5) should average 40+%, and old forest (VSS 6) should average 40+%. Opening size is up to 4 acres with a maximum width of up to 200 feet. One group of reserve trees, 3-5 trees per group, will be left if the opening is greater than an acre in size. Leave at least 2 snags per acre, 3 downed logs per acre, and 5-7 tons of woody debris per acre.

Within Post-fledgling Family Areas

General: Provide for a healthy sustainable forest environment for the post-fledgling family needs of goshawks. The principle difference between "within the post-fledgling family area" and "outside the post-fledgling family are" is the higher canopy cover within the post-fledgling family area and smaller opening size within the post-fledgling family area within the post-fledgling family area. Vegetative structural stage distribution and structural conditions are the same within and outside the post-fledgling family area.

Spruce-fir: Canopy cover for mid-aged (VSS 3) should average 60+% and for old forest (VSS 6) should average 60+%.

Mixed-conifer: Canopy Cover for mid-aged (VSS 4) to old forest (VSS 6) should be 60+%.

Ponderosa Pine: Canopy Cover for mid-aged forest (VSS 4) should average /13 60+% and 2/3 50+%. Mature (VSS 5) and old forest (VSS 6) should average 50+%.

Woodlands: Maintain existing canopy cover levels.

Within Nesting Areas

General: Provide unique nesting habitat conditions for goshawks. Important features include trees of mature to old-age with high canopy cover.

The structure of the vegetation within nest areas is associated with the forest type, and tree age, and density, and the developmental history of the stand. Table 5 of RM-217 presents attributes required for goshawk on locations with "low" and "high" site productivity.

Preferred treatments to maintain the desired structure are to thin from below with non-uniform spacing and use of hand tools and fire to reduce fuel loads. Lopping and scattering of the thinning debris is preferred if prescribed fire cannot be used. Piling of debris should be limited. When necessary, hand-piling should be used to minimize compaction within piles and to minimize displacement and destruction of the forest floor herbaceous layer. Do not grapple or Dozer pile debris. Manage road densities at the lowest level possible to minimize disturbance in the nest area. Use small, permanent skid trails in lieu of roads for timber harvesting.

Spruce-fir, mixed-conifer, ponderosa pine cover types: The nesting area contains only mature to old forest (VSS 5 & 6) having a canopy cover (measured vertically) between 50-70% with mid-aged VSS 6 trees 200-300 years old. Non-uniform spacing of trees and clumpiness is desirable.

Woodlands: Maintain existing canopy cover levels.

Human Disturbance:

Limit human disturbance in or near nest sites and post-fledgling family areas during the breeding season so that goshawk reproductive success in not affected by human activity.

The breeding season extends from March 1 through September 30.

Low intensity ground fires are allowed at any time in all forest cover types, but high intensity crown fires are not acceptable in the Post-fledgling family area or nest areas. Avoid burning the entire home range of a goshawk pair in a single year. For fires plans in the occupied nest are, a fire management plan should minimize the risk of goshawk abandonment while low intensity fire burns in the nest area. Prescribed fire within the nesting are should be plans to move with prevailing winds away from the nest tree to minimize smoke and crown fire developing and driving the adults off or consuming the nest tree.

Ground Surface Layer:

(All forested cover types)

Manage road densities at the lowest possible. Where timber harvesting has been prescribed to achieve desired forest condition, use small skid trails in lieu of roads.

Piling of debris should be limited. When necessary, hand or grapple piling should be used to minimize soil compaction within piles and to minimize forest floor herbaceous layer displacement and destruction. Limit dozer use for piling or scattering of logging debris so that the forest floor and herbaceous layer is not displaced or destroyed.

Mexican Spotted Owl (Alternative G)

Standards

Provide three levels of habitat management-protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape.

Protected areas include delineated protected activity centers; mixed conifer and pine-oak forests with slopes greater than 40% where timber harvest has not occurred in the last 20 years; and reserved lands which include wilderness, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas.

Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas.

Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forests outside protected and restricted areas.

Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area 1/2 mile beyond the perimeter of the proposed treatment area.

Monitor changes in owl populations and habitat needed for delisting.

Guidelines

A. General
Conduct surveys following Region 3 survey protocol

Breeding season is March 1 to August 31.

B. Protected Areas
Protected Activity Centers: Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided.

The Protected Activity Center boundary should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest or activity center located near the center.

The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat.

Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989.

Monitor changes in owl populations and habitat needed for delisting.

Guidelines

A. General
Conduct surveys following Region 3 survey protocol

Breeding season is March 1 to August 31.
B. Protected Areas
Protected Activity Centers: Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided.

The Protected Activity Center boundary should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest or activity center located near the center.

The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat.

Protected Activity Center boundaries should not overlap.

Submit protected activity center maps and descriptions to the recovery unit working group for comment as soon as possible after completion of surveys.

Road or trail building in protected activity centers should be avoided but may be permitted on a case-by-case basis for pressing management reasons.

Generally allow continuation of the level of recreation activities that was occurring prior to listing.

Require bird guides to apply for and obtain a special use permit. A condition of the permit shall be that they obtain a subpermit under the U.S. Fish and Wildlife Service Master endangered species permit. The permit should stipulate the sites, dates, number of visits and maximum group size permissible.

Harvest fuelwood when it can be done in such a way that effects on the owl are minimized. Manage within the following limitations to minimize effects on the owl:

-Retain key forest species such as oak.

-Retain key habitat components such as snags and large downed logs.

-Harvest conifers less than 9 inches in diameter only within those protected activity centers treated to abate fife risk as described below.

Treat fuel accumulations to abate fire risk:

-Select for treatment 10% of the protected activity centers where nest sites are known in each recovery unit having high fire risk conditions. Also select another 10% of the protected activity centers where nest sites are known as a paired sample to serve as control areas.

-Designate a 100-acre "no treatment" area around the known nest site of each selected protected activity center. Habitat in the no treatment area should be as similar as possible in structure and composition as that found in the activity center.

-Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the 100- acre "no treatment" area.

-Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation, and hardwood trees larger than 10 inches in diameter at the root collar.

-Select and treat additional protected activity centers in 10% increments if monitoring of the initial sample shows there were no negative impacts or there were negative impacts which can be mitigated by modifying treatment methods.

-Use light prescribed burns in nonselected protected activity centers on a case-by-case basis. Burning should avoid a 100-acre "no treatment" area around the activity center. Large woody debris, snags, clumps of broad-leafed woody vegetation should be retained and hardwood trees larger than 10 inches diameter at the root collar.

-Pre- and post-treatment monitoring should be conducted in all protected activity centers treated for fire risk abatement (See monitoring guidelines).

Steep Slopes (Mixed conifer and pine-oak forests outside protected activity centers with slopes greater than 40% that have not been logged within the past 20 years): **No seasonal restrictions apply.**

Treat fuel accumulations to abate fire risk:

.Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel removal, and prescribed fire.

.Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation, and hardwood trees larger than 10 inches in diameter at the root collar .

.Pre- and post-treatment monitoring should occur within all steep slopes treated for fire risk abatement (See monitoring guidelines).

Reserved Lands (Wilderness, Research Natural Areas, Wild and Scenic Rivers, and Congressionally Recognized Wilderness Study Areas): **Allow prescribed fire where appropriate.**

C. Restricted Areas
(Mixed conifer, pine-oak, and riparian forests)

Mixed Conifer and Pine-oak Forests (See glossary definition) **: Manage to ensure a sustained level of owl nest/roost habitat well distributed across the landscape. Create replacement owl nest/roost habitat where appropriate while providing a diversity of stand conditions across the landscape to ensure habitat for a diversity of prey species.**

The following table displays the minimum percentage of restricted area which should be managed to have nest/roost characteristics. The minimum mixed conifer restricted area includes 10% at 170 basal area and an additional amount of area at 150 basal area. The additional area of 150 basal area is +10% in ER-E and +15% in all other recovery units. The variables are for stand averages and are minimum threshold values and must be met simultaneously. In project design, no stands simultaneously meeting or exceeding the minimum threshold values should be reduced below the threshold values unless a district-wide or larger landscape analysis of restricted areas shows that there is a surplus of restricted area acres simultaneously meeting the threshold values.

Management should be designed to create minimum threshold conditions on project areas where there is a deficit of stands simultaneously meeting minimum threshold conditions unless the district-wide or larger landscape analysis shows there is a surplus.

	MC ALL RU	**MC BR-E RU**	**MC OTHER RU**	**PINE-OAK**
Restricted Area Percent	10%	+10%	+15%	10%
Stand Averages for:				
Basal Area	170	150	150	150
18 inch + trees/ac	20	20	20	20
Oak basal area	NA	**NA**	NA	20
Percent total existing stand density index by size class:				
12-18"	10	10	10	15
18-24"	10	10	10	15
24+"	10	10	10	15

Attempt to mimic natural disturbance patterns by incorporating natural variation, such as irregular tree spacing and various patch sizes, into management prescriptions. Maintain all species of native trees in the landscape including early seral species.

Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.

Emphasize uneven-aged management systems. However, both even-aged and uneven-aged systems may be used where appropriate to provide variation in existing stand structure and species diversity. Existing stand conditions will determine which system is appropriate.

Save all trees greater than 24 inches dbh.

In pine-oak forests. retain existing large oaks and promote growth of additional large oaks.

Encourage prescribed and prescribed natural fire to reduce hazardous fuel accumulation. Thinning from below may be desirable or necessary before burning to reduce ladder fuels and the risk of crown fire.

Retain substantive amounts of key habitat components:

.Snags 18 inches in diameter and larger.

.Down logs over 12 inches midpoint diameter .Hardwoods for retention, recruitment, and replacement of large hardwoods.

Riparian Areas: **Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should move degraded riparian vegetation toward good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.**
Domestic Livestock Grazing: **Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhibiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range conditions.**

Old Growth: **Except where otherwise noted, implement forest plan old growth standards and guidelines to maintain and promote development of owl habitat.**

D. Other Forest and Woodland Types
Apply ecosystem approaches to manage for landscape diversity mimicking natural disturbance patterns, incorporating natural variation in stand conditions and retaining special features such as snags and large trees, utilizing appropriate rues, and retention of existing old growth in accordance with forest plan old growth standards and guidelines.

E. Guidelines For Specific Recovery Units

Colorado Plateau: **No special additional guidelines apply.**
Southern Rocky Mountain -New Mexico: **No special additional guidelines apply.**
Upper Gila Mountains: **No special additional guidelines apply.**

Basin and Range. West: **Emphasize restoration of lowland riparian habitats.**

Management activities necessary to implement the Mt. Graham red squirrel recovery plan, **which may conflict with standards and guidelines for Mexican spotted owl, will take precedence and will be exempt from the conflicting Mexican spotted owl standards and guidelines.**
Basin and Range -East: **Emphasize restoration of . lowland riparian habitats.**

Management activities necessary to implement the Sacramento Mountain thistle recovery plan, **which may conflict with standards and guidelines for Mexican spotted owl, will take precedence and will be exempt from the conflicting Mexican spotted owl standards and guidelines.**

F. Monitoring Guidelines
Monitoring and evaluation should be collaboratively planned and coordinated with involvement from each national forest, USFWS Ecological Services Field Office, USFWS Regional Office, USDA Forest Service Regional Office, Rocky Mountain Research Station, recovery team, and recovery unit working groups.

Population monitoring should be a collaborative effort with participation of all appropriate resource agencies.

Habitat monitoring of gross habitat changes should be a collaborative effort of all appropriate resource agencies.

Habitat monitoring of treatment effects (pre- and post- treatment) should be done by the agency conducting the treatment.

Prepare an annual monitoring and evaluation report covering all levels of monitoring done in the previous year. The annual report should be forwarded to the Regional Forester with copies provided to the recovery unit working groups, USFWS Ecological Services field offices, and the USFWS Regional Office.

Rangewide: **Track gross changes in acres of owl habitat resulting from natural and human caused disturbances. Acreage changes in vegetation composition, structure, and density should be tracked, evaluated, and reported. Remote sensing techniques should provide an adequate level of accuracy.**

In protected and restricted areas where silvicultural or fire abatement treatments are planned, monitor treated stands pre- and post-treatment to determine changes and trajectories in fuel levels; snag basal areas; live tree basal areas; volume of down logs over 12 inches in diameter; and basal area of hardwood trees over 10 inches in diameter at the 'root crown.

Upper Gila Mountain, Basin and Range East, and Basin and Range West Recovery Units: Assist the recovery team and recovery unit working groups to establish sampling units consisting of 19 to 39 square mile quadrats randomly allocated to habitat strata. Quadrats should be defined based on ecological boundaries such as ridge lines and watersheds. Quadrat boundaries should not traverse owl territories. Twenty percent of the quadrats will be replaced each year at random.

Using the sample quadrats, monitor the number of territorial individuals and pairs per quadrat; reproduction; apparent survival; recruitment; and age structure. Track population density both per quadrat and habitat stratum.

Table 14. Existing and Proposed Federal Threatened, Endangered or Sensitive Species and/or Official State Listed Species by Management Area

Common Name	*Scientific Name*	*Management Area*
Fauna		
Aplomado Falcon	Falco femoralis septentriondis	----
Peregrine Falcon	Falco peregrinus	3A
Bald Eagle	Haliaeetus leucocephalus	1A-lE,lG,2B,2D,4J,4M,40,4Q, 4U
Black-footed Ferret	Mustela nigripes	---
Desert Bighorn Sheep	Ovis canadensis	3B
Black-striped Least Chipmunk	Eutamias minimus atristriatus	2D,2E,4I,4J
Meadow Jumping Mouse	Zapus hudsonius luteus	2D,2E,4I,4J
Gray Vireo	Vireo vicinior	1A,1B,1D,1I,1J,2A-2C,3A,3C 3D-3F,4I,4L-4N.4Q,4U
Baird's Sparrow	Ammordramus bairdii	3D
McCown's Longspur	Calcarius mccownii	3D
Varied Bunting	Passerina versicolor	3A
New Mexico Ramshorn Snail	Pecosorbis kansasensis	3E
Mottled Rock Rattlesnake	Crotalus lepidus lepidus	3A-3C
Trans-Pecos Rat Snake	Elaphe subocularis	3A-3C
Plain-bellied Water Snake	Nerodia erythrogaster	3A-3F
Western Ribbon Snake	Thamnophis proximus diabolicus	3A
Headwater catfish	Icatalurus lupus	3E
Sacramento Mountain Salamander	Aneides hardyi	2A,2H,4J
Spotted Owl	**Strix occidentalis**	**1A,1B,1E,1F,2D-2H,4I,4J**
Northern goshawk	**Accipiter gentilis atricapillas**	**1A,1B,1E,1F,2D-2H,4I,4J**

Flora

Common Name	*Scientific Name*	*Management Area*
Sneed's Pincushion Cactus	Coryphantha sneedii var. sneedii	3A,3C
Kuenzler's Hedgehog Cactus	Echinocereus fendieri var. kuenzleri	40
McKittrick Pennyroyal	Hedeoma apiculatum	3A
Chaplin's Columbine	Aguilegia chaplinei	2B,3E
Sacramento Prickly Poppy	Argemone pleiacantha ssp. pinnatisecta	2B,2C
Hershey's Cliff Daisy	Chaeotopappa hersheyi	3A,3C
Texas Rabbit Brush	Chrysothamnus nauseosus ssp. texensis	3A,3C
Purple Thistle	Cirsium vinaceum	2D-2F,4J
Sacramento Penstemon	Penstemon almosensis	2B
Sierra Blanca Cinquefoil	Potentilla sierra-blancae	1F,1H,1I
Guadalupe Sophora	Sophora gypsophila var. guadalupensis	3A,3C,3E
Twist Flower	Streptanthus carinatus	3A-3C,3E
Guadalupe Aster	Aster laevis var. guadalupensis	3E
Tall Milkvetch	Astragalus altus	2E,2H,4I
Sierra Blanca Cliff Daisy	Chaetopappa elegans	1H,1I
Golden Blatterpod	Lesquerella aurea	2D-2F
Guadalupe Milkwort	Polygala rimulicola	3A-3C,3E
Supreme Sage	Salvia suma	3A-3C,3E
Gray Sibara	Sibara grisea	2B,3A-3C,3E
Curl-leaf Needlegrass	Stipa curvifolia	1I,3E
Few-leaved Streptanthus	Streptanthus sparsiflorus	3A-3C
Lee's Pinsuchion Cactus	Coryphantha sneedii var. leei	3A-3C
Texas Valerina	Valeriana texana	3A-3C

D. RANGE RESOURCE MANAGEMENT LEVELS AND GRAZING INTENSITY

Level	Description
A	Excludes livestock grazing to protect other values or eliminate conflicts with other uses.
B	Low Management which is normally continuous grazing throughout the permitted grazing season. Most often associated with minimal improvement development, thus not providing for rest or deferment of pastures or timing of grazing use.
C & D	Moderate Management that provides, as a minimum, for deferment of pastures and improvement in livestock distribution. Moderate management may also provide for full rest of one or more pastures on an allotment, but requires additional improvement not normally associated with low level management strategy.
E	High Management associated with extensive improvement development, which assures year-long rest of pastures and good distribution of livestock. Provides fully for Plant and livestock needs. May entail extensive non-structural improvement for maximization and maximization and utilization of forage production.

Left Blank Intentionally

E. SUPPLEMENTARY TIMBER RESOURCE EXHIBITS

EXHIBIT 1

Land Classification

Classification	Acres
1. Non-Forest Land (includes water)	206,274
2. Forest land	897,221
	1,103,495
3. Forest land withdrawn from timber production	82,879
4. Forest land not capable of producing crops of industrial wood	557,239
5. Forest land physically unsuitable:	
--irreversible damage likely to occur	---
--not restockable within 5 years	---
6. Forest land-inadequate information /1	15,499
7. Tentatively suitable forest land (item 2 minus items 3, 4, 5, and 6)	257,103
8. Forest land not appropriate for timber production	
--needed for MMRs and multiple-use objectives	25,236
--not cost efficient	92,447
9. Unsuitable forest land (items 3, 4, 5, 6, and 8).	757,801
10. Total suitable forest land (item 2 minus item 9)	139,420
11. Total national forest land (items 1 and 2)	1,103,495

1/ Lands for which current information is inadequate to project responses to timber management. Usually applies to low site lands.

Exhibit 2

VEGETATION MANAGEMENT PRACTICES
(ANNUAL AVERAGE IN FIRST DECADE FOR SUITABLE LANDS)

Practice	Acres
Regeneration harvest:	
Clearcut	71
Shelterwood and seed tree	1800
Selection	445
Intermediate harvest:	
Commercial thinning	3048
Salvage/Sanitation	----
Reforestation	
Artificial	75
Natural	400

Exhibit 3

TIMBER PRODUCTIVITY CLASSIFICATION
OF SUITABLE LANDS

Potential Growth (cubic feet/acre/year/	Acres MC	PP	AS	Total
Less than 20	9,410	6,500	238	16,148
20-49	56,300	38,800	1,600	96,700
50-84	93,900	16,200	2,800	112,900
85-119	28,200	3,155	---	31,355
TOTAL	187,810	64,655	4,638	257,103

MC - Mixed conifer
PP - Ponderosa pine
AS - Aspen

Exhibit 4

ALLOWABLE SALE QUANTITY AND TIMBER SALE PROGRAM QUANTITY
(ANNUAL AVERAGE FOR FIRST DECADE)

Harvest Method	Allowable Sale Quantity 1/ Sawtimber (MMBF)	Other Products 2/ (MMBF)
Regeneration harvest:		
Clearcut	0.05	0.05
Shelterwood	--	--
Simulated shelterwood	12.1	0.6
Selection	0.1	0.1
Intermediate	2.7	1.2
Totals	15.0	2.0

	Additional Sales Sawtimber (MMBF)	Other Products (MMBF)
Total for all harvest methods	---	6.7

Allowable sale quantity	3.86 MMCF/yr,	17.0 MMBF/yr
Timber sale program quantity 4/		23.7 MMBF

1/ Only includes chargeablevolumes from suitable lands.

2/ Total wood products volume included in ASQ. In the Forest Plan, half of the wood product volume was counted as fuelwood and is not shown as wood products. On the Lincoln NF most of the product volume is sold as fuelwood.

3/ Only includes nonchargeable volumes from suitable and unsuitable lands, i.e., CFL fuelwood and PJ fuelwood.

4/ Total of allowable sale quantity and additional sales.

Exhibit 5

Long-term sustained yield capacity for years 1-200 is 3,888 MCF per year. Allowable sale quantity (net merchantable timber volume) is 3,864 MCF per year for years 1-10 and 3,888 MCF per year for years 11-200.

Exhibit 6

PRESENT AND FUTURE CONDITIONS FOR SUITABLE LANDS UNIT OF MEASURE SUITABLE LAND

	Unit of Measure	Suitable Land
Present forest:		
Growing stock	MMCF	195.72
LTSYC	MCF/Year	NA
Rotation age		120 to 130
Future forest:		
Growing stock	MMCF	300.64
LTSYC	MMCF/Year	3,888
Rotation age		100 to 110

Age class distribution acres:

Age Class	Present Forest	Future Forest
1-20	15%	23%
22-40	20	13
41-80	29	32
81-100	24	19
100+	12	13
Suitable acres - M		139

Exhibit 7

The information for this table is found in Chapter 4, Table 12.

F. Tables and Exhibits

.

Table 2. Proposed Plan Output

Resource or Activity	Unit of Measure	Annual Output
Allowable Sale Quantity	MMCF	3.9
Net Sawtimber (Sales)	MMBF	15.0
Net Products	MMBF	1.0
Timber Stand		
Improvements	Acres	1500.0
Fuelwood	MMBF	7.7
Recreation	MRVDs	
Developed	MRVDs	373.0
Dispersed	MRVDs	596.0
Downhill Skiing	MRVDs	196.0
Cave Use	MRVDs	6.0
Wilderness	MRVDs	23.0
Wildlife	MRVDs	386.0
Research Natural Areas	MAcres	2.2
Grazing Capacity	MAUMs	118.0
Permitted Livestock	MAUMs	147.0
Water Yield	MAcre-feet	123.0
Minerals	Cases	72.0
Fuels Treatment	MAcres	8.9
Unsatisfactory Watershed Condition	MAcres	107.0
Road / Route Closure	Miles	100.0
Road System	Miles	2,590.0
Trails	Miles	360.0

Table 3. Schedule of Recreation Site Construction

Site	Persons at one time	Acres
Smokey Bear		
Cedar Creek Group Site	360	30
Sacramento		
Upper Karr Winter Sports	450	30
Ski Area Rice/Russia	2,000	400
Silver Amphitheatre	150	0
Silver Snow Play Area	100	4

Table 4. Schedule of Recreation Site Reconstruction

Site	Persons at one time	Acres
Smokey Bear Oak Grove Campground	150	6

Table 5. Schedule for Trailhead Construction and Reconstruction

Site	Persons at one time	Acres
Smokey Bear		
Water or Elder	24	4
Nogal Peak or Argentina	18	2
Mills Canyon	18	2
Three Rivers (Reconstruction)		4
Nogal/Tortalita (Eratta Sheet)	**24**	

Table 6. Right-of-Way Acquisition Schedule

Name	Road Number	Miles
Poison Canyon	630	1.1
Dry Canyon	405	2.1
Perk Canyon	171	2.1
Bear Canyon	5655	0.5
Hay Canyon	257	0.5
Willis Canyon	169	3.25
Prestridge	541	0.75
Pendleton Canyon	265	1.25
Wayland Canyon	433	1.2
Potato Canyon	437	0.25
Jim Lewis Canyon	255	0.75
Bell Canyon	625	0.8
Sixteen Springs	175	1.5
Capitan Gap North	616	1.5
Capitan Gap South	56	4.9
Benado Gap North	441	2.6
Benado Gap South	441	0.1
Seven Cabins	256	1.3
Copeland	163	1.0
Arabella	5657	1.7
Nogal Lake	105	1.5
Dry Gulch	583	0.1
Elder/Water Canyon	480	9.0
Windy Canyon	5626	2.4
Tanbark	108	0.3
Eagle Lake	120	1.5
Pine Lodge	130	0.6
Agua Chiquita	64	0.25
The preceeding table lists the ROWs planned for acquisition during the plan period		

Table 7. Administrative Facilities Construction/Reconstruction

Priority	District	Name
1	Sacramento	Warehouse addition
2	Sacramento	Office
3	Sacramento	Office
4	Smokey Bear	Warehouse and Tanker Storage
5	Sacramento	Vehicle Storage
6	Smokey Bear	Water System
7	Sacramento	James Ridge Lookout and Cabins
8	Guadalupe	North Guadalupe Cabin
9	Sacramento	Sewer System

Table 8. Route Closure - Priority

1	Soil loss or watershed degradation
2	Wildlife habitat degradation
3	Excessive maintenance costs
4	Conflicts with grazing management
5	Unneeded for administrative or public access
Total Miles	100

Table 9 - Standard Vegetation Treatment Table
(Large Table can be found as Appendix F1)

Table 10. Timber Offering Schedule 1/

Fiscal Year Offered	Timber Sale Name	Township Range Section	Harvest Acres	Harvest Volume (MMBF)	Miles of Road Const.	Miles of Road Reconst.	Probable Harvest Methods
1987	Turkey	R17S, R11E Sec 25-27 & 34-36 T17S, R12E Sec 19, 30 T18S, R11E Sec 1, 12 T18S, R12E Sec 5-8	725	8.7	7.5	1.0	Seed cut 342 acres Intermediate cut 347 acres Selection cut 36 acres
	Telephone	T17S, R11E Sec 24, 25 T17S, R12E Sec 19	370	3.7	3.5	0	Shelterwood seed 23 acres Intermediate cut 347 acres
	Small Sales		80	1.1	--		
1988	Moore	T17S, R11E Sec 33-35 T18S, R11E Sec 2, 3, 10-12, 14, 15	735	7.0	4	3	Seed cut 210 acres Intermidiate cut 500 acres Selection cut 25 acres
	Peake	T16S, R11E Sec 13, 24 T16S, R12E Sec 7-9, 16-21	650	6.2	4	0	Seed Cut 180 acres Intermediate cut 420 Final removal 20 acres Selection cut 30 acres
	Small Sales			1.1	--		
1989	Harris	T18S, R12E Sec 8-10, 15-17, 21, 22	610	7.5	6.4	2.1	Seed cut 221 acres Intermediate cut 333 acres Final removal 56 acres

1/ All timber sales are on Sacramento Division,

2/ Acres shown are based on the best data available for the sales area, and indicates higher volumes per acre than those produced by ECOSIM, which were based on division-wide averages. Actual area of acres treated within the sale area boundaries may vary considerably to meet needs identified when project is designed.

Table 10. Timber Offering Schedule (Cont'd)							
Fiscal Year Offered	Timber Sale Name	Township Range Section	Harvest Acres	Volume (MMBF)	Miles of Road Const.	Miles of Road Reconst.	Probable Harvest Methods
1989	Beard	R15S, R13E Sec 22-26 & 36 T15S, R14E Sec 19, 30, 31	700	5.6	1	3	Seed cut 225 acres Intermediate cut 450 acres Selection cut 25 acres
	Small Sales			1.1			
1990	Bird	T16S, R12E Sec 25-27 & 32-36 T16S, R13E Sec 30-32 T17S, R13E Sec 5, 6	900	7.1	3	6	Seed cut 350 acres Intermediate cut 500 acres Final removal 50 acres
	Scott Able	T18S, R12E Sec 17-21, 27-30, 32-33	690	6.2	4	2	Seed cut 200 acres Intermediate cut 400 acres Final removal 50 acres Selection cut 40 acres
	Small Sales			1.1	--		
1991	Benson	T16S, R11E Sec 35-36 T17S, R11E Sec 1, 2, 11-13 T17S, R12E Sec 1-11, 16-18	965	6.5	1	6	Seed cut 100 acres Intermidiate cut 530 acres Final Removal 40 acres Selection cut 35 acre
	Little Apache	T15S, R12E Sec 29-32 T16S, R12E Sec 3, 4	330	2.1	2	0	Seed Cut 100 acres Intermediate cut 200 election cut 30 acres

Table 10. Timber Offering Schedule (Cont'd)							
Fiscal Year Offered	Timber Sale Name	Township Range Section	Harvest Acres	Volume (MMBF)	Miles of Road Const.	Miles of Road Reconst.	Probable Harvest Methods
1991	Hay	T17S,R12E Sec 26-29 T18S, R12E Sec 4, 5	535	4.5	6	0	Seed cut 180 acres Intermediate cut 320 acres Selection cut 35 acres
	Small Sales			1.1	--		
1992	Pepper	T18S, R12E Sec 11-14, 23, 24 T18S, R13E Sec 4-9, 17, 18	810	7.5	9	0	Seed cut 250 acres Intermediate cut 500 acres Final removal 60 acres
	Ranger	T15S, R12E Sec 23-26, 35, 36 T15S, R13E Sec 17-20 T16S, R12E Sec 5	830	5.8	2	2	Seed cut 240 acres Intermediate cut 560 acres Selection cut 30 acres
	Poison	T15S, R13E Sec 24 T15S, R14E Sec 19-23 26-34 T16S, R14E Sec 2, 3	950	6.6	5	2	Seed cut 300 acres Intermediate cut 600 acres Selection cut 50 acres
	Small Sales			1.1	--		
1993	Hubbell	T17S, R12E Sec 16, 17, 19-21, 29-32	860	7.7	8	0	Seed cut 225 acres Intermidiate cut 550 acres Final Removal 25 acres Selection cut 60 acres

Table 10. Timber Offering Schedule 1/ (Cont'd)							
Fiscal Year Offered	Timber Sale Name	Township Range Section	Harvest Acres	Harvest Volume (MMBF)	Miles of Road Const.	Miles of Road Reconst.	Probable Harvest Methods
1993	Bear	R17S, R12E Sec 13-15, 21-24, 26-28	620	6.0	6	0	Seed cut 200 acres Intermediate cut 380 acres Selection cut 40 acres
	Small Sales			1.1	--		
1994	Perk	T18S, R13E Sec 4, 9, 13-24, 28-30	1330	8.0	5	3	Seed cut 400 acres Intermediate cut 800 acres Final removal 70 acres Selection cut 60
	Greasy	T17S, R12E Sec 13, 23-26 T17S, R13E Sec 16-21	830	5.8	2	2	Seed cut 240 acres Intermediate cut 560 acres Selection cut 30 acres
	Lewis	T18S, R13E Sec 11-14 T18S, R14E Sec 4-9, 16-19	725	5.0	5	0	Seed cut 250 acres Intermediate cut 435 acres Selection cut 40 acres
	Small Sales			1.1	--		
1995	Wild Rice	T17S, R11E Sec 13, 14, 22-24, 26, 27	500	4.0	4	0	Seed cut 125 acres Intermidiate cut 325 acres Selection cut 50 acres

Table 10. Timber Offering Schedule 1/ (Cont'd)

Fiscal Year Offered	Timber Sale Name	Township Range Section	Harvest Acres	Harvest Volume (MMBF)	Miles of Road Const.	Miles of Road Reconst.	Probable Harvest Methods
1995	Dry Canyon	T15S, R13E Sec 21, 22 T16S, R13E Sec 5	800	4.8	1	4	Seed cut 200 acres Intermediate cut 520 acres Final removal 50 acres Selection cut 40 acres
	Pumper	T16S, R12E Sec 1-6, 8-16, 23, 24 T16S, R13E Sec 6-9, 16-18	860	5.5	3	0	Seed cut 300 acres Intermediate cut 520 acres Selection cut 40 acres
	Small Sales			1.1	--		
1996	Rio	T17S, R12E Sec 9-16, 21 T17S, R13E Sec 18	810	7.3	6	0	Seed cut 210 acres Intermediate cut 560 acres Selection cut 40 acres
	Carrisa	T18S, R13E Sec 34, 35 T19S, R13E Sec 2-10, 16-18	1,100	9.8	3	4	Seed cut 300 acres Intermediate cut 700 acres Final removal 50 acres Selection cut 50 acres
	Small Sales			1.1	--		

Table 11. Road Reconstruction

Priority	Division	Road Name	Road Number	Total Miles	Relocation Needed
1	Sacramento	Hay Canyon	257.3	2.7	Some
1	Smokey Bear	Rio Bonio	107.3	1.3	No
1	Guadalupe	North Rim	67	28.3	No
1	Sacramento	Crooked Well	9656	4.0	No
2	Smokey Bear	North Base	616.2	9.7	No
2	Sacramento	Hubbell Canyon	169.4	9.0	Some
2	Sacramento	Lick Ridge	253	3.5	Some
3	Smokey Bear	N.Capitan Gap	5643	4.4	Yes
3	Sacramento	Westside	90.2	128	Some
3	Sacramento	Claims Canyon	620C	2.2	No
4	Smokey Bear	Water Canyon	408.1	10.2	Some
4	Sacramento	Bailey Canyon	206	2.1	Some
4	Sacramento	Prather Canyon	233	5.5	No
5	Smokey Bear	Eagle Lake	120.5	1.6	Some
5	Sacramento	McEwan Lake	551	6.4	No
6	Smokey Bear	eS.Capitan Gap	56.2	2.2	Some
6	Sacramento	Threemile Canyon	228	2.0	No

Composition (Forest Type*)	Aspen and Western Live Oak	Standard Vegetation Treatment Table Engleman Spruce-Subalpine Fir, White Fir, Blue Spruce, Limber Pine, Rocky Mountain Juniper Cottonwood-willow, Interior Ponderosa Pine, Pinyon-Juniper, Arizona Cypress, Mesquite								
STRUCTURE	Desired One-aged, single-storied stand (One-age class comprises >= 90% of total stand BA for most of the rotation. Age difference between oldest and youngest tree in a class is less than 20% of the rotation.)				Desired two-aged, two-storied stand. (Two age classes, each >10% BA most of rotation)	Desired even-aged, Multi-Storied Stand (More than two age classes)			Any Desired One-, two-, or Multi-storied Stand	Open
FUNCTION	Coppice Regeneration Method (vegetative Regeneration Function)	Clearcut Regeneration Method	Seed Tree Regeneration Method	Shelterwood Regeneration Method	Irregular Shelterwood Regeneration Method	Single-tree Selection Regeneration Method	Group-Selection Regeneration Method	Irregular Group Shelterwood Regeneration Method	Intermediate Treatment Methods	No, or few, Trees
VEGETATION MANAGEMENT PRACTICE	**Activity** Coppice Coppice/ with reserve	**Activity** <= 5% tree cover post harvest: Patch cut Strip Cut Stand Cut 6-10% tree cover post harvest: Patch cut w/ Reserve Strip cut w/ Reserve Stand cut w/ Reserve	**Activity** Preparatory Seed 1-10% tree cover post harvest Final Removal Final Removal w/Reserve	**Activity** Preparatory Seed Group Seed Strip Seed Removal Group Removal Strip Removal Final Removal Final Removal w/Reserve	**Activity** Preparatory Preparatory Seed Removal Final Removal Final Removal w/Reserve Coppice Regeneration Method Coppice w/Standards (understory must regenerate vegetatively, suckers/sprouts	**Activity** Single-tree/ (individual Tree) Selection	**Activity** Group Selection Group Selection w/Reserve	**Activity** Seed Removal Final Removal Final Removal w/Reserve	**Activity** Improvement Liberation Thinning Commercial & Non-commercial Mortality Salvage Sanitation Salvage Cull Salvage Prescribed Fire Cleaning Weeding	**Activity** Meadow Maintenance And Creation

Appendix G – Wild, Scenic, and Recreation Eligibility Management Guidelines

Wild Rivers [FSH 1909.12, 8.2]

Smokey Bear Ranger District (Duran Canyon, Hale Canyon)
Guadalupe Ranger District (Sitting Bull Falls, Last Chance Canyon, Turkey Canyon, Upper Dark Canyon, Big Canyon, N. McKittrick Canyon)

- *Timber Production: Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). Timber outside the boundary, but within the visual corridors, will be managed and harvested in a manner to provide special emphasis to visual quality.*
- *Water Supply: All water supply dams and major diversions are prohibited.*
- *Hydroelectric Power: No development of hydroelectric power facilities would be permitted.*
- *Flood Control: No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river area must be maintained.*
- *Mining: New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims would not be abrogated. Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.*
- *Road Construction: No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within 1/4 mile of the riverbank. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.*
- *Agriculture: Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited.*
- *Recreation Development: Major public-use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces or shelters may be provided as necessary within the river area. These should harmonize with the surroundings.*
- *Structure: A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs could be allowed).*
- *Utilities: New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.*
- *Motorized travel: Motorized travel on land or water could be permitted, but is generally not compatible with this classification.*

Scenic Rivers [FSH 1909.12, 8.2]

Smokey Bear Ranger District (Pancho Canyon)

- *Timber Production: A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual scene area should be managed and harvested in a manner that provides special emphasis on visual quality.*
- *Water Supply: All water supply dams and major diversions are prohibited.*
- *Hydroelectric Power: No development of hydroelectric power facilities would be allowed.*
- *Flood Control: Flood control dams and levees would be prohibited.*
- *Mining: Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.*
- *Road Construction: Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.*
- *Agriculture: A wider range of agricultural uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion of the "largely primitive" nature of scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.*
- *Recreation Development: Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed.*
- *Structures: Any concentrations of habitations are limited to relatively short reaches of the river corridor. New structures that would have a direct and adverse effect on river values would not be allowed.*
- *Utilities: This is the same as for wild river classifications.*
- *Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.*

Recreational Rivers [FSH 1909.12,8.2]

Smokey Bear Ranger District (N. Fork Rio Ruidoso, Three Rivers, S. Fork Bonito)
Sacramento Ranger District (Monument Canyon, Fresnal Canyon, Dog Canyon, Upper Peñasco, Sacramento River)

- *Timber Production: Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.*
- *Water Supply: Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance.*
- *New structures are prohibited.*
- *Hydroelectric Power: No development of hydroelectric power facilities is allowed.*
- *Flood Control: Existing flood control works may be maintained. New structures are prohibited.*
- *Mining: Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and the Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.*
- *Road Construction: Paralleling roads or railroads could be constructed on one or both riverbanks. There can be several bridge crossings and numerous river access points.*
- *Agriculture: Lands may be managed for a full range of agricultural uses, to the extent currently practiced.*
- *Recreation Development: Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.*
- *Structures: Small Communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.*
- *Utilities: This is the same as for wild and scenic river classifications.*
- *Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.*

Appendix H – Planned and Unplanned Ignition for Resource Benefit Recommended Mitigation Measures By Resource Area.

Table 15. Recommended Mitigation Measures By Resource Area	
Resource Area	**Mitigation Measure**
Soils and Water Resources	• Evaluation of potential for watershed-level impacts on soils and headwater tributaries would occur during the WFDSS planning processes. • All mitigation measures listed in the *Interagency Standards for Fire and Fire Aviation Operations 2009* (NIFC, 2009), or updates, would be followed. • The Forest hydrologist would take the lead to determine if BMPs are meeting Forest Plan Standards and Guidelines for soil and water. • Site-specific watershed protection measures would be developed during the WFDSS process and would pay particular attention to those watersheds at greatest potential risk from unplanned ignitions for resource benefits. The general standards and guidelines in the Forest Plan that would be followed include: o Minimize impacts to soil and water resources in all ground-disturbing activities. Where disturbance cannot be avoided, provide stabilization as part of the project; o Maintain water quality within minimum State and federal standards; o Use BMPs to mitigate adverse effect of planned activities and maintain site productivity; and o Rehabilitation will be applied when needed to minimize loss of site productivity following activities or wildfire.
Air Quality	• Air quality impacts would be considered during all stages of the WFDSS process. If smoke impacts become unacceptable, the unplanned ignition for resource benefits would be actively suppressed. • Smoke emissions would be minimized using emission reduction techniques as required by the New Mexico Smoke Management Program (SMP). • All use of unplanned ignitions for resource benefit would comply with federal, State, and local air quality regulations. The USFS would follow the requirements of New Mexico's SMP to control and abate air pollution.
TES Species	• All standards and guidelines contained in the Lincoln Forest Plan, as amended, for the protection of TES Species will be followed. • See Wildlife report in its entirety for list of mitigation measures.
Aquatic Species	• Includes measures listed under *Soils and Water Resources* above. • During the WFDSS planning processes, potential fire effects to headwater streams (ephemeral and intermittent) that feed fish-bearing coldwater perennial streams would be addressed. WFDSS planning teams would determine the need for additional measures to protect feeder streams. • Data collected from the cooperative effort by New Mexico Department of Game and Fish, the USFS, and concerned citizens to assess the current status of streams on the Lincoln National Forest for their ability to support Rio Grande cutthroat trout would be considered during the WFDSS planning process to ensure that streams of suitable habitat for reintroduction of this species are not adversely impacted.
Recreation	• Timing of recreational holidays/impacts will be taken into consideration in the WFDSS planning process.

Visual Resources	• Includes measures listed under *Air Quality* above. • Established Visual Quality Objectives in the project area would be maintained and mitigated through proper planning.
Human Health and Safety	• All safety measures outlined in the National Interagency Fire Center's (NIFC) *Interagency Standards for Fire and Fire Aviation Operations 2009* (NIFC, 2009) would be followed during management of an unplanned ignition event. • The USFS would notify the public and the National Recreation Reservation Service in the event of an unplanned ignition event, and close any campgrounds and other developed sites on the Forest in the vicinity of the fire. Nearby communities would also be notified in accordance with New Mexico's SMP notification requirements.
Heritage Resources	• All known fire-sensitive sites would be protected. If potential fire effects on any cultural sites are considered to be adverse, the fire would be suppressed or the sites mitigated. • Any earth-disturbing firelines or other protection activities would be kept outside of all National Register of Historic Places (NRHP)-eligible or undetermined site boundaries. • Dependent on activity, an archeologist would be present during constructed line activities.
Wilderness Areas	. • The use of dozers or other machinery to construct fire lines within wilderness would be prohibited, as would the construction of temporary or permanent roads. • Includes measures listed under Air Quality above