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The El Malpais Plan

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The El Malpais Plan

A Stand-Alone Management Plan for
El Malpais National Conservation Area
and Adjoining Lands

Incorporating Applicable Decisions From
Approved El Malpais Plan
Rio Puerco Resource Management Plan
Continental Divide Trail Comprehensive Plan
El Malpais NCA Land Protection Plan
and
Riparian and Aquatic Habitat Management Plan

December 2001

Prepared by
U. S. Department of the Interior
Bureau of Land Management
Albuquerque Field Office



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

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Dear Reader:

This document, "The El Malpais Plan," is the culmination of the planning process for management of El Malpais National Conservation Area (NCA) and certain adjoining lands. The Albuquerque Field Office completed the formal land-use planning process for the El Malpais Plan Area in September 2001 with the approval of the Record of Decision for the *Proposed El Malpais Plan and Final Environmental Impact Statement* (September 2000). The Approved El Malpais Plan amends the *Rio Puerco Resource Management Plan* (RMP), the land management plan for the entire Albuquerque Field Office. The Approved Plan also included activity-level decisions for management of the resources of the Plan Area. The Albuquerque Field Office has prepared this "stand-alone plan"—The El Malpais Plan—to consolidate all decisions and management guidance currently applicable to the El Malpais Plan Area. The majority of the decisions and guidance are taken from the Approved El Malpais Plan. However, since RMP decisions applicable to the El Malpais Plan Area continue to be valid except as they were amended by the Approved Plan, decisions and guidance from the *Rio Puerco RMP* and its amendments which are applicable to the El Malpais Plan Area are included in this stand-alone El Malpais Plan. In addition, activity-level decisions from the Approved Plan and activity-level decisions tiered from the Rio Puerco RMP are also included in this stand-alone plan.

The El Malpais Plan is arranged as twenty-one separate management plans for the various resources managed by the Albuquerque Field Office in the El Malpais Plan Area. It has been prepared as a resource to be utilized by the AFO resource specialists who will implement the Plan. Those decisions and guidance that apply to more than one resource are duplicated in each resource section. Thus, each of the twenty-one resource plan sections is complete on its own to make implementation of the Plan by Field Office resource specialists as straightforward as possible. An understanding that there is duplication from section to section should help resource specialists and interested members of the public utilize the El Malpais Plan. It should also help members of the public with specific resource interests to be able to focus on the specific resource plan sections applicable to their interests.

We appreciate your interest in the planning process that has culminated in The El Malpais Plan, and hope that you will continue to work with us as we begin to implement the Plan. Implementation of the El Malpais Plan will conserve public resources while allowing for their use and enjoyment by the American people.

Sincerely,

Edwin J. Singleton
Field Manager

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CHAPTER 1

CHAPTER 1

INTRODUCTION

Purpose

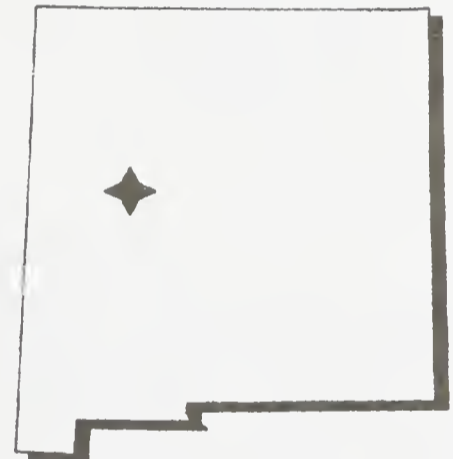
The Albuquerque Field Office (AFO) of the Bureau of Land Management (BLM) completed the land-use planning process for El Malpais National Conservation Area (NCA) and certain adjoining lands in September 2001 with the approval of the Record of Decision (see Appendix B) for the *Proposed El Malpais Plan and Final Environmental Impact Statement* (USDI, BLM 2000b). The Approved El Malpais Plan amends the *Rio Puerco Resource Management Plan* (RMP; USDI, BLM 1986), the land management plan for the entire Albuquerque Field Office. RMP decisions applicable to the El Malpais Plan Area (see Map 1-1) continue to be valid except as they were amended by the Approved Plan. The Approved Plan also included activity-level decisions for management of the resources of the Plan Area. The AFO has prepared this “stand-alone plan”—the El Malpais Plan—to consolidate the RMP amendment decisions and activity decisions of the Approved El Malpais Plan with the still applicable Rio Puerco RMP decisions. Implementation of the El Malpais Plan will conserve public resources while allowing for their use and enjoyment by the American people. The Plan will guide the development and use of public resources in the El Malpais Plan Area.

Background

On December 31, 1987, land previously managed by the Rio Puerco Resource Area of the Albuquerque District (now the AFO) was designated by Congress as El Malpais NCA and El Malpais National Monument. Until that date, the “El Malpais Special Management Area” was administered under the land-use decisions of the Rio Puerco RMP. On that date, Congress passed the El Malpais Act (Public Law 100-225) which, in addition to designating El Malpais National Monument to be managed by the National Park Service (NPS) and El Malpais NCA to be managed by the BLM, required the BLM to develop a general management plan for management of the NCA. The Act

also required an implementation plan for a continuing program of interpretive and public education, a proposal for public facilities development, natural and cultural resources management plans, a wildlife resources management plans, and a wilderness suitability recommendation for the Chain of Craters Wilderness Study Area (WSA). In 2000, the NCA became a part of BLM’s new National Landscape Conservation System (NLCS). The BLM is requiring development of stand-alone management plans for all units of the NLCS. The El Malpais Plan has been prepared to meet all of these planning requirements in a single document. It includes all decisions and management guidance currently applicable to the El Malpais Plan Area. The Plan

recommends a number of changes in the boundary of the NCA; these recommendations, as well as the wilderness suitability recommendations, cannot be implemented without Congressional action.



Location of the Plan Area

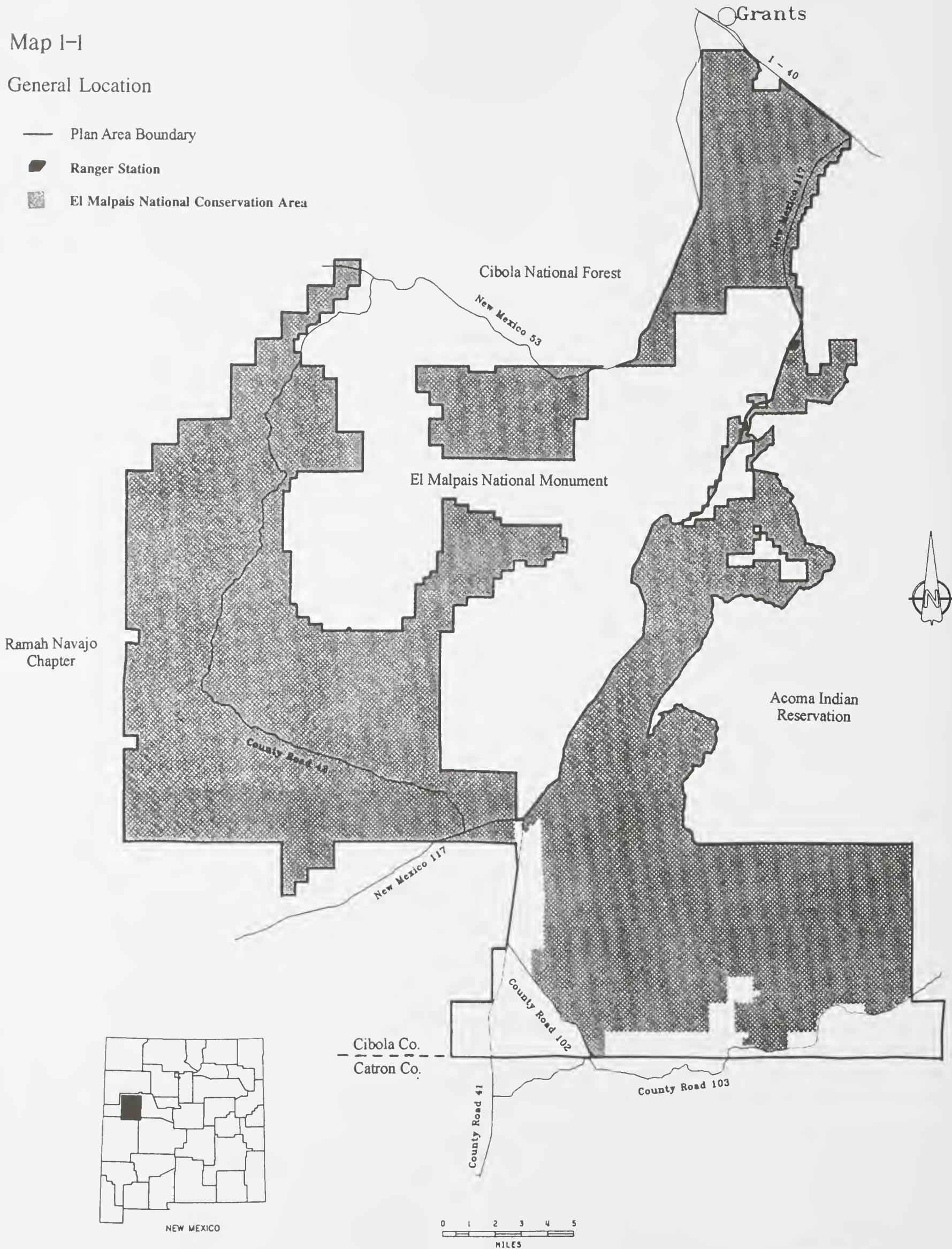
The El Malpais Plan Area lies south of the city of Grants, New Mexico, primarily in Cibola County (see Map 1-1). This was the Planning Area for the Approved El Malpais Plan, and is the area covered by this stand-alone El Malpais Plan. The Plan Area encompasses approximately 249,200 acres of Federal land, 34,600 acres of private land, and 2,500 acres of Indian land. It is bordered on the east by the Acoma Indian Reservation, on the south by Catron and Socorro Counties, on the west by Ramah Navajo land, and on the north by the Zuni Mountain portion of the Cibola National Forest (see Map 1-1). The northern section of the Plan Area nearly surrounds, but does not include, El Malpais National Monument,

El Malpais Plan Area

Map 1-1

General Location

- Plan Area Boundary
- Ranger Station
- ▨ El Malpais National Conservation Area



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administered by the NPS. The Approved Plan recommends approximately 15,100 acres in Catron and Socorro Counties managed by the BLM Socorro Field Office for inclusion in the NCA (see Map 1-2). This recommendation cannot be implemented without Congressional action.

Administrative Units in the NCA

The NCA is the primary area addressed in the Plan. It contains four administrative units with additional special designations: the Cebolla Wilderness, the West Malpais Wilderness, the Chain of Craters WSA, and the new Canyons WSA. For management and descriptive purposes, the remainder of the NCA has been divided into seven other geographic units: the Brazo, Breaks, Cerritos de Jaspe, Cerro Brillante, Continental Divide, Neck, and Spur Units (see Map 1-2; see Table 1-1 for acreage). The Plan also covers lands acquired by the BLM since 1987 that are within or adjacent to the NCA.

The Plan recommends five areas adjoining the NCA for incorporation into the NCA. Two of these units consist of lands outside the NCA but within the Plan Area—the Brazo Non-NCA Unit and the Breaks Non-NCA Unit (see Map 1-2). Three units recommended for inclusion in the NCA lie completely outside the Plan Area—the Continental Divide-AFO Unit (managed by the Albuquerque Field Office), and the Techado Mesa-SFO and Tank Canyon-SFO Units (both managed by the BLM Socorro Field Office). Congressional action would be required before any of these adjoining units could become part of the NCA. If Congressional action resulted in addition of lands managed by the Socorro Field Office to the NCA, management would nevertheless continue under the Socorro RMP. The Socorro RMP is currently being amended. The uses proposed for these units by the El Malpais Plan will be considered in some of the alternatives.

A sixth unit, the Cerro Brillante-AFO Unit (within the area managed by the AFO), includes private lands where BLM would seek only an access easement for the Continental Divide National Scenic Trail (CDNST) unless owners were willing to sell or make an exchange. This unit is outside the Plan Area and is not proposed for addition to the NCA. Descriptions of all seventeen units follow.

Units Within the NCA

Cebolla Wilderness

This wilderness is located along the east side of New Mexico (NM) 117 from The Narrows to County Road (CR) 41 (the Pietown road). The area encompasses approximately 62,000 acres, of which 99 percent is under BLM administration.

Mesas, canyons, buttes, and wide grassy valleys characterize the area. Sandstone forms a cliff face along the east side of the unit at the base of Cebollita Mesa. The sides of the mesa are covered by recent landslide deposits, while the top is capped by lava flows approximately 2.5 million years old. La Ventana Natural Arch, one of the largest in New Mexico, is located in this wilderness, approximately 8 miles south of the BLM Ranger Station.

West Malpais Wilderness

This wilderness is located north and east of CR 42 and southwest of El Malpais National Monument. Vehicular access along the west side of the area is dependent on the condition of CR 42, which can become impassable in wet weather. The wilderness encompasses approximately 39,800 acres, of which 99 percent is under BLM administration.

Within the wilderness, volcanic landscapes dominate. Lava flows 800,000 years old and portions of younger flows from the National Monument are found in and surround the area.

Chain of Craters WSA

This unit is located along the western edge of the NCA between CR 42 and Ramah Navajo Indian land. It encompasses approximately 18,300 acres, all of which are under BLM administration. The Continental Divide and the CDNST cross the western portion of the Plan Area in the WSA.

Within the WSA, volcanic landscapes predominate. A series of cinder cones is scattered through this area, as well as to the north, rising above a floor of 800,000-year-old lava flows. The older flows are covered with grass, low shrubs, and piñons and junipers. The highest point is Cerro Lobo, at an elevation of 8,345 feet.

El Malpais Plan Area

Map 1-2

NCA Units

- Existing NCA Units
- - - Proposed NCA Units
- . . . Easement Only

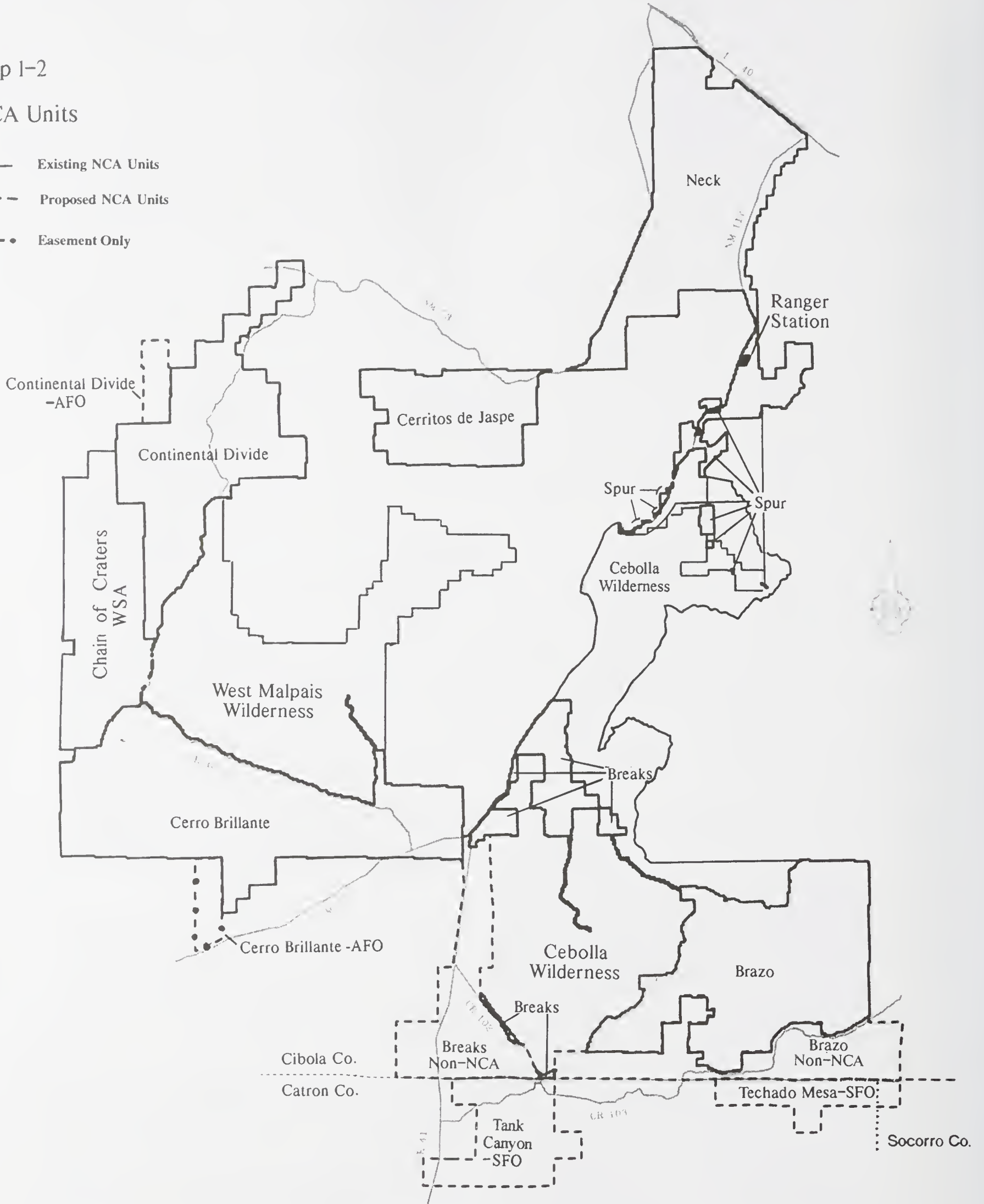


TABLE 1-1

ACREAGE FOR EL MALPAIS NATIONAL CONSERVATION AREA (NCA), THE
PLAN AREA, AND AREAS RECOMMENDED FOR ADDITION TO THE NCA
(rounded to nearest 100 acres)

Unit	BLM	Private	Indian	Total
<u>Within NCA</u>				
Cebolla Wilderness	61,500	300	200	62,000
West Malpais Wilderness	39,400	400	0	39,800
Chain of Craters Wilderness Study Area	18,300	0	0	18,300
Brazo ^a	28,700	900	0	29,600
Breaks ^a	6,500	0 ^b	0	6,500
Cerritos de Jaspe	10,100	2,600	0	12,700
Cerro Brillante	34,400	1,700	0	36,100
Continental Divide	17,500	6,800	0	24,300
Neck	6,100	19,600	1,500	27,200
Spur	4,600	200	800	5,600
Subtotal NCA	227,100	32,500(+) ^b	2,500	262,100
<u>Within Plan Area/Outside NCA</u>				
Brazo Non-NCA (Cibola County) ^a	10,400	1,700	0	12,100
Breaks Non-NCA (Cibola County)	11,700	400	0	12,100
Subtotal Non-NCA	22,100	2,100	0	24,200
Total Plan Area	249,200	34,600	2,500	286,300
<u>Outside Plan Area & NCA</u>				
Cerro Brillante-AFO (Cibola County) ^c	0	2,000	0	2,000
Continental Divide-AFO (Cibola County)	2,000	0	0	2,000
Tank Canyon-SFO (Catron County) ^d	9,900	200	0	10,100
Techado Mesa-SFO (Catron, Socorro Counties)	5,000	0 ^e	0	5,000
Subtotal	16,900	2,200(+) ^e	0	19,100
Grand Total	266,100	36,800	2,500	305,400

Notes: ^a The new Canyons WSA consists of 3,930 acres (all BLM) in 9 parcels from the Breaks (3,430 acres), Brazo (120 acres), and Brazo Non-NCA (380 acres) Units. If designated by Congress, these parcels will be added to the Cebolla Wilderness. If not designated, they will return to the units they were drawn from. The acreages of these units have not been reduced. ^b The Breaks Unit contains 22 acres of private land. ^c AFO is the Albuquerque Field Office (formerly the Rio Puerco Resource Area of the Albuquerque District). BLM will seek an easement for the CDNST across this unit, but the Plan does not recommend its inclusion in the NCA. ^d SFO is the Socorro Field Office (formerly the Socorro Resource Area of the Las Cruces District). ^e The Techado Mesa-SFO Unit contains 40 acres of private land.

Canyons WSA

The new Canyons WSA consists of nine separate parcels located on the periphery of the Cebolla Wilderness. These parcels encompass approximately 4,000 acres of BLM-administered land contiguous to the designated wilderness (see Map 2-6 in Chapter 2). These lands, acquired by BLM through exchange following passage of the El Malpais Act, are located between the current wilderness boundary and highways, bladed roads, and rights-of-way. Prior to designation as a WSA they were included within the Breaks (seven parcels), Brazo (one parcel), and Brazo Non-NCA (one parcel) Units as shown in the Proposed Plan and Final EIS. If Congress designates these lands as wilderness, they will be added to the Cebolla Wilderness. Until all or portions of these lands are either designated by Congress as wilderness or released from wilderness study, they will remain in WSA status and be managed under the *Interim Management Policy* (USDI, BLM 1995). If all or any portion of these lands are not designated as wilderness by Congress and are released from further wilderness review, they will be returned to the Breaks, Brazo, and Brazo Non-NCA Units and managed as prescribed under this Plan.

Landscape features found in these lands vary from grassy valley bottoms and piñon-juniper woodlands to ponderosa pine and sandstone mesas. These predominantly natural-appearing roadless lands provide an extension of the naturalness, as well as the opportunities for primitive and unconfined recreation and solitude, which characterize the Cebolla Wilderness. These lands have been used primarily for grazing, recreational activities, and as wildlife habitat.

Brazo Unit

The Brazo Unit is located in the extreme southeastern corner of the NCA, east of the Cebolla Wilderness and south of the Acoma Indian Reservation. This unit provides access to the Cebolla Wilderness from the east-southeast, and encompasses approximately 29,600 acres, of which 97 percent is under BLM administration. This acreage figure includes 120 acres for the parcel which has been removed from the Brazo Unit for inclusion in the Canyons WSA. This parcel will be returned to the Brazo Unit if Congress does not add it to the Cebolla Wilderness.

Sandstone mesas, canyons, buttes, and wide grassy valleys characterize the unit. The area is predominantly piñon-juniper woodlands with scattered sections of ponderosa pine forest. Access is by dirt roads that often become impassable during wet weather.

Breaks Unit

The Breaks Unit is located in the southeastern portion of the Plan Area just east of NM 117, and is surrounded by the Cebolla Wilderness. The unit encompasses approximately 6,500 acres, all but 22 acres of which are under BLM administration. This acreage figure includes 3,430 acres for the seven parcels which have been removed from the Breaks Unit for inclusion in the Canyons WSA. These parcels will be returned to the Breaks Unit if Congress does not add them to the Cebolla Wilderness.

Mesas, canyons, buttes, and wide grassy valleys make up the unit. The dominant vegetation is shrub-grassland with intermingled piñon-juniper woodland.

Cerritos de Jaspe Unit

The Cerritos de Jaspe Unit, located in the north-central portion of the Plan Area, is surrounded by the National Monument, except for about 3 miles along NM 53. Approximately 12,700 acres make up the unit, with about 80 percent under BLM administration.

Volcanic landscapes dominate the interior of this unit, while ancient lava flows and portions of younger flows in the National Monument surround it. This volcanic terrain is combined with sandstone and limestone ridges, resulting in a diversity of natural features. The ridges are the south end of the Zuni Mountains; they support a complex of Douglas fir and ponderosa pine forest found here at elevations lower than usually expected. The CDNST crosses the northeastern portion of this unit.

Cerro Brillante Unit

The Cerro Brillante Unit extends from the southwestern corner of the NCA along the southern boundary and to NM 117. The northern boundary is CR 42, which also forms the southern and western boundary of the West Malpais Wilderness. Approximately

36,100 acres lie within the unit, with 95 percent under BLM administration.

The landscape of this unit is dominated by rolling hills and swales covered with shrub-grasslands and small clumps of piñon-juniper woodlands. Cerro Brillante, a cinder cone reaching an elevation of approximately 8,050 feet, gives the unit its name. La Rendija, a large crack in the old basalt flows, bisects the unit from north to south along the corridor for the CDNST.

Continental Divide Unit

This unit is located in the northwestern portion of the NCA, bordered on the east by the National Monument. The unit encompasses approximately 24,300 acres, about 72 percent of which is under BLM administration. A series of aligned, steep-sided volcanic cinder cones and craters passes through this unit and the Chain of Craters WSA to the southwest. The corridor for the CDNST also crosses this unit.

Neck Unit

The Neck Unit is bounded on the north by Interstate 40 and along the west by NM 53 and the community of San Rafael. The eastern edge of the unit runs along NM 117, with the National Monument as its southern boundary. The unit encompasses approximately 27,200 acres, with 22 percent under BLM administration.

This unit is a basalt-floored valley between the Zuni Mountains on the west and Las Ventanas Ridge on the east. It is truncated on the north by Interstate 40. The Rio San Jose and Horace Mesa (southwest of Mount Taylor) lie to the north of this unit. Vegetation is mostly woody shrubs and grasses striving to exist on the older lava flows. The CDNST follows NM 117 in the Neck Unit.

Spur Unit

The Spur Unit is located on the eastern edge of the NCA, just east of NM 117 and south of the Neck Unit. The BLM Ranger Station is located within this unit, which encompasses approximately 5,600 acres (with 80 percent under BLM administration).

The unit consists of sandy-bottomed valleys with rocky mesa topography along NM 117. Piñon-juniper

woodlands dominate the vegetation. The CDNST follows NM 117 in the Spur Unit.

Units Within the Plan Area But Outside the NCA

Brazo Non-NCA Unit

Located just south of the Brazo Unit, this unit contains approximately 12,100 acres, of which 86 percent is under BLM administration. This acreage figure includes 380 acres for the parcel which has been removed from the Brazo Non-NCA Unit for inclusion in the Canyons WSA. This parcel will be returned to the Brazo Non-NCA Unit if Congress does not add it to the Cebolla Wilderness. These lands have similar topography and resource values to those of the adjacent Brazo Unit.

Breaks Non-NCA Unit

The Breaks Non-NCA Unit is located just west and south of the Cebolla Wilderness, generally along CR 41. It encompasses approximately 12,100 acres, of which 97 percent is under BLM administration. More than 70 percent of this total BLM acreage was acquired as part of recent land exchanges.

Open grasslands characterize the unit. Vegetation consists of grasses and shrubs, including blue grama and fringed sage. Part of the unit is classified as having the "sparse to bare" vegetation type, which is extremely sensitive to climatic variation and surface disturbance.

Units Outside the Plan Area & NCA

Cerro Brillante-AFO Unit

This unit within the area managed by the AFO is located on the southern edge of the Cerro Brillante Unit, and consists of three sections of private land outside the current NCA boundary south to NM 117. Like the Cerro Brillante Unit, this unit is dominated by rolling hills of old lava with open shrub-grassland vegetation. Approximately 3 miles of the route selected for the location of the CDNST treadway lie within the unit (on 2,000 acres of privately owned land). There is no BLM-administered land within this unit, and the BLM would seek only an access

easement for the CDNST here unless owners were willing to sell or make an exchange.

Continental Divide-AFO Unit

This unit managed by the AFO is located along the northwestern edge of the Continental Divide Unit, bordered on the south and east by the NCA boundary and on the north and west by private lands. It encompasses approximately 2,000 acres, all of which are under BLM administration. The topography of the unit is similar to that of the adjacent Continental Divide Unit.

Tank Canyon-SFO Unit

This unit managed by the BLM Socorro Field Office (SFO) adjoins the southwestern edge of the Plan Area south of the Breaks Non-NCA Unit, and contains approximately 10,100 acres. Most of the unit is contained in a scenic area of rolling topography, with dominant piñon and juniper vegetation.

Techado Mesa-SFO Unit

This unit managed by the SFO adjoins the southeastern edge of the Plan Area south of the Brazo Non-NCA Unit, and contains approximately 5,000 acres, only 40 acres of which is privately owned. This area has rolling topography and a high, steep-sided mesa capped by lava flows. Vegetation is dominated by piñon-juniper woodland and ponderosa pine forest with some oak/deciduous understory. Small playa lakes form seasonally on the mesa top.

Management of the NCA Since Its Establishment

The El Malpais Act contains specific directives for the BLM regarding planning and management of the NCA. See Appendix A for legislative highlights. Since the signing of the Act on December 31, 1987, the AFO (along with other agencies and groups) has completed a number of actions in the NCA under the Rio Puerco RMP.

The BLM Planning Process

The BLM develops three types of land-use plans: RMPs (including RMP amendments), activity-level

plans, and project-level plans. An RMP is a general land-use plan as prescribed by the Federal Land Policy and Management Act of 1976 (FLPMA). An RMP amendment is a modification of a portion of an original RMP. An RMP or RMP amendment is always accompanied by an environmental assessment (EA) or environmental impact statement (EIS) in compliance with the National Environmental Policy Act (NEPA).

An activity plan is a more detailed and specific plan for managing a single resource program or special management unit. Examples include a cultural resources management plan, a wildlife habitat management plan, or a wilderness management plan. An activity plan is accompanied by a NEPA document, usually an EA, but occasionally in a more complex situation, by an EIS.

A project plan is a detailed, site-specific plan for developing a particular project, such as an interpretive kiosk, a wildlife guzzler, or a campground. Project plans are usually accompanied by an EA.

Both RMP decisions (from the Rio Puerco RMP and subsequent amendments, including the Approved El Malpais Plan) and activity-level decisions (from the Approved El Malpais Plan) are included in this Plan. All decisions have been analyzed through the NEPA process. Because the activity-level decisions were included for analysis in the EIS associated with the Proposed Plan, they will require only site-specific cultural resources clearances, special-status species clearances, and in some cases, American Indian consultation, to complete compliance with NEPA before implementation.

Plan Amendments

Decisions for four of the ten issues in the Approved El Malpais Plan amended the Rio Puerco RMP: Issue 1—Recreation/Visual Resource Management (VRM), Issue 3—Access and Transportation, Issue 5—Wilderness Suitability, and Issue 10—Boundary and Land Ownership Adjustments.

The Approved Plan decisions amended the Rio Puerco RMP by adjusting some previously assigned VRM classes within the NCA, and by assigning classes to lands acquired outside the NCA after completion of the RMP. VRM classes influence the location of recreational and other facilities.

The Approved Plan specified motor vehicle use designations. The designated wildernesses are closed to motor vehicles. Motor vehicle use is limited to designated routes and trails in the remainder of the Plan Area. In addition, approximately 84 miles of road within the Plan Area will be closed and reclaimed. All changes in motor vehicle use area designations and route designations amended the RMP.

For the Wilderness Suitability Issue, the Approved Plan recommended approximately 4,000 acres for designation by Congress as wilderness. This land, in nine parcels contiguous to the Cebolla Wilderness, was formerly part of the Breaks, Brazo, and Brazo Non-NCA Units. These scattered parcels now form the Canyons WSA (see Map 2-6 in Chapter 2). The Chain of Craters WSA was not recommended as suitable for designation as wilderness.

The Approved Plan amended the RMP for Issue 10, Boundary and Land Ownership Adjustments, by recommending various changes in the boundary of the NCA. These changes are described in detail in Chapter 2, and require Congressional approval.

Planning Issues & Criteria for the Approved Plan

The ten issues resolved through the RMP amendment process in the Approved El Malpais Plan were identified based upon the judgement of an interdisciplinary team of resource specialists, interagency consultation, local, State and Tribal government input, review by BLM managers, and through extensive discussions with individuals, industry representatives, and public interest groups.

Resolution of some of the issues was dependent on data available at the time of preparation of the Proposed El Malpais Plan and Final EIS. The decisions for these issues provide that future actions based on new data may be approved as long as such actions conform with goals of the Approved Plan and the planning criteria used originally to guide resolution of the issue. For some issues, implementation of the decisions of the Approved Plan relies on future activity planning. The criteria will continue to apply as guidelines for preparation of activity plans. For this reason, the issues and criteria formulated at the beginning of the planning process are listed below.

Issue 1—Recreation

Designation of the NCA by Congress gave formal recognition to the area's public recreational values. The area is relatively undeveloped but attracts visitors who want to participate in a variety of recreational activities and settings. The recreational demand in the Planning Area is expected to increase because of population growth within a day's driving time of the area, its accessibility from three highways, and the increased publicity the area is receiving.

Issue Questions

- What range of recreational opportunities (e.g., off-road vehicle touring, biking, horseback riding, backpacking, hiking) should be provided to meet the wide variety of public demands?
- What BLM actions are needed to provide these recreational opportunities?

Planning Criteria

The BLM will consider the following factors in developing answers to the above questions:

- ◆ Existing recreational use and facilities;
- ◆ Public demand for recreational activities, settings, and opportunities;
- ◆ Compatibility with other land and resources uses;
- ◆ Public health and safety;
- ◆ Public interests and concerns; and
- ◆ Coordination with the NPS.

Issue 2—Facility Development

The Planning Area is characterized as a predominantly natural environment with few facilities for the comfort and convenience of visitors. Current facilities include a Ranger Station with interpretive exhibits on the east side; a parking area, trail and restrooms at La Ventana Natural Arch; and a picnic/camping area at the south end of The Narrows. Examples of facilities that could be developed are trailheads, kiosks, interpretive signing, parking areas, toilets, water sources, and visitor centers.

Issue Questions

- What level of facility development is appropriate?
- Where should the BLM provide facilities?

Planning Criteria

The BLM will examine the following factors in answering these issue questions:

- ◆ Existing facilities;
- ◆ Resource protection;
- ◆ Visitor health and safety;
- ◆ Site location and design;
- ◆ Public interests and concerns; and
- ◆ Coordination with the NPS.

Issue 3—Access & Transportation (Motorized & Non-Motorized)

Through the Rio Puerco RMP, the BLM limited vehicle use in the area to existing roads and trails. The exception is in the two wildernesses (Issue 4), where vehicle use and mechanized travel are prohibited. [Following definition of this issue, it was determined that a small portion of the Planning Area had been left open to motor vehicle use under the RMP.] County Roads 41, 42 and 103, and State Highways 53 and 117 provide access to the Planning Area. Numerous routes exist outside the wildernesses; from these, people use their cars, off-highway vehicles, bicycles, horses, and other means to gain access into the Planning Area. The BLM has inventoried these routes.

Also, a route through the Planning Area has been selected for the Continental Divide National Scenic Trail. Access to the route may need to be acquired.

Issue Questions

- What roads and trails should the BLM provide for access to or across the Planning Area's public lands?
- Which roads and trails should be designated as open, limited, or closed to use?

- Are new easement acquisitions not identified in the BLM's *NCA Land Protection Plan* (USDI, BLM 1989b) needed to ensure public access?

Planning Criteria

The BLM will consider the following information in answering these issue questions:

- ◆ Existing roads and trails;
- ◆ Compatibility with other land and resource uses; and
- ◆ Public interests and concerns, including those of local American Indian groups.

Issue 4—Wilderness Management

The El Malpais Act designated two wildernesses within the NCA, the West Malpais Wilderness (39,800 acres) and the Cebolla Wilderness (62,000 acres). The El Malpais Act allows for the continuation of livestock grazing, hunting, and trapping in these areas. The Act also recognizes the need for access by local American Indians for traditional cultural and religious practices, and provides for the scientific use of archeological resources in the Cebolla Wilderness.

Issue Questions

- What actions are needed to protect and preserve the natural features of each wilderness, while offering visitors an outstanding opportunity for solitude or a primitive and unconfined type of recreation?



Golden Eagle

- How can the BLM provide access for traditional cultural and religious practices by local American Indians and still be consistent with the Wilderness Act?
- What forms of scientific use of archeological resources can or should be authorized in the Cebolla Wilderness? What permit conditions are needed?

Planning Criteria

The BLM has considered the following factors in answering these issue questions.

- ◆ Management proposals that benefit the wilderness resource;
- ◆ Public interests and concerns; and
- ◆ Maintenance requirements for range improvements.

Issue 5—Wilderness Suitability

Before passage of the El Malpais Act, the BLM had designated El Malpais as a Special Management Area. In addition, portions of El Malpais had been designated as an Outstanding Natural Area, a Natural Environmental Area, and a National Natural Landmark. Upon passage of the Act, these designations were superseded by the NCA and National Monument designations.

By establishing the NCA, Congress recognized the outstanding historic, scenic, natural, and cultural resources of the area. The El Malpais Act directs the BLM to conduct a study of the Chain of Craters area and submit a recommendation as to its suitability for inclusion in the National Wilderness Preservation System (NWPS).

Since the designation of the NCA in 1987, the BLM has acquired additional lands contiguous to the Cebolla Wilderness. These newly acquired lands are also being evaluated for their wilderness suitability.

Issue Questions

- Is the Chain of Craters WSA suitable for recommendation for inclusion in the NWPS?

- Do the recently acquired lands within the Planning Area have wilderness values suitable for inclusion in the NWPS?

Planning Criteria

The BLM will examine the following factors in answering these issue questions:

- ◆ Mandatory wilderness values of size, naturalness, and an outstanding opportunity either for solitude or for primitive and unconfined recreation;
- ◆ Special features, such as landforms or geological expressions;
- ◆ Proximity to existing wilderness;
- ◆ Contribution to the diversity in the NWPS;
- ◆ Ramah Navajo Indian concerns; and
- ◆ Manageability of the area as wilderness.

Issue 6—American Indian Uses & Traditional Cultural Practices

Several American Indian groups use the Planning Area for traditional religious and cultural practices. Acoma Pueblo and the Ramah Navajo have taken a strong interest in the BLM's management of the area; other tribes such as the Zuni, Laguna, Alamo Navajo, and Cañoncito Navajo may also have concerns. Principal issues include access to sacred places and privacy for religious practices, as well as continued access to areas used for hunting, piñon picking, and gathering of other traditional plants and minerals.

Issue Questions

- How can the BLM facilitate traditional cultural and religious practices within the Planning Area?
- What actions can the BLM take to minimize conflict between traditional practices and other uses?

Planning Criteria

To answer these questions, the BLM has considered the following information:

- ◆ Traditional cultural and religious practices, uses and sensitive areas, including scheduling and participants;
- ◆ NCA legislative requirements; and
- ◆ Formal and informal means of communicating and coordinating with local American Indian groups and individuals.

Issue 7—Cultural Resources

The Planning Area is noted for its cultural resources. Archeological sites in this area span the past 12,000 years and are important for the scientific information they contain. At the same time, many of these same sites figure prominently in the history of several local American Indian tribes, and are very important in traditional cultural practices and belief. Other more recent sites provide links to the Hispanic and Anglo history of this area. The BLM manages these resources for their information potential, for their public values, or for conservation.

Issue Questions

- What management objectives should the BLM establish for cultural resources in the Planning Area?
- What actions should the BLM take to achieve these objectives?

Planning Criteria

To develop answers for these issue questions, the BLM has considered the following information:

- ◆ The relative importance and sensitivity of known and anticipated cultural resources;
- ◆ Their geographic distribution and density;
- ◆ Current and potential threats to these resources;
- ◆ Public interests and concerns, including those of local American Indian groups; and
- ◆ The legislative requirements and history of the El Malpais Act.

Issue 8—Wildlife Habitat

Public lands in the Planning Area provide habitat for a variety of wildlife species. Special management attention is needed to restore, maintain, or enhance priority species and their habitats. If these are not properly managed, other uses of the public land can impact wildlife habitat. Integrating habitat management with other resource programs requires careful planning to minimize impacts to priority species and their habitats, while still providing for other uses of the public land.

Issue Questions

- What wildlife species and their habitats should receive management priority?
- What maintenance, improvement, and expansion objectives and actions (including vegetative manipulation) should the BLM identify for these species and habitats?

Planning Criteria

To help answer these questions, the BLM has considered the following factors:

- ◆ Input from Federal and State wildlife agencies and the scientific community;
- ◆ Species and habitat of high public and scientific interest;
- ◆ Species habitat requirements;
- ◆ Vegetative communities and habitat condition;
- ◆ Conflicts between exotic and native species; and
- ◆ Maintenance and enhancement of biological diversity.

Issue 9—Vegetation

Vegetation is the common element on which all users of the landscape depend. It provides food and cover for wildlife and domestic animals, as well as scenic enjoyment for visitors. It catches rainfall and slows overland flows, reducing soil movement and increasing the amount of water absorbed by the soil. Vege-

tation thus affects the quantity and quality of water produced from watersheds, as well as the visual quality of an area's scenery.

Issue Questions

- What are the objectives for the vegetative communities the BLM will be managing to attain?
- What measures are needed to attain these objectives?

Planning Criteria

To help answer these questions, the BLM will consider the following factors:

- ◆ Protection and enhancement of watershed conditions;
- ◆ Unique or fragile soils and vegetation, including threatened and endangered plant species;
- ◆ Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat;
- ◆ Vegetative treatments or manipulation methods, including prescribed fire; and
- ◆ Use of fuelwood harvest and other forestry practices.

Issue 10—Boundary & Land Ownership Adjustments

As the result of recent changes in land ownership and public participation in the planning process, several minor adjustments in the NCA boundaries may be desirable. Also, two relatively small blocks of contiguous public land managed by the Socorro Field Office to the south of the NCA contain resources that would contribute to the NCA. These circumstances raise the question of whether the BLM should recommend modification of the NCA boundaries. Such a modification would require that Congress pass new legislation. In addition, several other situations exist in which acquisition of lands or interests in lands beyond those identified in the NCA *Land Protection Plan* (USDI, BLM 1989b) may be desirable.

Issue Questions

- Should the BLM recommend to Congress that the NCA boundaries be modified, and if so, in which areas?
- Are there lands or interests in lands [not already identified in the *Land Protection Plan*] that the BLM should acquire through exchange, purchase, or donation to further the aims of the El Malpais Act?

Planning Criteria

To help answer the above questions for this issue, the BLM will consider the following information:

- ◆ Resource values that exist on lands within and adjacent to the NCA;
- ◆ Concerns of local communities, governments, and private landowners; and
- ◆ The land ownership pattern.

Planning Issues & Criteria for the Rio Puerco RMP

Few of the RMP issues and their associated criteria apply to the El Malpais Plan Area. Those that continue to apply to the Plan Area are listed by resource in Chapter 2.

Implementation

All future resource management authorizations and actions within the area covered by the El Malpais Plan, including budget proposals, will conform or at a minimum, not conflict with the Plan. All operations and activities under existing permits, contracts, cooperative agreements, or other instruments for occupancy and use will be modified, if necessary, to conform with this Plan within a reasonable period of time, subject to valid existing rights.

The Plan does not supersede valid existing rights on public lands. Valid existing rights are those claims or rights to public land that take precedence over the decisions of the Plan. For example, a mining claim

filed prior to the passage of the El Malpais Act in an area later withdrawn from mineral entry would still be valid. Valid existing rights may be held by other government agencies or by private individuals or companies. Valid existing rights may pertain to minerals, rights-of-way, or water rights.

Decisions in this Plan will be implemented over a period of years. In most cases the site-specific NEPA analysis for activity-level decisions was completed in the Approved El Malpais Plan except for cultural resources clearances and special-status species clearances.

Priorities are listed in Chapter 2 for the implementation of those decisions that did not automatically become effective with the approval of the Plan. Priorities will be implemented as funding and personnel are available. Priorities will be reviewed annually to help develop the annual work plan/budget commitment for the coming year. Priorities may be revised based upon new national policy, new Department of Interior direction, or new BLM goals.

Monitoring and Evaluating the Plan

The effects of implementing the Plan will be monitored and evaluated on a periodic basis to assure that the desired results are being achieved. The frequency and standards for monitoring the individual resource programs are described in Chapter 2. Monitoring and evaluation will determine whether the original assumptions have been correctly applied, impacts correctly predicted, mitigation measure results are satisfactory, conditions or circumstances have significantly changed, and whether new data are of significance to the Plan.

Maintaining the Plan

The Plan will be maintained as necessary to reflect minor changes in data. Plan maintenance, a continuous process, corrects errors in the text, updates data bases, and corrects mapping and other table and graphic errors. It will not be used to expand the scope of resource uses or restrictions, or to change the terms, conditions and decisions of the Plan. Maintenance will be documented in supporting records. Formal public involvement is not necessary to maintain the Plan.

Changing the Plan

The Plan may be changed, if necessary, through the RMP amendment process. Results of monitoring and evaluation, new data, and new or revised policies will be examined to determine if there is need for an amendment. Any changes in circumstances or conditions which affect the scope, terms, or conditions of the Plan may warrant an amendment. In all cases, a proposed action that does not conform with the Plan and warrants further consideration before a plan revision is scheduled would require an amendment. Generally an amendment is site-specific or involves only one or two planning issues. The amendment process is identical to the resource management planning process, although the scope of the information, analysis, and documentation is limited.

A plan revision, when necessary, involves the preparation of a new RMP for the entire area covered by the RMP.

Relationship to Other BLM Planning Levels and Studies

Development of the El Malpais Plan has occurred within the framework of the BLM Land-Use Planning System. The Land-Use Planning System is directed by policy developed through the BLM Policy Planning System and land-use plan implementation is funded through the BLM Budget Planning System. Land-use planning decisions are made at three levels. RMP-level decisions allocate lands to broad general uses. Activity-level plans are program-specific plans related to smaller geographic areas. Project-level plans relate to site-specific areas and frequently to one or a few resources. This Plan satisfies the requirements for the RMP-level and for much of the activity-level planning for the El Malpais Plan Area.

Public Participation

Approved El Malpais Plan

Public participation in preparation of the Approved Plan was a dynamic process continued throughout Plan development. In addition to formal public participation, informal contact with public land users and interested persons occurred frequently. All applicable

public participation was documented in the planning process and is kept on file at the AFO. Public involvement is essential to the success of planning and was welcomed. The BLM provides five specific opportunities for public comment, participation, or review during the planning process.

The AFO published a general Notice of Intent (NOI) to prepare an RMP amendment/EIS in the Federal Register on March 29, 1995 (Vol. 60, No. 60). In the NOI, the AFO also identified the general planning criteria and invited public comment.

The NOI initiated the scoping process. A letter to those on the El Malpais Plan mailing list invited the public to participate in scoping by attending meetings and/or providing written comments. The AFO held public meetings to develop planning issues and review planning criteria. Meetings were held in Grants, the Ramah Navajo Chapter House, and Albuquerque. The AFO met with the Acoma Tribal Government on April 4, 1995. Written comments were accepted until scoping officially ended on May 19, 1995. Information on the results of public scoping was mailed to all on the El Malpais Plan mailing list on July 24, 1995.

Following completion of the *Draft El Malpais Plan and Environmental Impact Statement* in June 1999 (USDI, BLM 1999b), the AFO held a series of public hearings in Albuquerque, Grants, and Quemado to collect oral comments on the Draft Plan and to gather

input on the suitability of the Chain of Craters WSA for wilderness designation. The 90-day comment period ended on September 24, 1999. *The Proposed El Malpais Plan and Final Environmental Impact Statement* was completed in September 2000 (USDI, BLM 2000b). The 30-day period for public protests of the RMP amendment decisions ended on October 30, 2000.

The Record of Decision (ROD) approving the El Malpais Plan was signed on September 26, 2001. Appeals of activity-level planning decisions can be made by those parties adversely affected at the time the ROD is released. The 30-day waiting period for appeals ended on November 5, 2001. Activity-level planning decisions can now be implemented.

This public participation influenced the outcome of the land-use planning and led to decisions and their proposed implementation as laid out by resource/program in Chapter 2 of this document.

Rio Puerco RMP

Preparation of the *Rio Puerco RMP* (USDI, BLM 1986), the *El Malpais Land Protection Plan* (USDI, BLM 1989b), the *Continental Divide National Scenic Trail Comprehensive Plan* (USDA, FS, 1992, 1993), and the *Riparian and Aquatic Habitat Management Plan* (USDI, BLM 2000a) also included extensive public participation.





CHAPTER 2



CHAPTER 2

RESOURCE PLANS

Introduction

As detailed in Chapter 1, the El Malpais Act, which established El Malpais NCA, directed the BLM to prepare a general management plan describing appropriate uses and development for the NCA consistent with the purposes of the Act. The plan was to include, but not be limited to: (1) an interpretation and public education plan, (2) a public facilities plan, (3) natural and cultural resources management plans, and (4) a wildlife management plan. In addition, the general management plan was to include a wilderness suitability review of the Chain of Craters Wilderness Study Area. In conformance with the National Environmental Policy Act and the Federal Land Policy and Management Act, the general management plan ("The Approved El Malpais Plan") was prepared as an Environmental Impact Statement/Resource Management Plan Amendment (USDI, BLM 2000a). In this format, decisions and management guidance for the various resources required by the El Malpais Act to be covered by separate management plans were dispersed throughout the document. The conclusion to the planning process outlined by the El Malpais Act is to combine the decisions and guidance for each resource into the separate management plans required by the Act.

In 2000, El Malpais NCA became a part of the BLM's new National Landscape Conservation System (NLCS). The BLM is requiring development of stand-alone management plans for all units of the NLCS. The AFO has prepared this stand-alone plan for El Malpais NCA ("The El Malpais Plan") to consolidate all decisions and management guidance currently applicable to the El Malpais Plan Area. The majority of the decisions and guidance are taken from the Approved El Malpais Plan. However, since decisions and guidance from the *Rio Puerco Resource Management Plan* (USDI, BLM 1986) and its amendments (USDI, BLM 1989b, 2000a; USDA, FS 1992, 1993) applicable to the El Malpais Plan Area (see Map 1-1) continue to be valid except as they were

amended by the Approved El Malpais Plan, they are included in the stand-alone plan. In addition, activity-level decisions from the Approved Plan and activity-level decisions tiered from the Rio Puerco RMP are also included in the stand-alone plan.

Format

Chapter 2 is arranged as twenty-one separate management plans for the various resources managed by the AFO in the El Malpais Plan Area. This part of the El Malpais Plan has been prepared as a resource to be utilized by the AFO resource specialists who will implement the Plan, not as a document to be read straight through. Those decisions and guidance that apply to more than one resource are duplicated in each resource section. Thus, each of the twenty-one resource plan sections is complete on its own to make implementation of the Plan by AFO resource specialists as straightforward as possible. An understanding that there is duplication from section to section should help AFO resource specialists and interested members of the public utilize the El Malpais Plan. It should also help members of the public with specific resource interests to be able to focus on the specific resource plan sections applicable to their interests.

Each resource plan section begins with the goals of the resource program covered by the section. Goals are followed by the management guidance which directs operation of the program, including policy and authorities and field office program guidance. The heart of most sections is "Decisions From Approved El Malpais Plan," which also includes the criteria used in resolving the El Malpais Plan issues. This is followed by "Guidance From Rio Puerco RMP," including the criteria used in resolving the RMP issues, implementation guidance from the RMP and its amendments, and decisions carried forward into the RMP from planning documents completed prior to preparation of the RMP. Monitoring, implementation priorities, and support needs round out each resource section.

For the purposes of this document, Recreation Facility Development, Visual Resource Management, Off-Highway Vehicles, and Interpretation/Public Education are treated as programs separate from the Recreation Program.

Program Goals

The BLM's goal for the Recreation Program is to ensure the continued availability of quality outdoor recreational opportunities and experiences that are not readily available from other sources. Recreational use and capital investment in facilities are managed to protect the health and safety of visitors; protect natural, cultural, and other resource values; stimulate public enjoyment of public land; provide for universal access (including for physically challenged visitors); and, to the extent possible, resolve user conflicts. Management priority is given to undeveloped areas experiencing resource damage, user conflicts, or threatening visitor safety; areas where use exceeds current capacity; unique and/or scenic attractions adjoining heavily traveled highways; and preservation and protection of natural and cultural resources.

Management Guidance

Policy and Authorities

Recreation programs are managed according to multiple use principles unless otherwise specified by law or BLM policy. In areas formally recognized by Congress, such as designated wilderness and National Conservation Areas, providing recreational opportunities requires more intensive management and investment. The El Malpais Act specifies that the NCA be managed to protect geologic, archeological, ecological, cultural, scenic, scientific, and wilderness resources, in a manner consistent with the Federal Land Policy and Management Act of 1976 (FLPMA). Cave resources are managed in accordance with the Federal Cave Resources Protection Act of 1988.

Manuals and policy statements that pertain to the Recreation Program in El Malpais NCA include BLM

Manual Sections 8300–Recreation, 8357–Byways, 8360–Visitor Services, and 8362–Interpretive Services. Recreation management will be consistent with the policy indicated in *Recreation 2000* (a national planning and policy document for recreation management into the year 2000 and beyond) (USDI, BLM 1988b).

Laws that pertain to the Recreation Program in El Malpais NCA include FLPMA; the El Malpais Act; the Federal Cave Resources Protection Act of 1988; the Land and Water Conservation Fund Act of 1964; the Wilderness Act of 1964; the National Trails System Act of 1968; and the National Environmental Policy Act of 1969 (NEPA).

Field Office Program Guidance

The AFO uses the Recreation Opportunity Spectrum (ROS) to inventory, plan for, and administer outdoor recreation resources on the public lands. A general description of the six ROS classes together with the management objectives for each class is contained in Appendix C. Table 2-1 displays land acreage for each of the three ROS classes in the Plan Area. The ROS classification for the Plan Area is displayed on Map 2-1.

TABLE 2-1




**ROS CLASSIFICATIONS
FOR THE PLAN AREA (PA)
(acres, rounded to nearest hundred)**

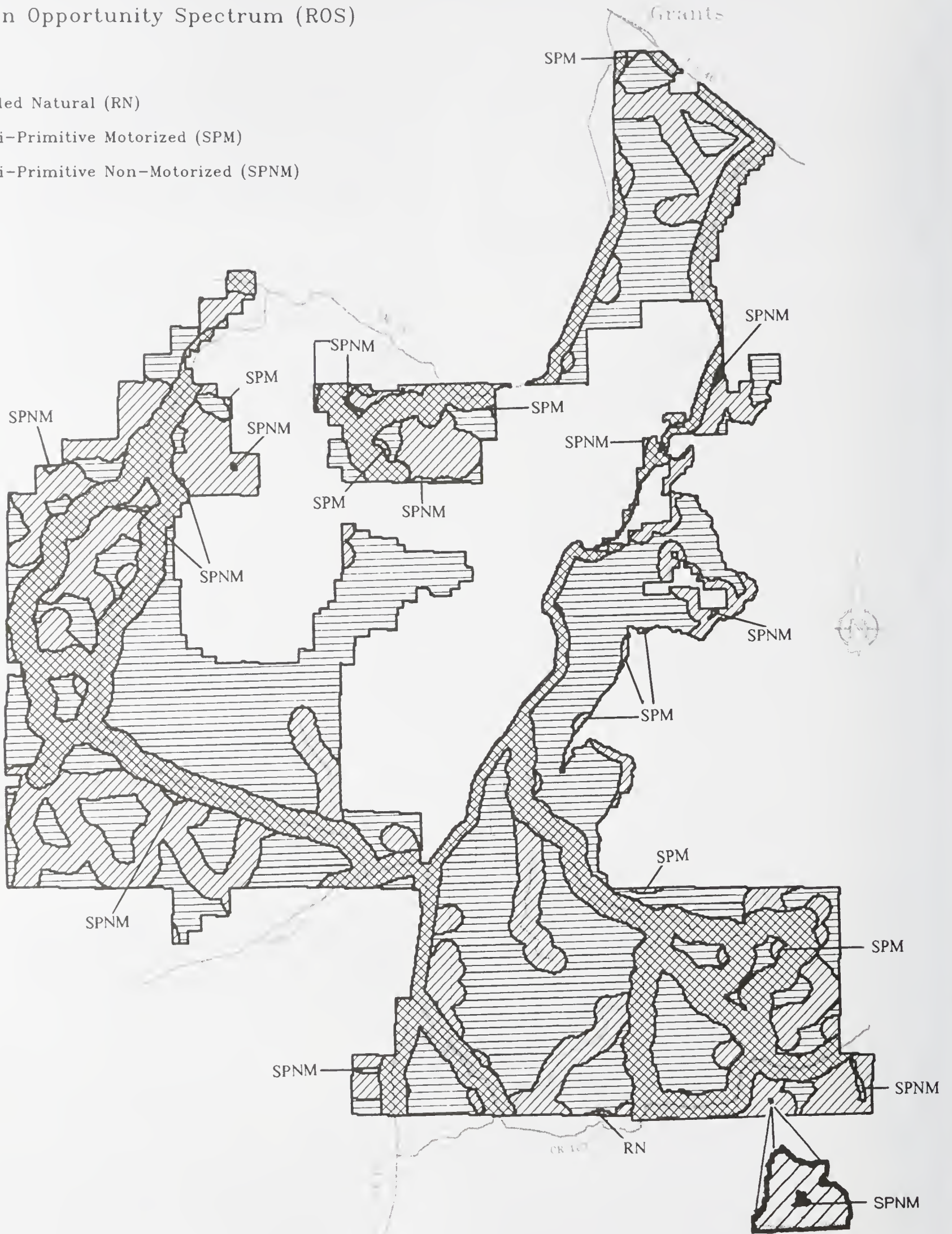
ROS Class	Approved Plan	
	Acres	% PA
Roaded natural	79,000	28
Semi-primitive motorized	72,000	25
Semi-primitive non-motorized	135,300	47
Totals	286,300	100

El Malpais Plan Area

Map 2-1

Recreation Opportunity Spectrum (ROS)

-  Roaded Natural (RN)
-  Semi-Primitive Motorized (SPM)
-  Semi-Primitive Non-Motorized (SPNM)



For any project proposed in the Plan Area, the AFO will continue to evaluate recreation resources on a case-by-case basis as part of project-level planning. Such evaluation will consider the compliance of the action with current management plans, the significance of the proposed project, and the sensitivity of recreation resources in the affected area. Stipulations will be attached as appropriate to ensure compatibility of projects with recreation management objectives.

Hunting and trapping are permitted in the Plan Area and must comply with all applicable New Mexico Department of Game and Fish regulations. Patrols such as Operation Respect will continue during hunting/trapping seasons.

Monitoring will be used to protect recreation resources and prevent their degradation. Staff patrols, traffic, and trail counters will be used to measure and monitor visitor use. The AFO uses the Limits of Acceptable Change (LAC) monitoring system to determine the need to modify use allocation or management. Certain limits have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan (see Appendix D).

The AFO will inspect recreation-related facilities and conduct a program of preventive and rehabilitative maintenance of recreation-related facilities, to the extent resources permit, to provide a safe, sanitary, and aesthetically pleasing environment for visitors and employees. Through inspection the AFO will identify and remove hazards or give warning of their presence. AFO personnel, volunteers, cooperative management agreements, contracts with the private sector, and other means as necessary will be utilized to maintain BLM facilities. The AFO will continually evaluate its recreation-related facilities through inspection to determine if they should be reconstructed, expanded, transferred, closed, or removed based on costs, resource protection, health and safety, and their capability of meeting current and future uses and demands.

The AFO will continue to issue special recreation permits to qualified outfitters and guides when requested, following the permitting process, which includes compliance with NEPA. Permits issued will be consistent with resource protection objectives and management decisions for the area in which the

proposed use is planned, and set up to reduce user conflicts. Examples of activities sometimes covered under these permits are guided and/or outfitted hunting, mountain biking events, pack-animal trekking, commercial photography, and other commercial outfitting. Commercial, competitive, and organized uses of public lands may be permitted. However, no motorcycle race or other off-highway vehicle competitive event will be allowed, as this would not be compatible with the intent of the El Malpais Act.

The AFO will conduct an inventory of cave (lava tube) resources and continue to manage caves in accordance with the Federal Cave Resources Protection Act of 1988 and related BLM policy. The AFO will undertake appropriate protection measures as needed. Recreational activities associated with caving will be dependent on the significance of the cave. Information about the location of significant caves will not normally be made available to the general public, and use of these caves will be regulated. Recreational use that would adversely affect significant cave resources will be deferred or denied.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including the Recreation Program. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

The goals and strategies identified in the *Partners Against Weeds* action plan for BLM (1996a) will be implemented as needed to help prevent the introduction or spread of noxious weeds in the AFO. These preventative measures will be applied to AFO-authorized actions, including recreation permits.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Recreation Program is:

- Promote a positive land ethic to visitors, informing them of the importance of using Leave No Trace and Tread Lightly recreational skills. Safety information is paramount.

Decisions From Approved El Malpais Plan

The emphasis for recreation will be on a combination of developed and dispersed recreational opportunities. Facilities developed to provide for recreation opportunities are discussed in the "Recreation Facilities Development" section. The semi-primitive motorized and semi-primitive non-motorized ROS classes have been enlarged under the El Malpais Plan (see Map 2-1 and Table 2-1). The AFO will reduce the density of vehicle routes in the Plan Area and limit vehicle travel to designated routes.

The Approved El Malpais Plan did not recommend the Chain of Craters WSA to Congress as suitable for wilderness designation. If released by Congress from wilderness study, this 18,300-acre area would be managed according to provisions of this Plan. Users of this area would have opportunities for roaded natural types of recreation on 7,800 acres, semi-primitive motorized types on 5,400 acres, and semi-primitive non-motorized types on 5,100 acres.

Within the ROS settings, users could participate in such activities as camping, hiking, horseback riding, hunting, mountain biking, picnicking, sightseeing, back-country driving, wildlife watching, and exploring and learning about historic and archeological sites. Recreational activities of interest to smaller populations such as caving, climbing, skiing, shooting, trapping, photography, pack trips, enjoying wilderness solitude, and road biking will continue to be offered; however, the AFO will make no formal identification of where or when these opportunities will be available.

Cross-country access by non-motorized non-mechanical means (i.e., on horseback or by foot) will be allowed to continue in the Plan Area. However, because of terrain and vegetation conditions, it is assumed that most of this type of access will be concentrated on existing or abandoned back-country roads and the few existing trails. Non-motorized mechanical transport (i.e., mountain and road bikes) is prohibited in wilderness and restricted to designated vehicle routes in the rest of the Plan Area. Motorized and mechanical access for traditional American Indian cultural practices will also be restricted to designated routes unless otherwise authorized.

Within designated wilderness, the emphasis will be on providing opportunities for users to experience solitude or take part in primitive and unconfined types of recreation, without diminishing the areas' wilderness character. Users can continue to pursue primitive types of recreation not requiring the use of motor vehicles, motorized equipment, or other forms of mechanical transport. The AFO will continue to encourage such use through publishing maps and brochures identifying the opportunities available within wilderness.

The Approved Plan recommends the Canyons WSA for wilderness designation. Prior to designation as a WSA, the nine parcels that make up the WSA were included within the Breaks, Brazo, and Brazo Non-NCA Units. Until all or portions of these lands are either designated by Congress as wilderness or released from wilderness study, they will remain in WSA status. If all or any portion of these lands are released by Congress from wilderness review, they will be returned to the Breaks, Brazo, and Brazo Non-NCA Units and managed as prescribed under this Plan.

Camping will be offered at one AFO-developed campground near the Ranger Station (see Map 2-2) and in dispersed sites throughout the Plan Area. No camping will be allowed at The Narrows or at La Ventana Natural Arch.

The AFO will establish up to 10 additional hiking trails in the Plan Area, for a total of up to 15 trails with a length of approximately 57 miles (see Map 2-2). The expanded trail system will provide improved access opportunities to such sites as the Lobo Canyon Petroglyphs, one or two homesteads, Cerro Americano, La Rendija, and the historic schoolhouse site in the West Malpais Wilderness. Systematic documentation will be needed at the Lobo Canyon Petroglyphs before the trail can be constructed. The closure of 83.4 miles of vehicle routes in the Plan Area will also create opportunities for visitors to use them as informal hiking trails without vehicle conflicts.

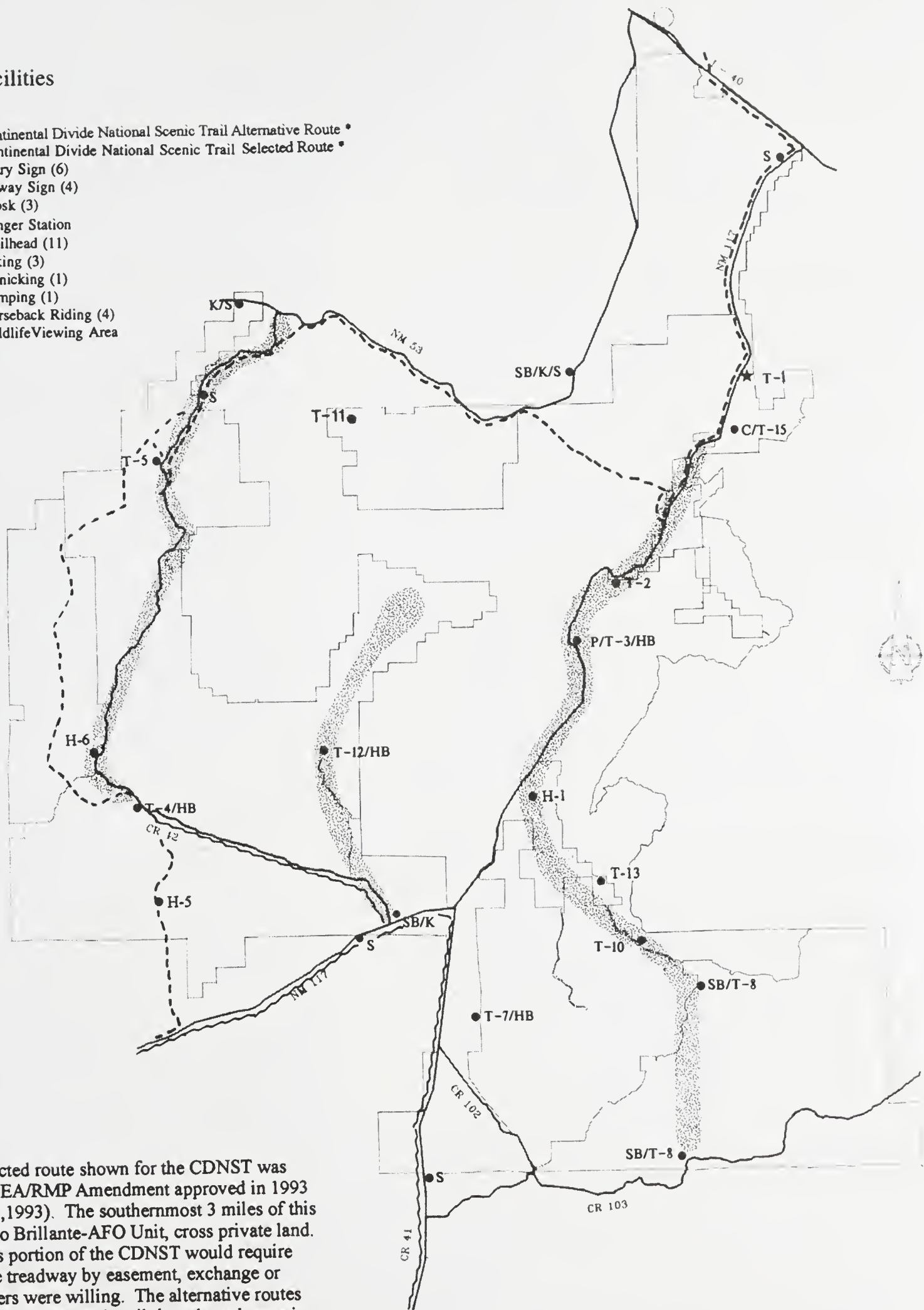
Facilities will be provided for the convenience of horseback riders (see Map 2-2). The Narrows will be one location, along with the Armijo Canyon area (for access to the Cebolla Wilderness, not the Dittert site), the Hole-in-the-Wall trailhead (for access to the West Malpais Wilderness), and the Cerro Brillante trailhead (for access to the Chain of Craters).

El Malpais Plan Area

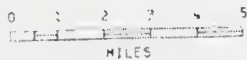
Map 2-2

Recreation Facilities

- Continental Divide National Scenic Trail Alternative Route *
- - - Continental Divide National Scenic Trail Selected Route *
- S Entry Sign (6)
- SB Byway Sign (4)
- K Kiosk (3)
- ★ Ranger Station
- T Trailhead (11)
- H Hiking (3)
- P Picnicking (1)
- C Camping (1)
- HB Horseback Riding (4)
- ▨ Wildlife Viewing Area



* Note: The selected route shown for the CDNST was established in an EA/RMP Amendment approved in 1993 (USDA, FS 1992, 1993). The southernmost 3 miles of this route, in the Cerro Brillante-AFO Unit, cross private land. Utilization of this portion of the CDNST would require acquisition of the treadway by easement, exchange or purchase, if owners were willing. The alternative routes shown will continue to be used until the selected route in the Cerro Brillante-AFO Unit is acquired.



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Roads will be closed to increase the isolation in the Plan Area for animals and hunters.

The AFO will continue to allow mountain bike use of the Plan Area on designated travel routes outside wilderness, especially promoting routes in the Chain of Craters, Cerritos de Jaspe, and Brazo Units. Approximately 131 miles of designated vehicle routes are available for such use in these three units, providing a variety of experiences and levels of difficulty. These routes are not as heavily traveled by motor vehicles as some others in the Plan Area and provide a system of loop trails. The Chain of Craters will be promoted for such use only if Congress releases the area from wilderness review.

Picnicking opportunities will be provided at the south end of The Narrows through facility development (see Map 2-2). Picnicking will also be encouraged as a dispersed activity.

Approximately 273 miles of BLM-designated travel routes will be available for sightseeing, driving for pleasure, or back-country driving, including designated Back Country Byways. The AFO will apply for designation of two new Back Country Byways, the NM 117-CR 42-NM 53 loop drive and a route extending through the Brazo Unit.

Sightseeing for cultural interest will be offered at the Dittert Site, the Ranger Station Reservoir, the Cebolla Canyon Complex, the Lobo Canyon Petroglyphs, and through guided hikes, the Aldridge Petroglyphs. Sightseeing for historic interest will be offered at one or more of six fenced or stabilized homestead sites (Armijo Canyon Springhouse; Armijo Canyon Homestead; Rowe Homestead at the mouth of Cebolla Canyon; Stone House—two sites—located further up Cebolla Canyon; Worley Homestead); and possibly the Savage Schoolhouse in Cebolla Canyon or other deserving properties. Data recovery through systematic collection of surface materials at the Ranger Station Reservoir and systematic documentation at the Lobo Canyon Petroglyphs will be necessary before such visitation can be encouraged at either site.

Wildlife viewing opportunities will be identified along as many as eight stretches of road in the NCA (see Map 2-2). The AFO will provide interpretive material and signs to enhance the viewing experience. Watchable wildlife signs will be installed along CR 42,

NM 53, and NM 117 to promote this recreational opportunity.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to recreational values, wilderness values, visual resources, and cultural resource values (e.g., homesteads, hogans) within the area. Appropriate cultural clearances, special-status species evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

Criteria for Resolution of El Malpais Plan Issues

The AFO considered the following factors in developing answers to the issue questions regarding recreation opportunities. These factors will continue to be considered as the El Malpais Plan is implemented.

- Existing recreational use and facilities
- Public demand for recreational activities, settings, and opportunities
- Compatibility with other land resource uses
- Public health and safety
- Public interests and concerns
- Coordination with the National Park Service

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance for the Recreation Program is listed below as “Criteria for Resolution of RMP Issues” and “Implementation Guidance From RMP.” In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under “Decisions Carried Forward From Previous Planning.”

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Recreation Program:

- Designation for OHV use will consider protection for resources such as . . . recreational values
- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . recreational . . . values of an area.

Implementation Guidance From RMP

The BLM, volunteers, organizations, and other agencies are developing a treadway for the Continental Divide National Scenic Trail (CDNST). The route for the trail was established in an EA/RMP Amendment developed jointly by the U. S. Forest Service, the National Park Service, and the BLM (USDA, FS 1992, 1993). The selected treadway through the Plan Area is shown on Map 2-2. This treadway is the subject of an EA scheduled for completion in 2001. The southernmost three miles of this route, in the Cerro Brillante-AFO Unit, cross private land. Utilization of that portion of the CDNST would require acquisition of the treadway by easement, exchange or purchase, if owners were willing. The alternative routes shown on Map 2-2 will continue to be used until the selected route in the Cerro Brillante-AFO Unit is acquired.

Decisions Carried Forward From Previous Planning

The following recreation decisions were carried forward into the Rio Puerco RMP from previous planning documents:

- Retain all public lands with a B or higher Recreation Inventory System (RIS) rating in public ownership, specifically in El Malpais. [*In compliance with the El Malpais Act, all lands within El Malpais NCA will be retained in public ownership.*]
- Attempt to enter into a cooperative agreement with the Pueblo de Acoma for routine patrols and surveillance of the El Malpais area. [*The Pueblo de Acoma has declined to enter into such an agreement.*]
- Attempt to acquire private lands within sensitive areas in Big Hole-in-the-Wall and Chain of Craters. [*This action has been accomplished.*]



Monitoring/Studies

Monitoring will be used to protect recreation resources and prevent their degradation. Staff patrols, traffic counters, and trail counters will be used to measure and monitor visitor use. The AFO uses the Limits of Acceptable Change (LAC) monitoring system to determine the need to modify use allocation or management. Certain limits have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan (see Appendix D).

The AFO will inspect recreation-related facilities and conduct a program of preventive and rehabilitative maintenance of recreation-related facilities, to the extent resources permit, to provide a safe, sanitary, and aesthetically pleasing environment for visitors and employees. Through inspection the AFO will identify and remove hazards or give warning of their presence. The AFO will continually evaluate its recreation-related facilities through inspection to determine if they should be reconstructed, expanded, transferred, closed, or removed, based on costs, resource protection, health and safety, and the facilities' capability of meeting current and future uses and demands.

Implementation Priorities

The management objectives as identified under "Management Guidance," "Decisions From Approved El Malpais Plan," and "Guidance From Rio Puerco RMP," will be implemented as funding and personnel are available. Some of the objectives have already been partially or fully implemented as part of resource programs carried out under the Rio Puerco RMP.

The public will be notified in the AFO's Annual RMP Update document of site-specific actions to be

implemented from this Plan. The following are general priorities for the Recreation Program:

- Continue inspection and monitoring patrols.
- Coordinate on actions proposed by other resource staff.
- Issue permits that meet criteria.
- Provide information on recreation opportunities.
- Complete road closures and recreation developments as specified in the El Malpais Plan.
- Apply for designation of two new Back Country Byways, the NM 117-CR 42-NM 53 loop drive and a route extending through the Brazo Unit. Work with partners to purchase and install up to four signs and one or two kiosks for each byway (see Map 2-2).

Support Needs

The Recreation Program will need support from the following resource programs in order to implement the preceding projects:

Fire Management

Implementation of the Wildland Fire Use and Prescribed Fire Management goals and protection of areas developed for recreation will support the Recreation Program.

Engineering & Operations

Support from Engineering and Operations will be needed to plan and implement some of the actions planned in the Recreation Program.

Cultural Resources

Planning for some of the actions proposed by the Recreation Program will require inventory for cultural resources.

American Indian Consultation

Planning for some of the actions proposed by the Recreation Program will require American Indian consultation.

Law Enforcement

The Law Enforcement Program will provide assistance to the Recreation Program by patrolling the Plan Area and providing assistance to public land users.

Interpretation/Public Education

Personal and non-personal interpretive/education support is necessary to promote dispersed recreation or direct use to developed areas in the NCA.

Volunteers

The AFO will continue to coordinate with individual volunteers wishing to assist in management of the Plan Area.





INTERPRETATION/PUBLIC EDUCATION PROGRAM



Program Goals

The goal of the Interpretation/Public Education Program is to educate the public about the AFO's objectives, goals, and mission at El Malpais NCA. The AFO offers public programs for users to attend and learn about the natural and cultural resources of El Malpais, as well as being good stewards of the public lands. In addition, this program provides written interpretation of the resources of the NCA in brochures and at facilities throughout the area. This program provides support to all of the resource programs for which the AFO has responsibility.

Management Guidance

Policy and Authorities

The El Malpais Act directs that the NCA be managed to protect geologic, archeological, ecological, cultural, scenic, scientific, and wilderness resources, in a manner consistent with the Federal Land Policy and Management Act of 1976 (FLPMA). The law also directed the BLM to develop a plan for interpretation and public education.

Other laws that pertain to the Recreation Program, including the Interpretation/Public Education Program, in El Malpais NCA include the Federal Cave Resources Protection Act of 1988, the Land and Water Conservation Fund Act of 1964, the Wilderness Act of 1964, the National Trails System Act of 1968, and the National Environmental Policy Act of 1969.

BLM Manuals, Instruction Memorandums, and Policy Statements that pertain to the Interpretation Program are Manual Sections 8300–Recreation, 8360–Visitor Services, and 8362–Interpretive Services; *Recreation 2000*, a national planning and policy document for recreation management into the year 2000 and beyond (USDI, BLM 1988b); and *BLM National Interpretive Strategy* (USDI, BLM 1999a).

Field Office Program Guidance

The AFO will continue to cooperate with the National Park Service (NPS) in operating the Northwest New Mexico Visitors Center near Grants. The AFO will continue to produce its own interpretive materials, and will maintain its partnership with the Public Lands Interpretive Association (formerly the Southwest Natural and Cultural Heritage Association) or another natural history organization to provide maps and other publications for visitors.

As required by the El Malpais Act, the AFO will identify sites in the NCA that are appropriate for addition to the Pueblo Heritage Trail (formerly the Masau Trail) and inform the NPS of them.

The AFO will develop a ½-mile-long (round trip) interpretive/orientation trail at the Ranger Station (USDI, BLM 1990c). Interpretive programs, exhibits, and demonstrations will continue to be provided at the Ranger Station. At La Ventana Natural Arch, interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology will be developed (USDI, BLM 1989a).

The AFO will continue to work with the volunteers at El Malpais NCA. Several are trained as hike leaders, and others regularly staff the Ranger Station.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Some potential themes are listed below by program; these are not all-inclusive or final.

- Promote a positive land ethic to visitors, informing them of the importance of using Leave No Trace and Tread Lightly recreational skills. Safety information is paramount. (Recreation Program)
- Wilderness has special values, and is set aside to protect them while allowing visitors to experience them. (Wilderness Program)

- Using surface waters can cause health problems, camping near surface waters can pollute them, and visitors should respect owners' rights to privately owned water sources. (Soil, Water, and Air Program)
- Visitors should be informed of the importance of dead and living wildlife trees, dead and down trees and logs, and wetlands to wildlife; the disturbance caused by human-wildlife interaction; and hunting and trapping opportunities and requirements on public lands in the Plan Area. (Wildlife Program)
- Livestock grazing is a historic use which is part of the cultural resource values for which the NCA was designated by Congress. (Rangeland Resources Program)
- Livestock grazing continues to be a legal activity in the Plan Area. Fences, waters, gates, and other range improvements are important tools for the proper management of livestock grazing. (Rangeland Resources Program)
- Vegetative manipulation plays a part in conserving our public lands, including fire and fuelwood harvesting. (Vegetation Program)
- Visitors should be informed of significant geologic features and the physical processes that produced them. (Geology Program)
- Cultural resources are important in understanding local history, especially for local American Indians, so sites should not be disturbed. Under the Archeological Resources Protection Act, monetary rewards may be offered for information leading to the arrest and conviction of violators. (Cultural Resources Program)

The AFO will develop appropriate interpretive materials to explain the significance of the special geologic features of the Plan Area, such as the Chain of Craters, the cliffs at The Narrows, La Ventana Natural Arch, Cerro Rendija, Hole-in-the-Wall, and Cerritos de Jaspe.

Decisions From the Approved Plan

Interpretation will occur through one-on-one contacts with visitors (public programs, guided hikes, and Ranger Station contacts); printed brochures, exhibits, interpretive media, and publications at the Ranger Station; and wayside exhibit panels, self-guided trails with interpretive signs, kiosks, and informational signs.

The AFO will continue to provide personal interpretive services/visitor contacts, interpretive programs, exhibits, and demonstrations at the Ranger Station and at the Northwest New Mexico Visitors Center near Grants.

At a location within a five-minute walk of the proposed campground, the AFO will build an amphitheater designed to hold about 50 people. Evening programs will be offered regularly during the summer.

The AFO will construct two primitive trailheads for the Continental Divide National Scenic Trail (CDNST), one each at Cerro Americano and Cerro Brillante. Each trailhead will include up to two wayside exhibits (to include watchable wildlife information at Cerro Americano).

The AFO will identify opportunities where users can pursue primitive types of recreation, including in designated wilderness. The AFO will continue to encourage such use by publishing maps and brochures identifying the opportunities available.

Management efforts in designated wilderness will continue to be concentrated on signing, preventing unauthorized vehicle intrusions, patrolling and monitoring uses for compliance with the *Wilderness Management Policy* (USDI, BLM 1981c), and educating the public through personal contacts, and interpretive and educational materials.

Visitor facilities at trailheads and other entry points to wilderness will be upgraded to improve access opportunities, services, and information. Additional on-site information will be provided to better inform and educate the public. Signs will identify the wilderness boundary, wilderness name, and some regulations governing use.

Personal contacts by staff and volunteers will provide additional on-site information and education when users are encountered during wilderness patrols. The AFO will continue to supply information about the wildernesses at the Ranger Station on NM 117, the Northwest New Mexico Visitors Center, and at the offices in Grants and Albuquerque.

Except for guided trips, visitor information and education programs about selected cultural and historic sites within the wildernesses will be located outside the wilderness boundaries or dispersed at other sites. Visitation of selected cultural and historic sites within the wildernesses will be encouraged through additional information provided off-site. Except for continued maintenance, monitoring, and guided hikes, the AFO will provide no additional on-site interpretation.

The AFO will develop and maintain interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology.

Up to three wayside exhibits will be located at the Narrows Rim Trailhead or near the picnic area.

The AFO will manage the Dittert Site, the Ranger Station Reservoir, the Lobo Canyon Petroglyphs, and outstanding homestead-era sites for public values and allocate them to public use, while taking care not to impair their information potential. As additional resource information becomes available, new areas for public use may be identified, but only if their information potential will not be adversely affected and only after appropriate American Indian consultations and compliance with the National Historic Preservation Act.

Dittert Site interpretation will include up to two wayside exhibits, a trail guide, and guided hikes for public and school groups (50 to 200 people per year). This will also be a trailhead and access for the Cebolla Wilderness, and wayside exhibits may include information about the Cebolla Wilderness. These additional interpretive elements about the Dittert Site (located within the boundaries of the Cebolla Wilderness) will be placed outside the wilderness boundary, at the trailhead to the site in Armijo Canyon.

The AFO will conduct frequent interpretive hikes that include visits to cultural resource sites. In addition to completing off-site interpretive measures such as

brochures, exhibits, and other media, the AFO will encourage visitation at the Dittert Site, Lobo Canyon Petroglyphs, and Ranger Station Reservoir. The AFO will also develop public interpretation for outstanding homestead-era sites. Systematic documentation will be needed at the Lobo Canyon Petroglyphs before such visitation can be encouraged. Data recovery through systematic collection of surface materials will be necessary at the Ranger Station Reservoir before the interpretive/orientation trail is extended to it.

Interpretive wayside exhibits will be developed for up to three archeological sites and/or homesteads along with brochures and/or trail guides keyed to markers. The AFO will conduct special hikes and programs for up to 200 people per year to these features.

Recreational activities of interest to smaller populations will continue to be offered. However, the AFO will make no formal identification of where or when such opportunities are available.

During the life of this Plan, no on-site interpretive development will occur at the Pinole Site, The Citadel, Cebolla Canyon Community, or Aldridge Petroglyphs, but the AFO will manage these sites to protect their potential for public use. If unsolicited visitation warrants, the AFO will install visitor registration boxes at these sites.

Pullouts with interpretive kiosks will be constructed at three NCA entry locations: the junction of NM 117 and CR 42, the western entrance along NM 53, and the first public land encountered along NM 53 (T. 9 N., R. 10 W., sec. 16).

Wildlife viewing opportunities will be identified along as many as eight stretches of road in the NCA (see Map 2-2). The AFO will provide interpretive material and signs to enhance the viewing experience. Watchable wildlife signs will be installed along CR 42, NM 53, and NM 117 to promote this recreational opportunity.

The Plan recommends acquisition of a 160-acre parcel in the Breaks Non-NCA Unit that includes an early twentieth-century historic ruin with interpretive potential (portions of T. 5 N., R. 11 W., sec. 3 and T. 6 N., R. 11 W., sec. 34). The AFO will interpret the historic ruin if Congress modifies the NCA boundary to include these lands.

To assist with its goals of public outreach, interpretation, and environmental education, the AFO will develop and maintain cooperative agreements and contacts with teaching institutes, research institutes, and non-profit organizations.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding facility development. These factors will continue to be considered as the El Malpais Plan is implemented.

- Existing recreational use and facilities
- Public demand for recreational activities, settings, and opportunities
- Compatibility with other land resource uses
- Public health and safety
- Public interests and concerns
- Coordination with the NPS

Guidance From Rio Puerco RMP

Some of the general recreation decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as “Criteria for Resolution of RMP Issues” and “Decisions Carried Forward From Previous Planning.”

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Recreation Program:

- Designation of OHV use will consider protection of resources such as . . . recreational values
- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . recreational . . . values.

Decisions Carried Forward From Previous Planning

- Complete a descriptive brochure and interpretive areas for each quality geologic feature in the Divide Planning Area: El Malpais lava flow and Chain of Craters. [*A pamphlet is now available for Chain of Craters; the El Malpais lava flow is within El Malpais National Monument.*]
- Acquire private lands in Cebollita Canyon and begin a stabilization, interpretation, and surveillance program of cultural resources in the canyon. [*The private lands listed for this decision, except for a small residential area, have all been acquired by Acoma Pueblo. This decision can no longer be implemented.*]
- Construct a parking area, day-use interpretive site, and loop trail at La Ventana Natural Arch. [*This action is complete.*]

Monitoring/Studies

The AFO will continually evaluate its interpretive program through the Limits of Acceptable Change monitoring system (Appendix D) and visitor use studies to determine if programs should be modified, expanded, transferred, or removed based on costs, resource protection benefits, visitor health and safety, and their capability of meeting current and future uses and demands.

Implementation Priorities

The following actions are listed in priority order, although several actions may occur at the same time. These developments will occur as time, staff, and budget allow.

- The first priority will be to maintain, update, and monitor existing interpretive programs and media.
- The AFO will continue to provide personal interpretive services/visitor contacts, interpretive programs, exhibits, and demonstrations at the Ranger Station and the Northwest New Mexico Visitors Center.

- Interpretive wayside exhibits emphasizing wilderness, wilderness use ethics, and area geology will be developed and maintained at La Ventana Natural Arch.
- The AFO will identify opportunities where users can pursue primitive types of recreation by publishing maps and brochures indicating such areas.
- At a location within a five-minute walk of the proposed campground, the AFO will build an amphitheater designed to hold about 50 people. Evening programs will be offered regularly during the summer.
- Up to three wayside exhibits will be located at the Narrows Rim Trailhead or near the picnic area at The Narrows.
- The AFO will construct two primitive trailheads for the CDNST, one each at Cerro Americano and Cerro Brillante. Each trailhead will include up to two wayside exhibits (to include watchable wildlife information at Cerro Americano).
- Dittert Site interpretation will include up to two wayside exhibits, a trail guide, and guided hikes for public and school groups (50 to 200 people per year). This will also be a trailhead and access for the Cebolla Wilderness, and wayside exhibits may include information about the Cebolla Wilderness. The AFO will place these additional interpretive elements about the Dittert Site (located within the boundaries of the Cebolla Wilderness) outside the wilderness boundary, at the trailhead to the site in Armijo Canyon.
- The AFO will provide additional on-site information to better inform and educate the public at trailheads and access points to wilderness. Signs at wilderness trailheads will identify the boundaries, wilderness name, and some regulations governing use. Personal contacts by staff and volunteers will provide additional on-site information and education when users are encountered during patrols. The AFO will continue to supply information about the wildernesses at the Ranger Station on NM 117, the Northwest New Mexico Visitors Center, and at BLM offices in Grants and Albuquerque.
- The AFO will conduct frequent interpretive hikes that include visits to cultural resource sites. In addition to completing off-site interpretive measures such as brochures, exhibits, and other media, the AFO will encourage visitation at the Dittert Site, Lobo Canyon Petroglyphs, and Ranger Station Reservoir. The AFO will also develop public interpretation for outstanding homestead-era sites. Visitation of selected cultural and historic sites within the wildernesses will be encouraged through additional information provided off-site. Except for continued maintenance, monitoring, and guided hikes, the BLM will provide no additional on-site interpretation. Systematic documentation at the Lobo Canyon Petroglyphs and data recovery through systematic collection of surface materials at the Ranger Station Reservoir will be necessary before such visitation can be encouraged.
- Interpretive wayside exhibits will be developed for up to three archeological sites and/or homesteads along with brochures and/or trail guides keyed to markers. The AFO will conduct special hikes and programs for up to 200 people per year to these features.
- To assist with its goals of public outreach, interpretation, and environmental education, the AFO will develop and maintain cooperative agreements and contacts with teaching institutes, research institutes, and non-profit organizations.

Support Needs

Fire Management

Implementation of the Wildland Fire Use and Prescribed Fire Management goals, along with protection of areas developed for recreation opportunities will support the Interpretation/Public Education Program.

Engineering & Operations

Support from the Engineering staff and the Labor/Work Crew would include installing and maintaining interpretive media.

Cultural Resources

Survey and inventory of cultural resources in the NCA will support the Interpretation/Public Education Program.

American Indian Consultation

The Cultural Resource staff will also support interpretive development through consultation with local interested American Indian tribes.

Law Enforcement

The Law Enforcement Program will continue to patrol the Plan Area to protect natural and cultural resources and provide assistance and protection to public land users. Personal contacts and written information supplied to users by Law Enforcement personnel will support the Interpretation/Public Education Program.

Volunteers

The AFO will continue to coordinate with individual volunteers wishing to assist in management of the NCA.





Program Goals

The goal of the Visual Resource Management (VRM) Program is to manage public lands to protect or enhance the quality of visual (scenic) values.

Management Guidance

Policy and Authorities

Section 102(a)(8) of the Federal Land Policy and Management Act of 1976 requires that . . . “the public lands be managed in a manner that will protect the quality of the . . . scenic . . . values” Section 103(c) identifies “scenic values” as one of the resources for which public lands should be managed. Section 201(a) states that “the Secretary [of the Interior] shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including . . . scenic values)” Section 101(b) of the National Environmental Policy Act of 1969, as amended, requires measures be taken to “. . . assure for all Americans . . . esthetically pleasing surroundings” Section 102 requires agencies to “utilize a systematic interdisciplinary approach which will ensure the integrated use of . . . environmental design arts in the planning and decisionmaking”

BLM Manual 8400—Visual Resource Management is the guide for management of visual resources. It states that the BLM has the basic stewardship responsibility to identify and protect visual values on public lands, and that visual resource management is a management responsibility shared by all resource programs. BLM Manual Handbooks H-8451-1—Visual Resource Inventory and H-8431-1—Visual Resource Contrast Rating also provide guidance.

Instruction Memorandum (IM) NM-80-109, Visual Resource Management (VRM) Policy and Procedures, states that “it is New Mexico State Office policy to consider all wilderness study areas (WSAs) determined by September 30, 1980 to be managed as [VRM] Class II.” IM WO-2000-96, Use of Visual Resource Management Class I Designation in Wilderness Study Areas, states that “it is the Bureau position, recognizing case-by-case exceptions for valid existing rights and grandfathered uses, that all WSAs should be classified as Class I, and managed according

to VRM Class I management objectives until such time as Congress decides to designate the area as wilderness or release it for other uses.” “This policy applies to all future plans and plan amendments.” The El Malpais Plan was already in progress when the new policy was issued. Therefore the public lands identified as WSAs within the Plan Area (the Chain of Craters and Canyons WSAs) remain in the Interim Class II category.

Field Office Program Guidance

The VRM system is the tool for identifying areas that warrant special management attention to protect scenic values and prevent irreparable damage to them. Visual values will be identified through the VRM guidance in BLM Manual Section 8410.

Visual resources will be administered in the Plan Area according to the objectives for each VRM class established through the land-use planning process.

VRM management objectives by class are as follows:

- Class I To preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
- Class II To retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must mimic the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- Class III To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should mimic the basic elements found in the predominant natural features of the characteristic landscape.

Class IV To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be a major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic landscape elements.

The AFO will maintain an inventory of scenic values on a continuing basis. Land acquired after completion of this Plan will be managed in accordance with the VRM class objectives for adjacent lands in the same management status. Acreage figures for individual VRM classes will be revised through maintenance of the El Malpais Plan/Rio Puerco Resource Management Plan (RMP) and shown in the annual RMP Update. Needs for RMP amendments will be identified if indicated through monitoring.

Visual resources will continue to be evaluated as a part of activity and project planning for all surface-disturbing projects regardless of size or potential impact. The Contrast Rating System identified in BLM Manual 8431 provides the means to evaluate proposed projects in the Plan Area during the environmental review process and determine whether they conform with approved VRM objectives. This system will be used to assess potential visual impacts of non-BLM and BLM-initiated projects and activities to ensure that they are within acceptable limits. Emphasis will be placed on providing this input during the initial planning and design phase in order to minimize costly redesign and mitigation at later phases of project design and development. Every effort will be made to inform potential applicants of the visual resource management class objective so they can adequately incorporate visual design considerations into their initial planning and design efforts.

Special emphasis will be placed on projects within highly sensitive areas as defined in the VRM Inventory Manual Handbook H-8410-1. The Continental Divide National Scenic Trail is rated as a "high sensitive level" travel route (USDA, FS 1985).

Stipulations will be established as appropriate to assure compatibility of projects with the management

objectives for visual resources. Numerous design techniques can be used to reduce visual impacts from surface-disturbing projects by implementing design fundamentals such as proper siting or location; reducing unnecessary disturbance; and repeating the elements of form, line, color, and texture. Other design strategies to consider are color selection, earthwork, vegetative manipulation, structures, reclamation/restoration, and linear alignment.

Major new rights-of-way will be discouraged, and use of existing rights-of-way (including joint use whenever possible) will be promoted. When expansions or realignments are proposed, the AFO will work closely with the rights-of-way holders, especially State and county transportation departments and utilities, to develop appropriate mitigation. Such measures will be designed to protect the scenic quality, and natural and cultural values of the Plan Area, as well as to ensure visitor safety.

When new construction is needed, the AFO will identify the least damaging routes and locations, working closely with private landowners in areas of mixed ownership. New construction for roads, pipelines, power lines, and communication sites will be authorized only if no alternatives exist, and if mitigation measures can ensure protection of the scenic quality, and natural and cultural values of the Plan Area. The AFO will conduct compliance inspections on all rights-of-way and land-use permits.

The AFO will inform proponents of major rights-of-way adjacent to the Plan Area of the legislative requirements for protection of the scenic quality, and cultural and natural resources of the NCA. The AFO will oppose major rights-of-way proposals on lands adjacent to the Plan Area if they would adversely impact the area's viewshed. In such situations, the AFO will work with proponents to find alternative routes and develop appropriate mitigation.

Staff from each program involved in resource development work will be responsible for monitoring impacts on visual resources to ensure that changes are within acceptable limits and for evaluating the success of the visual requirements.

Patrol, surveillance, and enforcement will be used to deter unauthorized activities which would impact visual quality.

Decisions From Approved El Malpais Plan

The Approved El Malpais Plan amends the Rio Puerco RMP for visual resource management in the Plan Area. The AFO will administer visual resources in the Plan Area according to the objectives of each VRM class established in the Approved Plan. VRM class objectives were assigned to public lands as shown on Map 2-3 and listed on Table 2-2. VRM Class I [preserve the existing character of the landscape] has been assigned to the congressionally designated Cebolla and West Malpais Wildernesses to maintain their existing scenic values and natural appearance.

TABLE 2-2

VRM CLASSES ASSIGNED TO PUBLIC LAND IN THE PLAN AREA (PA)

VRM Class	Acres	% of PA
I	100,900	40
II	148,240	60
III	60	<1
Totals	249,200	100

Class II [retain the existing character of the landscape] has been assigned to all lands under wilderness review (the Chain of Craters and Canyons WSAs) until they have been released from further wilderness review or designated as wilderness. Areas designated as wilderness will be reassigned to VRM Class I.

Class II [retain the existing character of the landscape] and Class III [partially retain the existing character of the landscape] have been assigned to other areas based on a combination of scenic quality, sensitivity level, and distance zones, and on management decisions based on the RMP (as amended) or directed by policy. Most of the land not under wilderness review was assigned to Class II. Only a 60-acre parcel surrounding the Ranger Station was assigned to Class III.

There is no Class IV [provide for management activities that require major modification of the existing character of the landscape] within the Plan Area. However, visual resources on the BLM lands proposed for addition to the NCA that adjoin the southeast corner of the Plan Area are managed by the Socorro Field Office as Classes III and IV. They will continue to be managed according to the prescriptions in the Socorro RMP for these assigned classes.

The AFO will continue to seek to acquire scenic or conservation easements along Federal, State, and county roads passing through the Plan Area to prevent the views along these roads from being obstructed or degraded by developments.

New facilities will be designed and built to achieve a consistent appearance throughout the Plan Area, and to blend with the surrounding landscape and local architectural styles. VRM class objectives have been set to accommodate a combination of developments, with higher levels at selected areas for user comfort and convenience, and rustic and primitive facilities elsewhere. Facility design and construction will conform to the assigned VRM class and be consistent with the Plan's theme of balanced management.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to visual resources, wilderness values, recreational values, and cultural resource values (e.g., homesteads, hogans) within the area. Appropriate cultural clearances, special-status species evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

Criteria for Resolution of El Malpais Plan Issues

The following factors that apply to the Visual Resource Management Program were considered in developing answers to the Recreation, Facility Development, Access and Transportation, Wilderness Management, and Boundary and Land Ownership Adjustments issue questions. These factors will continue to be considered as the El Malpais Plan is implemented.

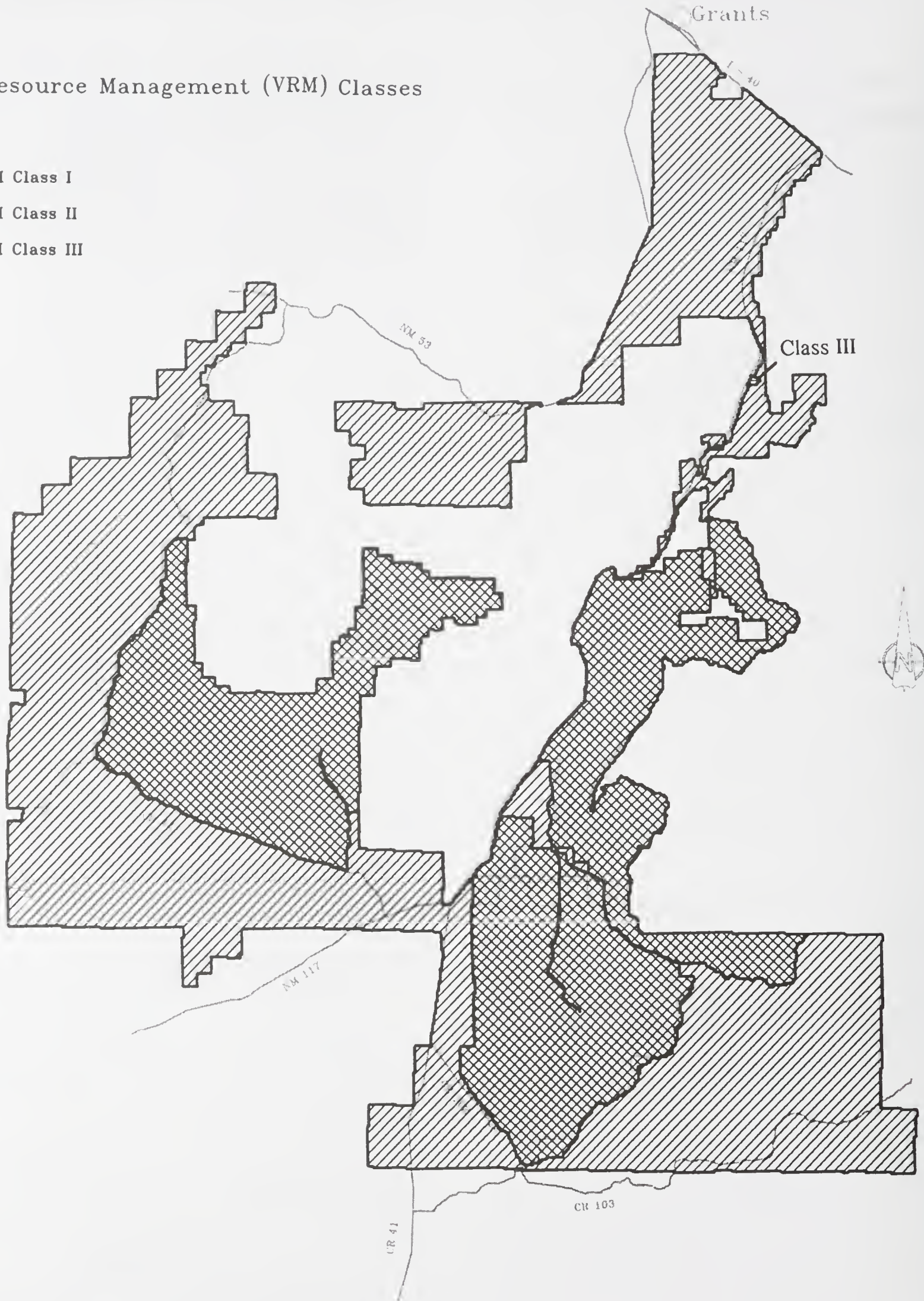
- Existing recreational use and facilities
- Compatibility with other land and resource uses

El Malpais Plan Area

Map 2-3

Visual Resource Management (VRM) Classes

- ☒ VRM Class I
- ▨ VRM Class II
- ▭ VRM Class III



- Public demand for recreational activities, settings, and opportunities
- Public interests and concerns
- Coordination with the National Park Service
- Resource protection
- Site location and design
- Existing roads and trails
- Maintenance requirements for range improvements
- Resource values that exist on lands within and adjacent to the NCA
- The land ownership pattern

Guidance From Rio Puerco RMP

Some of the guidance in the Rio Puerco RMP continues to be applicable to management of El Malpais NCA and adjoining lands. The guidance for the Visual Resource Management Program is listed below as "Criteria for Resolution of RMP Issues."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Visual Resource Management Program:

- Designation for OHV use will consider protection for resources such as . . . visual quality
- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . the scenic . . . values of an area.

Monitoring/Studies

The AFO will maintain an inventory of scenic values on a continuing basis, update VRM class acreage through RMP maintenance, and identify needs for RMP amendments when indicated by monitoring.

Patrol, surveillance, and enforcement will be used to deter unauthorized activities which would impact visual quality.

Staff from each program involved in resource development work will be responsible for monitoring impacts on visual resources to ensure that the changes are within acceptable limits and for evaluating the success of the visual requirements.

Implementation Priorities

- Incorporate visual design considerations into all surface disturbing projects regardless of size or potential impact.
- Place special emphasis on projects within highly sensitive areas as defined in the VRM Inventory Manual Handbook H-8410-1.
- Provide VRM input during the initial planning and design phase so as to minimize costly redesign and mitigation at later phases of project design and development.

Support Needs

Staff from each program involved in non-AFO- and AFO-initiated projects and activities will be responsible for monitoring impacts on visual resources to ensure that changes are within acceptable limits of the class where the proposed project or activity is located.

Lands & Realty

The Lands and Realty Program will support the Visual Resource Management Program in acquiring scenic and conservation easements.

Interpretation/Public Education

The Interpretation/Public Education Program will develop interpretive messages and media such as brochures and exhibits, prepare educational materials, and present interpretive/educational programs that include topics promoting understanding of the AFO's goals and objectives for the management of visual resources within the assigned classes for the maintenance of the scenic values within the Plan Area.

Program Goals

The BLM's goal for the Recreation Program is to ensure the continued availability of quality outdoor recreational opportunities and experiences that are not readily available from other sources. Recreational use and capital investment in facilities are managed to protect the health and safety of visitors; protect natural, cultural, and other resource values; stimulate public enjoyment of public land; provide for universal access (including for physically challenged visitors); and to the extent possible, resolve user conflicts. Management priority is given to undeveloped areas experiencing resource damage, user conflicts, or threatening visitor safety; areas where use exceeds current capacity; unique and/or scenic attractions adjoining heavily traveled highways; and preservation and protection of natural and cultural resources.

Management Guidance

Policy and Authorities

Recreation programs are managed according to multiple use principles unless otherwise specified by law or BLM policy. In areas formally recognized by Congress, such as designated wildernesses and National Conservation Areas, providing recreational opportunities requires more intensive management and investment. The El Malpais Act directs that the NCA be managed to protect geologic, archeological, ecological, cultural, scenic, scientific, and wilderness resources in a manner consistent with the Federal Land Policy and Management Act of 1976 (FLPMA). Recreation facility development planning for El Malpais NCA is one of the specific management plans called for by the El Malpais Act.

Laws that pertain to the Recreation Program in El Malpais NCA include FLPMA; the El Malpais Act; the Federal Cave Resources Protection Act of 1988; the Land and Water Conservation Fund Act of 1964; the Wilderness Act of 1964; the National Trails System Act of 1968; and the National Environmental Policy Act of 1969 (NEPA).

Manuals and policy statements that pertain to the Recreation Program in El Malpais NCA include BLM

Manual Sections 8300–Recreation, 8357–Byways, 8360–Visitor Services, and 8362–Interpretive Services. Recreation facilities development will be consistent with the policy indicated in *Recreation 2000* (a national planning and policy document for recreation management into the year 2000 and beyond) (USDI, BLM 1988b).

Field Office Program Guidance

For any project proposed in the Plan Area, the AFO will continue to evaluate recreation resources and facility development on a case-by-case basis as part of project-level planning. Such evaluation will consider the compliance of the action with current management plans, the significance of the proposed project, the sensitivity of resources in the affected area, and consultation with local interested American Indian Tribes. Stipulations will be attached as appropriate to ensure compatibility of projects with recreation management objectives.

All trail designs will incorporate accommodations, where practicable, for universal access. Location and construction of trail treadways will take into consideration and avoid, if possible, conflicts with private waters, private lands, sensitive wildlife and plant habitats, and sensitive cultural resource sites. As individual trails are sited for development and where further NEPA compliance is necessary, all required site-specific studies and clearances will be done and a determination will be made concerning the environmental consequences of the proposal.

New trails will not be built into sensitive wildlife habitats, and those in other areas will be designed whenever feasible to direct visitors away from sensitive areas. The AFO may close trails permanently or seasonally where problems are found to exist or are expected to occur within sensitive wildlife areas.

Recreational facilities and actions already completed at the Ranger Station (USDI, BLM 1990c) and La Ventana Natural Arch (USDI, BLM 1989a) will continue to be managed for intensive use, with emphasis on completing approved projects. For example, the AFO will develop a ½-mile-long (round trip) interpretive/orientation trail at the Ranger Station. Interpretive programs, exhibits, and demonstrations will

continue to be provided at the Ranger Station. At the arch, interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology will be developed.

The AFO will continue to cooperate with the National Park Service (NPS) in operating the Northwest New Mexico Visitors Center near Grants.

Monitoring will be used to protect recreation resources and prevent their degradation. Staff patrols, traffic counters, and trail counters will be used to measure and monitor visitor use. The AFO uses the Limits of Acceptable Change (LAC) monitoring system to determine the need to modify use allocation or management. Certain limits have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan (see Appendix D).

The AFO will inspect recreation-related facilities and conduct a program of preventive and rehabilitative maintenance of recreation-related facilities, to the extent resources permit, to provide a safe, sanitary, and aesthetically pleasing environment for visitors and employees. Through inspection the AFO will identify and remove hazards or give warning of their presence. AFO personnel, volunteers, cooperative management agreements, contracts with the private sector, and other means as necessary will be utilized to maintain BLM facilities. The AFO will continually evaluate its recreation-related facilities through inspection to determine if they should be reconstructed, expanded, transferred, closed, or removed based on costs, resource protection, health and safety, and their capability of meeting current and future uses and demands.

Decisions From Approved El Malpais Plan

The AFO will provide a limited number of developed recreational facilities at a modest number of selected sites, and will seek to disperse visitors to other parts of the Plan Area. Facility development will occur through project-level analysis. Users can continue to pursue primitive types of recreation in designated wilderness that do not require the use of motor vehicles, motorized equipment, or other forms of

mechanical transport. The AFO will continue to encourage such use by publishing maps and brochures identifying the opportunities available within these areas.

Secondary impacts to cultural resources, such as unauthorized collection of surface artifacts, will be more thoroughly studied and evaluated than is usual outside the NCA. Therefore, the AFO will require an inventory over an area at least ¼-mile wide around proposed visitor-use developments.

Interpretation will occur through one-on-one contacts with visitors (public programs, guided hikes, and Ranger Station contacts); printed brochures, exhibits, interpretive media, and publications at the Ranger Station; and wayside exhibit panels, self-guided trails with interpretive signs, kiosks, and informational signs.

Prescribed fires will be used where appropriate throughout the Plan Area to reduce fuel loading (hazardous fuel reduction) to reduce the risk of large fires in areas where there are high-value resources (e.g., recreation facilities, houses, land improvements, historic structures). A written prescribed fire plan must have been prepared and approved before ignition.

The Cerritos de Jaspe and Neck Units are within the *Joint Fire Management Plan's* (USDI, BLM and NPS 2001) Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Glossary and Map 2-9 in the Fire Management section). All wildland fires in this fire management unit, regardless of ignition source, will receive prompt suppression action commensurate with human safety in all instances. Fire in the Minimize Wildland Fire Presence Unit presents a threat to such resource values as recreational use areas, structures, cultural resources with flammable elements, critical wildlife habitats, and private land. To prevent unacceptable resource damage and/or loss of life and property, fires will generally not be allowed to burn in areas where public safety and other resource values are at risk. In some circumstances, prescribed fires may be used to protect the resource values within these areas by reducing fuel loading. Such fires would reduce the risk of catastrophic fires in the future.

General Recreation Facilities

Recreational facilities and actions already completed at the Ranger Station and La Ventana Natural Arch will continue to be managed and maintained for intensive use.

New facilities will be designed and built to achieve a consistent appearance throughout the Plan Area, and to blend with the surrounding landscape and local architectural styles. VRM class objectives have been set to accommodate a combination of developments, with higher levels at selected areas for user comfort and convenience, and rustic and primitive facilities elsewhere. Facility design and construction will conform to the assigned VRM class and be consistent with the Plan's theme of balanced management.

Camping will be offered at one developed campground and at dispersed sites throughout the Plan Area. No camping will be allowed at The Narrows or at La Ventana Natural Arch. The AFO will develop a campground within approximately 8 acres of the Spur Unit to accommodate camping on the east side of the Plan Area (see Map 2-2). The exact location will be decided after cultural resources surveys, special-status species surveys, and site investigations are completed. The campground will provide up to 20 single-family units with leveled parking spurs large enough to handle small self-contained recreational vehicles, vehicle campers, or tent camping. One unit will be built for multi-family or group camping with appropriate parking. Two vault toilets, tables, and cooking facilities will be constructed within the campground and, if possible, drinking water will be provided. Vehicle access to the campground from NM 117 will be improved by upgrading the existing dirt road and surfacing it for all-weather use. An amphitheater designed to hold about 50 people will be built at a location within a five-minute walk of the campground. The proposed campground will require special cultural resources survey and monitoring. The campground is near areas of dense cultural resources that would be vulnerable to surface collection. Therefore, in addition to the Class III cultural resources inventories, the AFO will conduct a reconnaissance survey within a one-mile radius before developing the campground, attempting to locate and document all sites vulnerable to illegal surface collection. The condition of these sites will be monitored carefully, and if any changes in their condition are detected resulting from recrea-

tional use of the campground, appropriate mitigating measures will be taken (e.g., data recovery, closure of affected areas to public entry).

Picnicking facilities will be provided only at the south end of The Narrows and will include a picnic area with up to 10 units, parking, drinking water (if possible), graveled access, and vault toilets. Up to three wayside exhibits will be located near the picnic area or at the nearby trailhead for the Narrows Rim Trail. (Figure 2-a shows a conceptual design of these developments.) The picnic area is not known to be in an especially sensitive area, but a Class III cultural resources inventory will be conducted in a ¼-mile radius around this facility to consider secondary impacts. Picnicking will also be encouraged as a dispersed activity. The Narrows will be designated as a day-use-only site for parking and hiking in the Cebolla Wilderness.

Mountain-biking facilities will be provided at the Cerro Americano trailhead for the Continental Divide National Scenic Trail (CDNST). Trailhead facilities to accommodate mountain-bike users in the Cerritos de Jaspe and Brazo Units will be built only if mountain bike routes are established there. The travel routes available for mountain bike use will not be marked as trails until established of LAC standards for social trails are exceeded (see Appendix D).

Approximately 273 miles of AFO-designated travel routes are available for sightseeing, driving for pleasure, or back-country driving, including one designated Back Country Byway, the Chain of Craters Back Country Byway. The AFO will apply for designation of two new Back Country Byways, the NM 117-CR 42-NM 53 loop drive and a route extending through the Brazo Unit. The AFO will work with partners to purchase and install up to four signs (see Figure 2-b) and one or two kiosks (see Figure 2-c) for each byway (see Map 2-2). (The layouts for typical kiosks are shown in Figures 2-d and 2-e.) Signs usually measure 3 feet tall by 5 feet wide, with a total height of 6 feet including support posts.

Entry identification signs will be placed and/or maintained at up to six locations along roads into the NCA. Additional signs will be posted as indicated by public comment or to eliminate confusion about land status. The dimensions of these signs will be the same as the Back Country Byway signs.

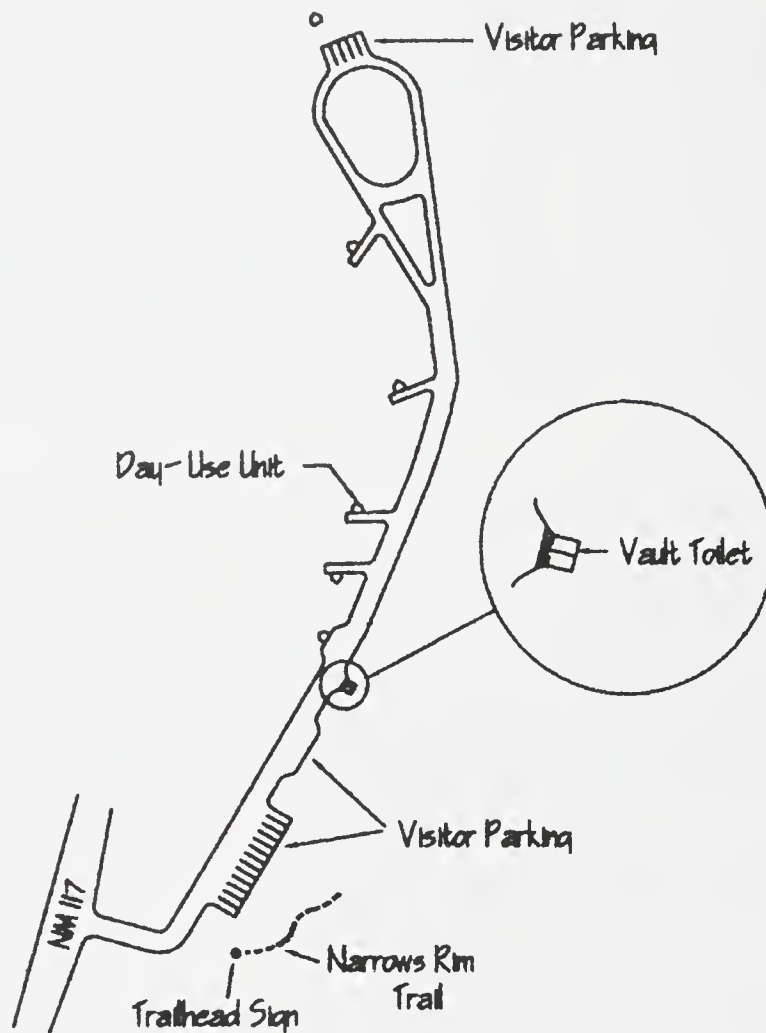


Figure 2 - a
The Narrows Day-Use Recreational Site

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

Figure 2-b
Back Country Byway Sign

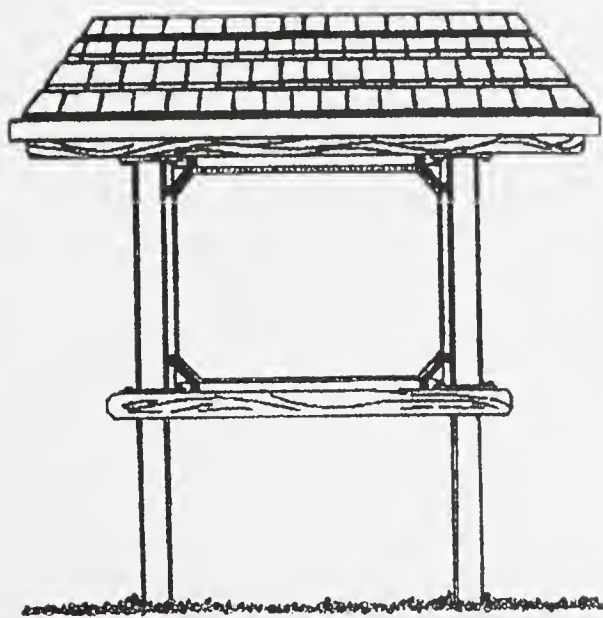
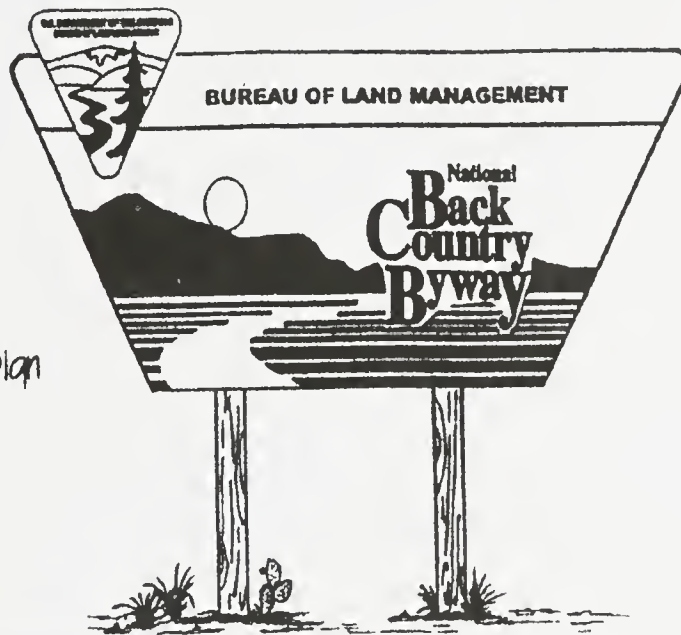


Figure 2-c
Typical Kiosk

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

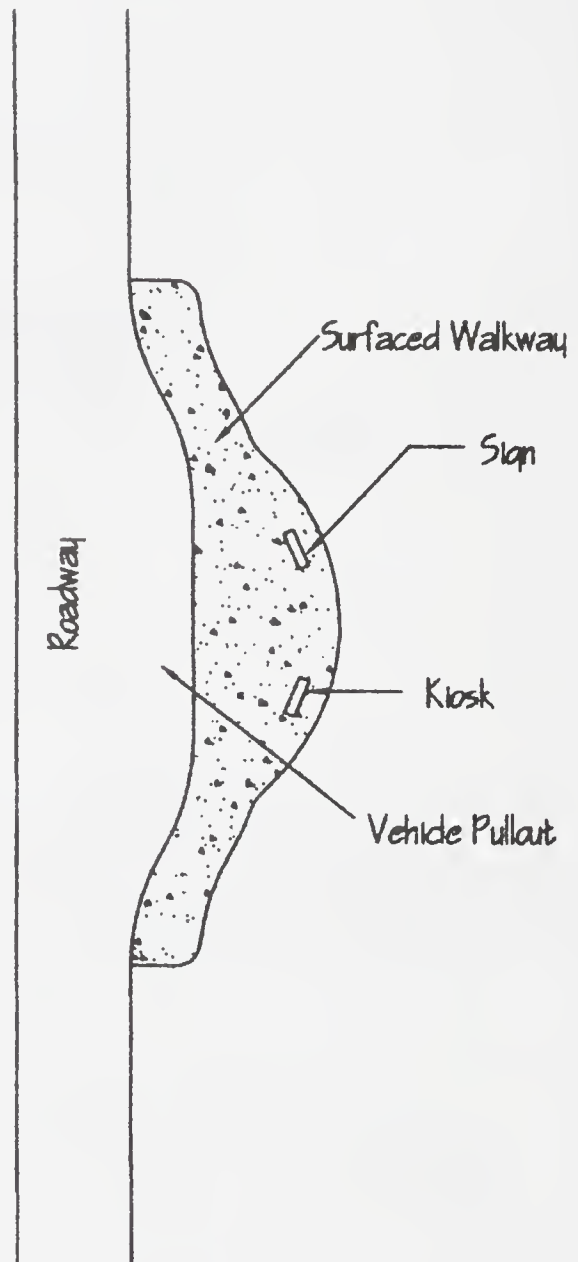


Figure 2 - d
Typical Pullout for Sign and Kiosk

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

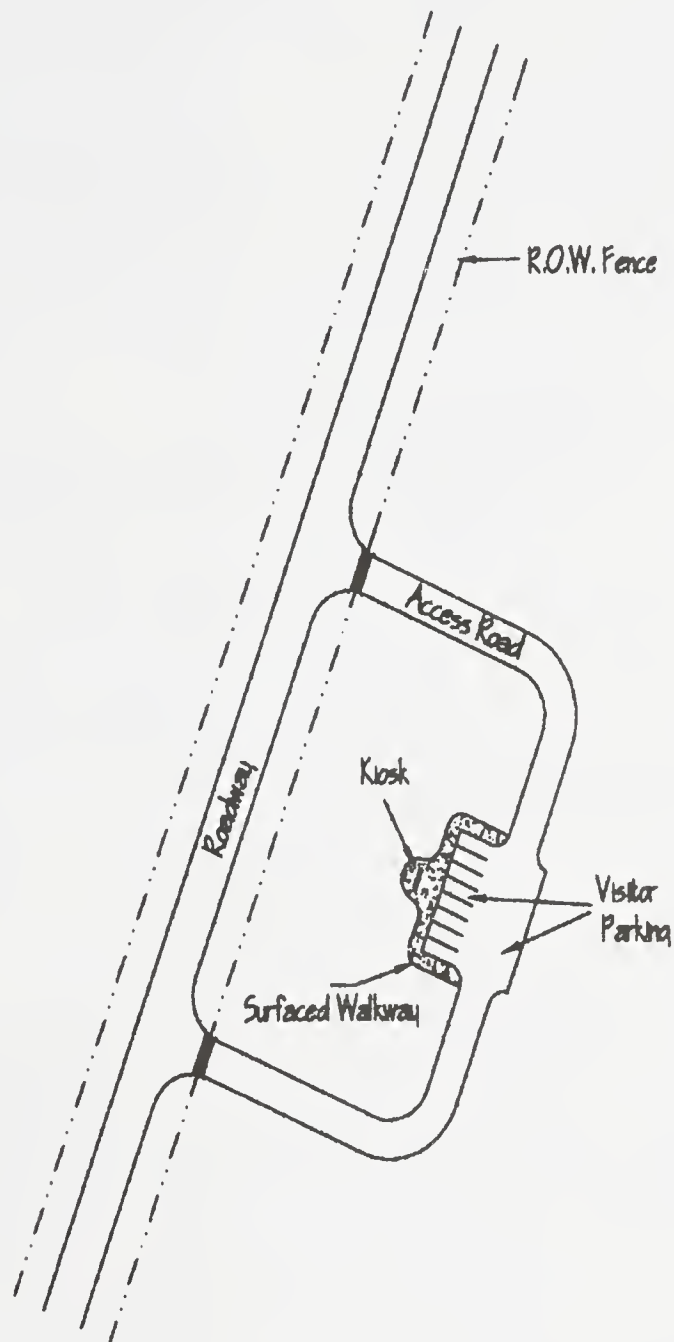


Figure 2-e
Typical Off-Roadway Kiosk

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

Pullouts with interpretive kiosks will be constructed at three NCA entry locations: the junction of NM 117 and CR 42, the western entrance along NM 53, and the first public land encountered along NM 53 (T. 9 N., R. 10 W., sec. 16).

Wildlife viewing opportunities will be identified along as many as eight stretches of road in the NCA (see Map 2-2). The AFO will provide interpretive material and signs to enhance the viewing experience. Watchable wildlife signs will be installed along CR 42, NM 53, and NM 117 to promote this recreational opportunity.

When warranted by significant visitation, the AFO will install visitor registration boxes at selected archeological properties. No additional developments will be planned at these sites. Visitation will be encouraged at the Lobo Canyon Petroglyphs rather than at other rock art sites. Systematic documentation will be needed at the petroglyphs before such visitation can be encouraged.

Trails, Trailheads, & Access Points

The AFO will establish up to 10 additional hiking trails in the Plan Area, for a total of up to 15 trails with a length of approximately 57 miles to distribute visitors and provide resource protection (see Table 2-3 and Map 2-2). Trail routes will be modified to direct visitor use away from sensitive cultural resources. The trailheads are not known to be in especially sensitive areas, but Class III inventories will be conducted in a ¼-mile radius around these facilities to consider secondary impacts.

The AFO will develop a ½-mile-long interpretive/orientation loop trail at the Ranger Station (USDI, BLM 1990c). To protect resources by focusing visitor use, as well as to provide visitors with an opportunity for exercise, a trail will be built connecting the campground with the interpretive/orientation trail at the Ranger Station.

Visitor facilities at trailheads and other entry points to wilderness will be upgraded to improve access opportunities, services, and information. Additional on-site information will be provided to better inform and educate the public. Signs will identify WSA and wilderness boundaries, WSA or wilderness name, and some regulations governing use.

La Ventana Natural Arch, The Narrows, and Armijo Canyon will continue to serve as primary access points to the Cebolla Wilderness. Facilities will be improved at The Narrows and Armijo Canyon to accommodate visitors and help direct wilderness access.

The Cebolla Canyon Road (No. 2003, which splits the Cebolla Wilderness), and the Sand Canyon Road (a dead-end, cherry-stemmed road) also provide opportunities for users to gain access to the Cebolla Wilderness. The AFO will maintain these roads more frequently to reduce erosion and improve access opportunities.

Since most of its 3.5-mile length is in the Cebolla Wilderness, the Narrows Rim Trail will be improved using minimum tool techniques to facilitate resource and wilderness protection and to help direct visitor use to a single pathway. The AFO will provide a primitive trailhead and graveled parking for up to 15 vehicles at the Narrows. Horseback access to the Cebolla Wilderness will continue to be provided at this location. Up to three wayside exhibits will be located at the trailhead or at the nearby Narrows picnic area. (See Figure 2-a for a conceptual design of these developments.)

A graveled access road and graveled parking area for up to 20 vehicles will be constructed at the Dittert Site. A primitive trailhead will be constructed to serve the Dittert Site and Armijo Canyon Homestead and Springhouse. This will also be a trailhead and access for the Cebolla Wilderness. Horse facilities will be built to provide access to the Cebolla Wilderness, not the Dittert Site. (Figure 2-f shows a conceptual design for these facilities.)

Dittert Site interpretation will include up to two wayside exhibits, a trail guide, and guided hikes for public and school groups (50 to 200 people per year). Interpretive elements about the Dittert Site (located within the boundaries of the Cebolla Wilderness) will be placed outside the wilderness boundary, at the trailhead to the Dittert Site and the Armijo Canyon Homestead.

The expanded trail system will provide improved access opportunities to such sites as the Lobo Canyon Petroglyphs, one or two homesteads, Cerro Americano, La Rendija, and the historic schoolhouse site in the West Malpais Wilderness.

TABLE 2-3
TRAILHEADS IN THE PLAN AREA ^a

Map ID No. ^b	Name	Trail Use or Destination Served
<u>Existing/Approved</u> T-1	Ranger Station	Interpretive/Orientation Trail, Ranger Station Reservoir
T-2	La Ventana Natural Arch	La Ventana Arch, Cebolla Wilderness
T-3	The Narrows	Cebolla Wilderness, Narrows Rim Trail
T-4	Cerro Brillante	CDNST, West Malpais Wilderness, La Rendija, West Malpais Schoolhouse, Chain of Craters
T-5	Cerro Americano	CDNST, mountain bike use
<u>Proposed</u> T-7	Armijo Canyon/Dittert Sites	Cultural & historic sites in Cebolla Wilderness
T-8	Brazo (2 trailheads) ^c	Mountain bike use
T-10	Savage Schoolhouse	Historic schoolhouse in Cebolla Wilderness
T-11	Cerritos de Jaspe ^c	Mountain bike use
T-12	Hole-in-the-Wall	Old volcanic flows surrounded by newer ones, West Malpais Wilderness
T-13	Lobo Canyon	Prehistoric petroglyphs in Cebolla Wilderness
T-15	Spur Campground	Loop trail past amphitheater

Note: ^a Two additional trailheads proposed at historic homesteads; locations not yet pinpointed.

^b See Map 2-2 for the location of these trailheads

^c Trailheads to be developed if use shows the need.

The existing trailhead for the Hole-in-the-Wall Trail, at the end of the cherry-stemmed road from CR 42, will continue to serve as the primary access point to the West Malpais Wilderness. The El Malpais Plan limits use of the vehicle route leading into Hole-in-the-Wall (a major attraction of the West Malpais Wilderness) to authorized vehicles. This rarely used vehicle route will continue to be identified as the Hole-in-the-Wall Trail. The existing trailhead and vehicle access to the Hole-in-the-Wall Trail will be improved, and a graveled parking area for up to 10 vehicles and horse facilities will be built. (See Figure 2-g for a conceptual design of these developments.)

Primitive trailheads, defined parking for up to eight vehicles, and a trailhead kiosk will be developed for the following cultural/historic properties as time, staff, and budget allow: the Lobo Canyon Petroglyphs (rather than at other rock art sites), the Savage Schoolhouse in Cebolla Canyon, the Ranger Station Reservoir, and other deserving properties as needed to distribute visitor use. All-weather gravel roads will be constructed to provide access to trailheads. For the Ranger Station Reservoir, the Ranger Station and parking lot will serve as the trailhead, with the approved interpretive/orientation trail for access (USDI, BLM 1990c). Data recovery through systematic

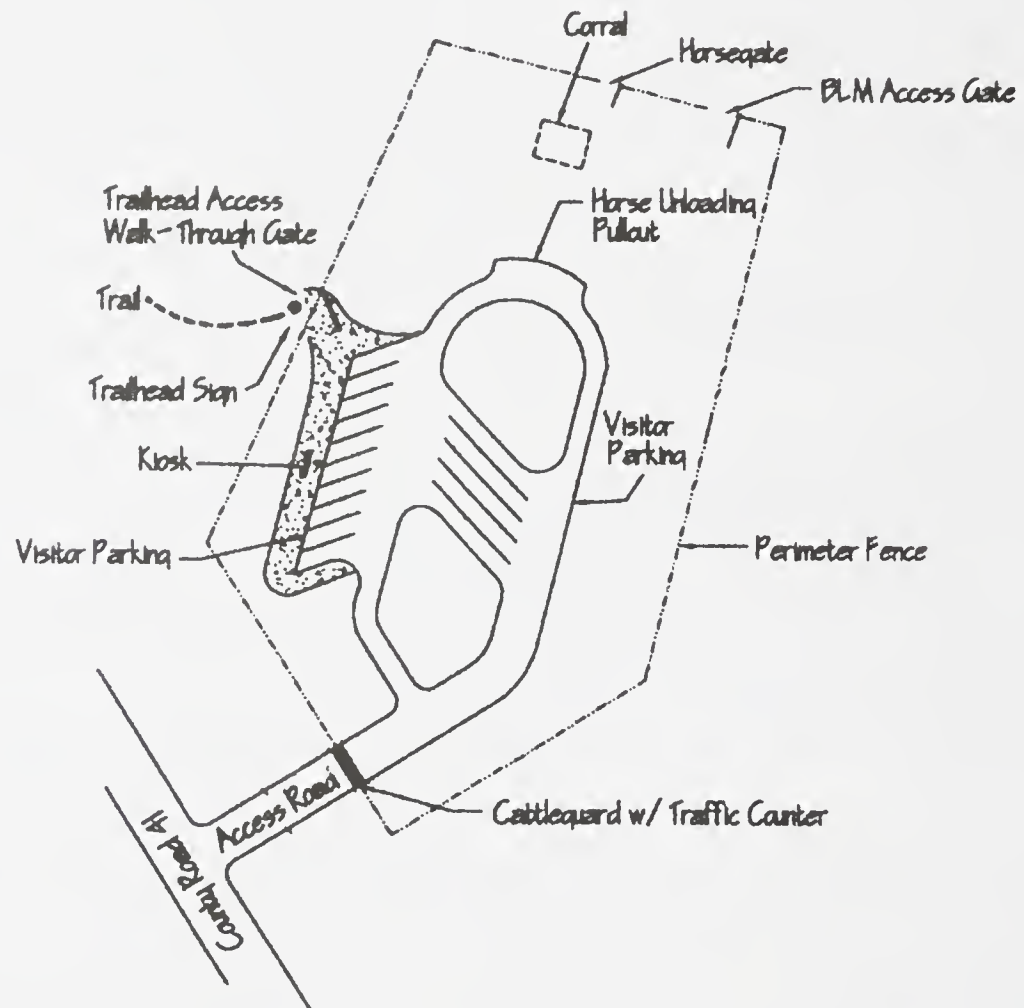


Figure 2-f
Dittert Site/Armijo Canyon Homestead
Trailhead Facility to Accommodate
Horseback Riders

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

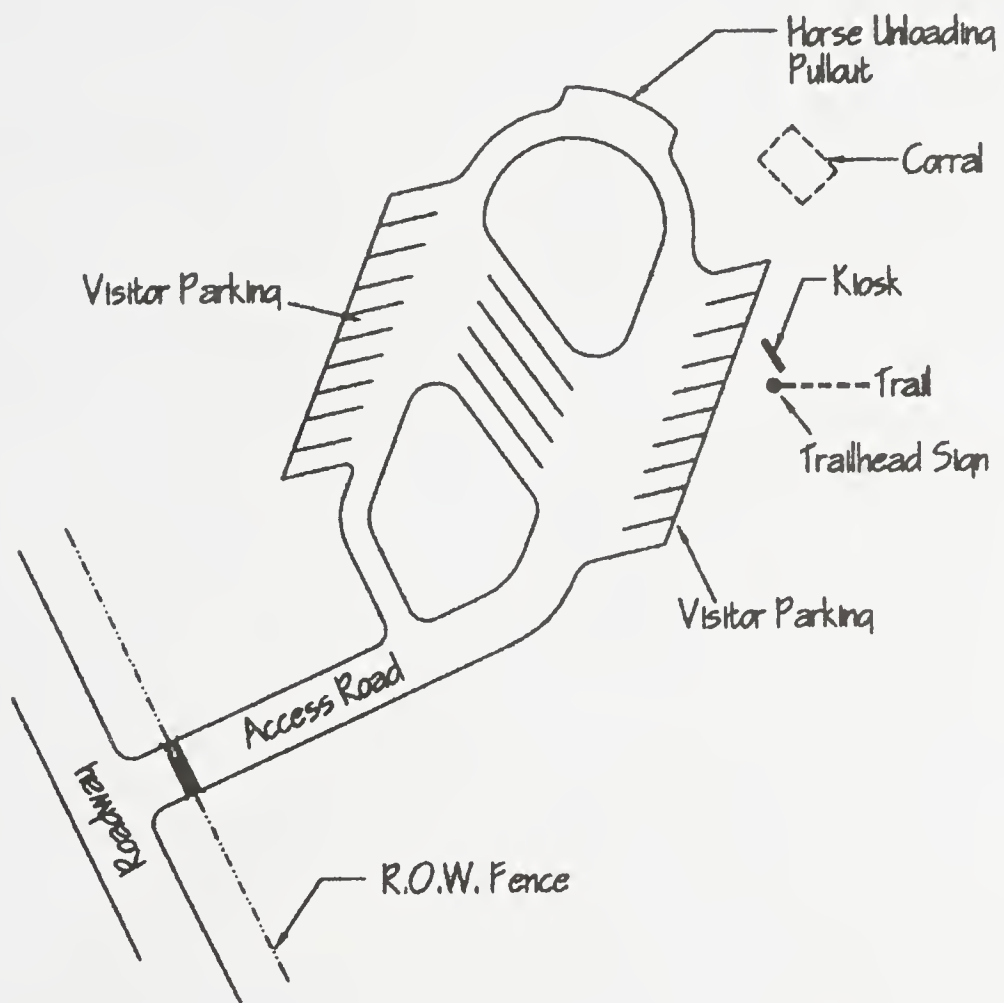


Figure 2 - 9
Typical Trailhead Facility
to Accommodate Horseback Riders

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

collection of surface materials will be necessary at the Ranger Station Reservoir before the trail is extended to it. Systematic documentation will be needed at the Lobo Canyon Petroglyphs before the trail and trailhead can be constructed.

The AFO will construct two primitive trailheads for the CDNST at Cerro Americano and Cerro Brillante. Each trailhead will include a graveled parking area for up to 20 vehicles and up to two wayside exhibits (to include watchable wildlife information at Cerro Americano). Facilities for horse use will be provided at the Cerro Brillante trailhead. The facilities at the Cerro Americano trailhead will accommodate mountain bike use. (See Figures 2-g, 2-h, and 2-i for possible design and layout of these developments.) Where feasible, the AFO will develop and identify water sources for CDNST hikers.

The AFO will seek to acquire a treadway for the CDNST in the Cerro Brillante-AFO Unit (see Maps 1-2 and 2-2) by easement, exchange or purchase, if owners are willing. The alternative routes shown on Map 2-2 will continue to be used until the treadway in the Cerro Brillante-AFO Unit is acquired. (See "Implementation Guidance From RMP," below.)

Other trails at selected locations will not be developed until established LAC monitoring system standards for social trails are exceeded (see Appendix D). Travel routes available for mountain bike use in the Cerritos de Jaspe and Brazo Units will not be marked as trails until established LAC standards for social trails are exceeded. Trailhead facilities to accommodate mountain bike users in the Cerritos de Jaspe and Brazo Units will be built only if mountain bike routes are established there.

One or two selected homesteads will be developed for public use. To provide for public access, the AFO will build a primitive trailhead, including a parking area for four to six vehicles, to serve each selected homestead. (Figures 2-h and 2-i show possible designs for these developments.)

The closure of 83.4 miles of vehicle routes in the Plan Area will create opportunities for visitors to use them as informal hiking trails without vehicle conflicts.

Interpretive wayside exhibits will be developed for up to three archeological sites and/or homesteads along with brochures and/or trail guides keyed to markers.

The AFO will conduct special hikes and programs for up to 200 people per year to these features.

For the convenience of horseback riders in the Plan Area, the AFO will provide access facilities at several allocations. The Narrows will be one location, along with the Armijo Canyon area (for access to the Cebolla Wilderness, not the Dittert Site), the Hole-in-the-Wall trailhead (for access to the West Malpais Wilderness), and the Cerro Brillante trailhead (for access to the Chain of Craters).

Criteria for Resolution of El Malpais Plan Issues

The AFO considered the following factors in developing answers to the issue questions regarding facility development. These factors will continue to be considered as the El Malpais Plan is implemented.

- Existing facilities
- Resource protection
- Visitor health and safety
- Site location and design
- Public interests and concerns
- Coordination with the NPS

Guidance From Rio Puerco RMP

Some of the general recreation decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues," "Implementation Guidance From RMP," and "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Recreation Program:

- Designation of OHV use will consider protection of resources such as . . . recreational values . . .

Figure 2 - h
Typical Pullout Trailhead Facility

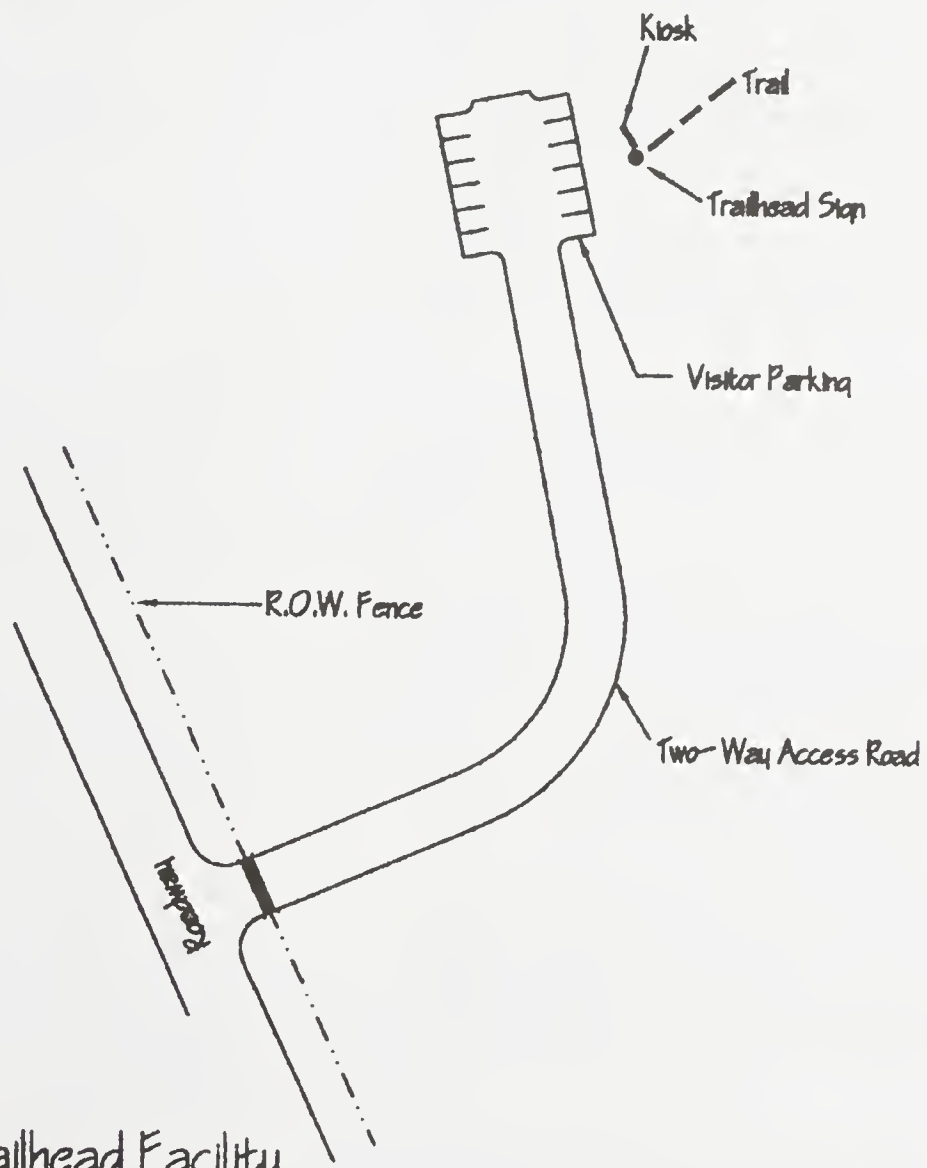
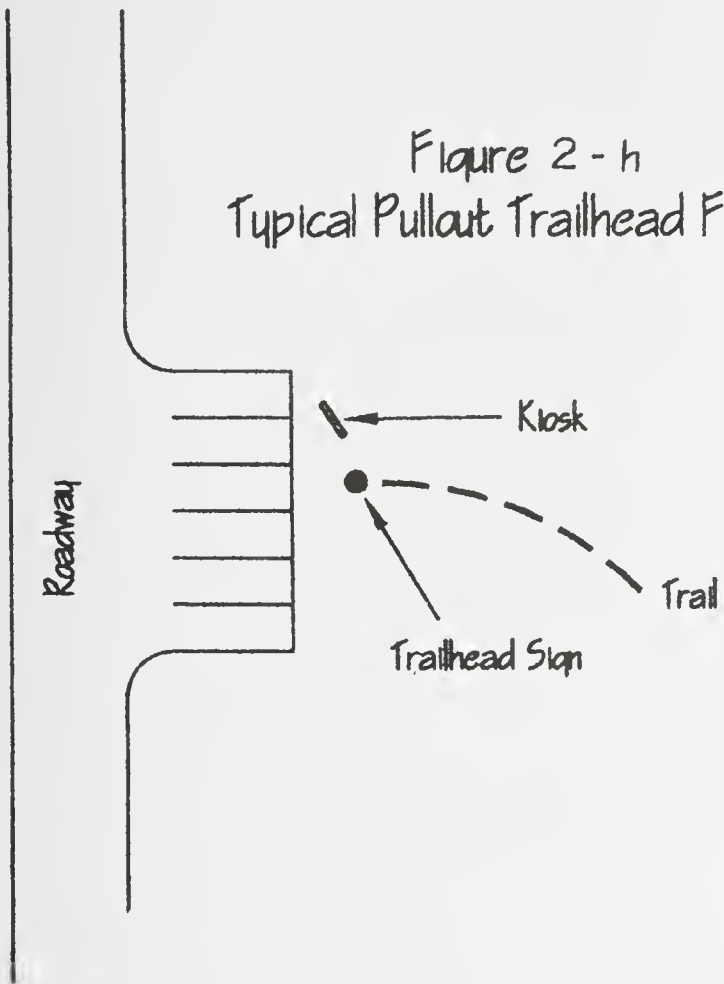


Figure 2 - i
Typical Off-Roadway Trailhead Facility

This figure is an example of a preliminary concept. It is shown for informational purposes only, to give an idea of the potential development of this facility or site.

- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . recreational . . . values.

Implementation Guidance From RMP

The RMP directs the AFO to prepare a sign plan. [A sign plan has been prepared for El Malpais NCA.]

The BLM, volunteers, organizations, and other agencies are developing a treadway for the CDNST. The route for the trail was established in an environmental analysis (EA)/RMP amendment developed jointly by the U. S. Forest Service, the National Park Service, and the BLM (USDA, FS 1992, 1993). The selected treadway through the Plan Area is shown on Map 2-2. This treadway is the subject of an EA scheduled for completion in 2001. The southernmost three miles of this route, in the Cerro Brillante-AFO Unit, cross private land. Utilization of that portion of the CDNST would require acquisition of the treadway by easement, exchange or purchase, if owners were willing. The alternative routes shown on Map 2-2 will continue to be used until the selected route in the Cerro Brillante-AFO Unit is acquired.

The CDNST EA/RMP Amendment identified two trailheads for the CDNST within the Plan Area, at Cerro Americano and Cerro Brillante. These trailheads will serve as staging areas for CDNST users.

Decisions Carried Forward From Previous Planning

- Construct a parking area, day-use interpretive site, and loop trail at La Ventana Natural Arch. [This action is complete.]
- Develop a series of loop trails around Sandstone Bluffs and Natural Arch. [The Sandstone Bluffs are now managed by the NPS and a trail has been constructed at La Ventana Arch.]
- Develop a primitive campground at Big Hole-in-the-Wall. [Big Hole-in-the-Wall is within the West Malpais Wilderness designated by the El Malpais Act. Section 2(c) of the Wilderness Act provides that wilderness is an area “. . . without permanent improvements . . .” BLM Manual

8560-Wilderness states that “no recreation facilities or improvements may be provided” within wilderness. No campground will be developed at this location.]

- Close the Dominguez-Escalante trailhead/parking lot. [The public lands affected by this decision are now managed by the NPS.]

Monitoring/Studies

Monitoring will be used to protect recreation resources and prevent their degradation. Staff patrols, traffic counters, and trail counters will be used to measure and monitor visitor use. The AFO uses the Limits of Acceptable Change monitoring system to determine the need to modify use allocation or management. Certain limits have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan (see Appendix D).

Trails at selected locations will not be developed until established LAC monitoring system standards for social trails are exceeded (see Appendix D).

Trailhead facilities to accommodate mountain bike users in the Cerritos de Jaspe and Brazo Units will be built only if mountain bike routes are established there. The travel routes available for mountain bike use will not be marked as trails until established LAC standards for social trails are exceeded.

The AFO will inspect recreation-related facilities and conduct a program of preventive and rehabilitative maintenance of recreation-related facilities, to the extent resources permit, to provide a safe, sanitary, and aesthetically pleasing environment for visitors and employees. Through inspection the AFO will identify and remove hazards or give warning of their presence. The AFO will continually evaluate its recreation-related facilities through inspection to determine if they should be reconstructed, expanded, transferred, closed, or removed based on costs, resource protection, health and safety, and their capability of meeting current and future uses and demands.

The proposed campground will require special cultural resources survey and monitoring. The campground is near areas of dense cultural resources that

would be vulnerable to surface collection. Therefore, in addition to the Class III cultural resources inventories, the AFO will conduct a reconnaissance survey within a one-mile radius before developing the campground, attempting to locate and document all sites vulnerable to illegal surface collection. The condition of these sites will be monitored carefully, and if any changes in their condition are detected resulting from recreational use of the campground, appropriate mitigating measures will be taken (e.g., data recovery, closure of affected areas to public entry).

The conditions of the physical structures at the Dittert Site and the historic homesteads planned for public visitation will be monitored. Increased maintenance as the result of visitation is expected.

Implementation Priorities

The following actions are listed in priority order, although several actions may be carried out at the same time. These developments will occur as time, staff, and budget allow.

General Recreation Facilities

- Complete approved recreation facility actions at the Ranger Station and La Ventana Natural Arch.
- Develop a campground within approximately 8 acres of the Spur Unit to accommodate camping. Vehicle access to the campground from NM 117 will be improved by upgrading the existing dirt road and surfacing it for all-weather use. At a location within a 5-minute walk of the campground, the AFO will build an amphitheater designed to hold about 50 people.
- Provide picnicking opportunities at the south end of The Narrows. Picnicking will also be encouraged as a dispersed activity. The Narrows will be designated as a day-use-only site for parking and hiking in the Cebolla Wilderness.
- Construct a graveled access road and graveled parking area for up to 20 vehicles at the Dittert Site. A primitive trailhead will be constructed to serve the Dittert Site and Armijo Canyon Homestead and Springhouse. This will also be a trailhead and access for the Cebolla Wilderness.

Horse facilities will be built to provide access to the Cebolla Wilderness, not the Dittert Site.

- Maintain the Cebolla Canyon Road and the Sand Canyon Road more frequently to reduce erosion and improve access opportunities to the Cebolla Wilderness.
- Encourage visitation at the Lobo Canyon Petroglyphs rather than at other rock art sites. When warranted by significant visitation, install visitor registration boxes at selected archeological properties. No additional developments will be planned at these sites.
- Work with partners to purchase and install up to four signs and one or two kiosks for each designated Back Country Byway (see Map 2-2).
- Provide mountain-biking facilities at the Cerro Americano CDNST trailhead.
- Update and maintain sign plan for the NCA.

Trails, Trailheads, & Access Points

The following actions are listed in priority order, although several actions may be carried out at the same time. These developments will occur as time, staff, and budget allow.

- Develop a ½-mile-long (round trip) interpretive/orientation trail at the Ranger Station (USDI, BLM 1990c). To provide visitors with exercise and direct use for resource protection, build a loop trail near the campground that connects with the interpretive loop trail at the Ranger Station.
- Improve the Narrows Rim Trail to help direct visitor use to a single pathway. Provide graveled parking for up to 15 vehicles. Horseback access to the Cebolla Wilderness will continue to be provided at this location.
- Construct two primitive trailheads for the CDNST, one each at Cerro Americano and Cerro Brillante. At the Cerro Brillante trailhead, facilities for horse use will be provided. At the Cerro Americano trailhead, facilities will accommodate mountain bike use. Where feasible, develop and identify water sources for CDNST hikers.

- Improve existing trailhead and vehicle access to the Hole-in-the-Wall Trail; build a graveled parking area for up to 10 vehicles and horse facilities.
- Develop primitive trailheads, defined parking for up to eight vehicles, and a trailhead kiosk for the Lobo Canyon Petroglyphs, the Savage Schoolhouse in Cebolla Canyon, the Ranger Station Reservoir, and other deserving properties as needed to distribute visitor use. All-weather gravel roads will provide access to trailheads. For the Ranger Station Reservoir, the Ranger Station and parking lot will serve as the trailhead, with the approved interpretive/orientation trail for access.
- Develop one or two selected homesteads for public use. To provide for public access, the AFO will build a primitive trailhead, including a parking area for four to six vehicles to serve each selected homestead.
- Provide access facilities for the convenience of horseback riders at several locations in the Plan Area: The Narrows, the Armijo Canyon area (for access to the Cebolla Wilderness, not the Dittert Site), the Hole-in-the-Wall trailhead (for access to the West Malpais Wilderness), and the Cerro Brillante trailhead (for access to the Chain of Craters).

Support Needs

Fire Management

Implementation of the wildland fire use and prescribed fire goals, along with protection of areas developed for recreation opportunities will support the Recreation Facilities Program.

Engineering & Operations

Engineering and Operations support will be needed to design, contract, or construct recreation facilities.

Cultural Resources

Survey and inventory of cultural resources in the NCA will support the Recreation Facilities Program.

The AFO will require a Class III cultural resources inventory over an area at least ¼-mile wide around proposed visitor-use developments.

In addition to Class III cultural resources inventories, the AFO will conduct a reconnaissance survey within a one-mile radius before developing the campground near the Ranger Station, attempting to locate and document all sites vulnerable to illegal surface collection. The condition of these sites will be monitored carefully, and if any changes in their condition are detected resulting from recreational use of the campground, appropriate mitigating measures will be taken.

The picnic area at The Narrows is not known to be in an especially sensitive area, but a Class III inventory will be conducted in a ¼-mile radius around this facility to consider secondary impacts.



Class III inventories will be conducted in a ¼-mile radius around trailheads to consider secondary impacts. As up to 10 additional hiking trails are established in the Plan Area, for a total of up to 15 trails and approximately 57 miles, trail routes will be modified to direct visitor use away from sensitive cultural resources.

Systematic documentation will be needed at the Lobo Canyon Petroglyphs before visitation can be encouraged.

Data recovery through systematic collection of surface materials will be necessary at the Ranger Station Reservoir before the trail can be extended to it.

Native American Consultation

The Cultural Resources staff also will support recreation facility development through consultation with local interested American Indian Tribes.

Law Enforcement

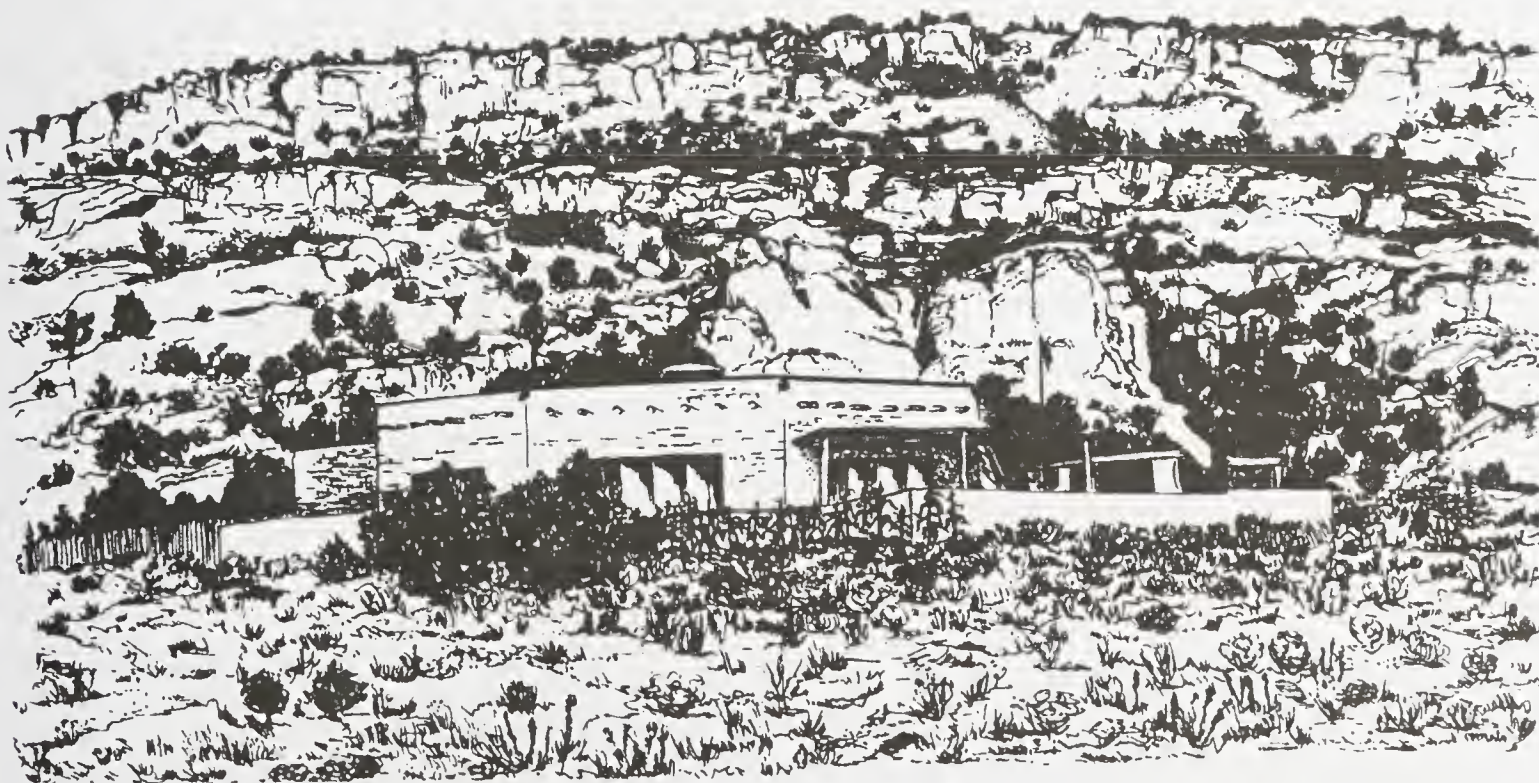
The Law Enforcement Program will continue to patrol the Plan Area to protect natural and cultural resources and provide assistance and protection to public land users.

Volunteers

Volunteers support the Interpretation/Public Education Program by leading hikes for the public, working at the information desk at the Ranger Station, and making contact with the public during patrols.

Interpretation/Public Education

Personal and non-personal interpretive/education support is necessary to promote dispersed recreation or direct use to developed areas in the NCA.





Program Goals

This program seeks to provide adequate access to meet the needs of all users, including those with physical challenges, to BLM facilities and resources, while reducing conflicts between users and preventing damage to natural resources. The BLM designates all public lands as open, limited, or closed to motorized vehicle use, and determines whether restrictions are needed to manage non-motorized uses (e.g., hiking, mountain biking, horseback riding).

Management Guidance

Policy and Authorities

For many years the term "off-highway vehicle" (OHV) has been used by the public, industry, and the BLM interchangeably with the term "off-road vehicle" (ORV). However, only the term off-road vehicle has a legally established definition in the BLM's 43 CFR 8340 regulations or Presidential Executive Orders applying to BLM: "any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain." The AFO has nevertheless elected to use "off-highway," partly because it is a more popular term, but primarily because the vehicles addressed by the regulations use roads and trails on BLM-administered land, and are therefore, not just "off-road."

Management of motorized access to and across public lands is directed by Executive Order (EO) 11644, as amended by EOs 11989 and 12608. Guidance to implement these EOs is provided in BLM Manuals 8342, 8300, and H-9114-1, and Titles 8340 and 8364 of the Code of Federal Regulations (CFR). Instruction Memorandum (IM) NM-95-031 (BLM New Mexico Roads Policy) provides direction for constructing, maintaining, rehabilitating, abandoning, and closing roads under BLM jurisdiction. Additional guidance is provided through IM NM-95-083 (Transportation and Access Management) and IM NM-94-098 (Off-Highway Vehicle Management). Non-motorized uses are controlled through 43 CFR 1600 and restricted under 43 CFR 8364.1. Road closures outside of land-use-planning are accomplished through the closure procedures at 43 CFR 8364. The BLM

recently completed its *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands* (USDI, BLM 2001). This document is a first step in developing a proactive approach to determining and implementing better on-the-ground motorized OHV management. It provides agency guidance and offers recommendations for future actions to improve motorized vehicle management.

To implement EO 11644, BLM regulations at 43 CFR 8340 established criteria for designating management areas of public land as "open," "limited," or "closed" to off-highway vehicle use. The "open," "limited," and "closed" area designations are accomplished through the land-use planning process. Areas are designated as limited where the BLM must restrict OHV use in order to meet specific resource management objectives. These limitations may include restricting the number of or types of vehicles; limiting the time or season of use; limiting use to existing roads and trails; or limiting use to designated roads and trails. In accordance with IM NM-94-098, when limiting vehicles to roads and trails, the preferred designation in New Mexico is to limit vehicles to designated roads and trails. The use of designated travel routes (roads and trails) is a more effective method of controlling OHV use, developing an OHV access network, protecting sensitive resource values, and determining when new, illegal routes of travel are being created.

Criteria to be considered when designating vehicle routes, as summarized from IM NM-95-083, are: adjacent resource sensitivity and use, purpose and need for route, manageability, duplication, maintainability, hazards, land ownership and trespass, destination, reasonable and adequate access to destination, adjacent land management objectives, user conflicts, and existing route designations. Signing of designated routes follows the guidance provided in BLM Manual Series 9130.

Field Office Program Guidance

The AFO identified motor vehicle routes of travel in a 1996 inventory of the Plan Area (USDI, BLM 1996c). These routes have now been designated as open, closed, or limited through the El Malpais Plan (see "Decisions From the Approved Plan," below.) Any

new routes in the Plan Area created by management action or land acquisition will be designated open, closed, or limited based on the criteria from IM NM-95-083 listed above.

Existing State, county, and private roads with valid rights-of-way will remain open. The AFO will work with these entities, as well as the National Park Service, the U. S. Forest Service, and private individuals on a case-by-case basis to build, realign, upgrade, and rehabilitate roads that lie within the Plan Area or provide access to El Malpais National Monument through the Plan Area. The 18.4 miles of BLM arterial route identified in the 1996 inventory (BLM Road 2003) will remain open for use by the public (see Map 2-4), except when closed by natural occurrences or in emergencies (i.e., to protect resource values, promote the safety of all users, or minimize conflicts among various users).

In accordance with the El Malpais Act, the American Indian people recognized as using the NCA are ensured access for traditional uses and cultural purposes. Such access must be consistent with the American Indian Religious Freedom Act and the Wilderness Act. On request, the AFO will temporarily close the smallest practicable area for the minimum period of time needed to accommodate such religious activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

New roads or trails will not be built into sensitive wildlife habitats, and those in other areas will be designed whenever feasible to direct visitors away from sensitive areas. Where problems are found to exist or are expected to occur within sensitive wildlife areas, the AFO may close roads or trails permanently or seasonally following the closure procedures at 43 CFR 8364.

Non-commercial, non-motorized and non-mechanized forms of access (e.g., backpacking, hiking, walking, horseback riding) will continue.

Acquired land will be managed for motor vehicle use in the same manner as adjacent land with the same management status.

Decisions From Approved El Malpais Plan

The density of vehicle routes in the Plan Area will be reduced.

To enhance natural processes, motor vehicle area designations within the Plan Area are either "limited" or "closed" (see "Policy and Authorities," above). The only land designated as "closed" is designated wilderness (40 percent of the Plan Area); the closed area would increase if Congress designates the Canyons WSA or any other lands as wilderness. Vehicle travel in the rest of the Plan Area is limited to "designated routes" (60 percent of the Plan Area) as shown on Table 2-4. No lands will remain open or undesignated.

TABLE 2-4

MOTOR VEHICLE AREA DESIGNATIONS IN THE PLAN AREA (PA)
(public land acres)

Area Status	Acres	% of PA
Open	0	0
Closed	100,900	40
Limited	148,370	60
Undesignated	0	0
Totals	249,200	100

The El Malpais Plan sets a prescription for the area designated as "limited" which limits general public OHV use to designated travel routes. The 273.1 miles of BLM-administered local and collector routes within the limited portion of the Plan Area shown on Map 2-4 are the "designated routes" open to the general public. The 83.4 miles of routes within the limited area shown on Map 2-5 as "closed" are not designated OHV routes open to the general public, and will be closed to render them impassable to vehicles and reclaimed (see Table 2-5). Use of 6.3 miles of routes on public lands within the limited area will be restricted to authorized users for access purposes.

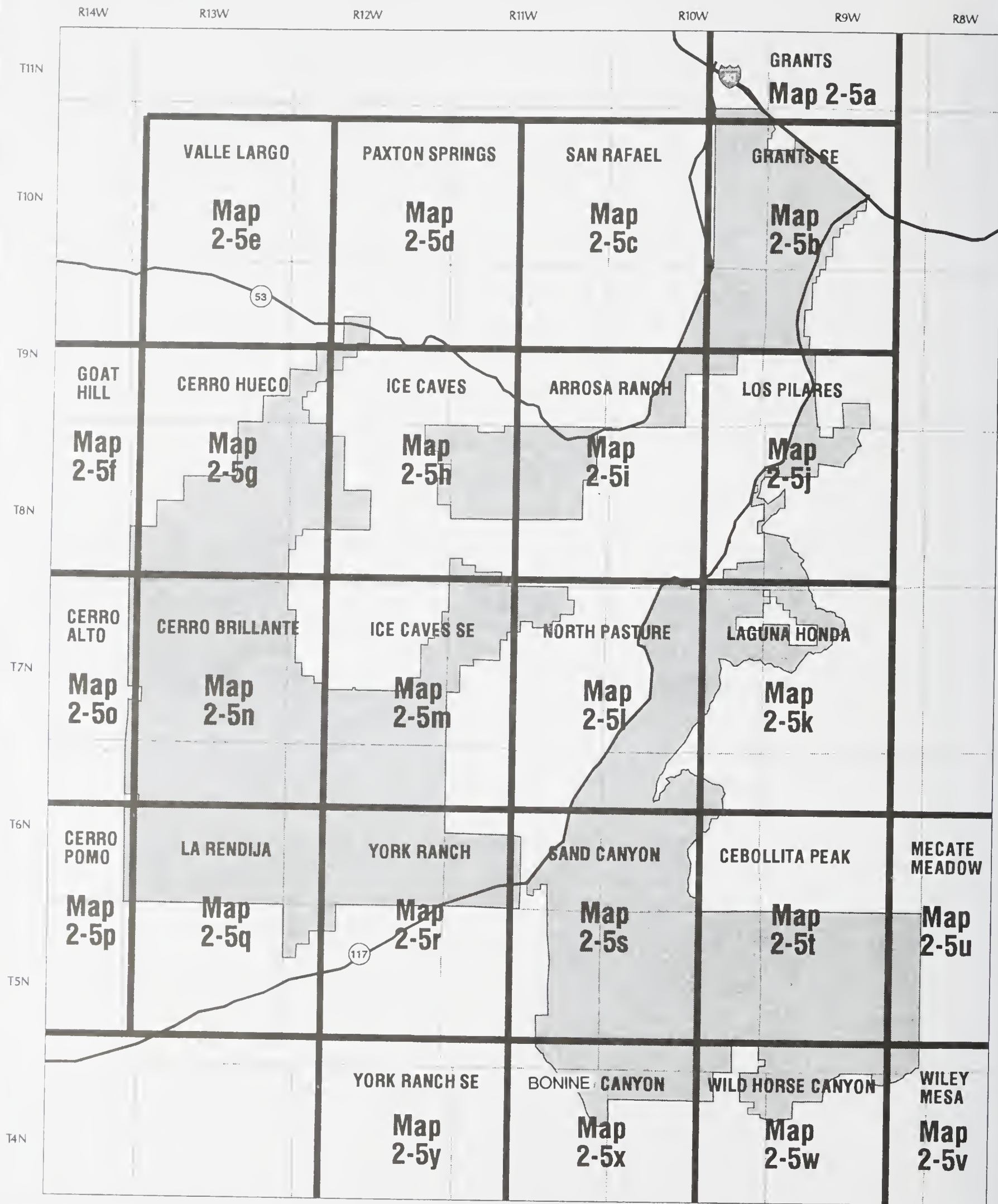
El Malpais Plan Area

Map 2-4
Routes

- Arterial
- Collector
- Local

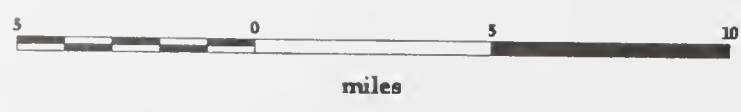


ROUTE DESIGNATION INDEX MAP

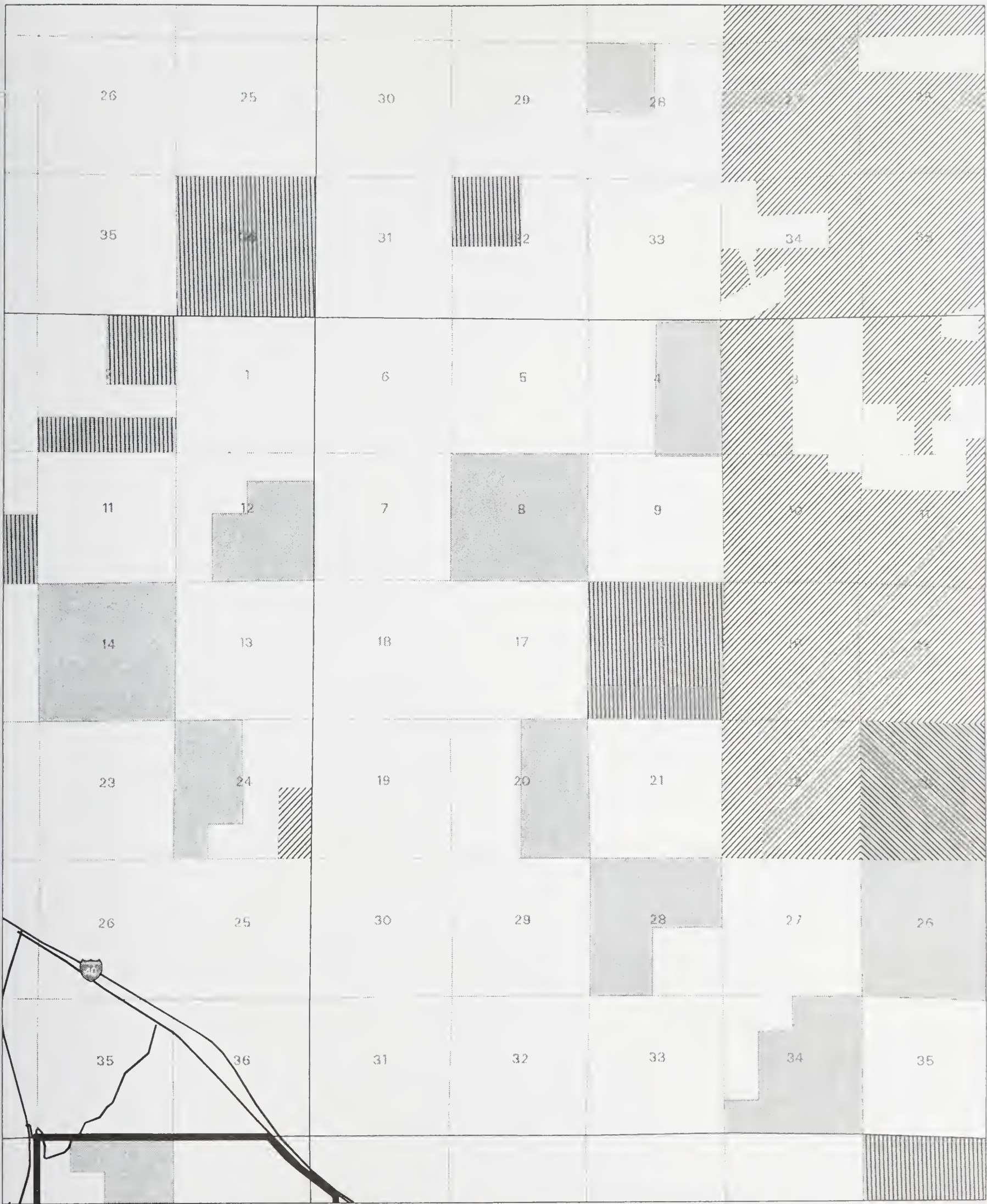


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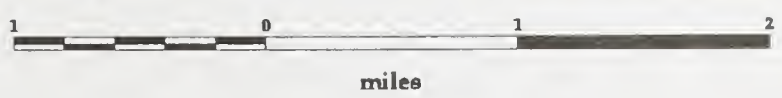


Map 2-5



- Bureau of Land Management
- U.S. Forest Service
- Tribal
- National Park Service
- Private
- State

- Road
- Approved Closure
- National Conservation Area (NCA) Boundary
- NCA Proposed Addition



GRANTS
Map2-5a

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- Bureau of Land Management
- U.S. Forest Service
- Tribal
- National Park Service
- Private
- State

- Road
- Approved Closure
- National Conservation Area (NCA) Boundary
- NCA Proposed Addition

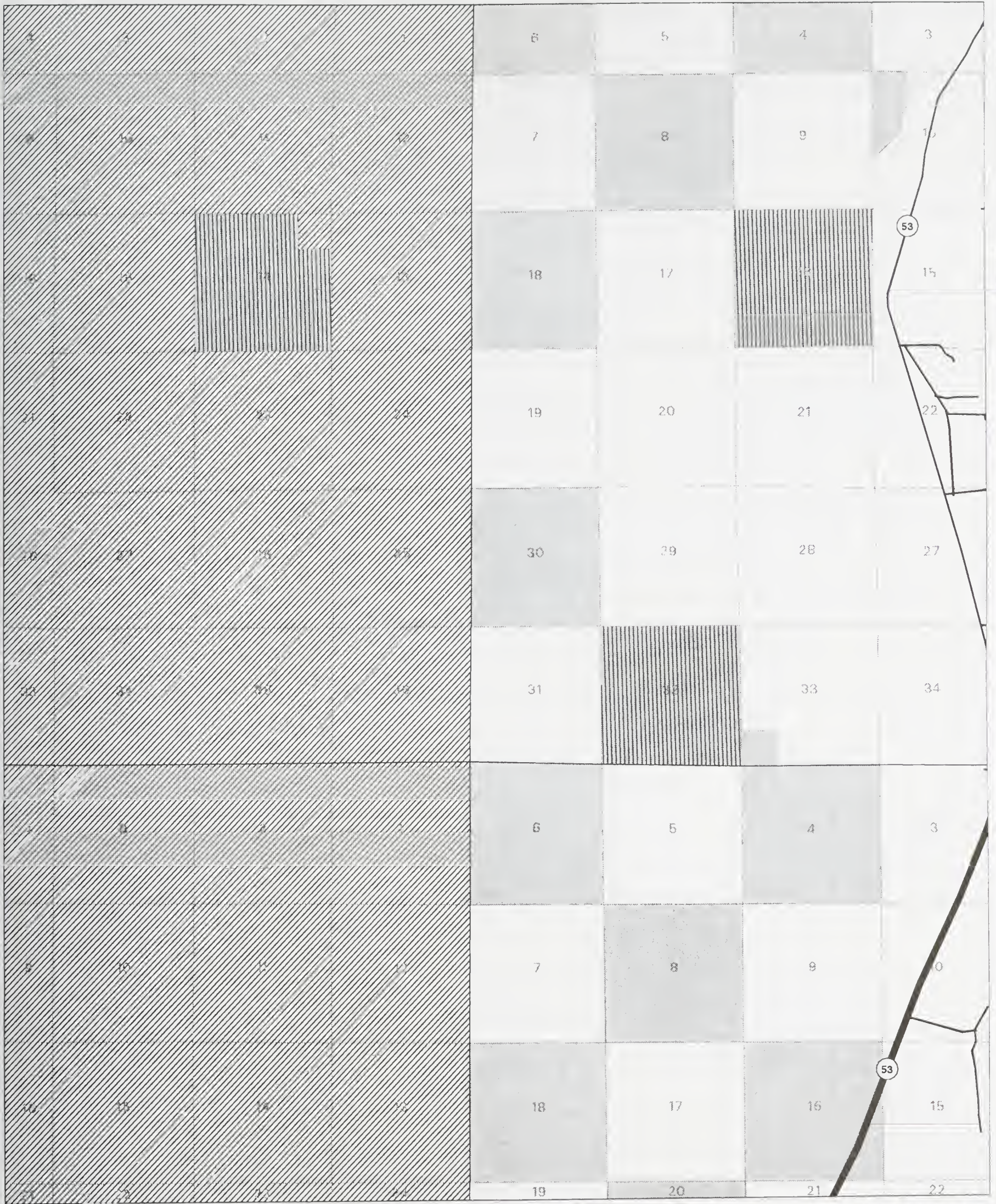








GRANTS SE
Map2-5b


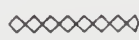


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-  State

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-  NCA Proposed Addition



miles







SAN RAFAEL Map2-5c





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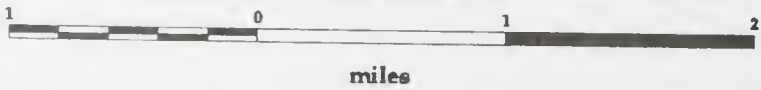
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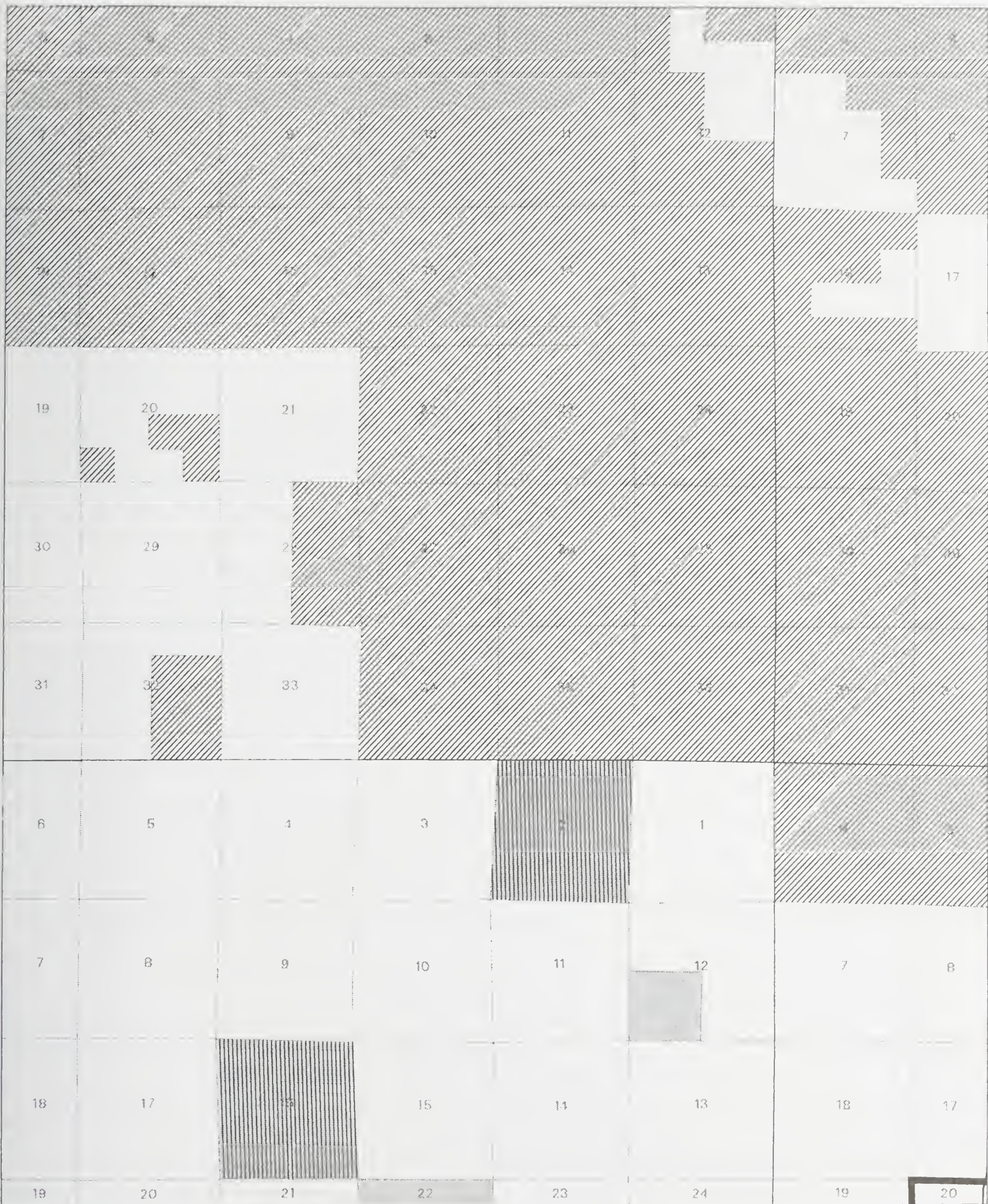
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition









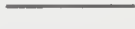


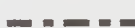
PAXTON SPRINGS
Map2-5d

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-  National Park Service
-  Private
-  State

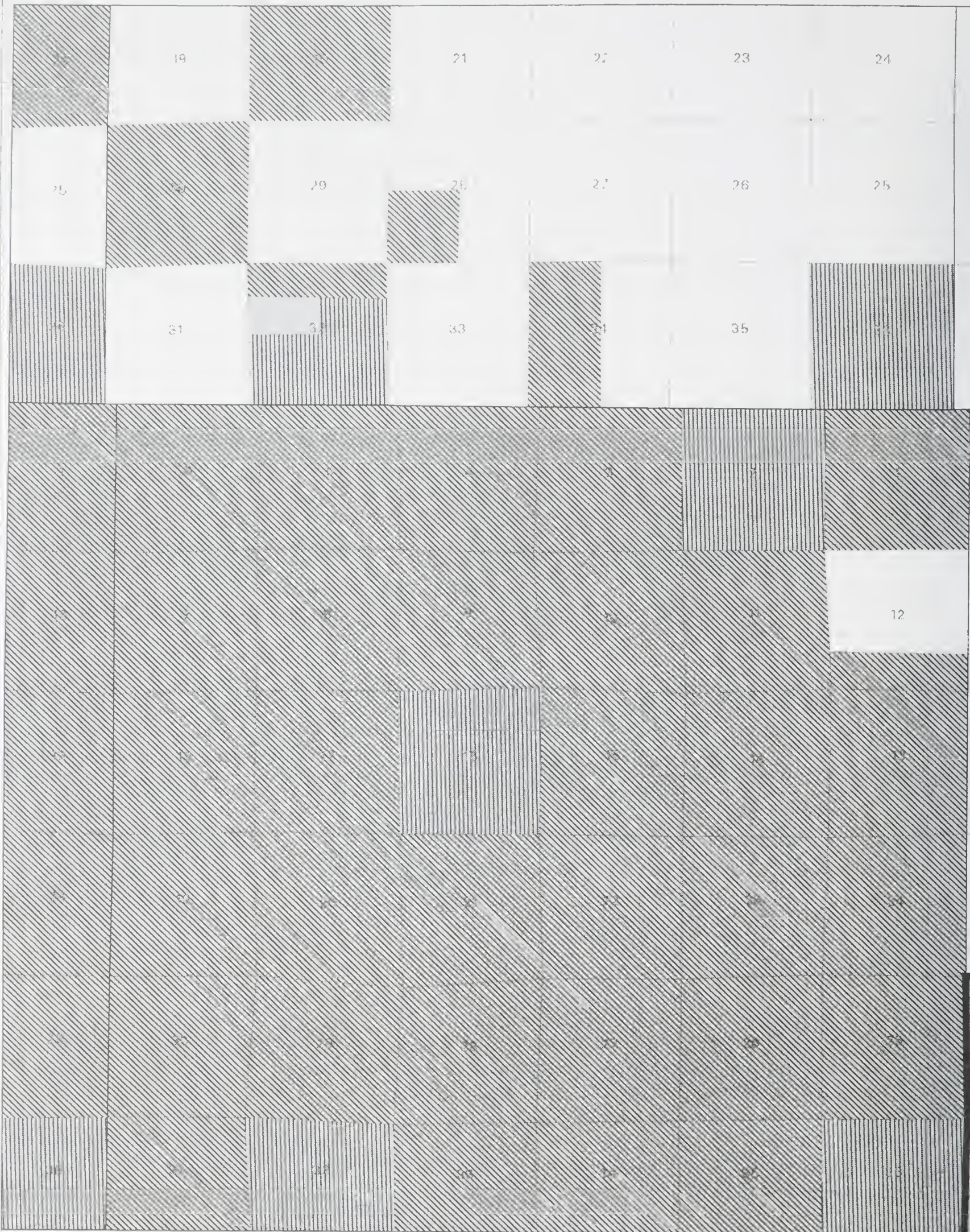
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition



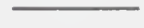


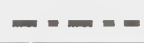
VALLE LARGO
Map2-5e

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-  Tribal
-  National Park Service
-  Private
-  State

-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition











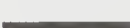

GOAT HILL
Map2-5f

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-  Bureau of Land Management
-  U.S. Forest Service
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-  Private
-  State

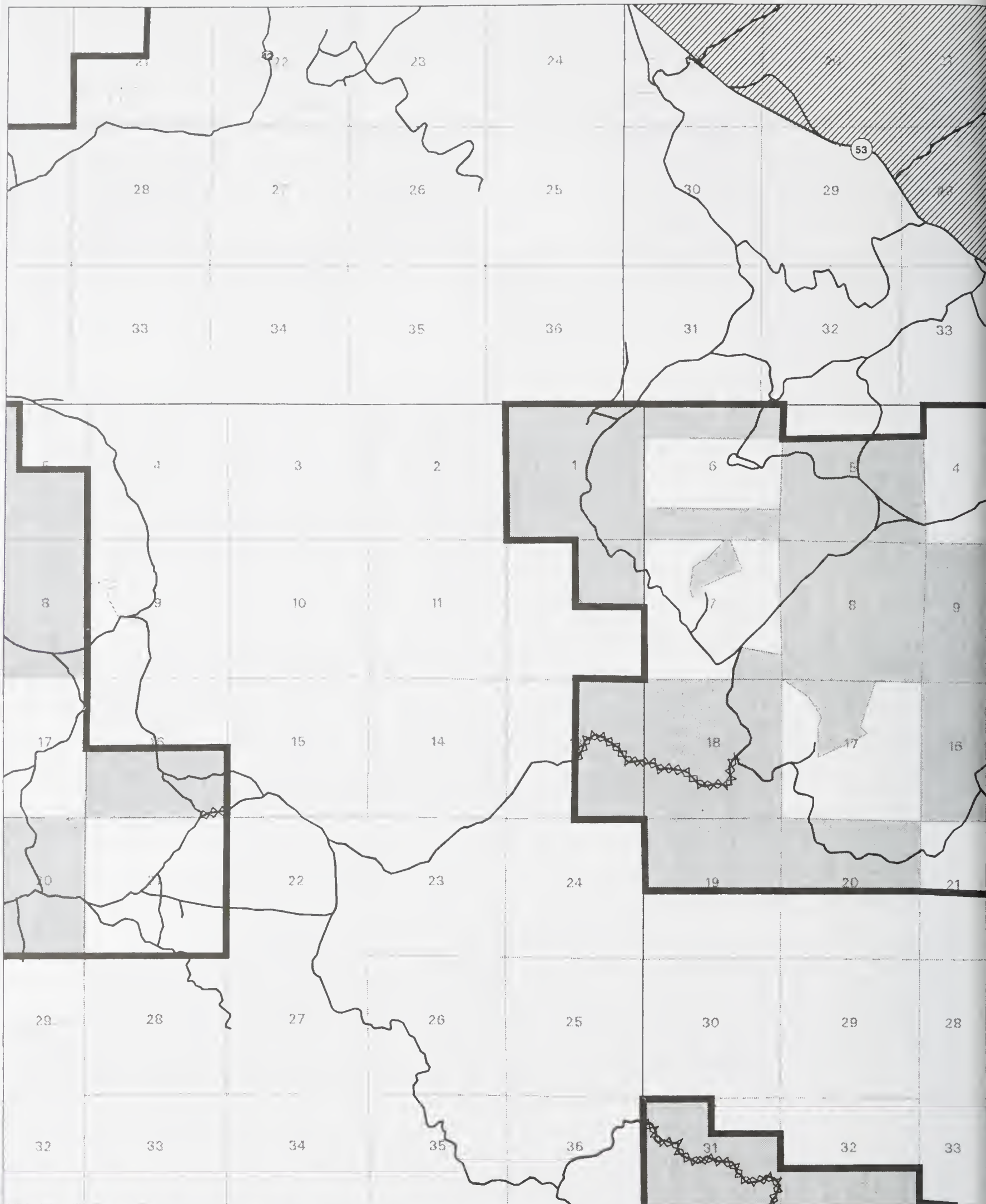
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition







CERRO HUECO Map2-5g

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-  Tribal
-  National Park Service
-  Private
-  State

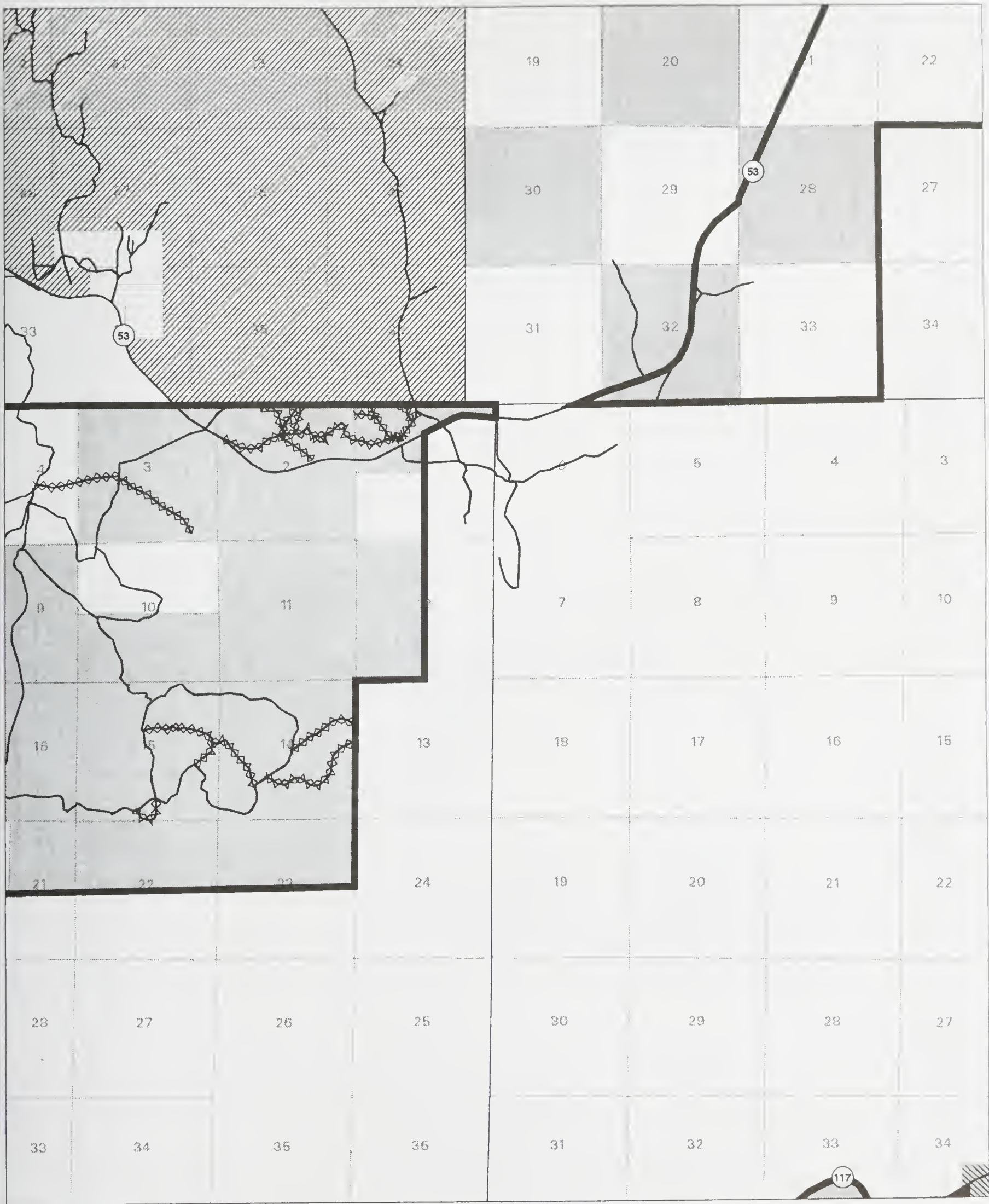
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition











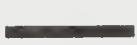

ICE CAVES
Map2-5h

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-  State

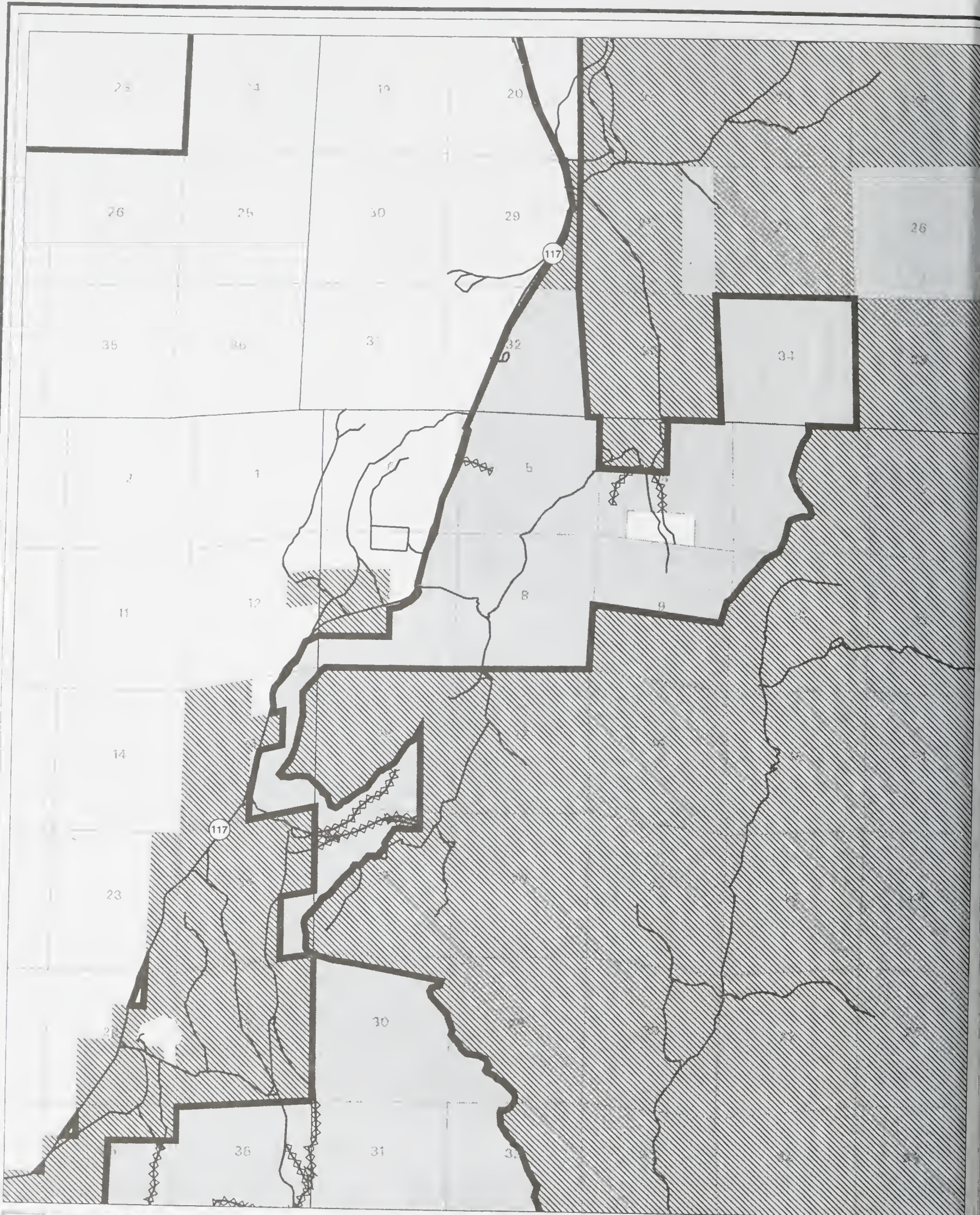
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition











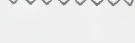

ARROSA RANCH
Map2-5i

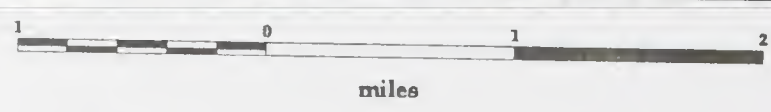
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


LOS PILARES
Map2-5j

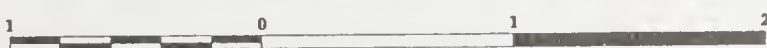

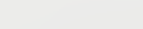
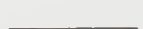
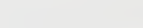
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-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State

-  1 0 1 2 miles
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition





LAGUNA HONDA
Map2-5k

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-  Private
-  State

-  Road
-  Approved Closure
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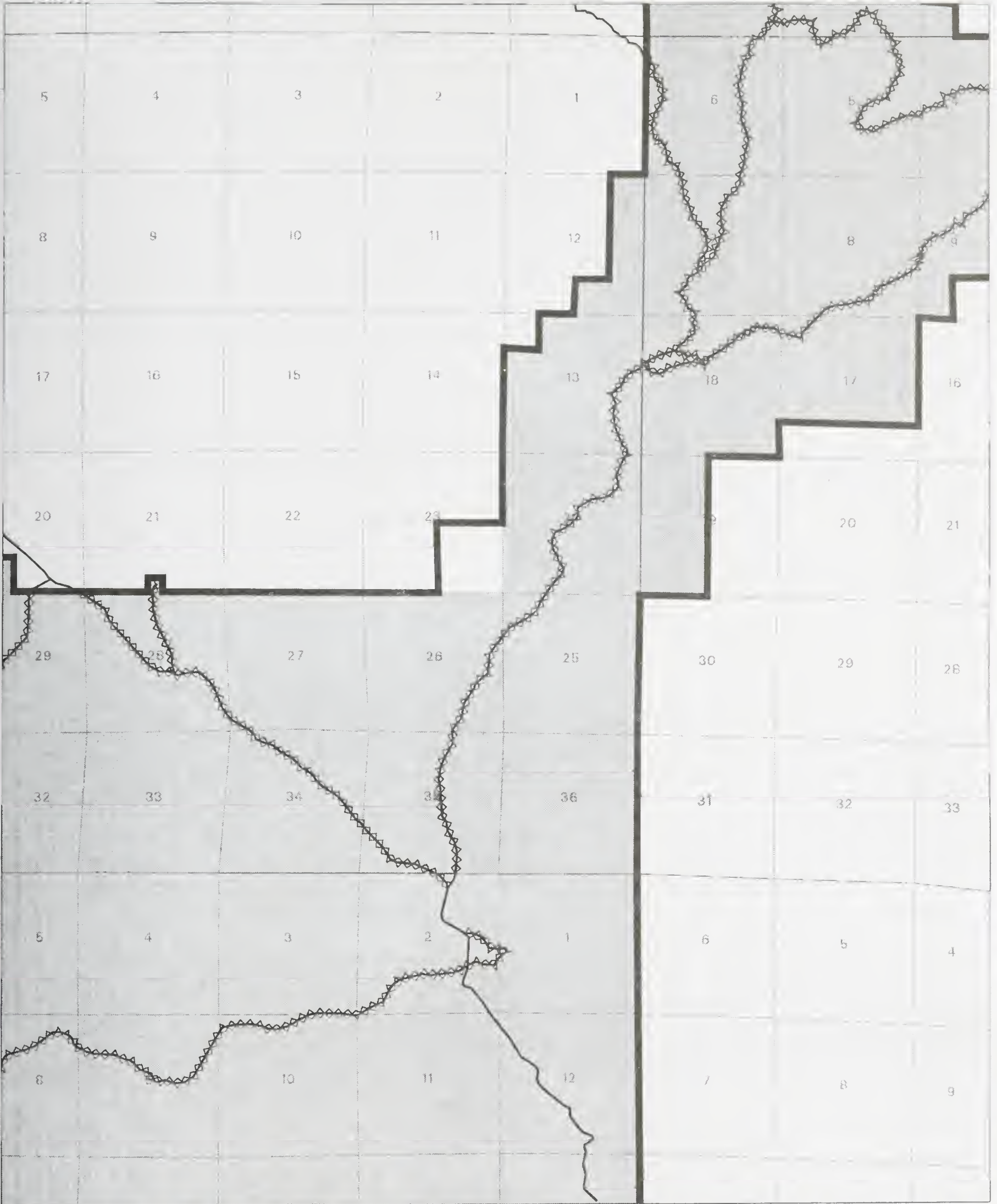








NORTH PASTURE
Map2-51






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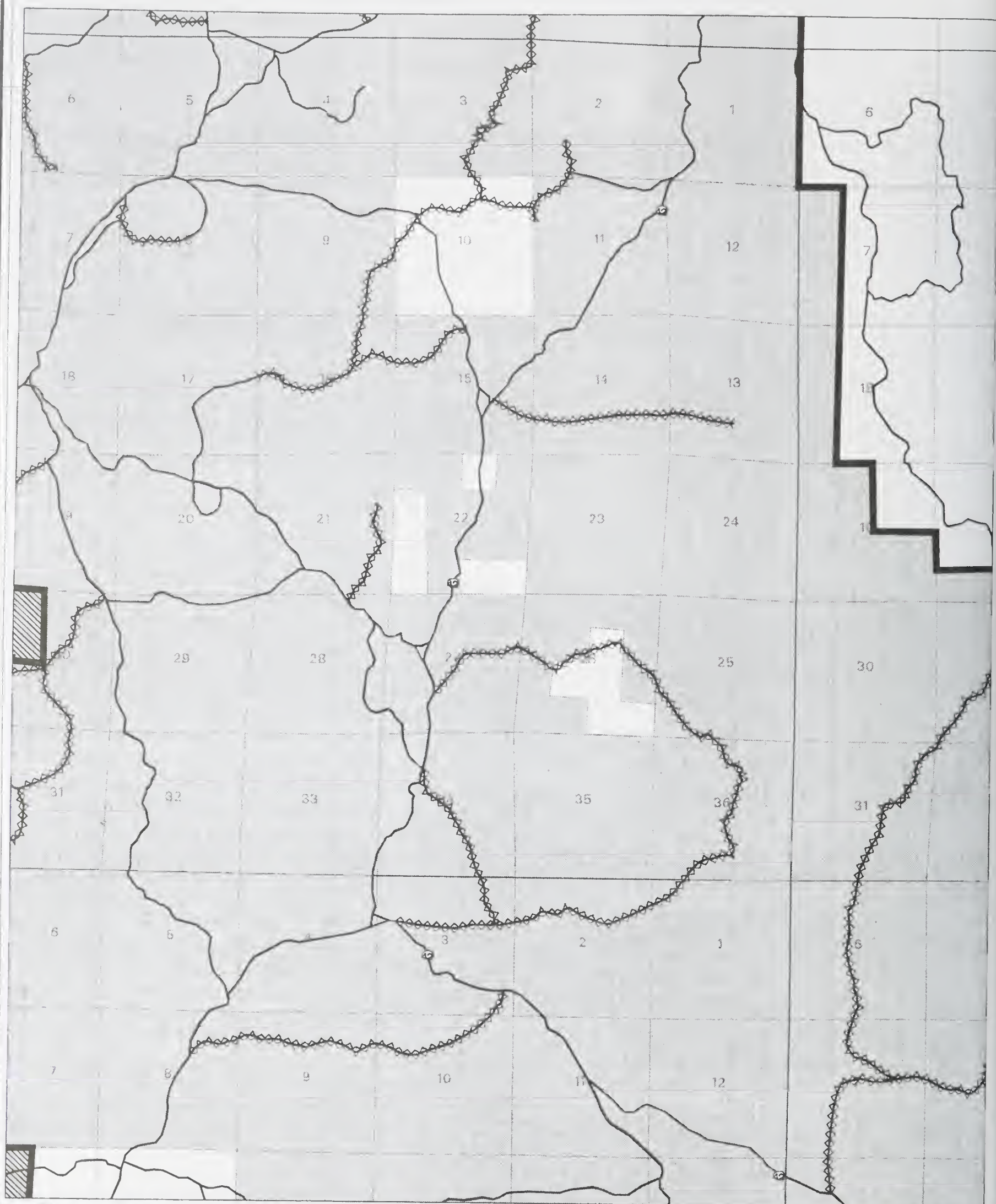
-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State

-  1 0 1 2 miles
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

ICE CAVES SE
Map2-5m

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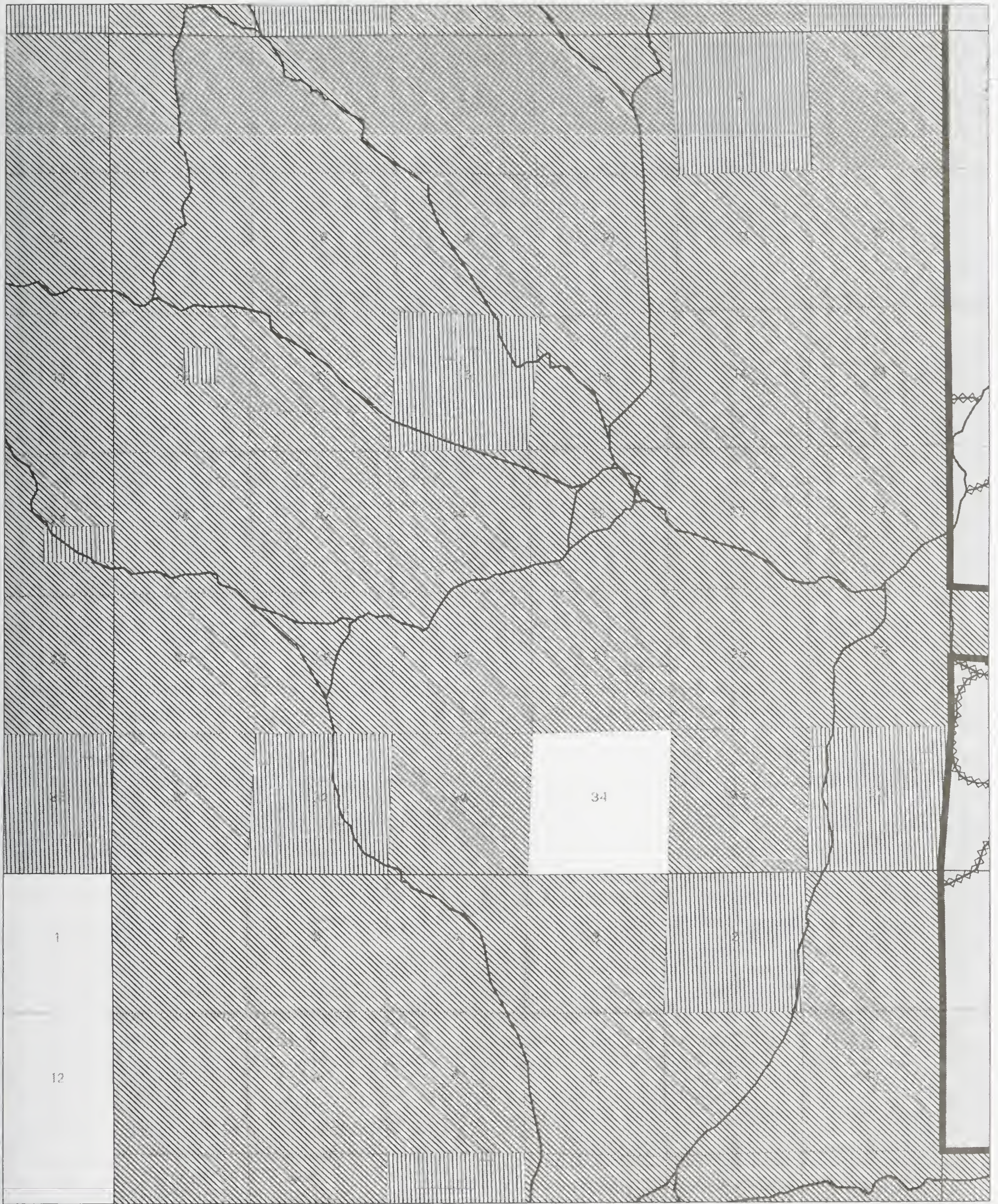










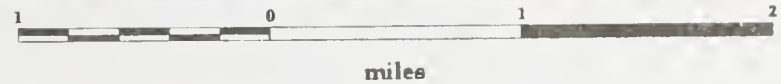
CERRO BRILLANTE
Map2-5n




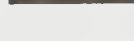
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-  Private
-  State



-  Road
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-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

CERRO ALTO
Map2-50

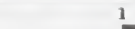
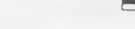
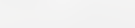
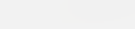
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-  NCA Proposed Addition



miles







CERRO POMO
Map2-5p

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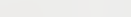
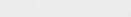
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-  Tribal
-  National Park Service
-  Private
-  State



-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

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LA RENDIJA
 Map2-5q





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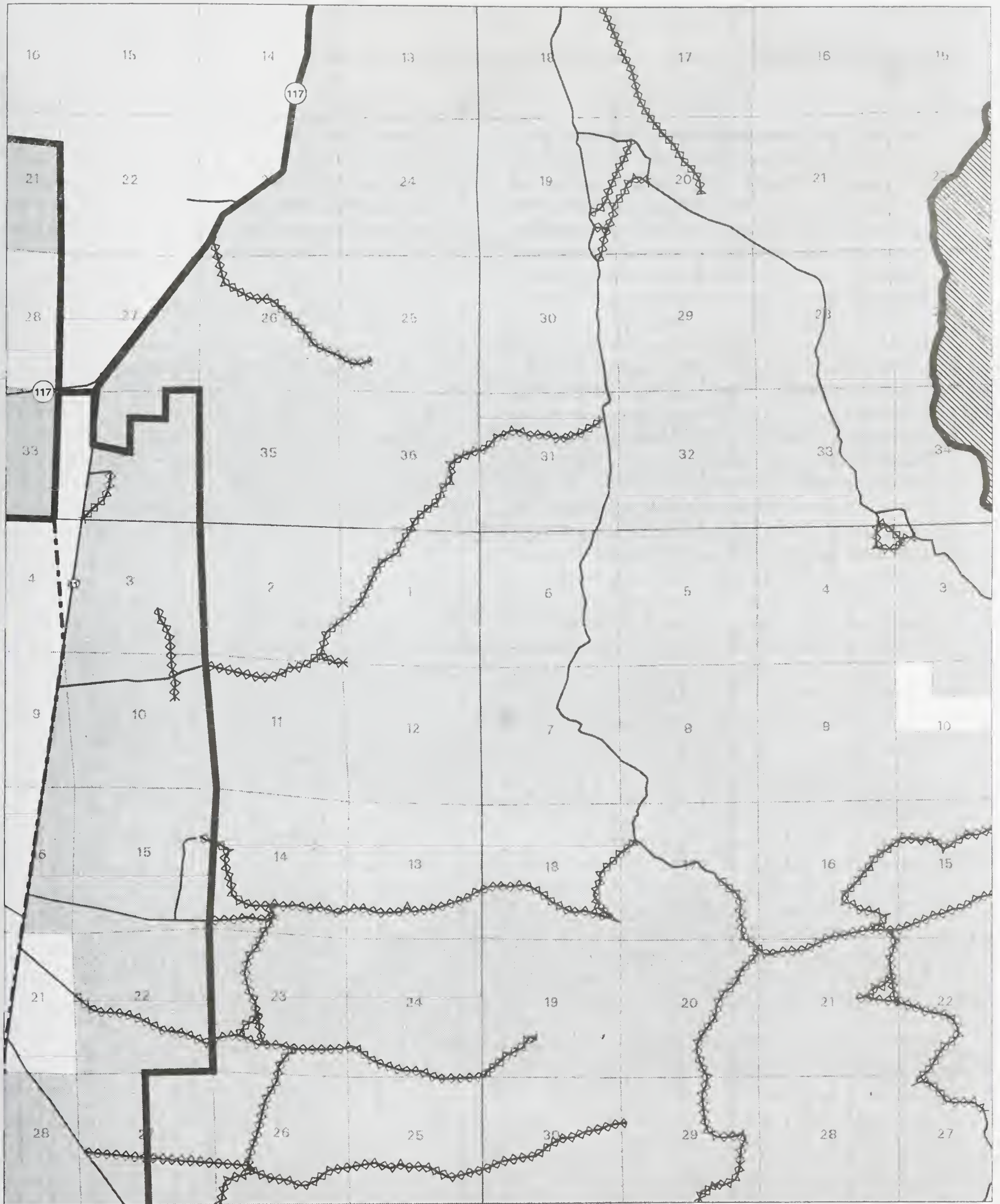








-  Road
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YORK RANCH
Map2-5r

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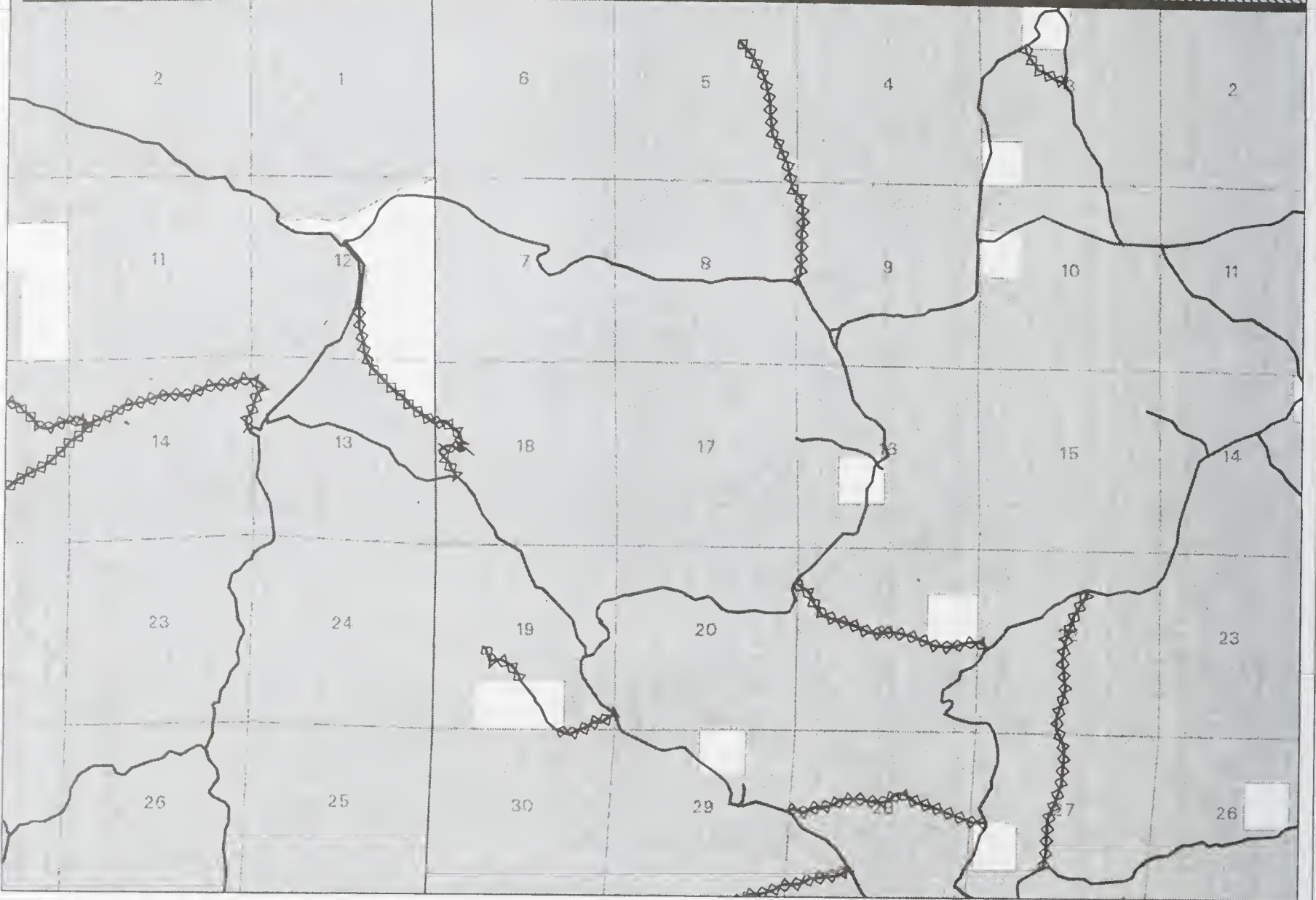
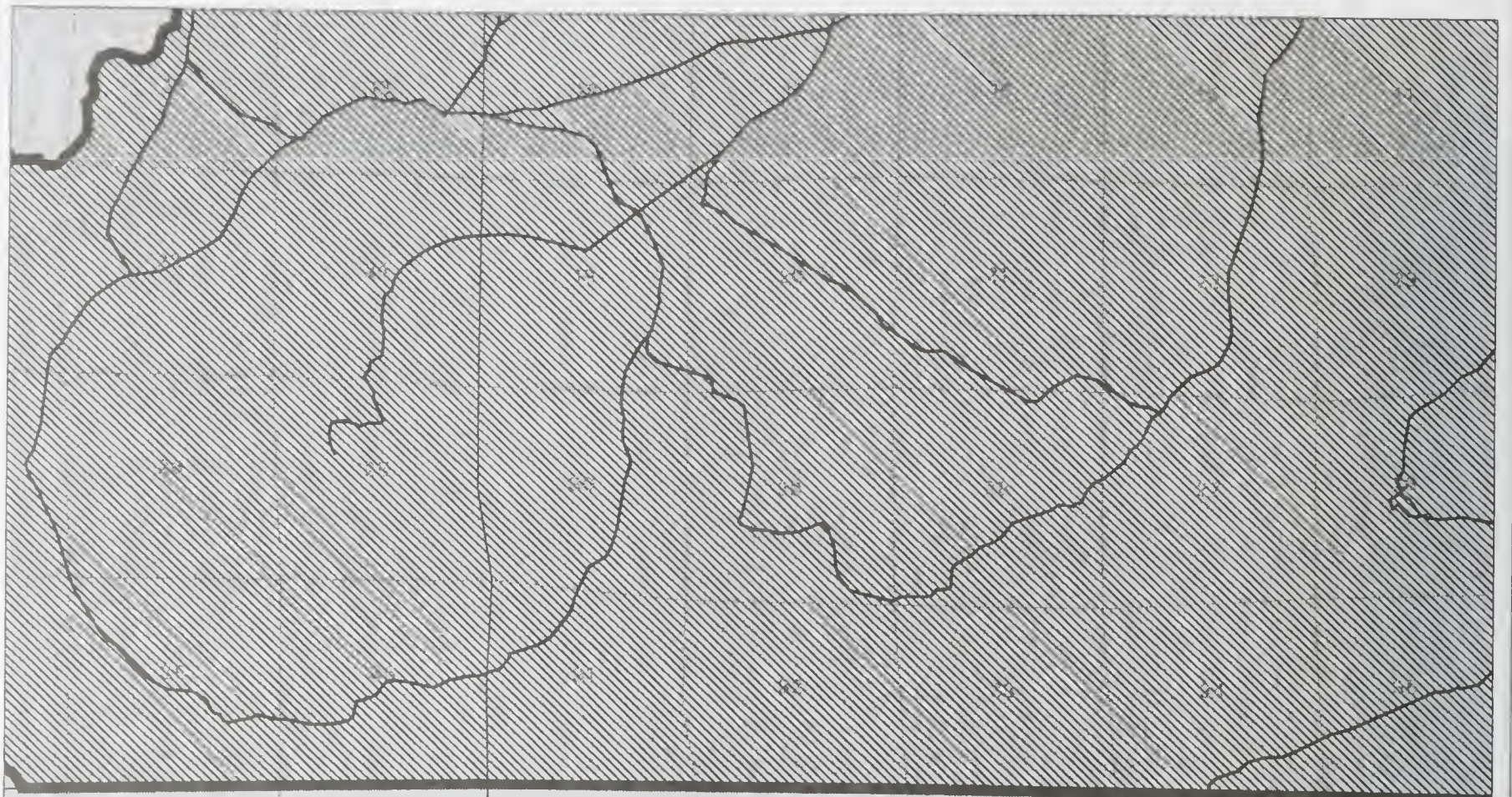
SAND CANYON Map2-5s







-  Road
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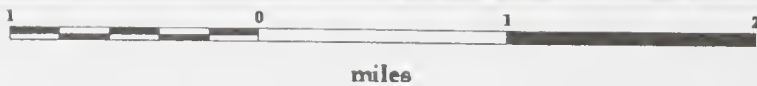
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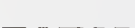
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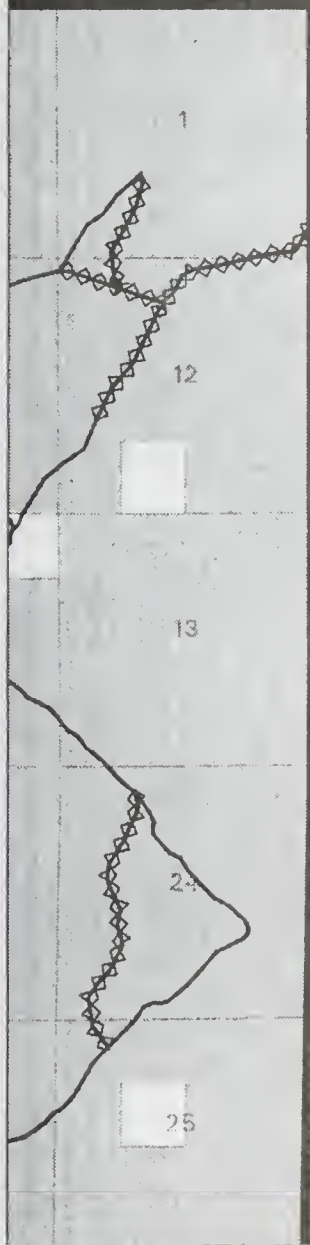
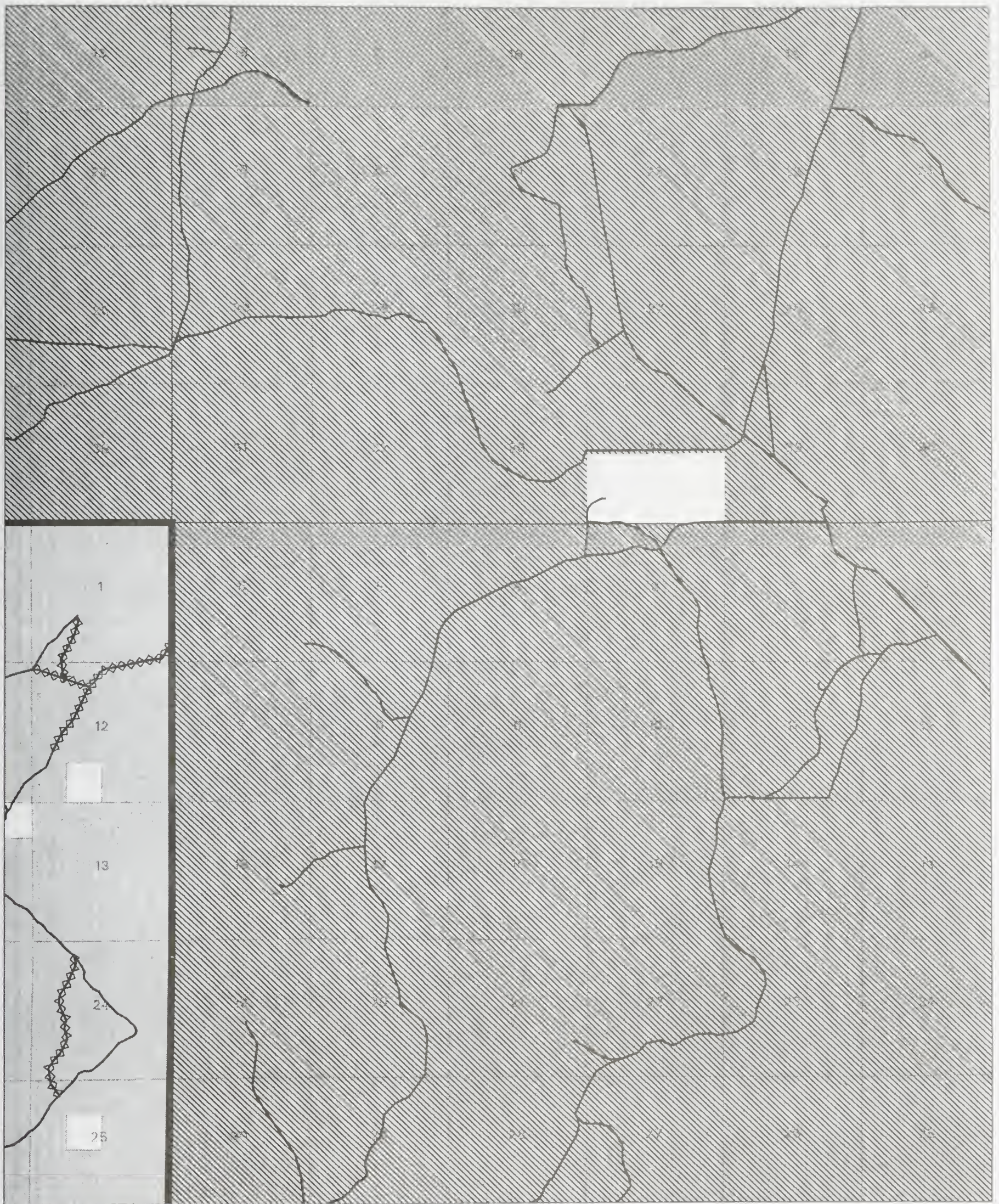
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





CEBOLLITA PEAK
Map2-5t

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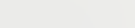

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MECATE MEADOW
Map2-5u

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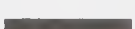
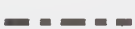




-  Bureau of Land Management
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-  Tribal
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-  Private
-  State



miles

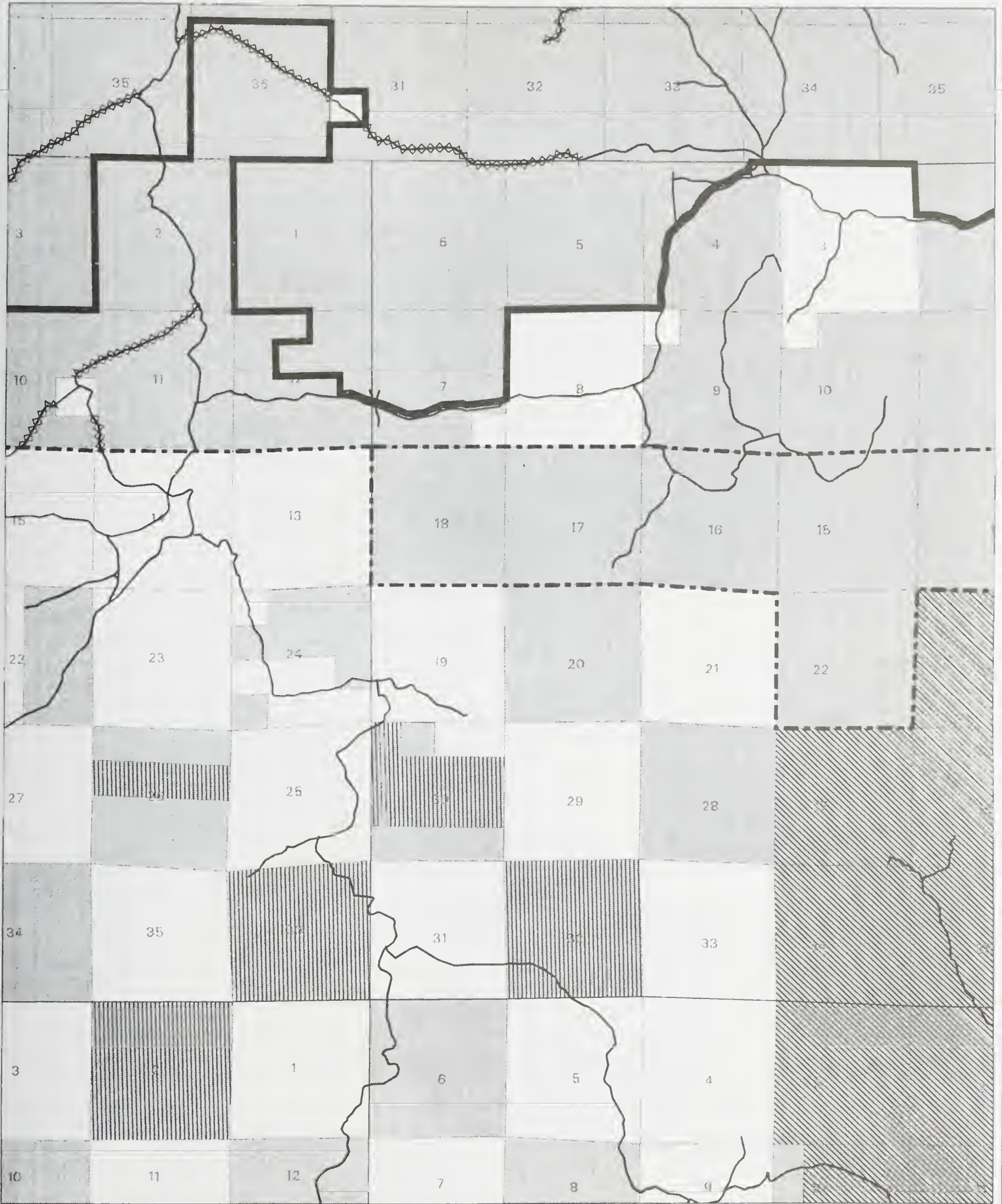
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition







WILEY MESA Map2-5v

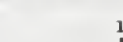
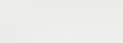
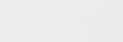
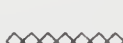
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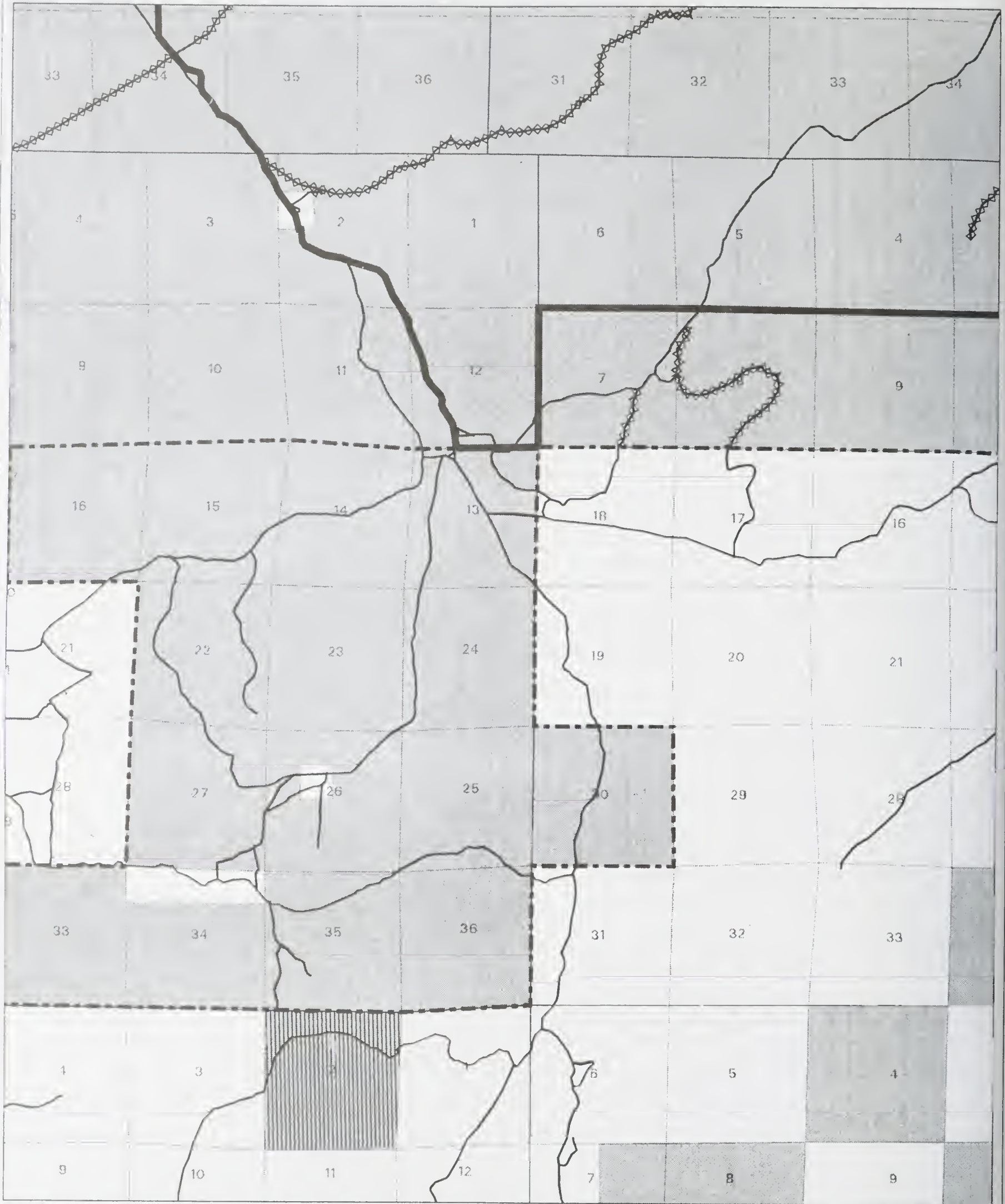
WILD HORSE CANYON

Map2-5w

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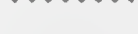

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





BONINE CANYON Map2-5x

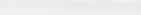
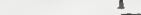
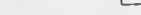
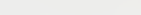
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YORK RANCH SE
Map2-5y

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TABLE 2-5
STATUS OF BLM MOTOR VEHICLE ACCESS
ROUTES WITHIN THE LIMITED AREA

Route Status	Miles	% of Total
Open	273.1	75
Closed	83.4	23
Authorized ^a	6.3	2
Totals	362.8	100

Note: ^a These routes are authorized for use by BLM staff members and grazing permittees only; they are not open to the general public.

Of the 83.4 miles of routes designated closed to vehicles by the Plan within the limited area, approximately 75 miles are within the NCA and 9 miles outside the NCA but within the Plan Area. The AFO will reclaim these roads through natural and mechanical treatment to bring them back into resource production. Of the roads to be closed within the NCA, 14 miles are within the Chain of Craters Unit, 3.1 miles in the Spur Unit, 15.3 miles in the Continental Divide Unit, 9.2 miles in the Cerritos de Jaspe Unit, 7.3 miles in the Breaks Unit, 12 miles in the Cerro Brillante Unit, and 14 miles in the Brazo Unit. Outside the NCA, 5.4 miles of road within the Brazo Non-NCA Unit and 3.2 miles within the Breaks Non-NCA Unit will be closed. The routes to be closed have been abandoned or did not show signs of regular or continuous use at the time of the 1996 inventory, duplicate other vehicle routes serving the area, are causing resource damage, or serve no apparent need.

A total of 76 miles of State highways, U. S. Forest Service, county, and private roads within the Plan Area will remain open, as will 18.4 miles of BLM arterial route (BLM Road 2003) (see Map 2-4).

Motorized vehicle access over 23.3 miles of routes inside wilderness will be limited to authorized users. Such access will be allowed only to non-Federal inholdings and livestock grazing operations over 5.5 miles of authorized routes in the Cebolla Wilderness and 17.8 miles in the West Malpais Wilderness. Access for livestock grazing use will continue under the conditions set in BLM Range Improvement Manage-

ment Plans for the individual allotments overlapping the Cebolla and West Malpais Wildernesses (USDI, BLM 1990a, 1990b, 1990d). Allottees may use motorized vehicles on authorized routes to access windmills for annual maintenance, fences every five years, and dirt tanks every ten years. Access to inholdings will be authorized over routes selected by the AFO to cause the least impact to the areas' wilderness character, while serving the purposes for which the private land is held or used.

Non-motorized mechanical transport (i.e., mountain and road bikes) is prohibited in wilderness and restricted to designated vehicle routes in the rest of the Plan Area. Motorized and mechanical access for traditional American Indian cultural practices will also be restricted to designated routes unless otherwise authorized.

Traditional American Indian cultural practices will be allowed to continue in the two wildernesses in a manner consistent with the intent of the Wilderness Act. Motor vehicle access to the perimeter of each wilderness will be allowed, but such use inside wilderness will be prohibited, unless the AFO has granted prior authorization after consultation and evaluation. When such use of motorized vehicles by American Indians is authorized, stipulations to control impairment of wilderness character must be met. Upon request, the AFO will temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

The AFO will develop maps, brochures, and signs to inform the public of access opportunities and restrictions. Signs marking designated routes and closures will be posted and maintained. Natural and mechanical treatments will be used to control access and discourage vehicle use on closed, unauthorized vehicle routes.

Maintenance and improvement will be concentrated on the designated arterial and collector routes. Local routes will remain rough and impassable at times.

The AFO will close roads to increase the isolation in the Plan Area for animals and hunters, following the closure procedures at 43 CFR 8364.

The Cebolla Canyon Road (No. 2003, which splits the Cebolla Wilderness), and the Sand Canyon Road (a dead-end, cherry-stemmed road) will continue to provide opportunities for users to gain access to the Cebolla Wilderness. The AFO will maintain these roads more frequently to reduce erosion and improve access opportunities.

The AFO will close the 2-mile-long two-track road leading into the Cebolla Canyon Community. Other access routes not identified for closure elsewhere in this Plan may be closed following the closure procedures at 43 CFR 8364 if this were essential for resource protection.

Criteria for Resolution of El Malpais Plan Issues

The AFO considered the following factors in developing answers to the issue questions regarding off-highway vehicles, and access and transportation. These factors will continue to be considered as the El Malpais Plan is implemented.

- Existing roads and trails
- Compatibility with other land and resource uses
- Public interests and concerns, including those of local American Indian groups

Guidance from Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance from RMP."

Criteria for Resolution of RMP Issues

Three of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the OHV Program:

- Use of military, fire, emergency, or law enforcement vehicles being used for emergency purposes; vehicles whose use is expressly authorized by the authorized officer, or otherwise officially approved; vehicles in official use; and com-

bat or combat support vehicles when used in times of national defense emergencies is excluded and will not be affected by "closed" or "limited" designations.

- OHV use related to mining claim operations will not be restricted, except by regulations and requirements found in 43 CFR 3809, as amended on March 2, 1983.
- OHV use performed in conformance with existing leases, permits, rights-of-way stipulations, or other land-use authorizations will not be restricted.

Implementation Guidance from RMP

The AFO will prepare a Transportation Management Plan. This Plan will identify the specific transportation management actions to be implemented to accomplish the objectives of the RMP and its amendments, including the Approved El Malpais Plan. The AFO road inventory (USDI, BLM 1996c) will be incorporated into the Transportation Management Plan and will be updated as new information becomes available. In addition, access, transportation, and rights-of-way needs will be incorporated into the Transportation Management Plan. Priorities for implementation of the Transportation Management Plan will be specified in the annual RMP Update document. All National Environmental Policy Act requirements will be complied with prior to implementing specific actions.

Monitoring/Studies

Monitoring will be done with a frequency based on the level of use, as well as resource and safety concerns. The AFO will gather information to ensure compliance with motor vehicle use area and route designations, identify the need to modify these designations, provide and maintain adequate motorized and non-motorized access, protect resource conditions, and initiate emergency limitations or closures. If monitoring shows that transportation use is causing or will cause adverse effects on resources beyond acceptable limits, is putting the safety of users at risk, or is allowing significant user conflicts to occur beyond acceptable limits, corrective actions will be taken. The AFO uses the Limits of Acceptable Change (LAC) monitoring system to determine the need to

have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan (see Appendix D).

Implementation Priorities

The implementation priorities listed below may change due to funding allocations, changes in policy, new directives, and staffing.

- Sign designated vehicle routes and maintain those signs. Inspect regulatory, warning, destination, and informational signs semi-annually and note findings.
- Provide maps of designated vehicle routes and brochures/information promoting responsible motorized OHV use on public lands.
- Discourage motor vehicle use on closed roads through measures such as signs and placement of barriers. Place first priority on blocking those former vehicle routes that had been leading to sensitive areas/resources as well as roads showing signs of rehabilitating naturally.
- Maintain travel routes to protect resources, provide for public and employee safety, and ensure adequate access.
- Monitor Plan Area to detect and evaluate motorized OHV-related resource damage, public and employee safety concerns due to road conditions, access inadequacy, and unauthorized roads. Use a LAC element established for unpaved roads as a tool (see Appendix D).
- Use global positioning system to inventory designated travel routes and other authorized travel routes for incorporation into the AFO geographic information system (GIS) database.
- Record existing designated travel routes and trails for motor vehicle use into inventory systems (Facility Inventory and Maintenance Management System, Recreation Management Information System, and GIS).
- Incorporate recreation designated travel routes and trail systems into AFO Transportation Management Plan.

Support Needs

Lands & Realty

The Lands and Realty Program will consult and coordinate with right-of-way holders.

Cultural Resources

Implementation of some of the planned actions will require cultural resources inventory.

American Indian Consultation

This program will provide support regarding OHV access and closures dealing with American Indian uses and traditional cultural practices.

Wildlife

The Wildlife Program will identify areas of sensitive wildlife habitat.

Special-Status Species

The Special-Status Species Program will survey and inventory for threatened and endangered species and other special-status species.

Rangeland Resources

The Rangeland Resources Program will authorize and monitor vehicle access associated with livestock management and range improvement maintenance.

Law Enforcement

The Law Enforcement Program will provide assistance by patrolling the Plan Area, ensuring compliance with rules and regulations, and providing assistance to public land users.

Recreation/Recreation Facilities

The Recreation Program will provide assistance through the installation and maintenance of signs and barriers, monitoring, and providing personal and non-personal assistance to public land users.

Interpretation/Public Education

The Interpretation/Public Education Program will support OHV management by presenting interpretive programs and preparing educational materials promoting the AFO's goals and objectives for environmentally responsible OHV use within the Plan Area.

Wilderness

The Wilderness Program will identify wilderness boundaries to prevent unauthorized vehicle entry.

Minerals

The Minerals Program will cooperate with the OHV Program to provide reasonable access to private minerals while minimizing environmental impacts.

Soil, Water, & Air Resources

The Soil, Water, and Air Program will cooperate with the OHV Program to control erosion on designated travel routes, and reclaim closed routes.

Engineering & Operations

Engineering support will be necessary in the design, contracting, maintenance, and reconstruction of travel routes, and the closure and reclaiming of unauthorized travel routes.







Wilderness Management



Program Goals

Through this program, the BLM identifies lands with wilderness characteristics, and recommends to Congress that those lands on which wilderness is the most appropriate land use be designated as wilderness. To preserve wilderness character of designated wilderness as Congress has directed, the BLM bases its wilderness management on principles of improvement and non-degradation. Under these principles, the intent is to prevent degradation of natural conditions, opportunities for solitude or primitive recreation, and special features located within the area; and to improve conditions where possible.

Four standard management goals established by the BLM for designated wilderness are as follows:

- Provide for the long-term protection and preservation of the area's wilderness character under the principle of non-degradation. Manage the area's natural condition; opportunities for solitude or primitive and unconfined types of recreation; and any features of ecological, scientific, educational, scenic, or historic value present so they remain unimpaired.
- Manage the area so visitors can use and enjoy it, but only in a way that leaves it unimpaired for the future. The wilderness resource is dominant in all management decisions in which a choice must be made between preservation of wilderness and visitor use.
- Manage the area using the minimum tools, equipment, and structures needed to successfully, safely, and economically accomplish tasks while least degrading wilderness values, temporarily or permanently. Preserve spontaneity of use and as much freedom from regulation as possible.
- Manage the nonconforming but accepted uses allowed by the Wilderness Act and subsequent laws in a way that prevents unnecessary or undue degradation of the area's wilderness character. Nonconforming uses are the exception rather than the rule; emphasis is placed on maintaining wilderness character.

Management Guidance

Policy and Authorities

Designated wilderness within the NCA is managed according to the provisions of the Wilderness Act of 1964, as amended; the Federal Land Policy and Management Act of 1976 (FLPMA); BLM Manuals 8560/H-8560-1—Management of Designated Wilderness Areas, and 8561—Wilderness Management Plans; New Mexico BLM Manual Supplement 8100/8560—Cultural Resource Management Within Wilderness Areas; the BLM's Wilderness Management Regulations (43 CFR 8560); and the specific directives contained within the El Malpais Act.

The El Malpais Act provides for the continuation of livestock grazing within the NCA, including within designated wilderness. Additional guidance for livestock grazing in designated wilderness is provided by the Wilderness Act, Section 108 of Public Law (P. L.) 96-560, House Report 96-617 "Grazing in National Forest Wilderness" which accompanies P. L. 96-560, and the BLM *Wilderness Management Policy* (USDI, BLM 1981c).

For wilderness study areas (WSAs), supporting analyses to determine wilderness suitability must meet the requirements of the BLM's *Wilderness Study Policy* (USDI, BLM 1982b). Both of the areas in the Plan Area under wilderness review (the Chain of Craters and Canyons WSAs) were analyzed for their values, resources, and uses to provide a basis for Congress to determine whether the lands should be added to the National Wilderness Preservation System. WSAs are managed under BLM's *Interim Management Policy for Lands Under Wilderness Review* (BLM Handbook H-8550-1; USDI, BLM 1995).

Field Office Program Guidance

As called for by the El Malpais Act, the Cebolla and West Malpais Wildernesses will continue to be managed as part of the NCA. The Chain of Craters and Canyons WSAs will be managed under the *Interim Management Policy* to prevent impairment of their values until Congress decides on their suitability for

designation as wilderness. If Congress decides not to designate the lands under review as wilderness and releases them from further consideration, the *Interim Management Policy* would cease to apply. The released lands would be managed under other provisions of this Plan.

All activities in designated wilderness will be carried out in conformance with the mandates of FLPMA, the Wilderness Act, and the El Malpais Act. Hunting and trapping will be allowed to continue under applicable State laws and regulations. Livestock grazing operations established at the time the Cebolla and West Malpais Wildernesses were designated will continue, subject to certain restrictions. Visual resources within designated wilderness will be managed under VRM Class I objectives.

Tools, equipment, or structures may be used for management in designated wilderness when they are the minimum necessary for the protection of the wilderness resources or when necessary in emergency situations for the health and safety of the visitor. Management, as identified in the *Wilderness Management Policy*, must use the minimum tool, equipment, or structure necessary to successfully, safely, and economically accomplish the objective. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently.

The use of motorized vehicles and mechanical transport will be prohibited, except in emergency situations and as permitted by law for livestock grazing and access to private lands and minerals. Access consistent with the Wilderness Act will be allowed for traditional and cultural religious practices by American Indians. On request, the BLM will temporarily close the smallest practicable area for the minimum period of time needed to accommodate such religious activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

Livestock grazing management must be coordinated and designed to facilitate other programs. The AFO must consider wilderness management; burn areas; wildlife projects; management of natural waters, springs and ephemeral flows; and forest and woodland

management in planning for livestock grazing management.

The El Malpais Act allows previously established livestock grazing to continue in the NCA wildernesses, subject to certain guidelines, as long as the intent of Congress regarding grazing in such areas is implemented (as expressed in the Wilderness Act, P. L. 96-560, and the House Report "Grazing in National Forest Wilderness" which accompanies P. L. 96-560). The BLM *Wilderness Management Policy* allows motorized and mechanized equipment to be used to maintain range improvements in wilderness. The AFO has developed Range Improvement Management (RIM) Plans for the individual allotments overlapping the West Malpais and Cebolla Wildernesses (USDI, BLM 1990a, 1990b, 1990d); the plans provide guidance and procedures for using such equipment, and the AFO will continue to follow them. Allottees may use motorized vehicles on authorized routes to access windmills for annual maintenance, fences every five years, and dirt tanks every ten years. The plans are on file at the AFO. If Congress designates all or portions of the Canyons WSA as part of the Cebolla Wilderness, RIM Plans for the affected allotments may need to be amended.

Adjustments of the boundary of designated wilderness can be made only through legislation.

To enable easier identification of WSA and wilderness boundaries, the AFO will mark them with signs.

If an owner of private mineral interests within wilderness wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the briefest impacts on wilderness character.

There are no privately owned minerals in the Chain of Craters WSA, while ownership of minerals is a mixture of Federal and private in the Canyons WSA. As in the rest of the NCA, the Federal minerals in the WSAs were automatically withdrawn from the mining and mineral leasing laws by the El Malpais Act. Under the *Interim Management Policy*, if an owner of private mineral interests within the Canyons WSA wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the least impairment to the area's suitability for designation as wilderness.

If Congress designates all or portions of the Canyons WSA as wilderness, it will be managed under the Cebolla Wilderness provisions of the El Malpais Plan.

A person with a disability that requires the use of a wheelchair in a wilderness may do so if the wheelchair meets the definition in the Americans with Disabilities Act of 1990 (ADA). The term wheelchair means a device that is solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area. Consistent with the Wilderness Act and the ADA, the BLM is not required to facilitate such use by building any facilities or modifying any conditions of lands within a wilderness area.

Interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology will be developed at La Ventana Natural Arch.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Wilderness Program is:

- Wilderness has special values, and is set aside to protect them while allowing visitors to experience them.

Decisions From Approved El Malpais Plan

Designated Wilderness (Cebolla & West Malpais Wildernesses)

The Approved El Malpais Plan recommends that Congress modify the boundary of the Cebolla Wilderness to include some newly acquired lands contiguous to the current Cebolla Wilderness boundary (an increase of about 4,000 acres). These lands are now being managed as the Canyons WSA. At the request of Acoma Pueblo, the Plan recommends that Congress amend the NCA/Cebolla Wilderness boundary to exclude 160 acres of formerly private land recently acquired by the Pueblo. Located in T. 7 N., R. 10 W., sec. 12 along the boundary of the Cebolla Wilderness (see Map 2-10 in the Land and Realty section), this parcel consists of aboriginal lands adjacent to other

Acoma lands that have recurring value to the Acoma people. This change would result in a net addition of about 4,000 acres to the Cebolla Wilderness. Any other adjustment in the amount of public land under BLM wilderness management would result from the acquisition of inholdings from willing sellers.

The AFO will continue to seek acquisition of mineral interests and approximately 700 acres of surface inholdings from willing sellers, 300 acres in the Cebolla Wilderness and 400 acres in the West Malpais Wilderness. Priority will be given to those lands that are undeveloped or where use would pose a detrimental threat to wilderness character. These lands will be managed as wilderness, if acquired.

The AFO will continue to patrol designated wilderness at least once a month when accessible to the public, with more frequent patrols spring through fall when use is greater. Patrol will be used to deter violations, gather information about area resources and uses, and inform users about the resources and appropriate use of designated wilderness.

Users can continue to pursue primitive types of recreation that do not require the use of motor vehicles, motorized equipment, or other forms of mechanical transport. Such use will be encouraged through publication of maps and brochures identifying the opportunities available within wilderness.

The AFO will develop and maintain interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology.

Along with trail improvements for recreation users and resource protection, the existing recreational facilities on the wilderness perimeters will remain in place. Visitor facilities at trailheads and other entry points will be upgraded to improve access opportunities, services, and information. Additional on-site information will be provided to better inform and educate the public. Signs will identify the boundaries, wilderness name, and some regulations governing use. Personal contact by staff and volunteers will provide additional on-site information and education when users are encountered during area patrols. The AFO will continue to supply information about the wildernesses at the Ranger Station on NM 117, the Northwest New Mexico Visitors Center, and BLM offices in Grants and Albuquerque.

La Ventana Natural Arch, The Narrows, and Armijo Canyon will continue to serve as primary access points to the Cebolla Wilderness. The AFO will improve facilities at Armijo Canyon and The Narrows to accommodate visitors and help direct wilderness access. The Cebolla Canyon Road (No. 2003, which splits the Cebolla Wilderness), and the Sand Canyon Road (a dead-end, cherry-stemmed road) will also continue to provide opportunities for users to gain access to the Cebolla Wilderness. The AFO will maintain these roads more frequently to reduce erosion and improve access opportunities. From The Narrows Recreation Site, the 3.5 mile long Narrows Rim Trail will be improved through the Cebolla Wilderness using minimum tool techniques to facilitate resource and wilderness protection, and to help direct visitor use to a single pathway.

Up to three wayside exhibits will be located at the Narrows Rim Trailhead or near the picnic area.

For the convenience of horseback riders in the Plan Area, facilities will be provided at several locations. The Narrows will be one location, along with the Armijo Canyon area (for access to the Cebolla Wilderness, not the Dittert Site), the Hole-in-the-Wall trailhead (for access to the West Malpais Wilderness), and the Cerro Brillante trailhead (for access to the Chain of Craters).

Management efforts within designated wilderness will continue to be concentrated on signing, preventing unauthorized vehicle intrusions, patrolling and monitoring uses for compliance with the *Wilderness Management Policy*, and educating the public through personal contacts, and interpretive and educational materials. The emphasis will be on providing opportunities for users to experience solitude or take part in primitive and unconfined types of recreation, without diminishing the areas' wilderness character.

The AFO will manage the Dittert Site, the Lobo Canyon Petroglyphs, and outstanding homestead-era sites within wilderness for public values and allocate them to public use, while taking care not to impair their information potential. As additional resource information becomes available, new areas for public use may be identified, but only if their information potential will not be adversely affected and only after appropriate American Indian consultations and compliance with the National Historic Preservation Act.

Except for guided trips, visitor information and education programs about selected prehistoric and historic sites within the wildernesses will be located outside the wilderness boundaries or dispersed at other sites. Additional interpretive information about the Dittert Site (located within the boundaries of the Cebolla Wilderness) will be placed outside the wilderness boundary, at the trailhead to the site in Armijo Canyon. Visitation of selected prehistoric and historic sites within the wildernesses will be encouraged through additional information provided off-site. Except for continued maintenance, monitoring, and guided hikes, the AFO will provide no additional on-site interpretation.

Recreational and facility developments at the Dittert Site will include a graveled access road and graveled parking area for up to 20 vehicles, as well as a primitive trailhead for the site, and the Armijo Canyon Homestead and Springhouse. This will also be a trailhead and access for the Cebolla Wilderness. Horse facilities will be built to provide access to the Cebolla Wilderness, not the Dittert Site. (Figure 2-f shows a conceptual design for these facilities.) Dittert site interpretation will include up to two wayside exhibits (placed outside the wilderness boundaries), a trail guide, and guided hikes for public and school groups (50 to 200 people per year). The wayside exhibits may include information about the Cebolla Wilderness.

The existing trailhead for the Hole-in-the-Wall Trail, at the end of the cherry-stemmed road from CR 42, will continue to serve as the primary access point to the West Malpais Wilderness. The El Malpais Plan limits use of the vehicle route leading into Hole-in-the-Wall (a major attraction of the West Malpais Wilderness) to authorized vehicles. This rarely used vehicle route will continue to be identified as the Hole-in-the-Wall Trail. The existing trailhead and vehicle access to the Hole-in-the-Wall Trail will be improved, and a graveled parking area for up to 10 vehicles and horse facilities will be built. (See Figure 2-g for a conceptual design of these developments.)

Traditional American Indian cultural practices will be allowed to continue in the two areas in a manner consistent with the intent of the Wilderness Act. Motor vehicle access to the perimeter of each wilderness will be allowed, but such use inside the wilderness will be prohibited, unless the AFO has granted prior authori-

zation after consultation and evaluation. When the AFO authorizes such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character must be met. Upon request, the AFO will temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

In most instances, prehistoric and historic cultural resources will be subject to the forces of nature in the same manner as other wilderness resources. Stabilization and scientific studies of selected cultural resources and historic sites within the two wildernesses will continue as required to meet protection and preservation mandates. Stabilization and erosion control measures will be allowed in wilderness, but only if resources unlikely to be duplicated elsewhere are threatened, and no other reasonable alternative exists. Such activities will be subject to the "minimum tool" requirement, and will not be allowed to degrade the area's overall character. The AFO will authorize research (under Section 501 of the El Malpais Act) if it can be carried out unobtrusively so as not to degrade wilderness character.

Wildlife habitat management will continue to be guided by the BLM's *Wilderness Management Policy*. Hunting and trapping will be permitted under applicable State and Federal laws and regulations. The AFO will continue to allow use and maintenance of the two wildlife exclosures and the water catchment within the West Malpais Wilderness, using the "minimum tool" concept (see Table 2-7 in the Wildlife section). [*The water catchment has been dismantled.*]

The AFO will consider vegetation treatments on a case-by-case basis under guidance found in the BLM's *Wilderness Management Policy*.

Motorized vehicle access over 23.3 miles of routes inside designated wilderness will be limited to authorized users. Such access will be allowed only to non-Federal inholdings and livestock grazing operations over 5.5 miles of authorized routes in the Cebolla Wilderness and 17.8 miles in the West Malpais Wilderness. Access for livestock grazing use will continue under the conditions set in the Range Improve-

ment Management Plans for the individual allotments overlapping the Cebolla and West Malpais Wildernesses (USDI, BLM 1990a, 1990b, 1990d). Allottees may use motorized vehicles on authorized routes to access windmills for annual maintenance, fences every five years, and dirt tanks every ten years. Access to inholdings will be authorized over routes selected by the AFO to cause the least impact to the areas' wilderness character, while serving the purposes for which the private land is held or used.

A small portion of the Cebolla Wilderness is within the Minimize Wildland Fire Presence Fire Management Unit; the West Malpais Wilderness is within the Wildland Fire Use for Resource Benefits Fire Management Unit; and the Chain of Craters and Canyons WSAs and most of the Cebolla Wilderness are in the Conditional Wildland Fire Use Fire Management Unit (see Glossary and Map 2-9 in the Fire Management section).

Fires will be controlled to prevent their spread outside wilderness and to prevent the loss of human life or property. Fire suppression methods will be those that cause the minimum adverse impact on wilderness character.

Wilderness Study Areas (Chain of Craters & Canyons WSAs)

The Approved El Malpais Plan does not recommend the Chain of Craters WSA to Congress as suitable for wilderness designation. If released by Congress from wilderness study, this 18,300-acre area will be managed according to provisions of this Plan. Users of the Chain of Craters Unit would have opportunities for roaded natural types of recreation on 7,800 acres, semi-primitive motorized types on 5,400 acres, and semi-primitive non-motorized types on 5,100 acres.

The Approved Plan recommends about 4,000 acres studied under Section 202 of FLPMA for wilderness designation. These lands are now being managed as the Canyons WSA (NM-014-001). The new WSA consists of nine separate parcels of BLM-administered land located on the periphery of the Cebolla Wilderness (see Map 2-6). These lands located between the current wilderness boundary and highways, bladed roads, and rights-of-ways were acquired through exchange following passage of the El Malpais Act. Prior to designation as a WSA, they were included







El Malpais Plan Area

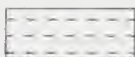
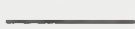

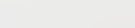

Map 2-6
Canyons WSA Index Map

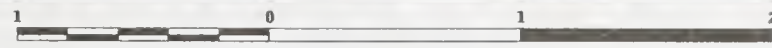
- Cebolla Wilderness
- Lands Recommended as Suitable for Wilderness





-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State

-  Canyons Wilderness Study Area (WSA)
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition



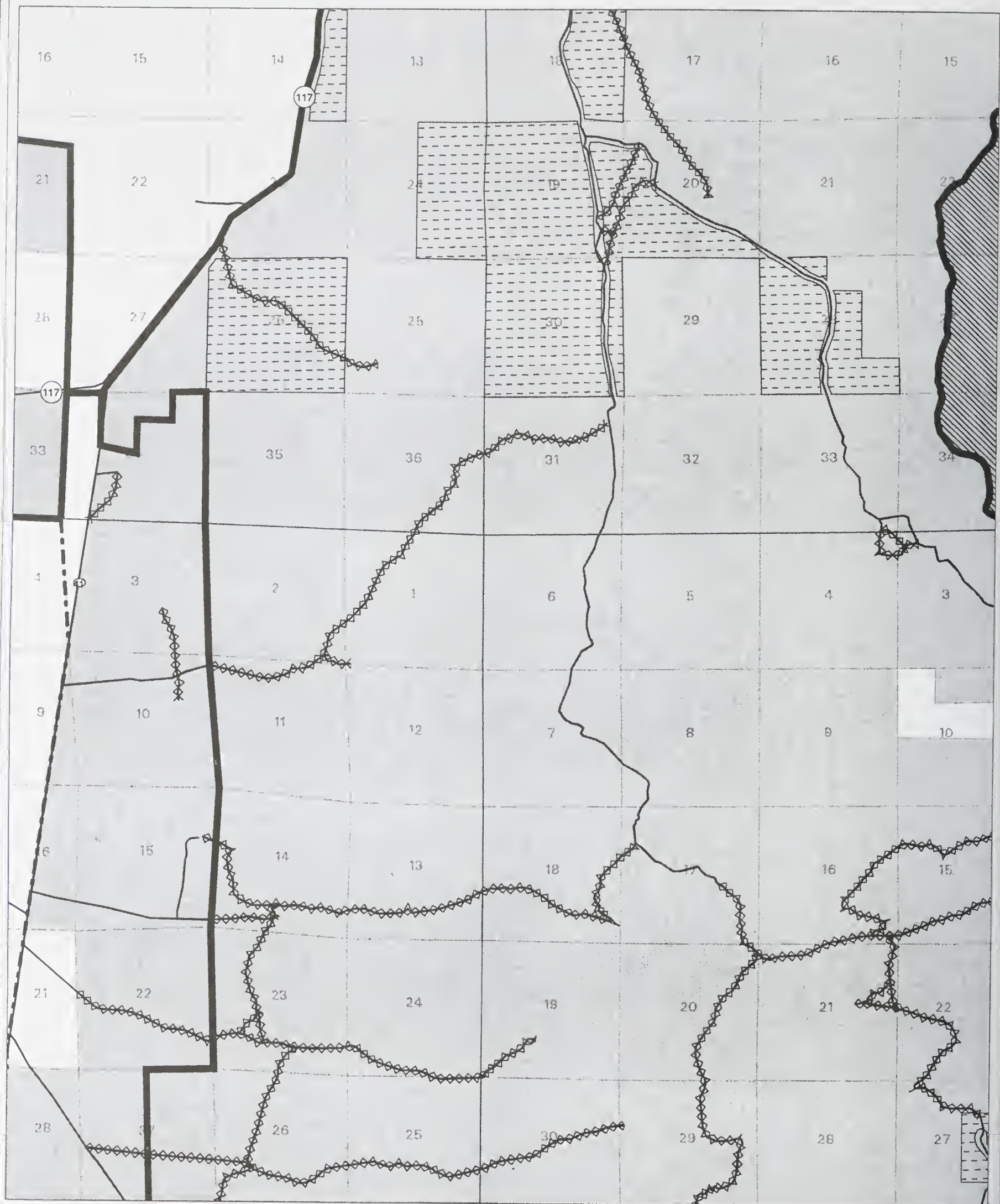
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



NORTH PASTURE Map2-6a





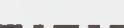
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Thu 09/27/2001

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-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State

-  Canyons Wilderness Study Area (WSA)
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

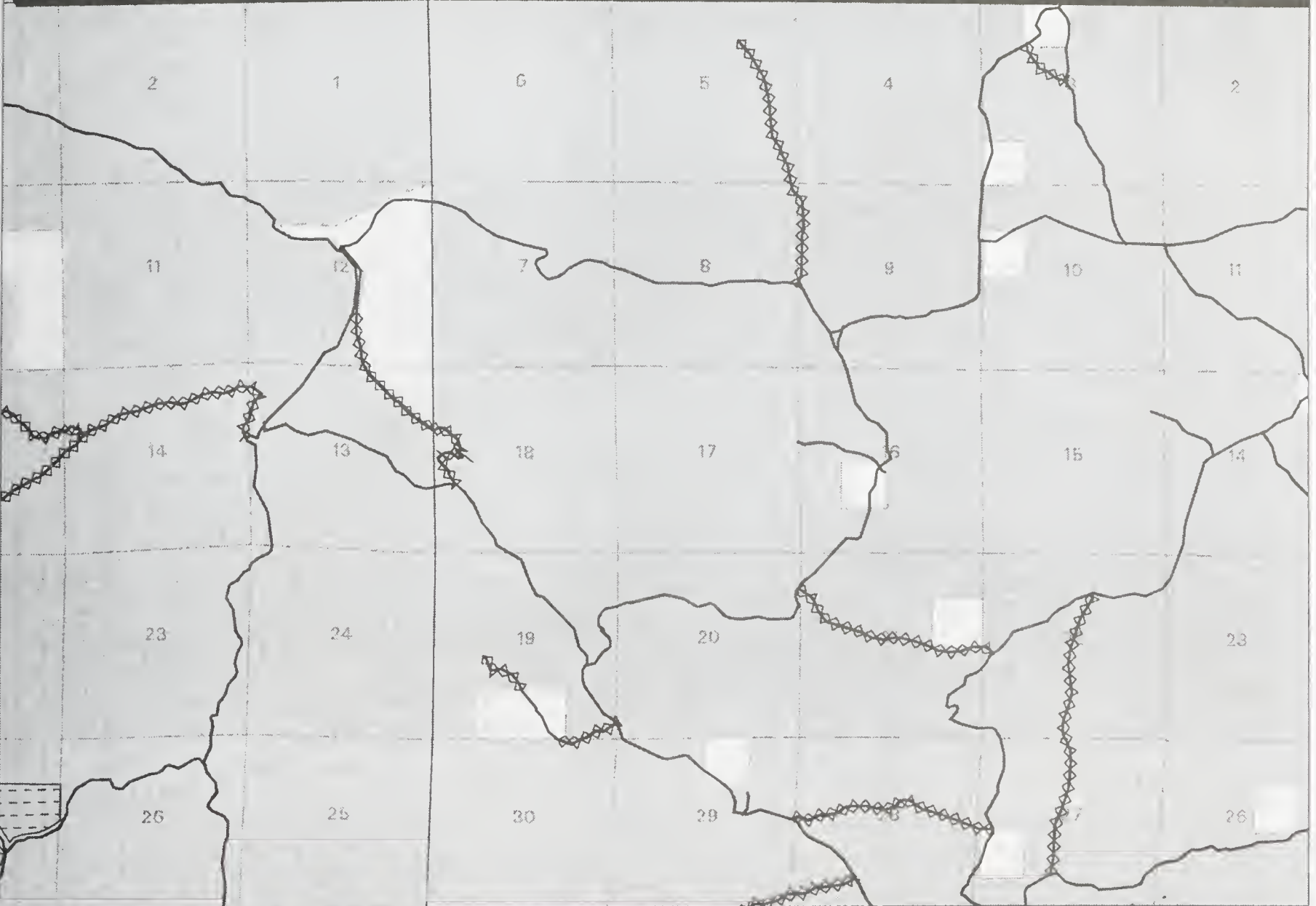
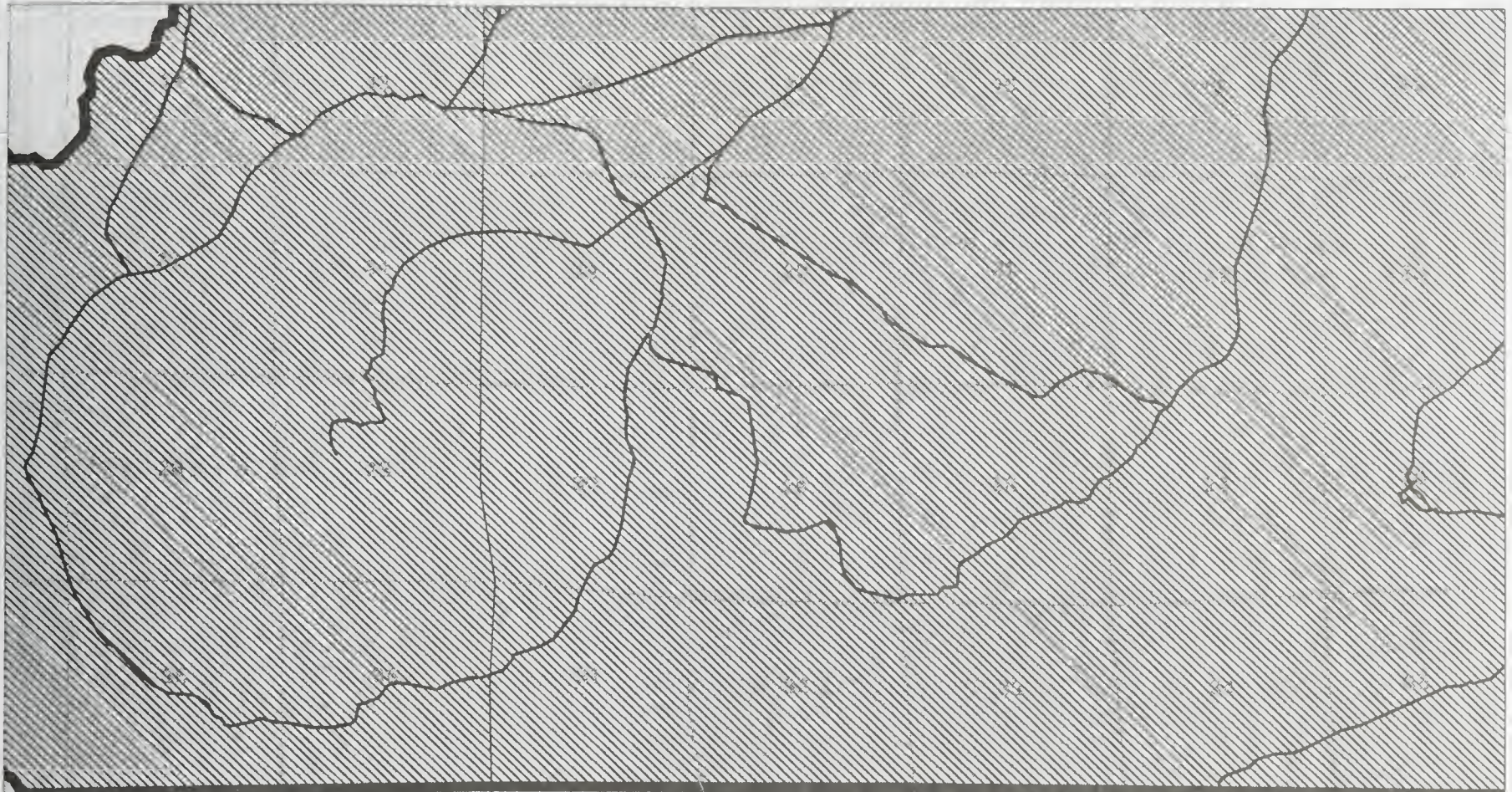








SAND CANYON Map2-6b






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-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State

-  Canyons Wilderness Study Area (WSA)
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

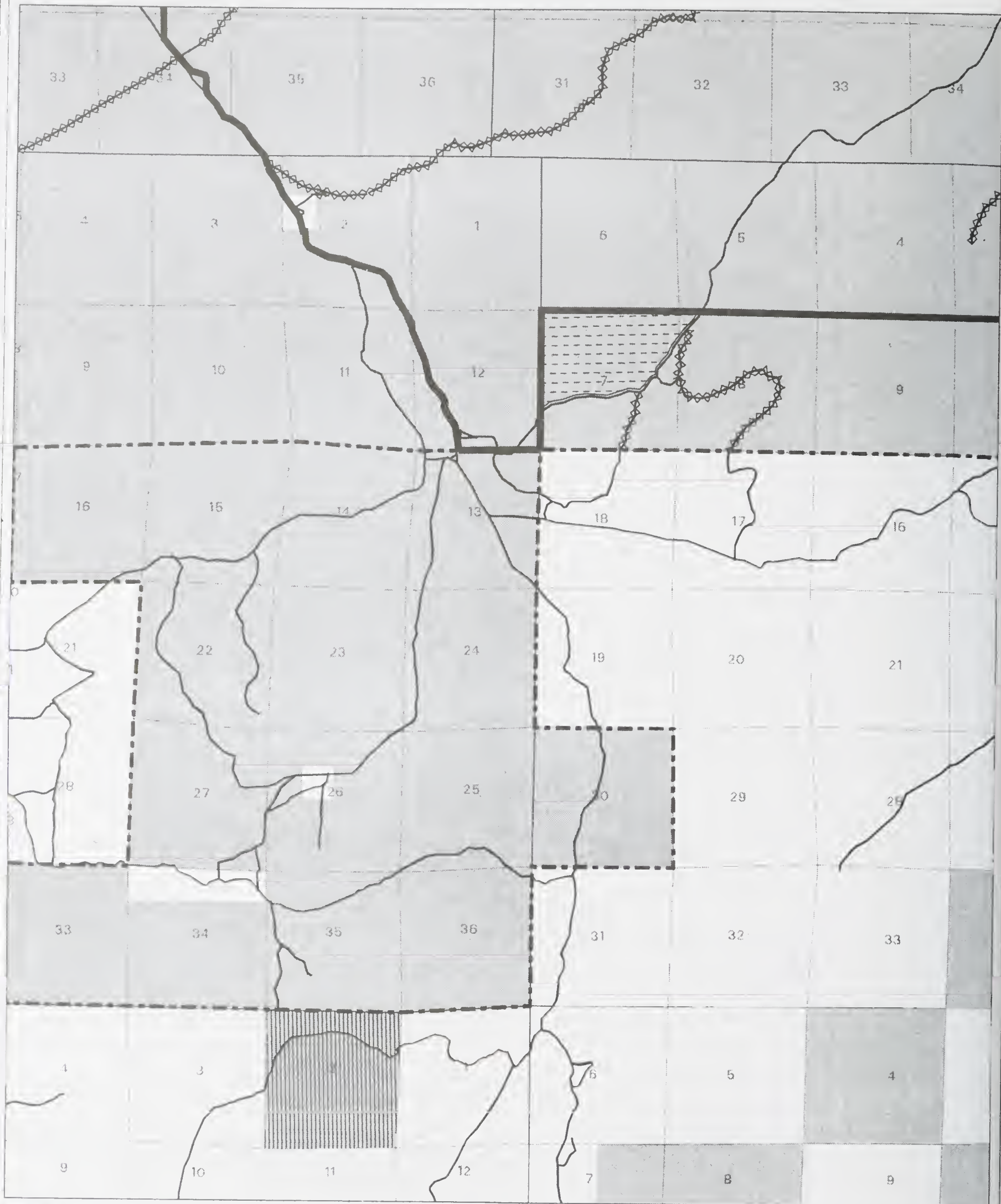




CEBOLLITA PEAK
Map2-6c

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Fri 09/28/2001


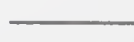


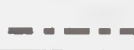
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-  Bureau of Land Management
-  U.S. Forest Service
-  Tribal
-  National Park Service
-  Private
-  State



-  Canyons Wilderness Study Area (WSA)
-  Road
-  Approved Closure
-  National Conservation Area (NCA) Boundary
-  NCA Proposed Addition

BONINE CANYON
Map2-6d

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within the Breaks (seven parcels), Brazo (one parcel), and Brazo Non-NCA (one parcel) Units as shown in the Proposed Plan and Final EIS. If Congress designates these lands as wilderness, they will be added to the Cebolla Wilderness. Until all or portions of these lands are either designated by Congress as wilderness or released from wilderness study, they will remain in WSA status and be managed under the *Interim Management Policy*, except as applied to minerals. [This exception for minerals does not apply at this time since all Federal minerals within the NCA have been automatically withdrawn by the *El Malpais Act*, and the one tract of the Canyons WSA that is outside the NCA boundary is underlain by private minerals.] If all or any portion of these lands are not designated as wilderness by Congress and are released from further wilderness review, they will be returned to the Breaks, Brazo, and Brazo Non-NCA Units and managed as prescribed under this Plan.

Another 6,450 acres studied under Section 202 were not recommended for designation as wilderness. The AFO will manage the 6,450 acres not recommended as suitable under the management prescriptions identified in this Plan.

For the convenience of horseback riders in the Plan Area, access facilities will be provided at several locations. The Cerro Brillante trailhead (for access to the Chain of Craters) will be one location.

The Chain of Craters and Canyons WSAs are in the Conditional Wildland Fire Use Fire Management Unit (see Glossary and Map 2-9 in the Fire Management section).

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding wilderness management. These factors will continue to be considered as the El Malpais Plan is implemented.

- Management proposals that benefit the wilderness resource
- Public interests and concerns
- Maintenance requirements for range improvements

- Mandatory wilderness values of size, naturalness, and an outstanding opportunity either for solitude or for primitive and unconfined recreation
- Special features, such as landforms, geologic expressions, and cultural and historic sites
- Proximity to existing wilderness
- Ramah Navajo Indian concerns

Guidance From Rio Puerco RMP

Some of the guidance in the Rio Puerco RMP continues to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Wilderness Program:

- Designation for OHV use will consider protection of resources such as . . . wilderness values . . .
- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . the . . . wilderness values of the area.

Monitoring/Studies

The AFO will continue to patrol the Cebolla and West Malpais Wildernesses at least once a month when the areas are accessible to the public, with more frequent patrols during spring through fall when use is greater. Patrol will be used to deter violations, gather information about area resources and uses, and inform users about the resources and appropriate use of designated wilderness.

Monitoring of lands under wilderness review is guided by the *Interim Management Policy*. This monitoring is done at least once a month when the areas are accessible by the public to ensure compliance with the *Interim Management Policy*, and to gather data on use and condition.

Non-degradation of biophysical and social conditions within designated wilderness and WSAs is achieved through the VRM system and the Limits of Acceptable Change (LAC) monitoring system (see Appendix D). Certain limits have already been established for the Plan Area, and these will be used to trigger actions (management modifications) called for in this Plan. If needed because of potential use activities or resource conflicts, or to help detect changes in wilderness conditions and opportunities, monitoring may be done more frequently. All authorized and unauthorized actions within designated wilderness and WSAs are recorded; when needed, the AFO establishes a case file.

Specific conditions for monitoring projects authorized within a wilderness or WSA are identified when each proposal is evaluated and authorized. Monitoring procedures and schedules for range improvement maintenance are identified in the Range Improvement Maintenance Plans for the two designated wildernesses.

Implementation Priorities

The following actions are listed in priority order, although several actions may be carried out at the same time. These developments will occur as time, staff, and budget allow.

- Patrolling and monitoring designated wildernesses and WSAs, including monitoring LAC indicators and taking appropriate actions when necessary.
- Installing and maintaining boundary, identification, informational, and regulatory signs.
- Providing information through brochures, maps, interpretive exhibits and material, and personal contacts.
- Maintaining, with the minimum tool or equipment, existing facilities provided to preserve the wilderness values and resources and for the health and safety of persons using these areas.
- Acquisition of inholdings (surface and subsurface).

Support Needs

Engineering & Operations

The Engineering and Operations staffs will support the Wilderness Program in the design, construction, and maintenance of access roads, trailhead facilities, trails, visitor use management facilities, and road closures.

Lands & Realty

Lands and Realty will support the Wilderness Program by acquiring private surface lands and subsurface mineral interests within wilderness.

Cadastral Survey

If Congress designates any of the Canyons or Chain of Craters WSAs as wilderness, the Cadastral Survey Program would be responsible for preparing a legal description of the new wilderness boundary.

Fire Management

Implementation of the wildland fire use and prescribed fire program will support wilderness management goals and objectives.

Rangeland Management

The Rangeland Management Program will support wilderness management by assuring compliance with the RIM plans, the *Wilderness Management Policy*, and the *Interim Management Policy*.

Wildlife Habitat

The Wildlife Program will support wilderness management through maintenance of wildlife exclosures and water catchments using the minimum tool concept.

Recreation

The Recreation Program will manage recreational visitation and influences to preserve designated wilderness and the values it offers people. This program

will process permit applications for commercial activities such as outfitter-guides dependent on a wilderness setting. It will assist in the design, construction, and maintenance of recreation facilities, installation and maintenance of signs for visitor safety and resource protection, as well as patrol and monitoring of designated wilderness and WSAs.

Cultural Resources

The Cultural Resources Program will survey and inventory cultural resources in support of the Wilderness Management Program.

American Indian Consultation

This program will consult and coordinate on wilderness access and closures for traditional cultural practices.

Law Enforcement

The law enforcement rangers will continue to patrol the designated wildernesses and WSAs to protect wilderness resources and provide assistance and protection to public land users.

Interpretation/Public Education

The Interpretation/Public Education Program will support the Wilderness Program by developing interpretive messages and media such as brochures, trail guides and exhibits, presenting interpretive programs, and preparing educational materials essential for the support, understanding, and protection of wilderness and its special features. Other key issues include wilderness safety and Leave No Trace ethics.







AMERICAN INDIAN USES & TRADITIONAL CULTURAL PRACTICES



Program Goals

The BLM seeks to consider the effects its actions may have on American Indian uses and traditional cultural practices, and to minimize those effects.

Management Guidance

Policy and Authorities

A number of laws and regulations require close consultation between the BLM and American Indian tribes with interests in lands administered by the agency. These include the American Indian Religious Freedom Act (AIRFA), the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the 1992 amendments to the National Historic Preservation Act, and the Religious Freedom Restoration Act. The El Malpais Act underscores these responsibilities by its emphasis on the continuation of American Indian traditional cultural practices in the NCA. Executive Order 13007—Indian Sacred Sites, the Executive Order of May 14, 1998—Consultation and Coordination with Indian Tribal Governments, and National Register Bulletin 38—Guidelines for Evaluating and Documenting Traditional Cultural Properties provide additional guidance. BLM procedures are described in BLM Manual Handbook H-8160-1—General Procedural Guidance for Native American Consultation.

Under these laws, several processes require formal consultation with American Indian tribes. One example is the ongoing consultation required by NAGPRA regarding repatriation of burials, grave goods, and objects of cultural heritage taken from public lands over the years. For the most part, traditional cultural practices within the Plan Area are private matters of concern only to the tribes and individuals who are directly involved, and the AFO does not attempt to actively manage these uses.

In accordance with the El Malpais Act, the American Indian people recognized as using the NCA are ensured access for traditional uses and cultural purposes.

Such access must be consistent with the American Indian Religious Freedom Act and the Wilderness Act. On request, the AFO will temporarily close the smallest practicable area for the minimum period of time needed to accommodate such religious activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

Field Office Program Guidance

For routine activities, the AFO relies on public participation in its land-use planning process as an initial screen to identify areas and issues of particular concern to American Indian tribes. After broad land-use plans such as the RMP and the El Malpais Plan have been completed, more specific activity plans or proposals for particular projects are evaluated through an environmental analysis process mandated by the National Environmental Policy Act. As a part of this process, the AFO normally notifies American Indian groups with interests in the affected area. For major projects, the AFO sends a scoping letter to these American Indian groups 30 days in advance of any project-specific analysis, and after all analyses have been completed, sends copies to the groups. For minor projects, the American Indian groups are notified while the environmental analysis is in progress. The AFO also prepares an annual RMP Update that lists projects anticipated in the coming year. This Update is sent to a broad mailing list that includes Acoma, Laguna, and Zuni Pueblos, as well as the Ramah Navajo Chapter. Any activity that requires a permit under ARPA on AFO lands also triggers a formal consultation with potentially interested tribes.

The AFO attempts to maintain effective informal lines of communication through frequent interaction with the Pueblo tribes and Navajo chapters who have expressed a strong interest in management of the Plan Area. The objective is to encourage communication while still recognizing the need for privacy in many situations. The AFO responds when these groups express concerns.

Decisions From Approved El Malpais Plan

The El Malpais Act explicitly recognizes the importance of continuing American Indian traditional cultural practices in the NCA. While it is not appropriate for the BLM to develop management actions related to these practices, the AFO did consider such uses as an important part of formulating management actions for other issues under this Plan. Certain decisions for the Wilderness Management and Cultural Resources issues do affect traditional Indian cultural practices. In these two cases, it was necessary to reconcile traditional cultural practices with other legislative mandates.

Traditional American Indian cultural practices will be allowed to continue in the Cebolla and West Malpais Wildernesses in a manner consistent with the intent of the Wilderness Act. Motor vehicle access to the perimeter of each wilderness will be allowed, but such use inside the wilderness will be prohibited, unless the AFO has granted prior authorization after consultation and evaluation. When the AFO authorizes such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character must be met. Upon request, the AFO will temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

Outside of designated wilderness, motorized and mechanical access for traditional American Indian cultural practices will be restricted to designated routes unless otherwise authorized.

Although collection of prehistoric pottery is generally prohibited by ARPA, an exception can be made if it is formally determined that these items are no longer of archeological interest. The AFO will consider making such a determination on a site-by-site basis, but only if such activity is found to be a traditional cultural practice within the meaning of the El Malpais Act. Individuals wishing to collect potsherds from a particular location within the NCA for traditional purposes must apply to the AFO for a special-use permit. After the location has been thoroughly documented and a refer-

ence collection of the pottery taken for permanent curation, and after consultations required under NHPA, the AFO may issue a permit for collection from the surface.

At the request of Acoma Pueblo, the Approved El Malpais Plan recommends that Congress amend the NCA boundary to exclude 960 acres of Acoma lands currently within the NCA in the Spur Unit and the Cebolla Wilderness. This recommendation includes several parcels totaling 800 acres between NM 117 and the National Monument boundary, and 160 acres within the Cebolla Wilderness (T. 7 N., R. 10 W., sec. 12) recently acquired by Acoma Pueblo. This latter parcel, which is adjacent to other Acoma lands, consists of aboriginal lands that have recurring value to the Acoma people.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding American Indian Uses and Traditional Cultural Practices. These factors will continue to be considered as the El Malpais Plan is implemented.

- Traditional cultural and religious practices, uses and sensitive areas, including scheduling and participants
- NCA legislative requirements
- Formal and informal means of communicating and coordinating with local American Indian groups and individuals

Guidance from Rio Puerco RMP

Many of the laws and policies relevant to American Indian issues were not in place when the Rio Puerco RMP was completed. Consequently, the Rio Puerco RMP does not address this issue.

Monitoring/Studies

The AFO will not monitor or actively study American Indian uses in El Malpais NCA unless explicitly requested to do so by the affected group.

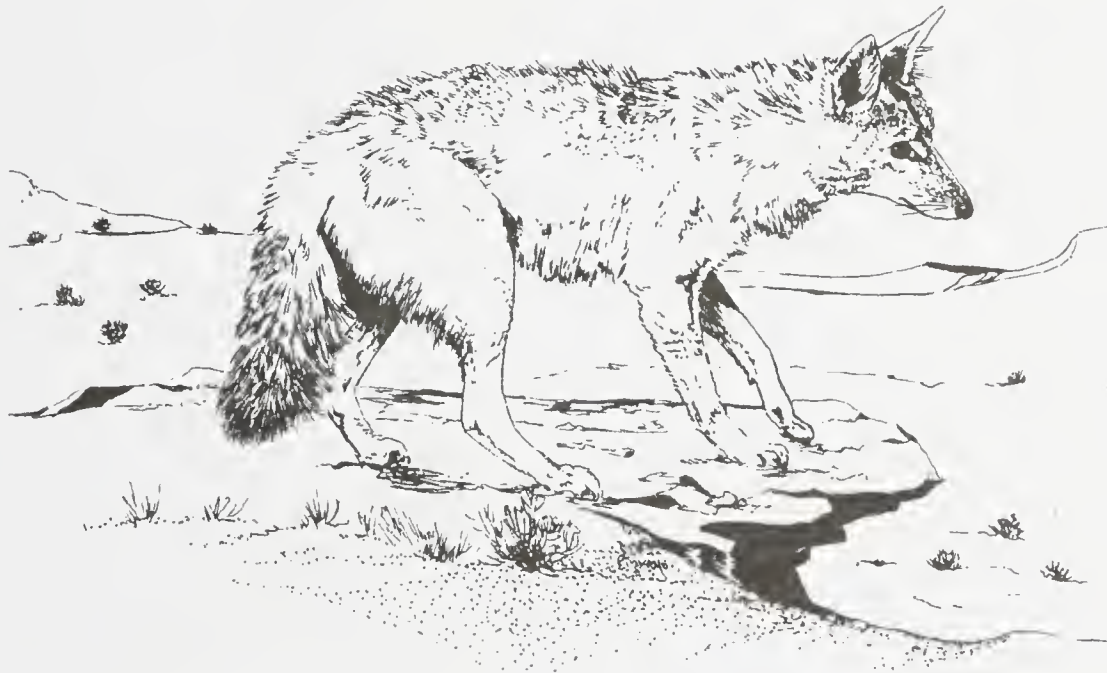
Support Needs

Law Enforcement

Support from the Law Enforcement Program might be needed if areas are closed to accommodate traditional cultural practices.

Cultural Resources

If special-use permits for pottery collection are requested, documentation of affected sites and NHPA compliance would be the responsibility of the Cultural Resources Program.





Program Goals

This program is established to protect archeological, historic, and sociocultural properties, and to provide for their use as allocated through land-use planning.

Management Guidance

Policy and Authorities

Federal laws such as the National Historic Preservation Act (NHPA) of 1966, the Archeological and Historic Preservation Act of 1974, the Archeological Resources Protection Act of 1979 (ARPA), the American Indian Religious Freedom Act of 1978 (AIRFA), and the Federal Land Policy and Management Act of 1976 provide for the protection and management of cultural resources. The El Malpais Act establishes protection of archeological and scientific resources as one of the principal purposes of the NCA, placing special emphasis on preservation and long-term scientific use of archeological resources. A national Programmatic Agreement with the National Conference of State Historic Preservation Officers (SHPOs) and the Advisory Council on Historic Preservation (dated March 26, 1997) and a separate Protocol Agreement with the New Mexico SHPO specific to New Mexico guide the AFO's compliance with NHPA. The BLM 8100-series manuals describe agency policies and procedures regarding cultural resources.

Field Office Program Guidance

Use Allocation. BLM Supplemental Program Guidance for Land Resources (Manual 1623.1) requires that RMPs include management objectives for all cultural resources known or likely to occur in the planning area. At the activity plan (or Cultural Resource Management Plan) level, cultural resources are allocated to certain uses. The three categories established for management objectives and six categories established for use allocation are shown in Table 2-6. (The terms themselves are defined in the Glossary.) Cultural resources that meet the definition of "Isolated Manifestation" will be allocated to the "Discharged Use" category after they have been adequately documented. Use allocation for the Plan Area is described

below under "Decisions From Approved El Malpais Plan."

TABLE 2-6

CULTURAL RESOURCE MANAGEMENT OBJECTIVES AND USE ALLOCATIONS

Management Objective	Use Category
Information Potential	Scientific Use; Management Use
Public Values	Sociocultural Use; Public Use
Conservation	Conserved for Future Use
(None)	Discharged Use

Compliance with the National Historic Preservation Act. Before any surface-disturbing or other activity that could affect cultural resources, the AFO routinely conducts an intensive (Class III) cultural resources inventory to ensure that important resources are not inadvertently damaged. The administrative steps required by NHPA, including consultations with the New Mexico SHPO, are then completed.

The El Malpais Act places special emphasis on preserving cultural resources, so projects within the NCA that could affect these resources are generally held to a higher standard than projects outside the NCA. If a question is raised about the appropriate level of inventory, the significance of resources that might be affected, or the potential impact of a proposed action, the AFO will use more cautious and conservative practices.

Inventory & Baseline Documentation. The BLM conducts cultural resource inventories at four levels of intensity (Classes I, II, and III, as well as reconnaissance level; see Glossary). Inventory usually consists of inspecting the ground surface for evidence of past human use and documenting whatever remains are

found. In most cases this documentation allows the BLM to evaluate the significance of the property, identify sources of deterioration, and describe the current condition of the property. The AFO, in concert with the Museum of New Mexico Archeological Records Management System, maintains the records generated by these inventories.

Permits & Scientific Investigations. The BLM issues permits authorizing various types of cultural resource investigations to qualified individuals and organizations employing them. Subject to certain restrictions and requirements, the most common permits authorize surveys and minor testing needed to determine whether subsurface archeological remains are present.

Permits that authorize the collection of artifacts, formal archeological testing, or more intensive investigations are issued under ARPA. As part of the permitting process, detailed information about the proposed activities, curation arrangements, and consultations with local American Indians are required. The conditions under which ARPA permits might be issued in the Plan Area are discussed below in the section entitled "Decisions From Approved El Malpais Plan."

Patrol & Surveillance. Enforcement of cultural resource protection laws is accomplished largely by BLM Rangers, who patrol back-country areas, maintaining a presence and looking for violations of ARPA and other laws that protect public lands. Rangers have usually had training specific to ARPA, interact closely with cultural resource specialists to become aware of areas that contain sensitive cultural resources, and exchange information about areas of past or ongoing vandalism. AFO cultural resource specialists and volunteers also visit sites and sensitive areas on a regular basis.

Monitoring. The AFO monitors the condition of cultural resources at two different levels of intensity. At the lowest level, these resources are formally recorded and their present condition documented. This documentation then serves as the basis for evaluating the property and assigning it to a use category. It also provides baseline information against which the future condition of the resources can be compared. At this level no time period is specified for follow-up inspection. Comparisons between baseline condition and current condition are made when a change is suspected.

For a handful of especially important and/or vulnerable sites, the AFO conducts a more formal and intensive program of photo-monitoring. At these sites a series of standardized photographs is taken from defined locations at set intervals, typically once a year. These photographs document any changes in physical appearance of the sites. This level of monitoring is more expensive and time-consuming and has only been implemented for a small number of sites in the Plan Area, including the Dittert Site, Oak Tree Ruin, and Arroyo Ruin.

Guidance From Other Programs. Location and construction of trail treadways will take into consideration and avoid, if possible, conflicts with sensitive cultural resource sites, private waters, private lands, and sensitive wildlife and plant habitats. As individual trails are sited for development and where further National Environmental Policy Act compliance is necessary, all required site-specific studies and clearances will be done and a determination will be made concerning the environmental consequences of the proposal.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Cultural Resources Program is:

- Cultural resources are important in understanding local history, especially for local American Indians, so sites should not be disturbed. Under the Archeological Resources Protection Act, monetary rewards may be offered for information leading to the arrest and conviction of violators.

Decisions From Approved El Malpais Plan

Under this Plan, the AFO will allow scientific use of prehistoric cultural resources, but will place stronger emphasis on conservation for future use. This objective reflects the principal guidance provided by the El Malpais Act. The draft plan considered and rejected alternatives which emphasized active management and development of information potential on one hand, and a management strategy which would have allowed natural processes to prevail on the other hand.

Use Allocation

The AFO will manage the Dittert Site, the Ranger Station Reservoir, the Lobo Canyon Petroglyphs, and outstanding homestead-era sites for public values and allocate them to public use, while taking care not to impair their information potential. As additional resource information becomes available, new areas may be identified for public use, but only if their information potential will not be adversely affected and only after appropriate American Indian consultations and NHPA compliance. Except as provided below, the AFO will manage historic Anglo, Hispanic, and Navajo cultural resources for scientific use, with required American Indian consultations. Paleo-Indian, Archaic, and Pueblo sites will be managed for their information potential and allocated to conservation for future use. Particular properties may be reallocated to scientific use under the conditions outlined below.

Compliance with the National Historic Preservation Act

Occasionally, development projects such as range improvements or recreational facilities will be proposed within the Plan Area. The AFO will conduct a cultural resources inventory for all proposals for potential ground-disturbing activities. If a question is raised about the appropriate level of inventory, the significance of the resources that might be affected, or the potential impact of a proposed action, the AFO will use more cautious and conservative practices. Secondary impacts such as unauthorized collection of surface artifacts will be more thoroughly studied and evaluated than is usual outside the NCA. Therefore, the AFO will require an inventory over an area at least ¼-mile wide around proposed visitor use developments. Under this Plan, the AFO will emphasize avoidance of cultural resources, rather than mitigation through data recovery.

Inventory & Baseline Condition

This Plan establishes the goal of achieving Class III inventory of 2.5-percent of the NCA over the life of the Plan. The AFO will also conduct supplemental reconnaissance-level surveys of critical areas and/or types of resources.

Scientific Investigation

Because the El Malpais Act emphasizes preserving cultural resources for long-term scientific use, the AFO will restrict archeological research that could result in physical alteration of prehistoric remains, including surface collection. On the assumption that cultural resources within the NCA are generally less threatened than resources outside the NCA, uses that would result in the physical alteration of cultural properties will be supported outside the NCA whenever possible. Whenever possible within the NCA, the AFO will encourage research that uses existing collections or non-disturbing field techniques.

If research involving the physical alteration of prehistoric sites is proposed within the NCA, a research design will be required detailing the nature of the proposed work, its purpose, and its anticipated impact on similar properties within the NCA. Researchers will have to consider the feasibility of conducting their work using cultural resources outside the NCA. They will also have to justify physically altering the NCA's cultural properties in terms of (1) clearly existing threats to their physical integrity, or (2) the central role these particular sites play in relation to the research design.

The AFO will approve such research only if adequate funding is ensured for analysis, reporting, and curation of artifacts. The approval will follow appropriate American Indian consultation, and will be granted only under the following circumstances: (1) the characteristics to be altered are threatened and will be lost without data recovery; or (2) the research cannot be done using sites outside the NCA, and after the research is completed a substantial portion of the site or equivalent sites will remain in an unaltered state.

Scientific studies of selected prehistoric and historic sites within designated wilderness will continue as required to meet protection and preservation mandates. The AFO can authorize scientific research in wilderness under Section 501 of the El Malpais Act if it can be carried out unobtrusively so as not to degrade wilderness character. Scientific investigations in wilderness must conform to the "minimum tool" standard; that is, motorized vehicles and equipment will be prohibited unless there is no other reasonable

alternative. If such use is approved, it will be the minimum necessary. Extractive activities such as artifact collection will be allowed, but no significant impacts to visual, vegetative, or other resources will be permitted.

Pottery Collection

Although collection of prehistoric pottery is generally prohibited by ARPA, an exception can be made if it is formally determined that these items are no longer of archeological interest. Under this Plan, the AFO will consider making such a determination on a site-by-site basis, but only if such activity is found to be a traditional cultural practice within the meaning of the El Malpais Act. Individuals wishing to collect potsherds from a particular location within the NCA for traditional purposes must apply to the AFO for a special-use permit. After the location has been thoroughly documented and a reference collection of the pottery taken for permanent curation, and after consultations required under NHPA, the AFO may issue the permit for collection from the surface.

Signs

Small inconspicuous antiquities signs will be placed carefully to avoid drawing unnecessary attention to sites, while still discouraging casual vandalism and aiding in prosecution of violators. These signs are usually 9 inches by 12 inches in size and are placed at ground level. Signs will be placed at approximately 100 sites during the life of the Plan.

Recreation & Recreation Facilities

An inventory over an area at least ¼-mile wide will be required around all proposed visitor use developments.

A campground will be developed within approximately 8 acres of the Spur Unit to accommodate camping on the east side of the Plan Area (see Map 2-2). The proposed campground will require special cultural resources survey and monitoring. The campground is near areas of dense cultural resources that would be vulnerable to surface collection. Therefore, in addition to Class III cultural resources inventories, the AFO will conduct a reconnaissance survey within a one-mile radius before developing the campground, attempting to locate and document all sites vulnerable

to illegal surface collection. The condition of these sites will be monitored carefully, and if any changes in their condition are detected resulting from recreational use of the campground, appropriate mitigating measures will be taken (e.g., data recovery, closure of affected areas to public entry).

Picnicking facilities will be provided at the south end of The Narrows. The picnic area is not known to be in an especially sensitive area, but a Class III inventory will be conducted in a ¼-mile radius around this facility to consider secondary impacts.

When warranted by significant visitation, the AFO will install visitor registration boxes at selected archeological properties. No additional developments will be planned at these sites.

The AFO will establish up to 10 additional hiking trails in the Plan Area, for a total of up to 15 trails with a length of approximately 57 miles to distribute visitors and provide resource protection (see Map 2-2 and Table 2-3). Trail routes will be modified to direct visitor use away from sensitive cultural resources. The trailheads are not known to be in especially sensitive areas, but Class III inventories will be conducted in a ¼-mile radius around these facilities to consider secondary impacts.

The expanded trail system will provide improved access opportunities to such sites as the Lobo Canyon Petroglyphs, one or two homesteads, Cerro Americano, La Rendija, and the historic schoolhouse site in the West Malpais Wilderness. Primitive trailheads, defined parking for up to eight vehicles, and a trailhead kiosk will be developed for the following cultural/historic properties as time, staff, and budget allow: the Lobo Canyon Petroglyphs (rather than at other rock art sites), the Savage Schoolhouse in Cebolla Canyon, the Ranger Station Reservoir, and other deserving properties as needed to distribute visitor use. All-weather graveled roads will be constructed to provide access to trailheads. For the Ranger Station Reservoir, the Ranger Station and parking lot will serve as the trailhead, with the approved interpretive/orientation trail for access. Data recovery through systematic collection of surface materials will be necessary at the Ranger Station Reservoir before the trail is extended to it. Systematic documentation will be needed at the Lobo Canyon Petroglyphs before the trail and trailhead can be constructed.

Sightseeing for cultural interest will be offered at the Dittert Site, the Ranger Station Reservoir, the Cebolla Canyon Complex, the Lobo Canyon Petroglyphs, and through guided hikes, the Aldridge Petroglyphs.

Sightseeing for historic interest will be offered at one or more of six fenced or stabilized homestead sites (Armijo Canyon Springhouse, Armijo Canyon Homestead; Rowe Homestead at the mouth of Cebolla Canyon; Stone House—two sites—located further up Cebolla Canyon; Worley Homestead); and possibly the Savage Schoolhouse in Cebolla Canyon or other deserving properties. Other areas may be identified for public visitation as additional information becomes available. Data recovery through systematic collection of surface materials at the Ranger Station Reservoir and systematic documentation at the Lobo Canyon Petroglyphs will be necessary before visitation can be encouraged at either site.

Recreational and facility developments at the Dittert Site will include a graveled access road and graveled parking area for up to 20 vehicles. A primitive trailhead will be constructed to serve the Dittert Site and the Armijo Canyon Homestead and Springhouse. This will also be a trailhead and access for the Cebolla Wilderness. Horse facilities will be built to provide access to the Cebolla Wilderness, not the Dittert Site. (Figure 2-f shows a conceptual design for these facilities.) Dittert Site interpretation will include up to two wayside exhibits, a trail guide, and guided hikes for public and school groups (50 to 200 people per year). Interpretive elements about the Dittert Site (located within the boundaries of the Cebolla Wilderness) will be placed outside the wilderness boundary, at the trailhead.

One or two selected homesteads will be developed for public use. To provide for public access, the AFO will build a primitive trailhead, including a parking area for four to six vehicles, to serve each selected homestead. (Figures 2-h and 2-i show possible designs for these developments.)

Prairie Dog Colony Enhancement Area

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from the prehistoric resources. However, their behavior

will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

Access Easements & Consolidation of Ownership

The AFO will seek legal access easements across key parcels of private land in areas of major archeological or historic values within or adjacent to public land. The AFO will also attempt to consolidate ownership by purchase or exchange from willing sellers in these areas.

The Plan recommends acquisition of a 160-acre parcel in the Breaks Non-NCA Unit that includes an early twentieth century historic ruin with interpretive potential (portions of T. 5 N., R. 11 W., sec. 3 and T. 6 N., R. 11 W., sec. 34).



Road Closure

The 2-mile-long two-track road leading into the Cebolla Canyon Community will be closed. Other access routes not identified for closure elsewhere in this Plan may be closed if this were essential for resource protection.

Formal Monitoring

Formal photo-monitoring programs have been initiated at the Dittert Site, Oak Tree Ruin, and Arroyo Ruin. This activity involves taking a series of identical photographs at intervals of one to five years so that changes in site condition can be documented systematically. Under this Plan, photo-monitoring will continue at these sites, with other sites potentially incorporated into the program as well.

Stabilization

The AFO will maintain the existing stabilization and erosion-control projects at the Dittert Site, Oak Tree Ruin, and Arroyo Ruin.

Additional stabilization and/or erosion-control projects for prehistoric sites will be undertaken only if highly valuable resources are endangered. The stabilization and repair needs of many homesteads have been assessed, and additional structures will be assessed as needed. Key sites will be monitored, including all those being managed for public interpretation, to ensure timely identification of natural deterioration.

In most instances, prehistoric and historic cultural resources in wilderness will be subject to the forces of nature in the same manner as other wilderness resources. Stabilization of selected prehistoric and historic sites within the two wildernesses will continue as required to meet protection and preservation mandates. Stabilization and erosion control measures will be allowed in wilderness, but only if resources unlikely to be duplicated elsewhere are threatened, and no other reasonable alternative exists. Such activities will be subject to the "minimum tool" requirement, and will not be allowed to degrade the area's overall character.

Fire Management

Prescribed fires will be used throughout the Plan Area where appropriate to protect, improve, or enhance wildlife/livestock habitats and watershed values. In addition, the AFO will use prescribed fires to reduce fuel loading (hazardous fuel reduction) to reduce the risk of large fires in areas where there are high-value resources (e.g., historic structures, houses, land improvements, recreation facilities). A written prescribed fire plan must have been prepared and approved before ignition.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to cultural resource values (e.g., homesteads, hogans), wilderness values, visual resources, and recreational values within the area. Appropriate cultural resources clearances, special-status species evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

The Cerritos de Jaspe and Neck Units are within the *Joint El Malpais Fire Management Plan's* (USDI, BLM and NPS 2001) Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Glossary and Map 2-9 in the Fire Management section). All wildland fires in this fire management unit, regardless of ignition source, will receive prompt suppression action commensurate with human safety in all instances. Fire in the Minimize Wildland Fire Presence Unit presents a threat to such resource values as cultural resources with flammable elements. To prevent unacceptable resource damage and/or loss of life and property, fires will generally not be allowed to burn in areas where public safety and other resource values are at risk. In some circumstances, prescribed fires may be used to protect the resource values within these areas by reducing fuel loading. Such fires would reduce the risk of catastrophic fires in the future.

Reconnaissance-level surveys looking for sites with flammable materials will be conducted in areas where prescribed fires are proposed. Areas proposed for prescribed fires will not generally be inventoried to Class III standards if they have low site density (see Map 2-7). Class III inventory will be considered in zones of high site density, and a cultural resource advisor will be required during fire suppression activities, regardless of the source of ignition. Class III inventory will be required for all planned surface-disturbing activities such as construction of fire lines.

Eight well-preserved homesteads have been singled out in the *Joint Fire Management Plan* as high-priority fire suppression zones. Additional sites may be added to this list if significant cultural resource values are threatened.

Vegetation

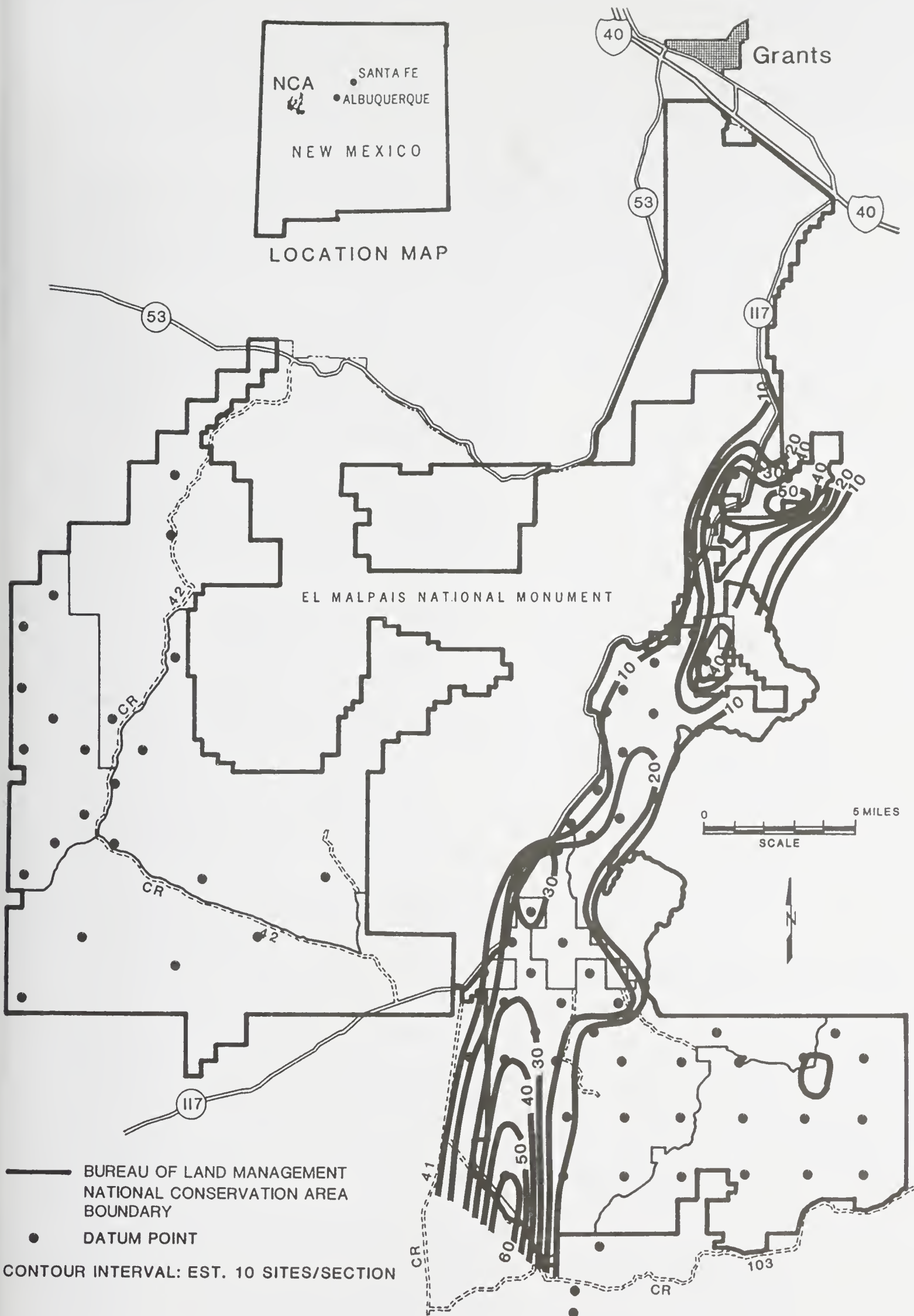
Any vegetative improvement activity that is likely to result in surface disturbance will be subject to Class III cultural resources inventory.

Rangeland Resources

Eight historic homesteads in the Plan Area have been fenced to exclude livestock; additional homesteads may be fenced if warranted.



LOCATION MAP



— BUREAU OF LAND MANAGEMENT
 NATIONAL CONSERVATION AREA
 BOUNDARY
 ● DATUM POINT
 CONTOUR INTERVAL: EST. 10 SITES/SECTION

Map 2-7
 Relative Density of Anasazi Sites
 Based on Class II Inventory

Special Designations

The AFO will place no special priority on nominating properties in the Plan Area to the National Register of Historic Places. Possibly, four or five properties will be nominated during the life of the Plan, perhaps as part of regional-scale thematic nominations (e.g., Chacoan outliers, major Pueblo II sites, great kivas, or homestead-era schoolhouses). The Dittert Site may be added to the World Heritage List as part of the Chaco Culture listing.

Public Interpretation

The AFO Grants Field Station staff will conduct frequent interpretive hikes that include visits to cultural resource sites. In addition to completing off-site interpretive measures such as brochures, exhibits, and other media, the AFO will encourage visitation at the Dittert Site, the Ranger Station Reservoir, and the Lobo Canyon Petroglyphs. The AFO will also develop public interpretation for outstanding homestead-era sites. Recreation facilities planned for these sites are discussed under "Recreation and Recreation Facilities," above. Systematic documentation will be needed at the Lobo Canyon Petroglyphs before visitation can be encouraged. Data recovery through systematic collection of surface materials will be necessary at the Ranger Station Reservoir before the interpretive/orientation trail is extended to it.

Except for guided trips, visitor information and education programs about selected prehistoric and historic sites within the wildernesses will be located outside the wilderness boundaries or dispersed at other sites. Additional interpretive information about the Dittert Site (located within the boundaries of the Cebolla Wilderness) will be placed outside the wilderness boundary, at the trailhead to the site in Armijo Canyon. Visitation of selected prehistoric and historic sites within the Cebolla and West Malpais Wildernesses will be encouraged through additional information provided off-site. Except for continued maintenance, monitoring, and guided hikes, the AFO will provide no additional on-site interpretation.

During the life of this Plan, no on-site interpretive development will occur at the Pinole Site, The Cita-

del, Cebolla Canyon Community, or Aldridge Petroglyphs, but the AFO will manage these sites to protect their potential for public use. If unsolicited visitation warrants, the AFO will install visitor registration boxes at those sites.

Interpretive wayside exhibits will be developed for up to three archeological sites and/or homesteads along with brochures and/or trail guides keyed to markers. The AFO will conduct special hikes and programs for up to 200 people per year to these features.

If acquired, the AFO will interpret the early twentieth century historic ruin in T. 5 N., R. 11 W., sec. 3 and T. 6 N., R. 11 W., sec. 34 if Congress modifies the NCA boundary to include these lands.

Criteria for Resolution of El Malpais Plan Issues

The AFO considered the following factors in developing answers to the issue questions regarding cultural resources. These factors will continue to be considered as the El Malpais Plan is implemented.

- The relative importance and sensitivity of known and anticipated cultural resources
- Their geographic distribution and density
- Current and potential threats to these resources
- Public interests and concerns, including those of local American Indian groups
- The legislative requirements and history of the El Malpais Act

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP."

Criteria for Resolution of RMP Issues

- Designation for OHV use will consider protection of resources such as cultural resources.
- Fuelwood will not be made available in areas where harvesting would degrade or disturb the cultural values of the area.

Implementation Guidance From RMP

Continue implementation (including monitoring) of existing cultural resource management plans. In El Malpais, the *Joint Management Plan for the Chaco Archeological Protection Site System* (USDI, NPS 1984) is germane to management of the Dittert Site, which was recently designated a Chacoan Protection Site by Congress. Among other provisions, the *Joint Management Plan* requires that actions affecting this site be coordinated through the Chaco Culture Inter-agency Management Group.

Continue patrol and surveillance program.

Decisions Carried Forward From Previous Planning

The following decision was carried forward into the Rio Puerco RMP from a land management plan completed prior to the RMP:

- Acquire private lands in Cebollita Canyon and begin a stabilization, interpretation, and surveillance program of cultural resources in the canyon. [*The private lands listed for this MFP decision, except for a small residential area, have all been acquired by Acoma Pueblo. This decision can no longer be implemented.*]

Monitoring/Studies

The AFO monitors the condition of cultural resources at two different levels of intensity. At the lowest level, these resources are formally recorded and their present condition documented. This documentation then serves as the basis for evaluating the property and assigning it to a use category. It also provides baseline information against which the future condition of the resources can be compared. At this level no time period is specified for follow-up inspection.

Comparisons between baseline condition and current condition are made when a change is suspected.

For a handful of especially important and/or vulnerable sites, the AFO conducts a more formal and intensive program of photo-monitoring. At these sites a series of standardized photographs is taken from defined locations at set intervals, typically once a year. These photographs document any changes in physical appearance of the sites. This level of monitoring is more expensive and time-consuming and has only been implemented for a small number of sites in the Plan Area, including the Dittert Site, Oak Tree Ruin, and Arroyo Ruin. Other sites can potentially be incorporated into the program if warranted.

Eight historic homesteads in the Plan Area have been fenced to exclude livestock. The condition of other historic homesteads will be monitored. Additional sites may be fenced if warranted.

Key sites will be monitored, including all those being managed for public interpretation, to ensure timely identification of natural deterioration. Included in this decision are the Dittert Site and the six historic homesteads planned for public visitation. Increased maintenance as result of visitation is expected.

The proposed campground will require special cultural resources survey and monitoring. The campground is near areas of dense cultural resources that would be vulnerable to surface collection. In addition to Class III cultural resources inventories, the AFO will conduct a reconnaissance survey within a one-mile radius before developing the campground, attempting to locate and document all sites vulnerable to illegal surface collection. The condition of these sites will be monitored carefully, and if any changes in their condition are detected resulting from recreational use of the campground, appropriate mitigating measures will be taken (e.g., data recovery, closure of affected areas to public entry).

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from the prehistoric resources. However, their behavior will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

Implementation Priorities

The following actions are listed in priority order, although several actions may be carried out at the same time. These actions will occur as time, staff, and budget allow.

As a practical matter, demand-driven actions receive high priority. Individual projects which could affect National Register values require compliance with NHPA. NHPA compliance will continue to receive priority consistent with the priority of the individual projects proposed by the various AFO resource programs. Coordination with the Chaco Culture Inter-agency Management Group regarding proposals which could affect the Dittert site are analogous to NHPA compliance.

Scientific investigation is an activity specifically mandated by the El Malpais Act. Although this Plan places a heavy burden upon applicants, the AFO will give highest priority to processing ARPA permit applications.

Fire suppression in the vicinity of the eight well-preserved homesteads identified in this Plan is another highest priority item.

Patrol and surveillance and monitoring are activities which may fluctuate in intensity, but which will always be ongoing to some degree.

Acquisition of easements and consolidation of ownership is usually dependent upon limited windows of opportunity. When such opportunities exist, the AFO must be willing to act, even if this means forgoing other work.

Most other activities proposed in the cultural resources section of this Plan are discretionary actions. These include collection of inventory and baseline information, signing, stabilization and erosion control, and road closures. Priority given to these activities will depend upon the immediacy of the threats which they are intended to counter, the availability of funding, and the availability of personnel to do the work.

Many of the interpretive activities envisioned in this Plan can be undertaken by either the Cultural Resources Program, the Interpretation Program, or the two programs acting in concert. In the Cultural Resources Program, higher priority will normally be

given to the demand-driven and proactive management actions described above. Recreation Program initiatives would receive priority as described above. This Plan places no special priority on special designations for cultural resources.

Support Needs

Lands & Realty

In areas of major archeological or historic values within or adjacent to public land, the AFO will seek legal access easements across key parcels of private land. The AFO will also attempt to consolidate ownership by purchase or exchange from willing sellers in these areas. Such access and acquisitions will require support from the Lands and Realty Program.

Off-Highway Vehicles

The AFO will close the 2-mile-long two-track road leading into the Cebolla Canyon Community. Other access routes not identified for closure elsewhere in this Plan may be closed if this were essential for resource protection. Support from the OHV Program will be necessary to accomplish road closures.

Engineering & Operations

Support from the Engineering and Operations Programs will be necessary to accomplish road closures.

Support from the Engineering and Operations Programs may be needed to accomplish stabilization and erosion control projects.

Interpretation/Public Education & Recreation Facilities Programs

The Cultural Resources Program, the Interpretation/Public Education Program, and the Recreation Facilities Program will cooperate in implementing possible interpretive developments at the Dittert Site, the Lobo Canyon Petroglyphs, and the Ranger Station Reservoir, as well as at homestead-era sites. The Interpretation Program will be responsible for at least some of the guided hikes to cultural and historic sites.

The Recreation Facilities Program will install visitor registration boxes at the Pinole Site, The Citadel,

Cebolla Canyon Community, or Aldridge Petroglyphs if unsolicited visitation warrants.

American Indian Consultation

Some activities proposed in this section will require American Indian consultation. Examples include archeological research and development of recreation facilities focusing on cultural resources.

Law Enforcement

Prevention of vandalism is a major emphasis of the patrol and monitoring program described in this sec-

tion. If incidents of vandalism are encountered, law enforcement will take appropriate action.

Fire Management

Eight well-preserved homesteads have been singled out in the *Joint El Malpais Fire Management Plan* as high-priority fire suppression zones. Additional sites may be added to this list if significant cultural resource values are threatened.





Program Goals

The AFO Wildlife Habitat Management Program focuses on habitats for terrestrial, aquatic, and special-status species (including threatened and endangered species), and on rare or representative habitats or ecosystems (see Appendices E and F). These habitats are managed to maintain or enhance the desired conditions that support the variety of wildlife species. AFO staff members identify opportunities for maintaining, improving, and expanding wildlife habitats on public lands consistent with other consumptive and non-consumptive uses. The staff also identifies and manages priority species and habitats (including rare and representative habitats, plant communities, and biological diversity).

The broad objectives of the Wildlife Habitat Management Program are to improve and protect aquatic and terrestrial wildlife habitat by coordinating the management of other resources and uses on public land. This coordination is designed to maintain habitat diversity, sustain ecosystem integrity, enhance aesthetic values, preserve the natural environment, and provide old growth habitat for wildlife. These objectives are accomplished to some extent through habitat manipulation, and to a great extent through mitigation under the National Environmental Policy Act (NEPA).

Management Guidance

Policy and Authorities

The BLM has a broad interest in managing the habitat of all wildlife as part of its overall multiple use program outlined in *Fish and Wildlife 2000* (a national planning and policy document for wildlife management into the year 2000 and beyond; USDI, BLM 1988a). BLM New Mexico has developed a version of this document that outlines specific objectives in managing the Statewide Wildlife Program (USDI, BLM 1989c). Other Federal laws and policies that direct the BLM to improve the management of habitat to meet wildlife needs include the Federal Land Policy and Management Act of 1976; the Endangered Species Act of 1973, as amended; the Sikes Act of 1960; the Public Rangeland Improvement Act of 1978, as amended; BLM Manual Section 6840; and program

policy emphasizing *Fish and Wildlife 2000* practices and biological diversity. The AFO's Wildlife Habitat Management Program is also influenced by various memoranda of understanding and cooperative agreements.

The AFO's coordination with the New Mexico Department of Game and Fish (NMDG&F), the U. S. Fish and Wildlife Service (FWS), and other Federal, State, and local agencies is an important part of managing wildlife habitats within the Plan Area.

Field Office Program Guidance

All range and watershed improvements will continue to be designed to achieve range, watershed, and wildlife objectives for maintaining, improving, or enhancing habitats, particularly for NMDG&F priority species. This includes location and design of waters and vegetative manipulation projects.

All properly functioning springs and associated riparian/wetland habitats on BLM-administered lands will be maintained at that level. Those features in the Nonfunctional or Functional-At Risk categories will be managed to improve them to the Properly Functioning Condition category. (See the Glossary for definitions of riparian function ratings.) The AFO will maintain or improve these features either by using livestock exclosures, or by implementing grazing management practices to maintain and/or improve them to properly functioning condition.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Wildlife, Rangeland Resources, Forestry, Watershed, Recreation, and Lands. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

The primary use of prescribed fires and wildland fire use (see Glossary) by programs other than the Fire Management Program (e.g., Wildlife, Watershed, Rangeland Resources) will be to protect, maintain, improve, or enhance wildlife and livestock habitats and watershed values; improve vegetative resources and help achieve potential natural community vegetative objectives; reduce the fuel load; and blend fire

back into the natural processes of a functioning ecosystem.

Individual prescribed fire plans or wildland fire implementation plans are required before fire can be used to improve the vegetative habitats of the Plan Area. In addition to a prescribed fire plan or wildland fire implementation plan, a State burn permit that includes a smoke management plan is also required.

In accordance with BLM fence standards, new fences will be designed to allow for wildlife passage. Any existing fences that impede wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Plan Area. Modification to six miles of fence in the Cerro Brillante area is scheduled to be accomplished in 2002 to help provide for antelope passage. This fence modification is being undertaken with Sikes Act funding.

Existing wildlife projects will be properly maintained (see Table 2-7). Any project not working as intended will be evaluated to determine if it is still needed as originally designed. All needed projects will be modified to work.

Livestock grazing management will be coordinated and designed to facilitate other programs. The AFO will consider wildlife projects; burn areas; management of natural waters, springs and ephemeral flows; wilderness management; and forest and woodland management in planning for livestock grazing management.

By scheduling livestock grazing use/non-use in critical wildlife areas during the appropriate season and to the greatest extent possible, the AFO will design and implement new grazing systems to protect wildlife habitats (e.g., antelope winter range).

Raptor protection will be implemented by requiring all new powerlines to be built to "electrocution-proof" specifications. To avoid collisions with powerlines by migrating birds, the mitigating measures identified by the Avian Power Line Interaction Committee (1994) will be incorporated into all new powerlines. Existing lines that are identified as causing electrocution and/or collision problems may also be modified where feasible.

Animal damage control activities on public lands within the Plan Area are guided by the Master Memorandum of Understanding between the Animal and Plant Health Inspection Service, Animal Damage Control (APHIS-ADC) and the BLM (USDA, APHIS 1995). The APHIS-ADC conducts animal damage control activities on BLM-administered lands, while the BLM identifies any special concerns for other resource values (e.g., special-status species, health and safety).

The AFO maintains an inventory of plant and wildlife habitat and species occurrence. This information is used in land-use planning, habitat management, and program coordination for multiple use decisions. Management emphasis is placed on biodiversity, ecosystem management, and special-status animal and plant species. All actions are reviewed and given site-specific analysis during the NEPA process to determine whether the action will affect special-status species, or terrestrial, wetland or riparian ecosystems.

Impacts to resident species' habitat, as well as impacts to habitat improvement projects and compatibility with the NMDG&F Operations Plan are considered when management actions are proposed. Conservation measures will continue to be taken to protect rare plants listed by the State of New Mexico Natural Heritage Program. All range and watershed improvements will continue to be designed to achieve both livestock and wildlife objectives. This includes location and design of waters and vegetation manipulation projects. Fences will be designed so as to cause the least resistance to wildlife movement.

Hunting and trapping are permitted in the Plan Area and must comply with all applicable NMDG&F regulations. Patrols such as Operation Respect will continue during hunting/trapping seasons.

New roads or trails will not be built into sensitive wildlife habitats, and those in other areas will be designed whenever feasible to direct visitors away from sensitive areas. The AFO may close roads or trails permanently or seasonally where problems are found to exist or are expected to occur within sensitive wildlife areas.

Location and construction of trail treadways will take into consideration and avoid, if possible, conflicts with sensitive wildlife and plant habitats, private waters,

TABLE 2-7

**WILDLIFE HABITAT PROJECTS TO BE
MAINTAINED UNDER THE EL MALPAIS PLAN**

Project Name	Unit	Location	Year Completed	Purpose
York Inverted Umbrella & Exclosure	Cerro Brillante	T. 6 N., R. 12 W. sec. 30, SW $\frac{1}{4}$ NW $\frac{1}{4}$	1982	Provide water for wild- life
La Rendija Inverted Umbrella	Continental Divide	T. 8 N., R. 12 W. sec. 5, NE $\frac{1}{4}$ SW $\frac{1}{4}$	1982	Provide water for wild- life
Malpais Swale Exclosure	West Malpais Wilderness	T. 7 N., R. 12 W. sec. 29, NW $\frac{1}{4}$ NW $\frac{1}{4}$	1982	Reduce livestock use of spring forbs to improve antelope habitat
Laguna Brillante Exclosure	West Malpais Wilderness	T. 6 N., R. 13 W. sec. 3, NE $\frac{1}{4}$ SE $\frac{1}{4}$	1982	Reduce livestock use of spring forbs to improve antelope habitat
Laguna Americana Exclosure	Continental Divide	T. 8 N., R. 13 W. sec. 13, NW $\frac{1}{4}$ NE $\frac{1}{4}$	1982	Protect riparian habitat by excluding livestock
Cerro Chato Exclosure & Wildlife Water	Chain of Craters WSA	T. 7 N., R. 13 W. sec. 17, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, SW $\frac{1}{4}$ SE $\frac{1}{4}$	1982-83	Provide water for wild- life
Cerro Americano Parabolic Guzzler & Exclosure	Continental Divide	T. 8 N., R. 13 W. sec. 11, NW $\frac{1}{4}$ SE $\frac{1}{4}$	1984-85	Provide water for wild- life
Cebolla Spring Exclosure	Brazo	T. 5 N., R. 10 W. sec. 12, NW $\frac{1}{4}$ NW $\frac{1}{4}$	1994	Protect riparian habitat & spring source from livestock use
El Malpais Inverted Umbrellas	Cerro Brillante	T. 6 N., R. 12 W. sec. 31, SE $\frac{1}{4}$ sec. 33, NE $\frac{1}{4}$ sec. 35, NE $\frac{1}{4}$	2000	Provide water for wild- life

private lands, and sensitive cultural resource sites. As individual trails are sited for development and where further NEPA compliance is necessary, all required site-specific studies and clearances will be done and a determination will be made concerning the environmental consequences of the proposal.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes

have been developed for several programs; these are not all-inclusive or final. A potential theme for the Wildlife Program is:

- Visitors should be informed of the importance of dead and living wildlife trees, dead and down trees and logs, and wetlands to wildlife; the disturbance caused by human-wildlife interaction; and hunting and trapping opportunities and requirements on public lands in the Plan Area.

Decisions From Approved El Malpais Plan

In addition to maintaining existing habitats in the proper quality and quantity necessary to support the existing populations in the area, the AFO will increase efforts to improve the quality and quantity of wildlife habitats within the Plan Area. The AFO will undertake up to eight wildlife habitat improvement projects annually (up to three fires and five other projects), generally in areas where limiting factors occur (e.g., lack of water, appropriate habitat). Projects could include water developments such as guzzlers, vegetative manipulation, and fences. Sikes Act funding will be used for these projects whenever appropriate.

Prescribed Fire & Wildland Fire Use

To support appropriate animal populations, the AFO will use two types of fire, prescribed fire and wildland fire use, throughout the Plan Area in a balanced approach to maintain and/or enhance wildlife habitats in the desired vegetative condition. Each wildland fire use or prescribed fire will be used to accomplish specific resource management objectives within a defined geographic area. The fires will generally range from 50 to 1,000 acres in size, with an average of 500 acres.

A Joint Fire Management Plan for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001) has been developed to support resource management goals, especially the restoration or maintenance of natural ecosystems. The *Joint Fire Management Plan* provides for firefighter and public safety, as well as protection of natural and cultural resources and human developments from unwanted wildland fire.

Prescribed fires will be used throughout the Plan Area where appropriate to protect, maintain, improve, or enhance wildlife/livestock habitats and watershed values. In addition, the AFO will use prescribed fires to reduce fuel loading (hazardous fuel reduction) to reduce the risk of large fires in areas where there are high-value resources (e.g., houses, land improvements, recreation facilities, historic structures). A written prescribed fire plan must have been prepared and approved before ignition.

The West Malpais Wilderness is within the Wildland Fire Use For Resource Benefits Fire Management Unit (see Glossary). The Chain of Craters and Canyons Wilderness Study Areas, most of the Cebolla Wilderness, and the Continental Divide, Cerro Brillante and Brazo Units, and parts of the Spur and Breaks Units are in the Conditional Wildland Fire Use Fire Management Unit. The Cerritos de Jaspe and Neck Units are within the Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Map 2-9 in the Fire Management section).

Prairie Dog Colony Enhancement Area

This project will use the south half of the North Pasture and the Head Pasture of the El Malpais Grazing Allotment within the Breaks Unit as a 1,000-acre enhancement area for a prairie dog colony. This is the historic location of the largest known prairie dog colony within the Plan Area, and its enhancement will also help support two local special-status species, the burrowing owl and mountain plover.

If the colony expands to an appropriate size (about 200 acres), the area will also be a potential release site for the black-footed ferret, one of the most endangered mammals on earth. The AFO will work with the NMDG&F to eliminate plague from the prairie dog colony in order to reestablish the black-footed ferret. Other protection measures planned include working with the NMDG&F to eliminate shooting within the Prairie Dog Colony Enhancement Area and moving the Cebolla Canyon Road from its junction with NM 117 to approximately three miles south.



Additionally, this area has been designated as a prairie dog release area. Each year the BLM receives numerous requests from the public for a location for releasing prairie dogs that have been displaced from residential development areas, mainly in Albuquerque and Santa Fe. This is the only prairie dog release area designated on public land in New Mexico.

The area will be managed to support prairie dog habitat requirements, which may be in conflict with other ecosystem practices. Prairie dog towns consist of short grass prairie with a substantial amount of bare ground. To keep the habitat within the area in the appropriate condition to support prairie dogs, the general goal of maintaining ground cover to the greatest extent possible will not be implemented within the 1,000-acre colony area.

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from the prehistoric resources. However, their behavior will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

Wildlife Water Catchments

Rainfall catchments will be constructed as appropriate to help provide wildlife water in areas where it is limited. The following are specific catchments identified to be installed within the Cerro Brillante Unit (with an inverted umbrella design): T. 6 N., R. 12 W., sec. 31, SE¼; T. 6 N., R. 12 W., sec. 33, NE¼; and T. 6 N., R. 12 W., sec. 35, NE¼. These catchments were specifically designed to support the antelope population within the area, although they will provide water for numerous other wildlife species. *[These three catchments have already been constructed under a Rio Puerco RMP decision with Sikes Act funding. Others may be constructed as appropriate in other areas.]*

The AFO will continue to allow use and maintenance of the water catchment within the West Malpais Wilderness using the "minimum tool" concept. *[The Bighole Inverted Umbrella #3 water catchment has been dismantled.]*

Riparian Fencing

The AFO will fence a 1½-mile section of the perennial stream along Cebolla Canyon, below Cebolla Spring (T. 5 N., R. 10 W., secs. 2 and 3). This is one of the few perennial streams occurring within the Plan Area; protection of these unique habitats is an AFO priority. *[The fencing of Cebolla Canyon as a riparian pasture was accomplished in 2000 as part of the NEPA process for re-authorization of the El Malpais Grazing Allotment permit.]*

Wildlife Re-Introductions

The AFO will work with the NMDG&F and the FWS to conduct feasibility evaluations for re-introducing native wildlife and/or plant species within the Plan Area where appropriate. Emphasis will be placed on special-status species. At the present time, no re-introductions of any plant or animal species are planned or being evaluated.

Miscellaneous Wildlife Projects/Operations

The AFO has fenced spring areas used by livestock to exclude them, and will develop livestock and wildlife waters elsewhere. Springs not used by livestock may be developed for wildlife use. To allow for fully functioning riparian condition, exotic species such as saltcedar and Russian olive will be removed using mechanical, biological, or chemical treatments. The AFO will plant willows, cottonwoods, and other native riparian species as needed.

Roads will be closed to increase the isolation in the Plan Area for animals and hunters.

Wildlife viewing opportunities will be identified along as many as eight stretches of road in the NCA (see Map 2-2). The AFO will provide interpretive material and signs to enhance the viewing experience. Watchable wildlife signs will be installed along CR 42, NM 53, and NM 117.

The AFO will construct two primitive trailheads for the Continental Divide National Scenic Trail at Cerro Americano and Cerro Brillante. Each trailhead will

include a graveled parking area for up to 20 vehicles and up to two wayside exhibits (to include watchable wildlife information at Cerro Americano).

Wildlife habitat management in designated wilderness will continue to be guided by the BLM *Wilderness Management Policy* (USDI, BLM 1981c). Hunting and trapping in wilderness will be permitted under applicable State and Federal laws and regulations.

The AFO will continue to allow use and maintenance of the two wildlife exclosures and the water catchment within the West Malpais Wilderness, using the "minimum tool" concept (see Table 2-7). [*The water catchment has been dismantled.*]

Allotment Management Plans/Coordinated Resource Management Plans (AMPs/CRMPs) prepared for grazing allotments/leases will contain objectives and actions for wildlife, watershed management, forests and woodlands, riparian, and fire. If monitoring studies indicate the need, existing plans may be revised, new plans developed, and/or livestock grazing use reduced.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding wildlife habitat. These factors will continue to be considered as the El Malpais Plan is implemented.

- Input from Federal and State wildlife agencies and the scientific community
- Species and habitat of high public and scientific interest
- Species habitat requirements
- Vegetative communities and habitat conditions
- Conflicts between exotic and native species
- Maintenance and enhancement of biological diversity
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat.

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Wildlife Habitat Management Program:

- Designation for OHV use will consider protection of resources such as valuable wildlife habitat.
- Fuelwood will be sold, where possible, in areas where the quality of wildlife habitat will not be degraded, but rather will be enhanced by the sale.

Implementation Guidance From RMP

Continue to review site-specific environmental assessments to ensure that adequate protection or mitigation is provided for biodiversity and special-status species, and to ensure compliance with all Federal and State statutes and regulations.

Participate with the USDA in the review of the annual Animal Damage Control operating plan for the AFO.

Participate in activity- and project-level planning for the implementation of the RMP to ensure that wildlife habitat values are adequately considered.

Continue to implement program coordination, projects, and monitoring studies in Habitat Management Plans (HMPs).

Continue cooperative monitoring studies with the AFO Range staff for areas not covered by HMPs.

Continue the biodiversity, neo-tropical bird, and riparian habitat initiatives through program coordination,

habitat inventory and monitoring, habitat acquisition, and implementation of habitat protection measures.

Decisions Carried Forward From Previous Planning

The following wildlife habitat decisions were carried forward into the Rio Puerco RMP from previous planning documents:

- Cooperate with New Mexico Department of Game and Fish (NMDG&F) to remove all barbary sheep from public lands in the Divide Planning Area. [*NMDG&F no longer has an objective to remove all barbary sheep from public lands, consequently this decision will have a low priority for implementation at this time.*]
- Burn and/or chain 10,000 acres of piñon-juniper [within the entire Divide Planning Area] in 50 to 100 acre irregularly-shaped plots. Seed with browse, grass, and forbs. This land treatment will take precedence over fuelwood management. [*See "Decisions From Approved El Malpais Plan, Prescribed Fire & Wildland Fire Use," above.*]
- Construct rainfall catchments. [*See "Decisions From Approved El Malpais Plan, Wildlife Water Catchments," above.*]
- Design and implement livestock grazing systems to protect mule deer habitat by scheduling non-use or rest during critical periods in essential winter ranges and fawning areas.
- Continue wildlife/range studies to determine habitat capability to support wildlife and livestock numbers.
- Construct antelope passes along the western boundary fence of the York Ranch No. 0076 Allotment. Allottee will be consulted prior to any fence modification. [*See "Decisions From Approved El Malpais Plan, Miscellaneous Wildlife Projects/Operations," above.*]
- Construct rainfall catchments to provide water for antelope. [*See "Decisions From Approved El*

Malpais Plan, Wildlife Water Catchments," above.]

- Seed browse and forbs in 1,000 acre plots.
- Design livestock grazing systems to enhance antelope habitat by removing livestock in key forb producing areas and kidding grounds.
- Fence springs and associated riparian vegetation. [*See "Decisions From Approved El Malpais Plan, Riparian Fencing," above.*]
- Acquire through exchange the riparian/wetland habitat, specifically Cebolla Spring and Laguna Americana. [*Both acquisitions have been accomplished.*]
- Construct reservoirs on public lands to create additional waterfowl and shorebird habitat and to provide livestock waters, contingent on location of feasible sites.

Monitoring/Studies

Wildlife habitat monitoring will follow BLM Manual 6600. In addition, the AFO follows recommendations in *Inventory and Monitoring of Wildlife Habitat* (Cooperrider, et al. 1986) when designing inventory and monitoring efforts. In monitoring condition and trend on key/important wildlife use areas, the Wildlife staff coordinates with the Range and Watershed staffs. All existing wildlife projects (e.g., water developments, wildlife exclosures) are monitored regularly to determine any maintenance needs. Monitoring in support of coal, fuelwood, or range projects in some years or seasons overrides priorities within the Wildlife Program.

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from the prehistoric resources. However, their behavior will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

AMPs/CRMPs prepared for grazing allotments/leases will contain objectives and actions for wildlife, water-

shed management, forests and woodlands, riparian, and fire. If monitoring studies indicate the need, existing plans may be revised, new plans developed, and/or livestock grazing use reduced.

Implementation Priorities

The management objectives as identified under "Management Guidance," "Decisions From Approved El Malpais Plan," and "Guidance From Rio Puerco RMP" will be implemented as funding and personnel are available. Some of the objectives have already been partially or fully implemented as part of resource programs carried out under the Rio Puerco RMP.

Based on availability of funding and manpower, the following would be the priority for wildlife habitat projects:

#1–Wildlife Habitat Projects (Riparian)

- All properly functioning springs and associated riparian/wetland habitats on BLM-administered lands will be maintained at that level. Those features in the Nonfunctional or Functional-At Risk categories will be managed to improve them to the Properly Functioning Condition category. The AFO will maintain or improve these features either by using livestock exclosures, or by implementing grazing management practices to maintain and/or improve them to properly functioning condition.
- Riparian plantings of native species (e.g., willows, cottonwoods) where appropriate.
- Saltcedar removal within all riparian areas.

#2–Wildlife Habitat Projects (Fencing/Waters)

- In accordance with BLM fence standards, new fences will be designed to allow for wildlife passage. Any existing fences that block wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Plan Area.

- Modification to six miles of fence in the Cerro Brillante area is scheduled to be accomplished in FY 2002/03 to help provide for antelope passage.

#3–Prairie Dog Colony Enhancement Area

- Work with the NMDG&F to eliminate shooting within the Prairie Dog Colony Enhancement Area.
- Move the Cebolla Canyon Road from its confluence with NM 117 to approximately three miles south.
- Work with the NMDG&F to eliminate plague from the prairie dog colony in order to reestablish the black-footed ferret.

#4–Prescribed Fire & Wildland Fire Use

- Techado Mesa reforestation burn.
- Chain of Craters and Cebolla Wildlife Habitat/Watershed prescribed burns.

Support Needs

Rangeland Management Forest & Woodland Resources Special-Status Species Riparian & Wetland Habitats Watershed Fire Management

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

In addition, the Wildlife Program will need support from the following resource programs in order to implement the preceding projects:

Engineering & Operations

The Engineering staff will be needed in support of the design and engineering components for development and construction of wildlife projects. In addition, the Labor/Work Crew will be needed to support the construction of wildlife projects, conduct prescribed fires, and maintain existing wildlife projects. This staff will be responsible for moving the Cebolla Can-

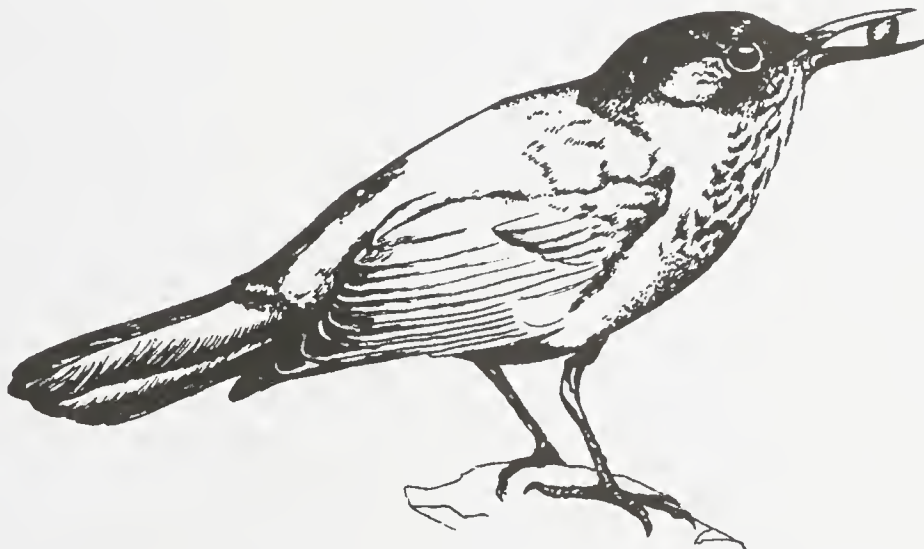
yon Road from its confluence with NM 117 to approximately three miles south.

Cultural Resources

Cultural resources inventory will be needed for all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.



Piñon Jay



THREATENED AND ENDANGERED & OTHER SPECIAL-STATUS SPECIES



Program Goals

The BLM Special-Status Species Program focuses on protecting and/or enhancing the habitats of threatened, endangered, and other special-status species to ensure their continued existence (see Appendices E and F). Special-status species are plants and animals that fall into any of six groups: species listed as endangered or threatened under the Endangered Species Act (ESA); species proposed for listing as endangered or threatened under the ESA; candidate species (formerly Category 1 species); species of concern (formerly Category 2 species); species designated by the BLM State Director as sensitive; and species listed by the State government as endangered or threatened (State-listed).

Management Guidance

Policy and Authorities

BLM policy is to ensure the implementation of the ESA, as amended, and the Federal Land Policy and Management Act (FLPMA). The AFO is committed to complying with the ESA, other applicable laws, regulations, BLM policies, and BLM Manual requirements.

The BLM has a complex set of responsibilities for managing the habitats of threatened, endangered (T&E), and other special-status plants and animals. Section 7 of the ESA requires that Federal agencies carry out programs to conserve listed species, and to ensure that their actions do not jeopardize the continued existence of listed species or adversely modify critical habitat. The AFO conducts formal and informal consultations with the U. S. Fish and Wildlife Service (FWS) under Section 7 of the ESA whenever an action could lead to a "may affect" determination for a listed species or a species proposed for listing. Under BLM policy and guidance, the AFO manages all candidate and BLM sensitive species for their conservation and conservation of their habitats. The AFO strives to ensure that its actions do not contribute to

the need to list any species as threatened or endangered.

Inventories for special-status species and/or their habitats follow BLM Manual 6600 and official procedures outlined by the FWS.

The AFO also manages its programs to conserve State-listed plants and animals. State laws protecting these species apply to all AFO programs and actions as long as they are consistent with FLPMA and other Federal laws.

Field Office Program Guidance

To protect T&E and other special-status species, the AFO will use the following approach in reviewing actions proposed on BLM-administered lands:

- Analyze all proposed actions to determine if T&E and other special-status species or their habitats may be affected.
- Consult with the FWS under Section 7 of the ESA when actions may affect a Federally listed threatened or endangered species or its habitat, and adverse impacts cannot be eliminated. (Note: Both beneficial and adverse impacts can be part of a "may affect" determination.) During the consultation process, the AFO will not authorize any action that will cause any irretrievable or irreversible commitment of resources.
- For "may affect" actions from which adverse impacts cannot be eliminated, initiate an informal conference, and consider requesting technical assistance from the FWS (for Federal candidate species) or the State of New Mexico (for State-listed species).
- Ensure that no AFO action or authorization will adversely affect the likelihood of recovery of any threatened, endangered, or other special-status species.

Actions will not be allowed to occur where they will adversely affect T&E or other special-status species or their habitats. A biological evaluation will be prepared for all actions that could lead to a "may affect" determination for any T&E listed species, species proposed for listing, or candidate species. To help protect special-status species, a National Environmental Policy Act (NEPA) document will be prepared prior to any action being permitted. The NEPA process will include identifying any such species in or near the area of activity; adjusting the project design, size, or location; applying appropriate stipulations (e.g., timing); or not authorizing the action.

Protection of T&E and other special-status species is ongoing on AFO lands, including the Plan Area. All standard wildlife stipulations and mitigation measures for proposed actions will be used to ensure that no adverse "may affect" FWS determinations for T&E and other special-status species will occur.

The AFO will work with the FWS to implement recovery strategies for T&E species. Three recovery plans are now being implemented—for the black-footed ferret, Mexican spotted owl, and peregrine falcon.

All range and watershed improvements will continue to be designed to achieve range, watershed, wildlife, and special-status species objectives for maintaining, improving, or enhancing habitats, particularly for New Mexico Department of Game and Fish (NMDG&F) priority species. This includes location and design of waters and vegetative manipulation projects.

All properly functioning springs and associated riparian/wetland habitats on BLM-administered lands will be maintained at that level (which will support T&E and special-status species dependent on riparian habitat). Those features in the "Nonfunctional" or "Functional-At Risk" categories will be managed to improve them to the "Properly Functioning Condition" category. (See the Glossary for definitions of riparian function ratings.) The AFO will maintain or improve these features either by using livestock exclosures, or by implementing grazing management practices to maintain and/or improve them to properly functioning condition.

In accordance with BLM fence standards, new fences will be designed to allow for wildlife passage. Any

existing fences that block wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Plan Area.

By scheduling livestock grazing use/non-use in critical wildlife and special-status species areas during the appropriate season and to the greatest extent possible, the AFO will design and implement new grazing systems to protect wildlife and special-status species' habitats (e.g., antelope winter range, mountain plover nesting areas).

Raptor protection will be implemented by requiring all new powerlines to be built to "electrocution-proof" specifications. To avoid collisions with powerlines by migrating birds, the mitigating measures identified by the Avian Power Line Interaction Committee (1994) will be incorporated into all new powerlines. Existing lines that are identified as causing electrocution and/or collision problems may also be modified where feasible.

Animal damage control activities on public lands within the Plan Area are guided by the Master Memorandum of Understanding between the Animal and Plant Health Inspection Service, Animal Damage Control (APHIS-ADC) and the BLM (USDA, APHIS 1995). The APHIS-ADC conducts animal damage control activities on BLM-administered lands, while the BLM identifies any special concerns for other resource values (e.g., special-status species, health and safety).

New roads or trails will not be built into sensitive wildlife habitats, and those in other areas will be designed whenever feasible to direct visitors away from sensitive areas. Roads or trails may be closed permanently or seasonally where problems are found to exist or are expected to occur within sensitive wildlife areas.

Location and construction of trail treadways will take into consideration and avoid, if possible, conflicts with sensitive wildlife and plant habitats, private waters, private lands, and sensitive cultural resource sites. As individual trails are sited for development and where further NEPA compliance is necessary, all required site-specific studies and clearances will be done and a determination will be made concerning the environmental consequences of the proposal.

Decisions From Approved El Malpais Plan

Many of the decisions from the Wildlife Habitat section also pertain to Special-Status Species.

Prescribed Fire & Wildland Fire Use

To support appropriate special-status species populations, the AFO will use two types of fire, prescribed fire and wildland fire use (see Glossary), throughout the Plan Area in a balanced approach to maintain and/or enhance special-status species' habitats in the desired vegetative condition. Each wildland fire use or prescribed fire will be used to accomplish specific resource management objectives within a defined geographic area. The fires will range from 50 to 1,000 acres in size, with an average of 500 acres.

A Joint Fire Management Plan for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001) has been developed to support resource management goals, especially the restoration or maintenance of natural ecosystems. The *Joint Fire Management Plan* provides for firefighter and public safety, as well as protection of natural and cultural resources and human developments from unwanted wildland fire.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to cultural resource values (e.g., homesteads, hogans), wilderness values, visual resources, and recreational values within the area. Appropriate special-status species evaluations, cultural resources clearances, and other environmental documentation will be required before any prescribed fire is initiated.

Prairie Dog Colony Enhancement Area

This project will use the south half of the North Pasture and the Head Pasture of the El Malpais Grazing Allotment within the Breaks Unit as a 1,000-acre enhancement area for a prairie dog colony. This is the historic location of the largest known prairie dog colony within the Plan Area, and its enhancement will also help support two local special-status species, the burrowing owl and mountain plover.

If the colony expands to an appropriate size (about 200 acres), the area will also be a potential release site for the black-footed ferret, one of the most endangered mammals on earth. The AFO will work with the NMDG&F to eliminate plague from the prairie dog colony in order to reestablish the black-footed ferret. Other protection measures planned include working with the NMDG&F to eliminate shooting within the Prairie Dog Colony Enhancement Area and moving the Cebolla Canyon Road from its junction with NM 117 to approximately three miles south.

Additionally, this area has been designated as a prairie dog release area. Each year the BLM receives numerous requests from the public for a location for releasing prairie dogs that have been displaced from residential development areas, mainly in Albuquerque and Santa Fe. This is the only prairie dog release area designated on public land in New Mexico.

The area will be managed to support prairie dog habitat requirements, which may be in conflict with other ecosystem practices. Prairie dog towns consist of short grass prairie with a substantial amount of bare ground. To keep the habitat within the area in the appropriate condition to support prairie dogs, the general goal of maintaining ground cover to the greatest extent possible will not be implemented within the 1,000-acre colony area.

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from the prehistoric resources. However, their behavior will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

Riparian Fencing

The AFO will fence a 1½-mile section of the perennial stream along Cebolla Canyon, below Cebolla Spring (T. 5 N., R. 10 W., secs. 2 and 3). This is one of the few perennial streams occurring within the Plan Area; protection of these unique habitats is an AFO priority. [*The fencing of Cebolla Canyon as a riparian pasture was accomplished in 2000 as part of the NEPA process for re-authorization of the El Malpais Grazing Allotment permit.*]

Wildlife Re-Introductions

The AFO will work with the NMDG&F and the FWS to conduct feasibility evaluations for re-introducing native wildlife and/or plant species within the Plan Area where appropriate. Emphasis will be placed on special-status species. At the present time, no re-introductions of any plant or animal species are planned or being evaluated.

Miscellaneous Wildlife Projects/Operations

To allow for fully functioning riparian condition (which will support special-status species dependent on native riparian vegetation), exotic species such as saltcedar and Russian olive will be removed using mechanical, biological, or chemical treatments. The AFO will plant willows, cottonwoods, and other native riparian species as needed.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding wildlife habitat and vegetation, including special-status species. These factors will continue to be considered as the El Malpais Plan is implemented.

- Input from Federal and State wildlife agencies and the scientific community
- Species and habitat of high public and scientific interest
- Species habitat requirements
- Vegetative communities and habitat conditions
- Conflicts between exotic and native species
- Maintenance and enhancement of biological diversity
- Unique or fragile soils and vegetation, including threatened and endangered plant species
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat.

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Special-Status Species Program:

- Designation of OHV use will consider protection of resources such as valuable wildlife and special-status species habitat.
- Fuelwood will be sold, where possible, in areas where the quality of wildlife and special-status species' habitat will not be degraded, but rather will be enhanced by the sale.

Implementation Guidance From RMP

Continue to review site-specific environmental assessments to ensure that adequate protection or mitigation is provided for biodiversity and special-status species, and to ensure compliance with all Federal and State statutes and regulations.

Participate with the USDA in the review of the annual Animal Damage Control operating plan for AFO.

Participate in activity and project-level planning for the implementation of the RMP to ensure that wildlife and special-status species' habitat values are adequately considered.

Continue the biodiversity, neo-tropical bird, and riparian habitat initiatives through program coordination, habitat inventory and monitoring, habitat acquisition, and implementation of habitat protective measures.

Continue to implement program coordination, projects, and monitoring studies in Habitat Management Plans (HMPs).

Continue cooperative monitoring studies with the AFO Range staff for areas not covered by HMPs.

Decisions Carried Forward From Previous Planning

The following wildlife habitat decisions that also apply to special-status species habitat were carried forward into the Rio Puerco RMP from previous planning documents:

- Burn and/or chain 10,000 acres of piñon-juniper [within the entire Divide Planning Area] in 50 to 100 acre irregularly-shaped plots. Seed with browse, grass, and forbs. This land treatment will take precedence over fuelwood management. [See *“Decisions From Approved El Malpais Plan, Prescribed Fire & Wildland Fire Use,”* above.]
- Continue wildlife/range studies to determine habitat capability to support wildlife and livestock numbers.
- Fence springs and associated riparian vegetation. [See *“Decisions From Approved El Malpais Plan, Riparian Fencing,”* above.]
- Acquire through exchange the riparian/wetland habitat, specifically Cebolla Spring and Laguna Americana. [Both acquisitions have been accomplished.]

Monitoring/Studies

Monitoring and inventory efforts for special-status species and/or their habitats will follow BLM Manual 6600 and official procedures outlined by the FWS.

The southwestern willow flycatcher and the mountain plover are being monitored on an annual basis to determine what habitats and areas within the Plan Area these species occupy.

The Prairie Dog Colony Enhancement Area is proposed for an area near the Cebolla Canyon Prehistoric Community. It is expected that the animals will remain in the fine valley-bottom sediments, away from

the prehistoric resources. However, their behavior will be monitored, and if disturbance encroaches into the area of prehistoric ruins, appropriate measures will be taken.

Implementation Priorities

The management objectives as identified under “Management Guidance,” “Decisions From Approved El Malpais Plan,” and “Guidance From Rio Puerco RMP” will be implemented as funding and personnel are available. Some of the objectives have already been partially or fully implemented as part of resource programs carried out under the Rio Puerco RMP.

Based on availability of funding and manpower, the following would be the priority for Special-Status Species Habitat projects.

#1—Special-Status Species Habitat Projects (Riparian)

- All properly functioning springs and associated riparian/wetland habitats on BLM-administered lands will be maintained at that level. Those features in the “Nonfunctional” or “Functional-At Risk” categories will be managed to improve them to the “Properly Functioning Condition” category. The AFO will maintain or improve these features either by using livestock enclosures, or by implementing grazing management practices to maintain and/or improve them to properly functioning condition.
- Riparian plantings of native species (e.g., willow, cottonwoods) where appropriate.
- Saltcedar removal within all riparian areas.

#2—Special-Status Species Habitat Projects (Fencing/Waters)

- In accordance with BLM fence standards, new fences will be designed to allow for wildlife passage. Any existing fences that block wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Plan Area.

#3–Prairie Dog Colony Enhancement Area

- Work with the NMDG&F to eliminate shooting within the Prairie Dog Colony Enhancement Area.
- Move the Cebolla Canyon Road from its junction with NM 117 to approximately three miles south.
- Work with the NMDG&F to eliminate plague from the prairie dog colony in order to reestablish the black-footed ferret.

#4–Prescribed Fire & Wildland Fire Use

- Techado Mesa reforestation burn.
- Chain of Craters and Cebolla Wildlife Habitat/Watershed prescribed burns.

Support Needs

- **Rangeland Management**
- **Forest & Woodland Resources**
- **Wildlife Habitat**
- **Riparian & Wetland Habitats**
- **Watershed**
- **Fire Management**

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

In addition, the Special-Status Species Program will need support from the following resource programs in order to implement the preceding projects:

Engineering & Operations

The Engineering staff will be needed in support of the design and engineering components for development and construction of wildlife projects, including those to benefit special-status species. In addition, the Labor/Work Crew will be needed to support the construction of wildlife projects, conduct prescribed fires, and maintain existing wildlife projects. This staff will be responsible for moving the Cebolla Canyon Road from its confluence with NM 117 to approximately three miles south.

Cultural Resources

Cultural resources inventory will be needed for all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.



Southwestern Willow Flycatcher



VEGETATION/POTENTIAL NATURAL COMMUNITIES



Program Goals

The goal of the Vegetation Program for the Plan Area is to complement natural ecological processes with management practices that will provide for the establishment of the Potential Natural Communities (PNCs), the communities that would become established if natural processes were allowed to be completed. (See Appendix G for more information.) Based on its soils, other physical features, and climate, the environment in the Plan Area is capable of supporting four different PNCs: Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex (USDA, SCS 1993). The PNC goals are long-term targets that are not expected to be reached during the 15- to 20-year life of this Plan.

Management Guidance

Policy and Authorities

Management for the PNC goals and objectives is in accordance with the requirements of the El Malpais Act, which states that the NCA was established to protect, among other resources, the ecological resources of the area. For vegetation management, the guidance provided by law, regulations, and policy comes from the various BLM resource programs. See the Forestry and Woodlands, Rangeland Resources, Riparian Resources, Special-Status Species, and Wildlife Habitat program sections in this document for policies and guidance for vegetation management. The Final Environmental Impact Statement *Vegetation Treatment on BLM Lands* provides policy and procedures for integrated vegetation management activities (USDI, BLM 1991a).

Field Office Program Guidance

Consistent with the PNC goals, the AFO has developed vegetative objectives for the Grass-Shrub, Piñon-Juniper, and Ponderosa Pine PNCs in the Plan Area. Compared to the goals, these objectives are more species- and site-specific. The AFO will use a full range of management techniques (forest and woodland, livestock grazing, riparian, fire, and

watershed) to achieve the PNC vegetative objectives. Progress toward meeting the objectives will be measured during the life of this Plan. Specific objectives are shown on Table 2-8 for the Grass-Shrublands community and on Table 2-9 for the Piñon-Juniper (woodland) and Ponderosa Pine (forest) communities.

Where the existing vegetation differs from the PNC vegetative objectives, the AFO will consider using practices such as prescribed fire, chemical treatment, tree thinning, and livestock grazing management to encourage the achievement of the vegetative objectives. The AFO will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

Fire has played an integral role in the Plan Area. The numerous plant communities have developed as part of a fire-dependent ecosystem (see Appendix F). Periodic burning of these communities is necessary to perpetuate their natural composition, structure, and function.

The primary use of prescribed fires and wildland fire use (see Glossary) by programs other than the Fire Management Program (e.g., Wildlife, Watershed, Rangeland Management) will be to improve vegetative resources and help achieve PNC vegetative objectives; protect, maintain, improve, or enhance wildlife and livestock habitats and watershed values; reduce the fuel load; and blend fire back into the natural processes of a functioning ecosystem.

Livestock grazing management plans and their revisions are key to ensuring that livestock grazing use is not limiting the accomplishment of vegetative objectives. The AFO will continue to involve the public in the National Environmental Policy Act (NEPA) process for grazing permit/lease management plans, including allotment management plans/coordinated resource management plans (AMPs/CRMPs), as well as for site-specific projects. Coordination with affected allottees, involved landowners, the State, and interested members of the public will continue to be part of the process in making changes in livestock grazing management within the Plan Area. Grazing systems will be implemented as needed to ensure that

TABLE 2-8
POTENTIAL NATURAL COMMUNITY OBJECTIVES FOR GRASS-SHRUBLANDS
(plant composition percentages)

Ecological Sites ^a	Grasses		Woody Plants	Forbs ^b
	Warm Season	Cool Season		
Clayey	20-45	20-35	10-25	5-10
Clayey Bottomland	25-40	40-60	15-20	10-15
Clayey Woodland	35-45	20-30	10-20	5-15
Loamy	40-60	20-40	10-15	5-10
Loamy Malpais	35-50	20-35	10-20	5-10
Deep Sand	40-60	20-40	5-10	10-25
Foothills	40-60	20-40	10-20, P-J canopy \leq 25 ^c	5-15
Savanna	20-45	15-40	5-15, P-J canopy \leq 25 ^c	5-10

- Notes: ^a These are areas that have the potential to produce a unique vegetative community (see Appendix G for further explanation).
^b Forbs are non-woody plants other than grasses.
^c P-J is piñon-juniper; the canopy is the covering these trees provide above smaller vegetation.

TABLE 2-9
POTENTIAL NATURAL COMMUNITY OBJECTIVES FOR WOODLANDS AND FORESTS
(plant composition percentages)

Ecological Sites	Grasses	Woody Plants	Forbs
Piñon-Juniper Woodlands	50-70	20-30, P-J canopy 20-40	10-15
Ponderosa Forests	60-80	15-25, Ponderosa canopy 10-40	5-15

PNC vegetative objectives are met and resource conflicts are ameliorated. The effects of all livestock grazing systems will be monitored to determine success.

The AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Rangeland Resources, Wildlife, Watershed, Recreation, Forestry, and Lands. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Vegetation Program is:

- Vegetative manipulation, including fire and fuelwood harvesting, plays a part in conserving our public lands.

Decisions From Approved El Malpais Plan

A full range of management techniques (forest and woodland, livestock grazing, riparian, fire, and watershed) will be used to achieve the PNC vegetative objectives.

To improve watershed conditions and assist in accomplishing vegetative objectives, the AFO will provide for the use of mechanical, chemical, or biological vegetation treatments in AMPs/CRMPs. Treatments will be considered in areas where livestock rest and prescribed fires have not been effective, i.e., areas where junipers too small for fuelwood have invaded (in meadow-like openings, grasslands, or savannas) or areas where fire-tolerant species such as rubber rabbitbrush have increased or invaded (in valley bottoms, drainages, and meadow-like openings).

For watershed management, the AFO will consider building small structures to spread or divert water. Site-specific environmental assessments will be completed before any structures are built.

Control of noxious weeds (e.g., knapweed, bindweed, leafy spurge, thistle) is allowed by mechanical, chemical, or biological means. Site-specific NEPA compli-

ance will be completed before any noxious weeds are treated. [*A Field Office-wide programmatic environmental assessment for noxious weed treatment has been prepared. Site-specific NEPA compliance will tier from the programmatic document.*]

To allow for fully functioning riparian condition, exotic species such as saltcedar and Russian olive will be removed using mechanical, biological, or chemical treatments. The AFO will plant willows, cottonwoods, and other native riparian species as needed.

The AFO will consider vegetation treatments within designated wilderness on a case-by-case basis under guidance found in the BLM *Wilderness Management Policy* (USDI, BLM 1981c).

Any vegetative improvement activity that is likely to result in surface disturbance will be subject to Class III cultural resources inventory.

The Prairie Dog Colony Enhancement Area will be managed to support prairie dog habitat requirements, which may be in conflict with other ecosystem practices. Prairie dog towns consist of short grass prairie with a substantial amount of bare ground. To keep the habitat within the area in the appropriate condition to support prairie dogs, the general goal of maintaining ground cover to the greatest extent possible will not be implemented within the 1,000-acre colony area.

A *Joint Fire Management Plan* has been developed for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001). Through the El Malpais Plan and the activity-level *Joint Fire Management Plan*, the AFO will implement woodland and forest management practices which will allow the return of natural fire to El Malpais. The *Joint Fire Management Plan* identifies management objectives for protecting, maintaining, and/or enhancing resource values using fire. It also establishes restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas).

The *Joint El Malpais Fire Management Plan* was developed to support resource management goals, especially the restoration or maintenance of natural ecosystems. It provides for firefighter and public safety, as well as protection of natural and cultural resources and human developments from unwanted wildland fire.

Prescribed fires and wildland fire use will be used to manage fuel loads (hazardous fuel reduction), protect private property, and accomplish PNC vegetative objectives, including reducing piñon-juniper in a potential ponderosa pine habitat. Prescribed fires will be used where appropriate to protect, maintain, improve, or enhance wildlife/livestock habitats and watershed values. Fires ranging in size from 50 to 1,000 acres each will be used each year. A written prescribed fire plan must have been prepared and approved before ignition. Ponderosa seedlings will be planted on some locations if needed to ensure reestablishment. In areas proposed for prescribed fires, pre- and post-burn rest from grazing will be planned in coordination with the affected allottee(s).

To support appropriate animal populations, the AFO will use the two types of fire, prescribed fire and wildland fire use, throughout the Plan Area in a balanced approach to maintain and/or enhance wildlife habitats in the desired vegetative condition. Each wildland fire use or prescribed fire will be used to accomplish specific resource management objectives within a defined geographic area. The fires will generally range from 50 to 1,000 acres in size, with an average of 500 acres.

The West Malpais Wilderness is within the Wildland Fire Use For Resource Benefits Fire Management Unit. The Chain of Craters and Canyons Wilderness Study Areas, most of the Cebolla Wilderness, and the Continental Divide, Cerro Brillante and Brazo Units, and parts of the Spur and Breaks Units are in the Conditional Wildland Fire Use Fire Management Unit. The Cerritos de Jaspe and Neck Units are within the Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Glossary and Map 2-9 in the Fire Management section).

Individual prescribed fire plans or wildland fire implementation plans are required before fire can be used to improve the vegetative habitats of the Plan Area.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to cultural resource values (e.g., homesteads, hogans), wilderness values, visual resources, and recreational values within the area. Appropriate cultural resources clearances,

special-status species evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding vegetation and wildlife habitat. These factors will continue to be considered as the El Malpais Plan is implemented.

- Input from Federal and State wildlife agencies and the scientific community
- Species and habitat of high public and scientific interest
- Species habitat requirements
- Vegetative communities and habitat conditions
- Conflicts between exotic and native species
- Maintenance and enhancement of biological diversity
- Protection and enhancement of watershed conditions
- Unique or fragile soils and vegetation, including threatened and endangered plant species
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat
- Vegetative treatments or manipulation methods, including prescribed fire
- Use of fuelwood harvest and other forestry practices

Monitoring/Studies

Progress toward meeting the PNC vegetative objectives will be measured during the life of this Plan. Specific objectives are shown on Table 2-8 for the

Grass-Shrubland community and on Table 2-9 for the Piñon-Juniper (woodland) and Ponderosa Pine (forest) communities. This topic is discussed in the Forest and Woodland Resources and Rangeland Resources sections.

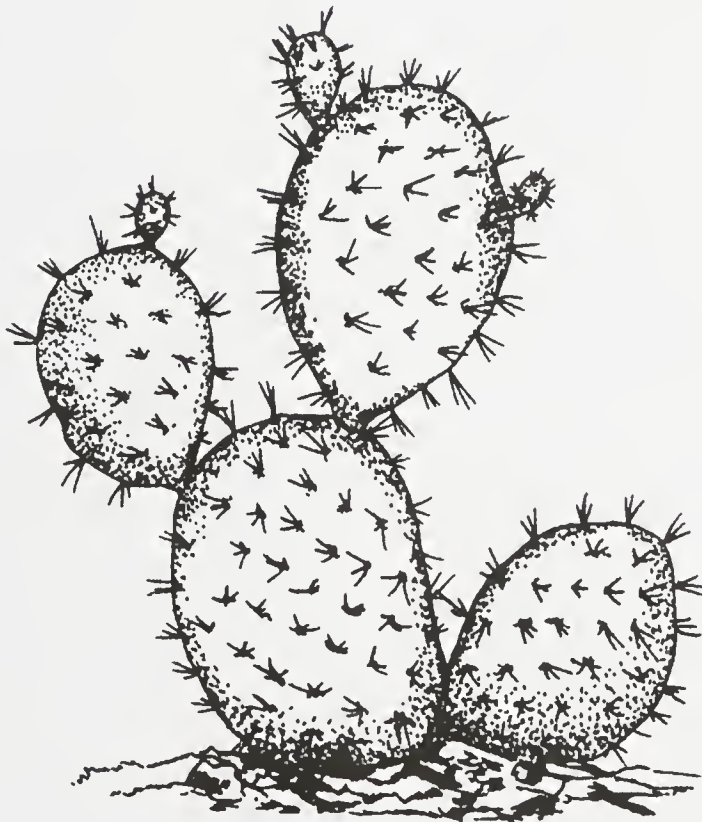
Where the existing vegetation differs from the PNC vegetative objectives, the AFO will consider using practices such as prescribed fire, chemical treatment, tree thinning, and livestock grazing management to encourage the achievement of the vegetative objectives. The AFO will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

Implementation Priorities

Priorities for the Vegetation/Potential Natural Communities Program are listed in the Forest and Woodland Resources and Rangeland Resources sections.

Support Needs

Support needs for the Vegetation/Potential Natural Communities Program are listed in the Forest and Woodland Resources and Rangeland Resources sections.





Program Goals

The AFO's long-term goal for the forest and woodland resources in the Plan Area is to manage ponderosa pine stands for increased reproduction, improved stand vigor, and rehabilitation of degraded sites. For the woodland resources, the long-term goal is to maintain healthy piñon-juniper stands. The goals of the Forest and Woodland Resources Program complement and build on the goals of other programs, especially the Vegetation Program. The goal of that program is to complement natural ecological processes with management practices that will provide for the establishment of the Potential Natural Communities (PNCs). Table 2-8 shows the PNC objectives for forests and woodlands.

Management Guidance

Policy and Authorities

The Federal Land Policy and Management Act (FLPMA) requires that forests and woodlands on BLM-administered lands be managed on the basis of multiple use and sustained yield. The *Public Domain Woodlands Management Policy* (BLM Washington Office Instruction Memorandum 83-102) and the *Public Domain Forest Management Policy* (BLM Washington Office Information Bulletin 90-19) furnish guidelines for management of forests and woodlands. The Material Disposal Act of 1947, as amended, establishes the authority under which the BLM disposes of timber and other wood products. The El Malpais Act provides further guidelines for management of forests and woodlands in El Malpais NCA.

The El Malpais Act specifies that collection of green or dead wood for sale or other commercial purposes is not permitted in the NCA. However, management for PNC vegetative goals and objectives is in accordance with the requirements of the Act, which states that, among other resources, the NCA was established to protect the ecological resources of the area.

Field Office Program Guidance

Where the existing vegetation differs from the PNC vegetative objectives, the AFO will consider using practices such as prescribed fire, chemical treatment,

tree thinning, and livestock grazing management to encourage the achievement of the vegetative objectives. The AFO will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

Collection of green or dead wood for sale or other commercial purposes is not permitted in the NCA under the El Malpais Act. However, the AFO can contract for thinning or salvage of wood products outside wilderness and the WSAs to meet PNC vegetative objectives. When thinning results in a supply of fuelwood, the AFO will notify local groups that the wood is available for home use. In addition, home-use fuelwood sales to accomplish PNC goals, although not specifically called for in the Approved Plan, are consistent with the Act.

Before proposing any part of the Plan Area for woodland or forest management, the AFO will inventory and evaluate it. Based on the evaluation, a site-specific environmental assessment will be prepared for public review and comment before any action is taken.

The AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Forest and Woodland Resources. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

Livestock grazing management will be coordinated and designed to facilitate other programs. The AFO will consider forest and woodland management; management of natural waters, springs and ephemeral flows; wildlife projects; wilderness management; and burn areas in planning for livestock grazing.

Fire has played an integral role in the Plan Area. The numerous plant communities have developed as part of a fire-dependent ecosystem (see Appendix F). Periodic burning of these communities is necessary to perpetuate their natural composition, structure, and function.

The primary use of prescribed fires and wildland fire use (see Glossary) by programs other than the Fire Management Program (e.g., wildlife, watershed, range) will be to improve vegetative resources and help achieve PNC vegetative objectives; protect, maintain, improve, or enhance wildlife and livestock habitats and watershed values; reduce the fuel load;

and blend fire back into the natural processes of a functioning ecosystem.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Forestry Program is:

- Vegetative manipulation, including fire and fuelwood harvesting, plays a part in conserving our public lands.

Decisions From Approved El Malpais Plan

A full range of management techniques (forest and woodland, livestock grazing, riparian, fire, and watershed) will be used to achieve the PNC vegetative objectives.

Piñon-juniper thinning will be allowed to meet woodland and ponderosa pine objectives. Sites selected for such rehabilitation will be those with the highest potential for success, that is, those with the best soils, elevations, slopes, and exposures. A variety of tree sizes and ages will be left. The ground cover from trees left after thinning will be between 10 and 40 percent.

The AFO will consider vegetation treatments within designated wilderness on a case-by-case basis under guidance found in the BLM *Wilderness Management Policy* (USDI, BLM 1981c).

Any vegetative improvement activity that is likely to result in surface disturbance, such as timber thinning operations that include harvesting the trees, will be subject to Class III cultural resources inventory.

Allotment Management Plans/Coordinated Resource Management Plans (AMPs/CRMPs) prepared for grazing allotments/leases will contain objectives and actions for forests and woodlands, wildlife, riparian, fire, and watershed management. If monitoring studies indicate the need, existing plans can be revised, new plans developed, and/or livestock grazing use reduced.

To improve watershed conditions and assist in accomplishing vegetative objectives, the AFO will provide for the use of mechanical, chemical, or biological vegetation treatments in AMPs/CRMPs. Treatments will be considered in areas where livestock rest and prescribed fires have not been effective, i.e., areas where junipers too small for fuelwood have invaded (in meadow-like openings, grasslands, or savannas) or areas where fire-tolerant species such as rubber rabbitbrush have increased or invaded (in valley bottoms, drainages, and meadow-like openings).

A *Joint Fire Management Plan* has been developed for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001). Through the El Malpais Plan and the activity-level *Joint Fire Management Plan*, the AFO will implement woodland and forest management practices which will allow the return of natural fire to El Malpais. The *Joint Fire Management Plan* identifies management objectives for protecting, maintaining, and/or enhancing resource values using fire.

It also establishes restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas).

Prescribed fires and wildland fire use will be used to manage fuel loads (hazardous fuel reduction), protect private property, and accomplish PNC vegetative objectives, including reducing piñon-juniper in potential ponderosa pine habitat. Fires ranging in size from 50 to 1,000 acres each will be used each year. A written prescribed fire plan must have been prepared and approved before ignition. Ponderosa seedlings will be planted on some locations if needed to ensure reestablishment. In areas proposed for prescribed fires, pre- and post-burn rest from grazing will be planned in coordination with the affected allottee(s).



To support appropriate animal populations, the AFO will use the two types of fire, prescribed fire and wildland fire use, throughout the Plan Area in a balanced approach to maintain and/or enhance wildlife habitats in the desired vegetative condition. Each wildland fire use or prescribed fire will be used to accomplish specific resource management objectives within a defined geographic area. The fires will generally range from 50 to 1,000 acres in size, with an average of 500 acres.

Individual prescribed fire plans or wildland fire implementation plans are required before fire can be used to improve the vegetative habitats of the Plan Area.

The West Malpais Wilderness is within the Wildland Fire Use For Resource Benefits Fire Management Unit. The Chain of Craters and Canyons Wilderness Study Areas, most of the Cebolla Wilderness, and the Continental Divide, Cerro Brillante and Brazo Units, and parts of the Spur and Breaks Units are in the Conditional Wildland Fire Use Fire Management Unit. The Cerritos de Jaspe and Neck Units are within the Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Glossary and Map 2-9 in the Fire Management section).

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding vegetation and wildlife habitat. These factors will continue to be considered for forest and woodland management as the El Malpais Plan is implemented.

- Protection and enhancement of watershed conditions
- Unique or fragile soils and vegetation, including threatened and endangered plant species
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat
- Vegetative treatments or manipulation methods, including prescribed fire

- Use of fuelwood harvest and other forestry practices
- Vegetative communities and habitat conditions

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Although not specifically called for in the Approved El Malpais Plan, home-use fuelwood sales to accomplish PNC vegetative objectives could be authorized. Ten of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future fuelwood sales actions:

- Fuelwood will be sold, where possible, in areas where the quality of wildlife habitat will not be degraded, but rather will be enhanced by the sale.
- Fuelwood will be made available from lands which would minimize the deterioration of existing roads, while discouraging the proliferation of new roads and ways.
- Fuelwood will not be made available where erosion problems are severe.
- Roads created for access to fuelwood sale areas will be rehabilitated and abandoned upon completion of the sale, unless considered essential.
- Fuelwood will not be made available in areas where harvesting would degrade or disturb livestock grazing, or the scenic, cultural, historic, recreational, or wilderness values of the area.
- Fuelwood products will be made available first from stands damaged by insects, fire, and/or diseases where practical.

- Fuelwood will be salvaged, where practical, from right-of-way clearings, tree-thinning areas, and chaining and chemically-treated areas.
- Fuelwood products will be made available to the public on a sustained yield basis.
- Fuelwood products will be made available to the public at fair market value.
- Fuelwood products sales will be designed to minimize trespass on non-public lands

Implementation Guidance From RMP

The Woodland Resources Program in the AFO consists of managing limited ponderosa pine stands and more extensive piñon-juniper woodlands. The long-term objective for ponderosa pine management in the AFO is to increase reproduction and stand vigor, as well as to reduce encroachment of piñon-juniper into the ponderosa pine stands. The long-term objectives for woodland (piñon-juniper) management in the AFO are to establish and maintain healthy stands producing fuelwood on a sustained yield basis in established woodland management areas, to reduce unauthorized cutting, and to manage stands with consideration for other forest and woodland product yields.

Providing for the long-term maintenance of the ponderosa pine stands is a goal of the program. Since existing ponderosa pine is managed for enhancement and protection of the stands, rather than the maximization of forest products, no specific allowable cut goals have been established for this species in the AFO. All forestry practices currently being implemented in the AFO are in conformance with standard silvicultural practices and the 1981 environmental assessment *Timber Management Plan* (USDI, BLM 1981b), covering the BLM Albuquerque and Socorro Districts (now Field Offices).

In addition to the guidelines contained in the *Timber Management Plan*, other silvicultural practices are currently being implemented in the AFO. Season of harvest may be varied to minimize conflicts with other resources. Slash is disposed of in a manner conducive to revegetation and protection of the site. Slash burning complies with State air quality regulations. Harvest cuts are laid out in such a manner as to reduce the risk of windthrow. A snag management program

is being implemented to enhance bird habitat. All activity plans developed for forestry and woodlands products are examined through the environmental analysis process and are subject to public review and participation.

The piñon-juniper woodlands within the El Malpais Plan Area are managed on a sustained yield basis. However, in some cases piñon-juniper woodlands are harvested so as to prevent the reestablishment of the stand in order to promote other resource management objectives. For example, piñon-juniper woodland has been intentionally reduced in the past to develop wildlife habitat and promote the growth of ponderosa pine stands.

Active management of piñon-juniper woodlands is a new concept that is being addressed in New Mexico not only by the BLM but by all Federal and State agencies, as well as by private individuals. Information is being gathered through cooperative inventory programs. Once this information is available and with adequate mapping and aerial photographs to coordinate initial efforts, a logical program will be devised. Until reliable data are obtained with intensive field check, goals will remain general in nature.

Small amounts of fuelwood may be made available to the public as a result of wildlife habitat improvement projects and ponderosa pine stand maintenance projects [to meet PNC vegetative objectives].

Designation of fuelwood cutting areas will be consistent with other resource values, and could be used to improve wildlife habitat [to meet PNC vegetative objectives]. Providing fuelwood cutting areas could help to reduce the amount of trespass woodcutting. Cutting piñon and juniper could also help maintain ponderosa pine stands. This type of woodland management would allow a reasonable harvest of firewood while protecting or enhancing other resource values.

Fuelwood cutting areas will be inventoried and sampled to help determine the allowable cut. After these areas are inventoried, a detailed site-specific plan and environmental assessment will be completed which will implement a permit system, appropriate fees, allowable cut, clean-up enforcement, and a monitoring plan. The public will then be notified in the local news media of the fuelwood cutting areas and requirements.

The first priority sources for fuelwood supply in the AFO are, when practical, dead-and-down wood from chainings and chemically-treated areas, right-of-way clearings, and tree-thinning areas. Greenwood areas are utilized last. Specific silvicultural standards are established at the activity-planning stage and are prepared on a site-specific basis. The silvicultural standards are consistent with acceptable methods for the species and site. Slash treatment follows the same guidelines identified for the ponderosa pine program.

Decisions Carried Forward From Previous Planning

The following forest and woodlands decisions were carried forward into the Rio Puerco RMP from previous planning documents:

- Establish forest and woodland monitoring areas on Techado Mesa.
- Lay out and open commercial and individual firewood cutting areas in the following areas: Chain of Craters—individual use, green wood. The amount cut each year will be on a sustained yield basis; volume will be dependent on approved activity plans. *[This decision is not consistent with the requirements of the El Malpais Act and cannot be implemented.]*
- Land treatments identified in RM-2.5, WL-2.1, and W-1.5 will take precedence over fuelwood management.
- Cruise and mark ponderosa pine. Salvage and mortality timber sales as demand arises, the volume will be determined during activity planning. Land treatments identified in RM-2.5, WL-2.1, and W-1.5 will take precedence over fuelwood management. *[This decision is not consistent with the requirements of the El Malpais Act and cannot be implemented.]*

Monitoring/Studies

The AFO will conduct site-specific monitoring on treated areas to evaluate success in attaining the PNC vegetative objectives. Compliance checks will be conducted in fuelwood and timber sale areas to ensure adherence to permit and contract terms and condi-

tions. Patrols, surveillance, and enforcement actions will be used to deter unauthorized harvest of wood products. In addition, the AFO will consider using remote sensing information (e.g., satellite data, aerial photographs) to monitor changes in vegetative communities. This information will be evaluated to determine the cause of change, the effects, and any corrective action needed.

Monitoring studies are being conducted to evaluate the success of ponderosa pine reforestations (e.g., mortality studies) in those areas which have been harvested to improve ponderosa pine habitat (stand vigor and reproduction).

AMPs/CRMPs will contain objectives and actions for forests and woodlands, wildlife, riparian, fire, and watershed management. If monitoring studies indicate the need, existing plans can be revised, new plans developed, and/or livestock grazing use reduced.

Implementation Priorities

- Manage ponderosa pine stands for increased reproduction, improved stand vigor, and rehabilitation of degraded sites.
- Maintain healthy piñon-juniper stands.

Support Needs

Rangeland Management Wildlife Habitat Special-Status Species Riparian & Wetland Habitats Watershed Fire Management

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

Lands & Realty

Site-specific planning for woodland and forest improvement projects may require easement acquisition across non-Federal land.

Cadastral Survey

Cadastral survey of several small parcels has been requested to positively identify the boundaries of public land prior to forest and woodland improvement project actions.

Cultural Resources

Cultural resources inventory will be needed for all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.





Program Goals

The primary goals of this program in the Plan Area are to manage for healthy rangelands and ensure that livestock grazing management on each allotment contributes to the accomplishment of the Potential Natural Community (PNC) vegetative objectives shown on Table 2-8 for grass-shrubland communities and Table 2-9 for woodland and forest communities. Proper management of grazing is essential to ensure that the PNC vegetative objectives are achieved.

Management Guidance

Policy and Authorities

The grazing program is authorized by the Taylor Grazing Act, the Federal Land Policy and Management Act, the Public Rangeland Improvement Act, and the Federal grazing regulations (43 CFR 4100, including the recently adopted Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration at 43 CFR 4180). The El Malpais Act provides for the continuation of livestock grazing within the NCA (including designated wilderness) under these and other applicable Federal laws. Additional guidance for livestock grazing in designated wilderness is provided by the Wilderness Act, Section 108 of Public Law (P. L.) 96-560, the House Report "Grazing in National Forest Wilderness" accompanying P. L. 96-560, and the BLM *Wilderness Management Policy* (USDI, BLM 1981c).

Field Office Program Guidance

Livestock grazing management will be coordinated and designed to facilitate other programs. The AFO will consider burn areas; wildlife projects; management of natural waters, springs and ephemeral flows; wilderness management; and forest and woodland management in planning for livestock grazing management.

Where the existing vegetation differs from the PNC vegetative objectives, the AFO will consider using practices such as prescribed fire, chemical treatment, tree thinning, and livestock grazing management to

encourage the achievement of the vegetative objectives. The AFO will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

For example, range management must coordinate with the Fire Program. Fire has played an integral role in the Plan Area, which is made up of numerous plant communities that have developed as part of a fire-dependent ecosystem. Periodic burning of these communities is necessary to perpetuate their natural composition, structure, and function. Reintroducing natural fire to open ponderosa pine habitat can improve forest health, wildlife forage, and ground cover for watershed. In general, grazing management must be designed to provide frequent, routine rest from livestock grazing use to allow recovery for forage species. Furthermore, in areas where natural fire is desired as a management tool, such rest from grazing is even more critical. For these areas to burn properly, they must have an understory of fine fuel (i.e., grasses, forbs, and shrubs), so livestock grazing must be deferred to allow the development of the understory. The length of deferment depends on how much understory is available. On conservatively managed range, no deferment may be required. Conditions such as drought, combined with grazing, may result in a depleted understory. When understory is inadequate to support fire, deferment of livestock grazing use will be planned. The length of deferment would be expected to be about two growing seasons. Where the fine fuel understory has been replaced by woody species, livestock grazing deferment alone will in most cases not be sufficient to restore the understory.

The primary use of prescribed fires and wildland fire use (see Glossary) by programs other than the Fire Management Program (e.g., Rangeland Resources, Wildlife, Watershed) will be to protect, maintain, improve, or enhance wildlife and livestock habitats and watershed values; improve vegetative resources and help achieve PNC vegetative objectives; reduce the fuel load; and blend fire back into the natural processes of a functioning ecosystem.

All range and watershed improvements will continue to be designed to achieve range, watershed, and wildlife objectives for maintaining, improving, or enhancing habitats, particularly for New Mexico Department

of Game and Fish priority species. This includes location and design of waters and vegetative manipulation projects.

All properly functioning springs and associated riparian/wetland habitats on BLM-administered lands will be maintained at that level. Those features in the Nonfunctional or Functional-At Risk categories will be managed to improve them to the Properly Functioning Condition category. (See the Glossary for definitions of riparian function ratings.) The AFO will maintain or improve these features either by using livestock exclosures, or by implementing grazing management practices to maintain and/or improve them to properly functioning condition.

The AFO will take all appropriate actions (e.g., fencing, grazing management practices) to protect riparian/wetland habitats in the Plan Area. Construction activities that remove or destroy riparian vegetation will be avoided. The AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Rangeland Resources. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

In managing livestock grazing, the AFO will design and establish practices that meet riparian and water quality needs. No livestock-related activities such as salting, feeding, construction of holding facilities, or stock driveways will be allowed to occur within riparian zones.

In accordance with BLM fence standards, new fences will be designed to allow wildlife passage. Any existing fences that impede wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Plan Area. Modification to six miles of fence in the Cerro Brillante area is scheduled to be accomplished in 2002 to help provide for antelope passage. This fence modification is being undertaken with Sikes Act funding.

By scheduling livestock grazing use/non-use in critical wildlife areas during the appropriate season and to the greatest extent possible, the AFO will design and implement new grazing systems to protect wildlife habitats (e.g., antelope winter range). New roads or trails will not be built into sensitive wildlife habitats, and those in other areas will be designed whenever feasible to direct visitors away from sensitive areas.

The AFO may close roads or trails permanently or seasonally where problems are found to exist or are expected to occur within sensitive wildlife areas.

The goals and strategies identified in the *Partners Against Weeds* action plan for BLM (USDI, BLM 1996a) will be implemented as needed to help prevent the introduction or spread of noxious weeds in the AFO. These preventative measures will be applied to AFO actions such as range improvements and grazing permits.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. Potential themes for the Rangeland Resources Program are:

- Livestock grazing is a historic use which is part of the cultural resource values for which the NCA was designated by Congress.
- Livestock grazing continues to be a legal activity in the Plan Area. Fences, waters, gates, and other range improvements are important tools for the proper management of livestock grazing.

Grazing Decisions. The *West Socorro Rangeland Management Program* planning document and environmental impact statement (EIS; USDI, BLM 1982a) was completed in accordance with the National Environmental Policy Act (NEPA) to assess the effect of livestock grazing use on the public lands within the planning area, including the current Plan Area. Vegetative monitoring studies were performed for this document on six allotments now within or overlapping the El Malpais Plan Area where changes in grazing management were being considered (see Map 2-8). For the other ten allotments now within or overlapping the El Malpais Plan Area, the EIS concluded that range conditions were acceptable and that no changes in livestock grazing practices were needed. Grazing decisions were issued in 1992 for these six allotments; changes in livestock grazing were made on three allotments, while no changes were needed on the other three.

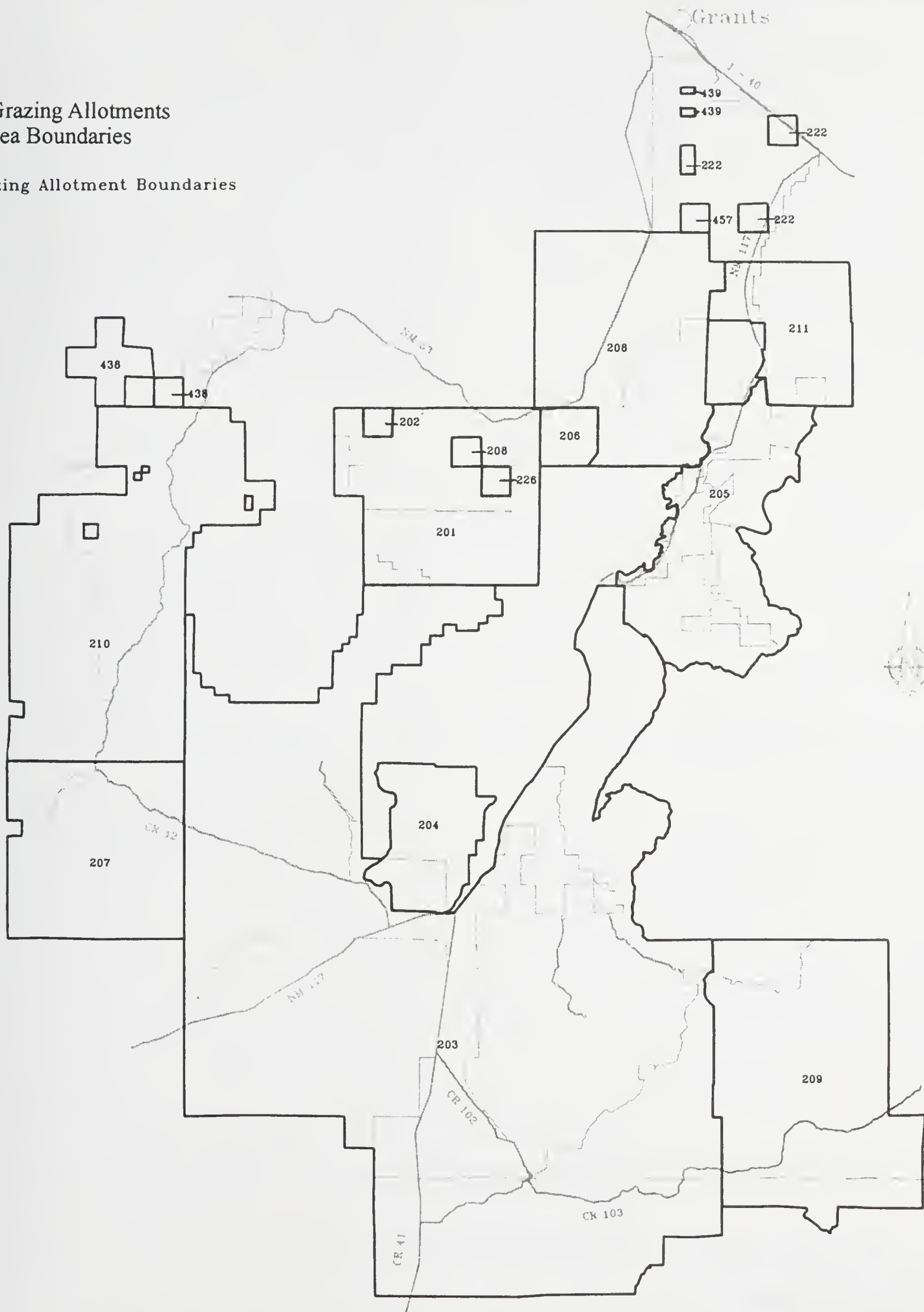
In 1999, the AFO began preparing grazing allotment environment assessments (EAs) for grazing permits/leases at the time of their renewal, usually on a ten-year cycle. The proposed action for the EA, including

El Malpais Plan Area

Map 2-8

Overlap of Grazing Allotments
with Plan Area Boundaries

Grazing Allotment Boundaries



terms and conditions, is added to the permit/lease to mitigate the adverse effects of livestock grazing, and to describe those considerations needed for other resource programs. The proposed action for the EA, together with the terms and conditions, becomes the management plan for the allotment. Permit/lease renewal EAs have been completed for fifteen of the grazing allotments in the Plan Area. Livestock grazing management changes were incorporated into the terms and conditions of the grazing permits/leases as needed to assure that the completed EAs meet the requirements of 43 CFR 4180—Fundamentals of Rangeland Health. The EA for the sixteenth, the Loma Montosa Allotment, will be completed at permit renewal.

Allotment Management Categories. In accordance with the *West Socorro Rangeland Management Program*, the AFO has placed each of the sixteen livestock grazing allotments within or overlapping the Plan Area (see Map 2-8) into a "Selective Management Category" based on its existing vegetative (ecological) condition and/or conflicts with other resource uses (e.g., wildlife, watershed). Categorization provides a system for focusing attention on the allotments on which changes in grazing management may be needed. The criteria for grazing allotment categorization are displayed on Table 2-10, while the specific category for each allotment can be found on Table 2-11.

TABLE 2-10
ALLOTMENT CATEGORIZATION CRITERIA

Category M (Maintain)	Category I (Improve) ^a	Category C (Custodial)
An allotment must meet conditions 1, 2 & 3 or 1, 2, & 4 listed below:	An allotment must meet any one of the following three conditions:	An allotment must meet all of the following conditions:
1. Has no significant resource conflicts, and current grazing management practices are acceptable.	1. Has a potentially significant resource conflict, and current grazing management practices could be improved.	1. Has no significant resource conflicts, and grazing management practices are acceptable.
2. Has only a moderate potential for improvement in forage production (vegetative condition).	2. Has a high potential for improvement in forage production (vegetative condition), and an ecological condition rating of 50 or less.	2. Has a low potential for improvement in forage production (poor soils).
3. Has an ecological condition rating of 38 to 51 and an improving vegetative trend.	3. Has an ecological condition rating of 50 or less and a static or downward vegetative trend.	
4. Has an ecological condition rating of 51 or higher and a static or improving vegetative trend.		
<u>Other Considerations</u> Contains 30% or more public land or more than 1,540 public land acres.	<u>Other Considerations</u> Contains 30% or more public land or more than 1,540 public land acres.	<u>Other Considerations</u> Contains less than 30% public land or less than 1,540 public land acres.

Note: ^a Regardless of its size, any parcel of public land with an identified resource conflict qualifies for the I category.

TABLE 2-11

**SELECTIVE MANAGEMENT CATEGORIES
FOR GRAZING ALLOTMENTS OVERLAPPING THE PLAN AREA**

Allotment Number	Allotment Name	Selective Management Category	Public Land Acres
201	Cerritos de Jaspe	M	9,138
202	Bright's Well	M	304
203	El Malpais	I	136,195
204	Raney	C	1,980
205	Los Pilares	I	13,998
206	Little Hole-in-the-Wall	C	320
207	Cerro Brillante	I	21,760
208	Loma Montosa	I ^a	7,520
209	Techado Mesa	I	35,099
210	Los Cerros ^b	I	40,109
211	Ventana Ridge	M ^a	3,013
222	Chical	C ^c	1,600
226	Arrosa	C	640
438	Monument Lake	C	3,200
439	La Vega	C	160
457	Palomas	C ^c	640
Total			275,676 ^a

Notes: ^a Includes allotment acres that are outside the Plan Area

^b Combined allotment created in 1995 to include the former Cerro Chato Allotment (#200)

^c Allotments created by the AFO as the result of a land exchange with the State of New Mexico in 1987

“T” category (Improve) allotments are managed to improve their ecological condition and resolve resource conflicts. These are the allotments on which the AFO can apply vegetative management techniques, where the PNC data indicate the potential for change is good. Allotments in the I category are expected to stay in that category for ten years or longer, depending on the situation. In some cases infrastructure such as fences and waters needs to be developed before optimum livestock grazing regimes can be implemented. In other circumstances, actions such as prescribed fire to control piñon-juniper encroachment into grass-shrublands or treatment of saltcedar in riparian areas need to be completed to complement grazing management. Even when the conditions needed to change a grazing allotment from the I to the M category have been attained, it is better to delay the category change for another five-year evaluation period, increasing the likelihood that the changes will remain effective in the long term.

“M” category (Maintain) allotments are managed to maintain current satisfactory resource conditions. “C” category (Custodial) allotments typically contain small amounts of unconsolidated public lands, have no resource conflicts, and/or have a low potential for improved resource condition. They are kept in Federal ownership, with grazing fees collected, but without large investments of time or money.

Changes in Livestock Grazing Management. The AFO will continue to implement specific prescriptions to accomplish vegetative goals and objectives.

Allotment-specific prescriptions can be as simple as a pasture rotational grazing plan, or as involved as preparation of an activity plan. Typically, management changes are implemented, monitored, and evaluated. Based on the evaluations, management recommendations are made for continuation of current management or for new changes to accomplish objectives. Prescriptions for changing livestock grazing management are usually made to “I” category allotments only. For “M” and “C” category allotments, grazing allottee management practices are acceptable and no formally documented livestock management plan is required beyond the EA proposed action/terms and conditions. In most cases, a “M” or “C” category allotment would be changed to the “I” category prior to proposing changes in livestock grazing management.

In general, detailed activity plans, either Allotment Management Plans (AMPs) or Coordinated Resource

Management Plans (CRMPs), are prepared for “I” category allotments. AMPs contain goals and objectives and site-specific prescriptions for livestock grazing practices to meet those goals and objectives. They also outline required monitoring studies. CRMPs differ from AMPs in that they contain site-specific prescriptions for a variety of resource programs. As a consequence, CRMPs require a larger commitment of staff and resources to complete. However, budget priorities may not support preparation of either type of detailed activity plan. Rather than defer change in livestock grazing management until resources can be devoted to preparation of a detailed activity plan, a simple pasture rotational grazing plan can be developed and implemented.

Livestock grazing management plans and their revisions are key to ensuring that livestock grazing use is not limiting the accomplishment of vegetative objectives. The AFO will continue to involve the public in the NEPA process for permit/lease management plans, including AMPs/CRMPs, as well as for site-specific projects. Coordination with affected allottees, involved landowners, the State, and interested members of the public will continue to be part of the process in making changes in livestock grazing management within the Plan Area.

The AFO has developed a CRMP for the Cerro Brillante (#207) Allotment, and AMPs for the Los Pilares (#205), Techado Mesa (#209), Los Cerros (#210), and El Malpais (#203) Allotments.

Rangeland Improvements. Rangeland improvements will continue to be placed within the Plan Area to improve livestock grazing management, for accomplishment of vegetative objectives, and to benefit other programs, particularly Riparian, Forest and Woodlands, Wildlife Habitat, and Watershed. Grazing allottee requests for rangeland improvements will also be considered. Prior to approval, each rangeland improvement project proposed will be assessed to determine the impact of the project and identify mitigative measures as appropriate. Types of rangeland improvement projects which could be applied to the public lands within the Plan Area include, but are not limited to, fences, spring developments, drilling and equipping of water wells, water pipelines, prescribed fires, mechanical treatments, and chemical treatments. All laws, regulations, and management guidance will be considered in the planning, approval, and implementation of each rangeland improvement project.

Grazing Systems. Grazing systems will be implemented as needed to ensure that PNC vegetative objectives are met and resource conflicts are ameliorated. Common grazing systems are rest rotation, deferred rotation, deferred grazing, alternative grazing, and short duration high intensity grazing. As new and different systems are proposed, they can be attempted if the livestock grazing deferment periods specified below under "Decisions From Approved El Malpais Plan" are followed. The effects of all livestock grazing systems will be monitored to determine success.

Livestock Grazing in Wilderness. In the NCA wildernesses, the El Malpais Act allows previously established livestock grazing to continue, subject to certain guidelines, as long as the intent of Congress regarding grazing in such areas is implemented (as expressed in the Wilderness Act and P. L. 96-560). The BLM *Wilderness Management Policy* allows motorized and mechanized equipment to be used to maintain range improvements in wilderness. The AFO has developed Range Improvement Management (RIM) Plans for the individual allotments overlapping the West Malpais and Cebolla Wildernesses; the plans provide guidance and procedures for using such equipment, and the AFO will continue to follow them. Allottees may use motorized vehicles on authorized routes to access windmills for annual maintenance, fences every five years, and dirt tanks every ten years. The plans are on file at the AFO. If Congress designates all or portions of the Canyons WSA as part of the Cebolla Wilderness, RIM Plans for the affected allotments may need to be amended.

Monitoring. The AFO and allottees modify livestock grazing practices based on the results of systematic vegetative monitoring studies. These studies are done on all allotments, with the intensity and frequency based on allotment category. If evaluations indicate the need, the AFO will implement changes in livestock grazing management through agreements with allottees or through management decisions. The selective management category of an allotment may be changed based on new resource information.

The AFO will continue to do on-the-ground monitoring studies. To enhance these monitoring methods and increase the success of vegetative management practices, the AFO will apply advancing technology such as remote sensing data and Geographic Information Systems (computer) analysis. Comparison and

evaluation of these data could be used by the AFO to make adjustments in grazing use (including reduced livestock numbers). The AFO could use these types of data to determine the effectiveness of livestock grazing management in accomplishing the vegetation objectives. Vegetative treatments will be applied in specific areas where they are likely to succeed to encourage the formation of PNCs.

Decisions From Approved El Malpais Plan

The El Malpais Plan decisions specifically affecting Rangeland Resources are those regarding the PNC vegetative goals and objectives presented in the Vegetation/Potential Natural Communities section. A full range of management techniques (livestock grazing, forest and woodland, riparian, fire, and watershed) will be used to achieve the PNC vegetative objectives. Changes in livestock grazing management will continue to be made to ensure accomplishment of PNC vegetative objectives. Grazing management plans, including AMPs/CRMPs, will continue to be developed and revised as needed to ensure that progress is being made toward accomplishment of PNC vegetative objectives. A CRMP for the Cerro Brillante Allotment and an AMP for the El Malpais Allotment have recently been completed. They both include PNC vegetative objectives and requirements for minimum rest periods from livestock grazing. The AMPs for the Los Cerros, Techado Mesa, and Los Pilares allotments have been amended to include PNC vegetative objectives and requirements for minimum rest periods. The minimum livestock grazing rest period will be from April 15 to October 15 for at least one pasture each year. New range improvements will be developed if needed to provide this rest. AMPs/CRMPs will contain objectives and actions for forests and woodlands, wildlife, riparian, fire, and watershed management. If monitoring studies indicate the need, existing plans may be revised, new plans developed, and/or livestock grazing use reduced.

The AFO has fenced spring areas used by livestock to exclude them, and will develop livestock and wildlife waters elsewhere.

To improve watershed conditions and assist in accomplishing vegetative objectives, the AFO will provide for the use of mechanical, chemical, or biological vegetation treatments in AMPs/CRMPs. Treatments

will be considered in areas where livestock rest and prescribed fires have not been effective, i.e., areas where junipers too small for fuelwood have invaded (in meadow-like openings, grasslands, or savannas) or areas where fire-tolerant species such as rubber rabbit-brush have increased or invaded (in valley bottoms, drainages, and meadow-like openings).

Control of noxious weeds (e.g., knapweed, bindweed, leafy spurge, thistle) is allowed by mechanical, chemical, or biological means. Site-specific environmental assessments will be completed before any noxious weeds are treated. *[A Field Office-wide programmatic environmental assessment for noxious weed treatment has been prepared. Site-specific NEPA compliance will tier from the programmatic document.]*

A *Joint Fire Management Plan* has been developed for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001). Through the El Malpais Plan and the activity-level *Joint Fire Management Plan*, the AFO will implement woodland and forest management practices which will allow the return of natural fire to El Malpais. The *Joint Fire Management Plan* identifies management objectives for protecting, maintaining, and/or enhancing resource values using fire. It also establishes restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas).

Prescribed fires and wildland fire use will be used to manage fuel loads (hazardous fuel reduction), protect private property, and accomplish PNC vegetative objectives, including reducing piñon-juniper in potential ponderosa pine habitat. Prescribed fires will be used where appropriate to protect, maintain, improve, or enhance wildlife/livestock habitats and watershed values. Fires ranging in size from 50 to 1,000 acres each will be used each year. A written prescribed fire plan must have been prepared and approved before ignition. Ponderosa seedlings will be planted on some locations if needed to ensure reestablishment. In areas proposed for prescribed fires, pre- and post-burn rest from grazing will be planned in coordination with the affected allottee(s).

The West Malpais Wilderness is within the *Joint Fire Management Plan's* Wildland Fire Use For Resource Benefits Fire Management Unit. The Chain of Craters

and Canyons Wilderness Study Areas, most of the Cebolla Wilderness, and the Continental Divide, Cerro Brillante and Brazo Units, and parts of the Spur and Breaks Units are in the Conditional Wildland Fire Use Fire Management Unit. The Cerritos de Jaspe and Neck Units are within the Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Glossary and Map 2-9 in the Fire Management section).

The AFO will consider vegetation treatments within designated wilderness on a case-by-case basis under guidance found in the BLM *Wilderness Management Policy*. The AFO will control fires in wilderness to prevent their spread outside wilderness and to prevent the loss of human life or property. Fire suppression methods will be those that cause the minimum adverse impact on wilderness character.

Motorized vehicle access over 23.3 miles of routes inside wilderness will be limited to authorized users. Such access will be allowed only to non-Federal inholdings and livestock grazing operations over 5.5 miles of authorized routes in the Cebolla Wilderness and 17.8 miles in the West Malpais Wilderness. Access for livestock grazing use will continue under the conditions set in the BLM Range Improvement Management Plans for the individual allotments overlapping the Cebolla and West Malpais Wildernesses (USDI, BLM 1990a, 1990b, 1990d). Allottees may use motorized vehicles on authorized routes to access windmills for annual maintenance, fences every five years, and dirt tanks every ten years. Access to inholdings will be authorized over routes selected by the AFO to cause the least impact to the areas' wilderness character, while serving the purposes for which the private land is held or used.

Eight historic homesteads in the Plan Area have been fenced to exclude livestock. Additional homesteads may be fenced if warranted.

Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the issue questions regarding vegetation, wildlife habitat, and wilderness management. These factors will continue to be considered as the El Malpais Plan is implemented.

- Protection and enhancement of watershed conditions
- Unique or fragile soils and vegetation, including threatened and endangered plant species
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat
- Vegetative treatments or manipulation methods, including prescribed fire
- Use of fuelwood harvest and other forestry practices
- Vegetative communities and habitat conditions
- Maintenance requirements for range improvements

Guidance From Rio Puerco RMP

Some of the decisions from the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

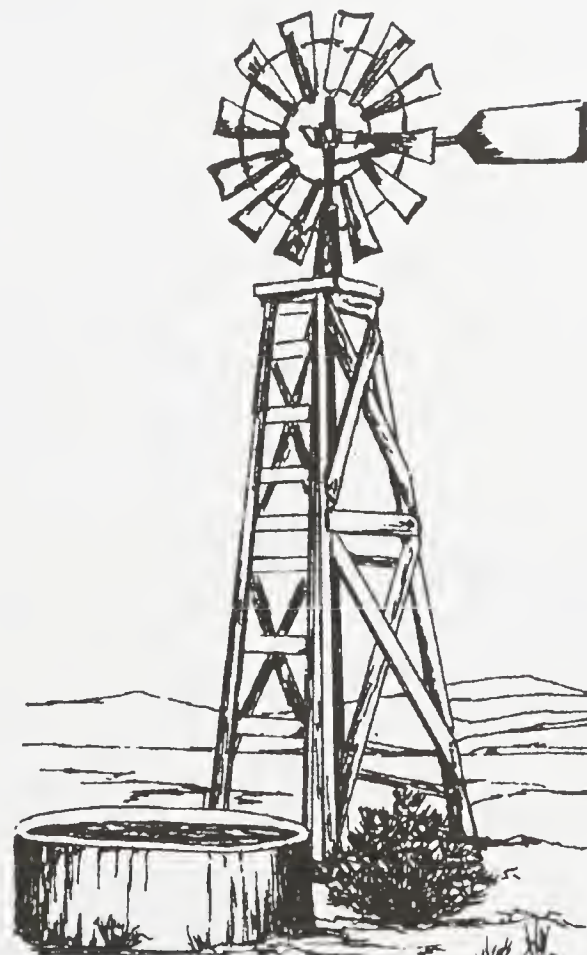
Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the RMP issues remain applicable for future actions in the Rangeland Resources Program:

- OHV use performed in conformance with existing leases, permits, rights-of-way stipulations, or other land-use authorization will not be restricted.
- Fuelwood will not be made available where harvesting would degrade or disturb livestock grazing.

Decisions Carried Forward From Previous Planning

West Socorro Rangeland Management Program and EIS. The *West Socorro Rangeland Management Program* (USDI, BLM 1982a) contains additional proposed actions and management objectives for public land within the Plan Area. In 1983, administration of the public land in Cibola and Valencia Counties was transferred to what is now the Albuquerque Field Office from what is now the Socorro Field Office. Twelve grazing allotments overlapping the Plan Area were part of this transfer. In 1992 to implement the *West Socorro Rangeland Management Program*, the AFO issued decisions based on monitoring studies to establish new grazing preferences, which included sufficient forage to provide for wildlife needs. Table H-1 in Appendix H displays the grazing preferences before and after the monitoring studies and new decisions. In addition to these adjustments, other changes in grazing management have been ongoing. These are shown in Table H-2 in the same appendix.



Divide Management Framework Plan. The following decisions affecting the Rangeland Resources Program were carried forward into the Rio Puerco RMP from the Divide Management Framework Plan:

- Construct a 20-acre enclosure on each of 33 range sites [in the entire Divide Planning Unit] for vegetative condition and trend studies.
- Perform seeding trials in each of 33 range sites [in the entire Divide Planning Unit] to determine the potential forage production by re-seeding using a multiple approach.
- Maintain existing land treatments to achieve maximum forage production primarily by prescribed burning. Other methods such as herbicide application, tree cutting, and chaining would be considered.
- Burn and/or chain 10,000 acres of piñon-juniper [in the entire Divide Planning Unit] in 50 to 100 acre irregularly-shaped plots. Seed with browse, grass, and forbs. This land treatment will take precedence over fuelwood management. [See *“Decisions From Approved El Malpais Plan, Prescribed Fire & Wildland Fire Use,”* above.]
- Design and implement livestock grazing systems to protect mule deer habitat by scheduling non-use or rest during critical periods in essential winter ranges and fawning areas.
- Continue wildlife/range studies to determine habitat capability to support wildlife and livestock numbers.
- Construct antelope passes along the western boundary fence of the York Ranch No. 0076 Allotment. Allottee will be consulted prior to any fence modification. [See *“Decisions From Approved El Malpais Plan, Miscellaneous Wildlife Projects/Operations,”* above.]
- Seed browse and forbs in 1,000 acre plots.
- Design livestock grazing systems to enhance antelope habitat by removing livestock in key forb producing areas and kidding grounds.
- Construct reservoirs on public lands to create additional waterfowl and shorebird habitat and to

provide livestock waters, contingent on location of feasible sites.

Monitoring/Studies

The AFO and allottees modify livestock grazing practices based on the results of systematic vegetative monitoring studies. These studies are done on all allotments, with the intensity and frequency based on allotment category. C category allotments are field checked before permit/lease renewal or transfer. For the M category allotments, vegetative trend data is collected and reviewed before permit renewal. Trend and forage utilization studies are done and evaluated every five years on the I category allotments. If evaluations indicate the need, the AFO will implement changes in livestock grazing management through agreements with allottees or through management decisions. An allotment's selective management category is changed based on new resource information.

The AFO will continue to do on-the-ground monitoring studies. To enhance these monitoring methods and increase the success of vegetative management practices, the AFO will apply advancing technology such as remote sensing data and Geographic Information Systems (computer) analysis. Comparison and evaluation of these data could be used by the AFO to make adjustments in grazing use (including reduced livestock numbers). These types of data may be used to determine the effectiveness of livestock grazing management in accomplishing vegetation objectives.

If monitoring studies indicate that objectives for forestry and woodlands, wildlife, riparian, fire, or watershed management are not being met, existing AMPs/CRMPs may be revised, new plans developed, and/or livestock grazing use reduced.

Eight historic homesteads in the Plan Area have been fenced to exclude livestock. The condition of other historic homesteads will be monitored. Additional homesteads can be fenced if warranted.

Implementation Priorities

The management objectives as identified under “Management Guidance,” “Decisions From Approved El Malpais Plan,” and “Guidance From Rio Puerco RMP” will be implemented as funding and personnel are available. Some of the objectives have already

been partially or fully implemented as part of resource programs carried out under the Rio Puerco RMP. The following is priority order for management of rangeland resources if funding is available:

Continue routine grazing administration, including billings, unauthorized use detection and abatement, range improvements, transfers, and other day-to-day customer service activities.

Perform livestock grazing management compliance checks including field inspections and grazing allottee contacts.

Perform grazing monitoring studies including data evaluations in accordance with "Monitoring/Studies," above.

Coordinate with AFO resource specialists including, but not limited to, wildlife, recreation, wilderness, and forestry and woodlands, to develop projects which will ensure that the PNC vegetative objectives are being met.

Based on evaluations of monitoring studies, implement changes in grazing management as needed. Permit(s)/lease(s) may need to be reissued to implement management changes.

Support Needs

Forest & Woodland Resources
Wildlife Habitat
Special-Status Species
Riparian & Wetland Habitats
Watershed
Fire Management

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its PNCs. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

Cultural Resources

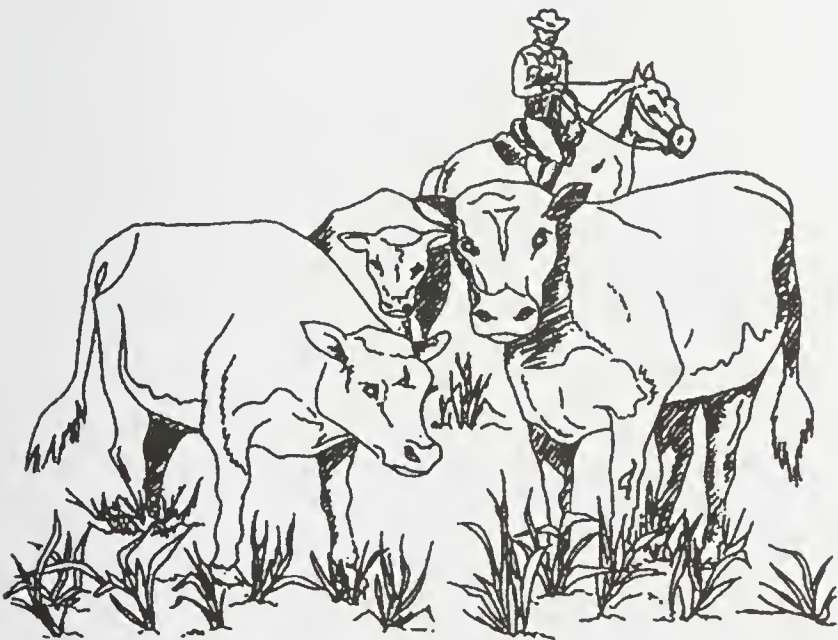
Cultural Resources Program support is required before rangeland improvement projects can be approved.

American Indian Consultation

American Indian consultation is also required before rangeland improvement projects can be approved.

Lands & Realty

Support from the Lands and Realty Program is important when access is needed to support effective decisions which will provide progress to achieving PNCs.





Program Goals

The goal of this program is to manage the riparian and wetland habitats in the Plan Area for their protection and enhancement. BLM policy is to achieve a healthy and productive ecological condition for all public riparian areas (USDI, BLM 1991b). Riparian-wetland management goals and objectives fall into four general management strategies: maintenance of existing riparian conditions; improvement of degraded riparian conditions; recovery of lost riparian areas; and development of new riparian areas.

Management Guidance

Policy and Authorities

The Taylor Grazing Act of 1934, as amended, directs the Secretary of the Interior to stop injury to the public lands by preventing overgrazing and soil deterioration. It also authorizes the Secretary to continue the study of erosion and flood control and to perform such work as may be necessary to amply protect and rehabilitate such areas. The Federal Land Policy and Management Act of 1976 (FLPMA) requires that "the public lands be managed in a manner that will protect the quality of . . . ecological, environmental, . . . water resources, and . . . that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals . . ." FLPMA also requires compliance with state and Federal water pollution standards. The Public Rangeland Improvement Act of 1978 directs improvement of rangeland conditions in accordance with land-use planning under FLPMA. The Water Quality Act of 1987, as it amends the Federal Water Pollution Control Act (Clean Water Act) of 1977 has the objective to restore and maintain ". . . the chemical, physical, and biological integrity of the Nation's water . . . at a level of quality which provides protection for fish, shellfish, wildlife, and recreational use."

A number of executive orders (EOs) also provide guidance to the Riparian and Wetland Habitat Program. EO 11988 of 1977–Floodplain Management, as amended by EO 12148, directs each Federal agency to take action to avoid, to the extent possible, the long- and short-term adverse impacts associated with

the occupancy and modification of floodplains. Agencies are further required to avoid direct or indirect support of floodplain development whenever there is a practicable alternative. Each agency is required to provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for acquiring, managing, and disposing of Federal lands and facilities. EO 11990 of 1977 (Protection of Wetlands) directs Federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial value of wetlands in carrying out programs affecting land use. All Federally initiated, financed, or permitted construction projects in wetlands must include all practical measures to minimize adverse impacts. This requires that all leases, rights-of-way, easements, and disposals involving Federal wetlands contain restrictions to uses by the grantee which are consistent with Federal, state, and local wetland regulations.

The Department of the Interior has a mandate for the management of the Nation's natural resources, including riparian/wetland areas. The Department's policy is to exercise leadership and take action to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of wetlands and floodplains.

The BLM's policy, in accordance with laws, EOs, and Departmental guidance, is to maintain, restore, or improve riparian-wetland ecosystems to achieve a healthy and properly functioning condition that assures biological diversity, productivity, and sustainability. The BLM Manual 1737–Riparian-Wetland Area Management pertains to Riparian Resources. In addition, managers are to ensure that riparian-wetland determinations, including management objectives, are made in accordance with the Supplemental Program Guidance (SPG) for resource management planning, Manual Sections 1622.1 and 1624. Programs with SPG relating to riparian-wetland management include Rangeland Resources; Recreation; Wildlife Habitat; Soil, Water, and Air Resources; Forest and Woodland Resources; and Minerals Management. According to the SPG, the BLM must:

- Establish riparian-wetland management objectives using an interdisciplinary approach and incorporate these as appropriate in site-specific activity plans.

- Incorporate the necessary stipulations in land-use authorizations and contracts to ensure that riparian/wetland objectives in land-use and activity plans are met.
- Monitor all actions and mitigating measures.
- Evaluate (through interdisciplinary teams) monitoring results to ensure that management prescriptions are achieving their intended purpose. If they are not, management prescriptions, associated enforcement, and treatments must be changed to ensure that riparian-wetland objectives are being met.

Field Office Program Guidance

The AFO also manages riparian resources under an amendment to the Rio Puerco RMP, the *Riparian and Aquatic Habitat Management Plan* (USDI, BLM 2000a). Guidance from this document is listed below under "Guidance From Rio Puerco RMP."

Riparian/wetland areas are those lands directly influenced by permanent water, such as spring areas or streambanks. They have visible vegetation or physical characteristics that reflect this influence. Riparian areas are extremely limited in size and extent throughout the Plan Area. As such they are extremely important, not only for many species of wildlife, but also for maintenance of water quality, spring and streamflow, and forage production.

The majority of the Plan Area is a closed basin with no external water sources. A few small riparian/wetland marshy areas occur around natural springs in the area. Cebollita and Cebolla are the best known of these springs. Each provides enough water to form a small (less than 10 acre) riparian/wetland area with a less than 1½-mile-long stream below it. There are no other perennial streams in the Plan Area. However, there are temporary playa lakes which can resemble wetlands after large summer rainstorms.

The AFO will take all appropriate actions (e.g., fencing, grazing management practices) to protect riparian/wetland habitats in the Plan Area. Construction activities that remove or destroy riparian vegetation will be avoided. Protection or enhancement of riparian and wetland areas may involve the use of various types of projects and methods of management, including fencing, seasonal use by livestock, voluntary non-

use by livestock, planting of native vegetation, removal of exotic species, terracing and contouring, prescribed burning, limiting vehicle use, removal or restocking of wildlife (e.g., beavers, muskrats), and placing structures to create point bars, enhance sinuosity, or control erosion. Land exchanges may also be appropriate actions to consolidate public land management in and/or adjacent to important riparian/wetland areas.

All springs and associated riparian/wetland habitats on BLM-administered lands that are presently in the Properly Functioning Condition category will be maintained at that level (USDI, BLM 1993, 1994). All springs and associated riparian/wetland habitats that are presently in the Nonfunctional or Functional-At Risk categories will be managed to improve them to the Properly Functioning Condition category. (See the Glossary for definitions of riparian function ratings.) The AFO will maintain or improve these features either by using livestock exclosures, or by implementing grazing management practices to maintain or improve them to properly functioning condition

In managing livestock grazing, the AFO will design and establish practices that meet riparian and water quality needs. No livestock-related activities such as salting, feeding, construction of holding facilities, or stock driveways will be allowed to occur within riparian zones.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Rangeland Resources, Wildlife, Watershed, Recreation, Forestry, and Lands. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

Decisions From Approved El Malpais Plan

The AFO will fence a 1½-mile section of the perennial stream along Cebolla Canyon, below Cebolla Spring (T. 5 N., R. 10 W., secs. 2 and 3). This is one of the few perennial streams occurring within the Plan Area; protection of these unique habitats is an AFO priority. [*The fencing of Cebolla Canyon as a riparian pasture was accomplished in 2000 as part of the National Environmental Policy Act process for re-authorization of the El Malpais Grazing Allotment permit.*]

The AFO will use a full range of management techniques (forest and woodland, livestock grazing, riparian, fire, and watershed) to achieve the potential natural community vegetative objectives.

The AFO has fenced spring areas used by livestock to exclude them, and will develop livestock and wildlife waters elsewhere. Springs not used by livestock may be developed for wildlife use. To allow for fully functioning riparian condition, exotic species such as saltcedar and Russian olive will be removed using mechanical, biological, or chemical treatments. The AFO will plant willows, cottonwoods, and other native riparian species as needed.

A *Joint Fire Management Plan* has been developed for El Malpais NCA and El Malpais National Monument (USDI, BLM and NPS 2001). Through the El Malpais Plan and the activity-level *Joint Fire Management Plan*, the AFO will implement woodland and forest management practices which will allow the return of natural fire to El Malpais. The *Joint Fire Management Plan* identifies management objectives for protecting, maintaining, and/or enhancing resource values using fire. It also establishes restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas).

Allotment Management Plans/Coordinated Resource Management Plans (AMPs/CRMPs) prepared for grazing allotments/leases will contain objectives and actions for riparian, forests and woodlands, wildlife, fire, and watershed management. If monitoring studies indicate the need, existing plans can be revised, new plans developed, and/or livestock grazing use can be reduced.

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to the Riparian and Wetland Habitat Program in El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning." Riparian management emerged as an important issue following completion of the RMP. While there is no implementation guidance from the RMP itself, an amendment to the RMP completed in

2000, *Final Environmental Impact Statement for Riparian and Aquatic Habitat Management in the Albuquerque Field Office—New Mexico, Volume 2: Proposed Riparian and Aquatic Habitat Management Plan* (USDI, BLM 2000a), completed land management planning for riparian resources in the AFO. Decisions from this document are listed below as "Decisions From Riparian EIS."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Riparian and Wetland Habitat Program:

- Designation of OHV use will consider protection of resources such as valuable wildlife habitat . . . and other resource uses. [*Riparian and wetland habitat will be considered under this criterion.*]
- Fuelwood will be sold, where possible, in areas where the quality of wildlife habitat will not be degraded, but rather will be enhanced by the sale. [*Riparian and wetland habitat will be considered under this criterion.*]

Decisions Carried Forward From Previous Planning

The following decisions were carried forward into the Rio Puerco RMP from land management plans completed prior to the RMP:

- Fence springs and associated riparian vegetation. [*See Decisions From Approved El Malpais Plan, Riparian Fencing,* in the *Wildlife Habitat* section.]
- Acquire through exchange the riparian/wetland habitat, specifically Cebolla Spring and Laguna Americana. [*Both acquisitions have been accomplished.*]

Decisions From Riparian EIS

The following decisions from the *Final Environmental Impact Statement for Riparian and Aquatic Habitat Management in the Albuquerque Field Office—New Mexico, Volume 2: Proposed Riparian and*

Aquatic Habitat Management Plan (USDI, BLM 2000a) apply to riparian and wetland habitats in the Plan Area:

- Develop a lotic riparian habitat [running water such as rivers, streams, and springs] protection enclosure in Cebolla Canyon. [*The fencing of Cebolla Canyon as a riparian pasture was accomplished in 2000 as part of the NEPA process for re-authorization of the El Malpais Grazing Allotment permit.*]
- Reestablish an appropriate Cebolla Creek stream crossing for the main Cebolla Canyon road.
- Control invasive plant species (e.g., saltcedar) in Cebolla Canyon.
- Reestablish and/or augment native woody species (e.g., coyote willow, cottonwood) in Cebolla Canyon.
- Develop open water ponds at Cebolla Spring within and/or adjacent to the existing spring protection fence.
- Reestablish and/or augment native woody species at Cebolla Spring.
- Continue monitoring and survey activities at Cebolla Spring.
- Assess the protection of Cebollita Spring and its associated lotic reach.

Monitoring/Studies

The AFO will monitor riparian/wetland habitats using the process for assessing Properly Functioning Condition for lentic systems (standing water habitats such as lakes, ponds, seeps, and meadows) and lotic systems (running water habitats such as rivers, streams, and springs) (USDI, BLM 1993, 1994). Vegetative development is monitored using the process in *Monitoring the Vegetation Resources in Riparian Areas* (USDA, FS 2000) known as a “greenline survey.”

For established riparian/wetland areas that are not in properly functioning condition, condition assessments should be updated every two years, with greenline surveys updated at a minimum of every six years.

AMPs/CRMPs prepared for grazing allotments/leases will contain objectives and actions for riparian, forests and woodlands, wildlife, fire, and watershed management. If monitoring studies indicate the need, existing plans can be revised, new plans developed, and/or livestock grazing use can be reduced.

Implementation Priorities

Maintain the protection and proper management of the riparian/wetland resources within the Plan Area that have currently been identified and assessed.

Continue monitoring studies, focusing on condition assessments and greenline surveys.

Identify and assess new riparian/wetland habitat areas and develop management strategies.

Support Needs

Rangeland Management Forest & Woodland Resources Wildlife Habitat Special-Status Species Watershed Fire Management

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

Cultural Resources

Cultural resources inventory will be needed for all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.



The Soil, Water, and Air Program is referred to in most of the other sections of this document as the “Watershed Program.”

Program Goals

The goals of this program are to protect, maintain, and enhance, wherever possible, the soil, water, and air resources of the Plan Area for the benefit of humans, and the wide variety of plant and animal ecosystems. The program will continue to support other resource activities.

Management Guidance

Policy and Authorities

The basis for initiating and implementing the goals of the Soil, Water, and Air Resources Program is BLM Manual 7200 and the following acts, executive orders, and circulars, and their amendments: Economy Act of 1932, Taylor Grazing Act of 1934, Soil Conservation and Domestic Allotment Act of 1935, Appropriations Act of 1952, Watershed Protection and Flood Control Act of 1954, Water Resources Research Act of 1954, Water Resources Planning Act of 1965, Soil Information Assistance for Community Planning and Resource Development Act of 1966, National Environmental Policy Act of 1969, Clean Air Amendments of 1970, Water Resources Development Act of 1974, Colorado River Basin Salinity Control Act of 1974, Federal Land Policy and Management Act of 1976, Safe Drinking Water Amendments of 1977, Clean Water Act of 1977, Public Rangeland Improvement Act of 1978, Classification and Multiple-Use Act of 1981, Farmland Protection Policy Act of 1981, Annual Appropriations Act of the Department of the Interior, Executive Orders 107, 11514, 11738, 11752, 11988, 12148, 11990, and 12322, and Circulars A-67, A-78, A-81, and A-97.

The El Malpais Act expressly reserves to the United States the minimum amount of water required to carry out the purposes for which El Malpais NCA, and the Cebolla and West Malpais Wildernesses were designated. This clause in the legislation does not affect any existing water right or pending application. Any

new water developments under this legislation will have priority dates that are junior to all existing rights and pending applications (see “Decisions From Approved El Malpais Plan,” below).

Field Office Program Guidance

The AFO will continue to participate with the U. S. Department of Agriculture Natural Resources Conservation Service (NRCS) in the National Cooperative Soil Survey. Detailed soil surveys for individual projects will be conducted as needed.

Reduction of nonpoint source pollution through control of soil erosion and sediment production from public lands remains a high priority management goal.

The AFO will monitor and maintain water quality to State standards at the El Malpais Ranger Station and any other BLM-developed public drinking water sites.

The Soil, Water, and Air Resources Program will provide input, analysis, and support when the AFO initiates or authorizes projects. Best management practices will be applied to reduce the impacts of surface-disturbing activities.

Water rights for the management of public lands in the Plan Area will be established under appropriate Federal and State laws.

The AFO will participate in general stream water rights adjudications for the Rio San Jose and Zuni Basins and present claims based on Federal and State water laws.

Prevention and reduction of impacts to air quality from activities on public lands is accomplished by mitigation measures developed on a case-by-case basis through the environmental analysis process. Activities such as road construction will have dust abatement programs as part of their permits or contracts.

In addition to the small structures called for by the Approved Plan, other land treatment methods will be considered in any effort to improve watershed health.

Livestock grazing management will be coordinated and designed to facilitate other programs. The AFO

will consider management of natural waters, springs and ephemeral flows; burn areas; wildlife projects; wilderness management; and forest and woodland management in planning for livestock grazing management.

In managing livestock grazing, the AFO will design and establish practices that meet riparian and water quality needs. No livestock-related activities such as salting, feeding, construction of holding facilities, or stock driveways will be allowed to occur within riparian zones.

All range and watershed improvements will continue to be designed to achieve watershed, range, and wildlife objectives for maintaining, improving, or enhancing habitats, particularly for NM Department of Game and Fish priority species. This includes location and design of waters and vegetative manipulation projects.

The primary use of prescribed fires and wildland fire use (see Glossary) by programs other than the Fire Management Program (e.g., Watershed, Rangeland Resources, Wildlife) will be to protect, maintain, improve, or enhance watershed values and wildlife and livestock habitats; improve vegetative resources and help achieve potential natural community vegetative objectives; reduce the fuel load; and blend fire back into the natural processes of a functioning ecosystem.

Individual prescribed fire plans or wildland fire implementation plans are required before fire can be used to improve the vegetative habitats of the Plan Area. In addition to a prescribed fire plan or wildland fire implementation plan, a State burn permit that includes a smoke management plan is also required.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Watershed, Rangeland Resources, Wildlife, Recreation, and Lands. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

Location and construction of trail treadways will take into consideration and avoid, if possible, conflicts with private waters, private lands, sensitive wildlife and plant habitats, and sensitive cultural resource sites. As individual trails are sited for development and where further National Environmental Policy Act compliance is necessary, all required site-specific studies and

clearances will be done and a determination will be made concerning the environmental consequences of the proposal.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are not all-inclusive or final. A potential theme for the Soil, Water, and Air Program is:

- Using surface waters can cause health problems, camping near surface waters can pollute them, and visitors should respect owners' rights to privately owned water sources.

Decisions From Approved El Malpais Plan

For watershed management, the AFO will consider building small structures to spread or divert water. Site-specific environmental assessments will be completed before any structures are built.

Allotment Management Plans/Coordinated Resource Management Plans (AMPs/CRMPs) prepared for grazing allotments/leases will contain objectives and actions for watershed management, forests and woodlands, wildlife, riparian, and fire. If monitoring studies indicate the need, existing plans may be revised, new plans developed, and/or livestock grazing use reduced.

To improve watershed conditions and assist in accomplishing vegetative objectives, the AFO will provide for the use of mechanical, chemical, or biological vegetation treatments in AMPs/CRMPs. Treatments will be considered in areas where livestock rest and prescribed fires have not been effective, i.e., areas where junipers too small for fuelwood have invaded (in meadow-like openings, grasslands, or savannas) or areas where fire-tolerant species such as rubber rabbitbrush have increased or invaded (in valley bottoms, drainages, and meadow-like openings).

Camping will be offered at one developed campground within the Spur Unit. The Narrows will be the only site developed for picnicking. If possible, drinking water will be provided at the campground and picnic area.

Where feasible, the AFO will develop and identify water sources for Continental Divide National Scenic Trail hikers.

Wildlife habitat improvement projects could include water developments such as guzzlers and catchments.

A full range of management techniques (watershed, forest and woodland, livestock grazing, riparian, and fire) will be used to achieve the potential natural community vegetative objectives.

Prescribed fires will be used throughout the Plan Area where appropriate to protect, maintain, improve, or enhance watershed values and wildlife/livestock habitats. A written prescribed fire plan must have been prepared and approved before ignition.

Criteria for Resolution of El Malpais Plan Issues

The following factors that apply to the Soil, Water, and Air Program were considered in developing answers to the issue questions regarding vegetation. These factors will continue to be considered as the El Malpais Plan is implemented.

- Protection and enhancement of watershed conditions
- Unique or fragile soils and vegetation, including threatened and endangered plant species
- Areas that require increased vegetative cover to reduce soil erosion, increase forage production, and improve wildlife habitat
- Vegetative treatments or manipulation methods, including prescribed fire
- Use of fuelwood harvest and other forestry practices

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance for the Soil, Water, and Air Program is listed below as "Criteria for Resolution of RMP Issues." In addition, the RMP

carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Soil, Water, and Air Program:

- Designations for OHV use will consider protection of resources such as . . . watershed
- Fuelwood will not be made available where erosion problems are severe.

Implementation Guidance From RMP

Continue the water rights and use inventory. [*This inventory is an ongoing process that needs periodic updating as new information becomes available.*]

Decisions Carried Forward From Previous Planning

The following watershed decisions were carried forward into the Rio Puerco RMP from previous planning documents:

- Through consultation, implement watershed treatments on Allotments 205 (Los Pilares) and 210 (Los Cerros). Develop watershed plan in the Techado . . . watershed. [*Proposals for improving watershed health would be preceded by a review of the current condition; implementation of proposals would proceed through permittee consultation and the environmental analysis process.*]
- Identify treatment areas through Section 8 consultation; treated areas will be rested 1-2 years; treatments done solely in wildlife areas will be in conformance with wildlife recommendations. ("Design and implement livestock grazing systems to protect mule deer habitat by scheduling non-use or rest during critical periods in essential winter ranges and fawning areas.") These land treatments will take precedence over fuelwood management.

- Develop drinking water sources at Sandstone Bluffs Overlook and La Ventana Natural Arch. [The Sandstone Bluffs Overlook is now in El Malpais National Monument; priority for public water supply will be at the campground in the Spur Unit and the picnic area at The Narrows.]

Monitoring/Studies

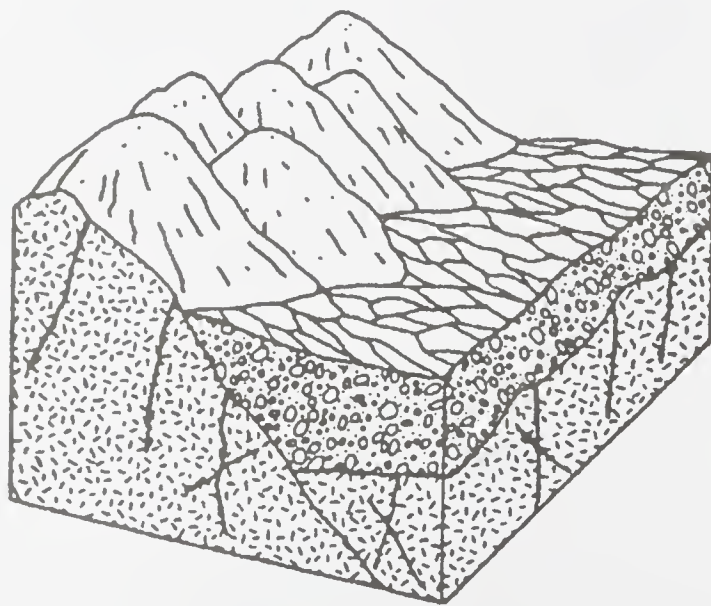
The AFO will monitor water quality to State standards at the Ranger Station and any other BLM-developed public drinking water sites.

AMPs/CRMPs prepared for grazing allotments/leases will contain objectives and actions for watershed management, forests and woodlands, wildlife, riparian, and fire. If monitoring studies indicate the need, existing plans may be revised, new plans developed, and/or livestock grazing use reduced.

Implementation Priorities

Reduce nonpoint source pollution through control of soil erosion and sediment production from public lands.

Participate in general stream water rights adjudications for the Rio San Jose and Zuni Basins and present claims based on Federal and State water laws.



Alluvial Fans on Lava Plateau

Support Needs

Rangeland Management Forest & Woodland Resources Wildlife Habitat Special-Status Species Riparian & Wetland Habitats Fire Management

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

Cultural Resources

Cultural resources inventory will be needed for all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.

Special-Status Species

Special-status species consideration will be required for all surface- and vegetation-disturbing actions.

Engineering & Operations

The Engineering and Operations Programs will develop well specifications and administer contracts for drilling and well completion for the public drinking water sources proposed at the Spur campground and The Narrows picnic area.

Support from this program could also be needed for construction of small structures to spread or divert water, as well as for other types of watershed improvement projects.



Program Goals

The goal of the Fire Management Program is to protect visitors, other land users, wildlife, livestock, and special physical resource features of the Plan Area. Prescribed fires and wildland fire use will be utilized by other resource programs (e.g., wildlife, range, watershed) to improve the vegetative resources and help achieve potential natural community vegetative objectives; protect, improve, or enhance wildlife and livestock habitats and watershed values; reduce the fuel load; and blend fire back into the natural processes of a functioning ecosystem.

Management Guidance

Policy and Authorities

Congressional designation as an NCA by the El Malpais Act requires the AFO to manage the area's resources with a "... higher order of protection than that followed on other multiple use lands . . ." Further policy authority lies with the Federal Land Policy and Management Act (FLPMA), which provides overall policy direction.

Department of the Interior Manual Part 910 directs that "Fire, as a critical natural process, will be integrated into land, natural, and cultural resource management plans and activities on a landscape scale, across bureau boundaries, and will be based upon the best available science. All use of fire for natural and cultural resource management requires a formal prescription." Part 620 requires that "Every area with burnable vegetation must have an approved fire management plan. Fire management plans must be consistent with firefighter and public safety, values to be protected, and land, natural and cultural resource management plans, and must address public health issues. Fire management plans must also address all potential wildland fire occurrences and include the full range of wildland fire management."

Fire planning for public lands must conform to the *Review and Update of the 1995 Federal Wildland Fire Management Policy* (USDI, et al. 2001), which establishes direction for the BLM Fire Program.

BLM direction for the Fire Management Program is found in BLM Manual 9200, the Draft Prescribed Fire Management Handbook (H-9214-1), Fire Management Planning Handbook (H-9211-1), and Standards for Fire and Aviation Operations (H-9213-1).

Field Office Program Guidance

Fire has played an integral role in the Plan Area. The numerous plant communities have developed as part of a fire-dependent ecosystem (see Appendix F). Periodic burning of these communities is necessary to perpetuate their natural composition, structure, and function. The primary use of fire by other resource programs will be to maintain and improve wildlife habitats, vegetative communities, and watershed values through a prescribed burning program. In this way, the AFO can help restore the natural place of fire in a functioning ecosystem.

The activity-level *Joint Fire Management Plan for El Malpais NCA and El Malpais National Monument* (USDI, BLM and NPS 2001) is the guiding document for managing fire within the Plan Area. In addition, the AFO's coordination with the National Park Service (NPS), New Mexico Department of Game and Fish, the U. S. Fish and Wildlife Service, and other Federal, State, and local agencies is an important part of managing wildland fire within the Plan Area.

Where the existing vegetation differs from the potential natural community vegetative objectives, the AFO will consider using practices such as prescribed fire, chemical treatment, tree thinning, and livestock grazing management to encourage the achievement of vegetative objectives. The AFO will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

Livestock range management must be coordinated and designed to facilitate other programs. The AFO will consider burn areas; wildlife projects; management of natural waters, springs and ephemeral flows; wilderness management; and forest and woodland management in planning for livestock grazing management. For example, range management must coordinate with the Fire Program. Reintroducing natural fire to open ponderosa pine habitat can improve forest health,

wildlife forage, and ground cover for watershed. In general, grazing management must be designed to provide frequent, routine rest from livestock grazing to allow recovery for forage species. Furthermore, in areas where natural fire is desired as a management tool, such rest from grazing is even more critical. For these areas to burn properly, they must have an understory of fine fuel (i.e., grasses, forbs, and shrubs), so livestock grazing must be deferred to allow the development of the understory. The length of deferment depends on how much understory is available. On conservatively managed range, no deferment may be required. Conditions such as drought, combined with grazing, may result in a depleted understory. When understory is inadequate to support fire, deferment of livestock grazing use will be planned. The length of deferment would be expected to be about two growing seasons. Where the fine fuel understory has been replaced by woody species, livestock grazing deferment alone will in most cases not be sufficient to restore the understory. The AFO will consider burn areas; wildlife projects; management of natural waters, springs and ephemeral flows; wilderness management; and forest and woodland management in planning for livestock grazing management.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Rangeland Resources, Wildlife, Watershed, Recreation, and Lands. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions, including prescribed fire and mechanical fuels reduction.

The *Partners Against Weeds* (PAWS) action plan for BLM (USDI, BLM 1996a) and the *Pulling Together National Strategy for Invasive Plant Management* (Federal Interagency Committee for Management of Noxious and Exotic Weeds 1998) establish general guidelines to be implemented.

The goals and strategies identified in the PAWS action plan will be implemented as needed to help prevent the introduction or spread of noxious weeds in the AFO. These preventative measures will be applied to AFO actions such as fire rehabilitation.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes have been developed for several programs; these are

not all-inclusive or final. A potential theme for the Fire Management Program is:

- Vegetative manipulation plays a part in conserving our public lands, including fire and fuelwood harvesting.

Decisions From Approved El Malpais Plan

Joint Fire Management Plan

The Approved El Malpais Plan outlined decisions for fire management in the Plan Area, and called for preparation of an activity-level fire management plan. The activity plan, *Joint Fire Management Plan for El Malpais NCA and El Malpais National Monument* was approved on July 27, 2001 (USDI, BLM and NPS 2001). The Approved El Malpais Plan and the *Joint Fire Management Plan* identify management objectives for protecting, maintaining, and/or enhancing resource values using fire. The *Joint Fire Management Plan* also establishes restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas). Three critical departures from previous fire policy are that 1) all ignitions occurring in wildland areas will be classified as either wildland fire (any non-structural fire, other than prescribed fire, that occurs on wildland) or prescribed fire (fire ignited by management actions to meet specific objectives); 2) all wildland fires will be managed with the appropriate management response as outlined in the *Joint Fire Plan* and analysis of the specific situation; and 3) wildland fires can be managed entirely or in any part for resource benefits or receive suppression actions to minimize burned area because of high values to be protected, threats to life or property, or other social, political, and economic considerations that outweigh potential environmental benefits.

Through the El Malpais Plan and the *Joint Fire Management Plan*, the AFO will implement woodland and forest management practices which will allow the return of natural fire to El Malpais. The *Joint Fire Management Plan* was developed to support resource management goals, especially the restoration or maintenance of natural ecosystems. It provides for fire-fighter and public safety, as well as protection of natural and cultural resources and human developments from unwanted wildland fire.

Prescribed fires will be used where appropriate throughout the Plan Area to protect, maintain, improve, or enhance wildlife/livestock habitats and watershed values. In addition, the AFO will use prescribed fires to reduce fuel loading (hazardous fuel reduction) to reduce the risk of large fires in areas where there are high-value resources (e.g., houses, land improvements, recreation facilities, historic structures). A written prescribed fire plan must have been prepared and approved before ignition.

Prescribed fire plans will be developed on a case-by-case basis, with each taking into account the desired outcomes (vegetative response and/or fuel reduction). Each plan will also outline the appropriate conditions (e.g., temperature, relative humidity, wind speed, soil moisture, flame height) under which fire will accomplish those vegetative outcomes. A prescribed fire will be ignited only when the conditions outlined in the prescribed fire plan are met. These include not only the conditions for the desired vegetative response, but also the necessary resources (staff, engines, aircraft) to ignite and control the prescribed fire.

The AFO will evaluate and approve all prescribed fire plans, paying close attention to cultural resource values (e.g., homesteads, hogans), wilderness values, visual resources, and recreational values within the area. Appropriate cultural resources clearances, special-status species evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

Wildland fires will receive an appropriate response based on initial and periodic evaluations of public and firefighter safety, current and predicted fire behavior, values at risk, potential damage from suppression activities, and firefighting resource availability. In some areas, benefits to natural resources may be considered. Appropriate Management Response can range from intense suppression to monitoring, or combinations of actions as required. Some naturally ignited wildland fires may be managed to accomplish resource objectives (wildland fire use). The process for evaluating each new fire and assessing ongoing wildland fires will be documented in a Wildland Fire Situation Analysis. The documentation supporting the wildland fire use decision process is known as the Wildland Fire Implementation Plan.

Individual prescribed fire plans or wildland fire implementation plans are required before fire can be used to improve the vegetative habitats of the Plan Area. In addition to a prescribed fire plan or wildland fire implementation plan, a State burn permit that includes a smoke management plan is also required.

The *Joint Fire Management Plan* divides the Plan Area into three fire management units (“Minimize Wildland Fire Presence Unit,” “Wildland Fire Use For Resource Benefits Unit,” and “Conditional Wildland Fire Use Unit”; see Map 2-9). For each zone, the AFO has identified general management practices to allow fire to become part of the natural process, while still protecting other resources values. The *Joint Fire Management Plan* may be modified to incorporate new information (e.g., new resources at risk), changes in vegetative prescriptions, or additional information from adjacent landowners (e.g., NPS, private individuals, Indian tribes).

Minimize Wildland Fire Presence Unit. All wildland fires, regardless of ignition source, will receive prompt suppression action commensurate with human safety in all instances. Fire in the Minimize Wildland Fire Presence Unit presents a threat to such resource values as structures, recreational use areas, cultural resources with flammable elements, critical wildlife habitats, and private land. To prevent unacceptable resource damage and/or loss of life and property, fires will generally not be allowed to burn in areas where public safety and other resource values are at risk. In some circumstances, prescribed fires may be used to protect the resource values within these areas by reducing fuel loading. Such fires would reduce the risk of catastrophic fires in the future.

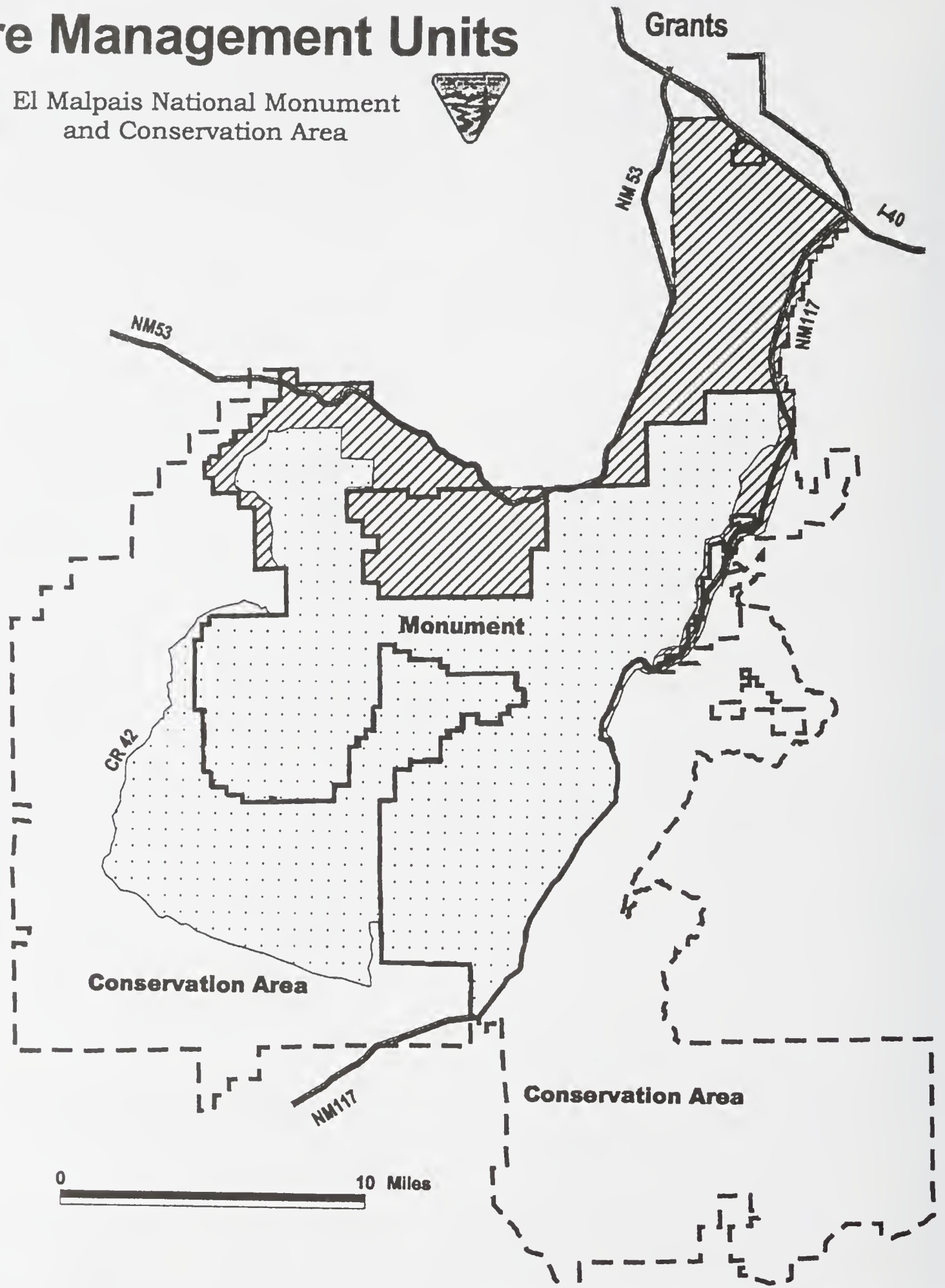
The Cerritos de Jaspe and Neck Units are within the Minimize Wildland Fire Presence Fire Management Unit, as are portions of the Spur Unit and the Cebolla Wilderness (see Map 2-9).

Wildland Fire Use For Resource Benefits Unit. Wildland Fire Use is defined as the management of naturally ignited wildland fires to accomplish specific, pre-stated resource management objectives in the pre-defined geographic areas outlined in the *Joint El Malpais Fire Management Plan*. Such fires were previously called “prescribed natural fires.” Wildland Fire Use For Resource Benefits areas are usually






Fire Management Units



El Malpais National Monument
and Conservation Area



Map 2-9

-  NPS Boundary
-  BLM Boundary
-  Minimize Fire Presence
-  Wildland Fire Use For Resource Benefits
-  Conditional Wildland Fire Use

No warranty is made by the NPS nor the BLM as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the NPS and BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notice.

located where there are natural fuel breaks (e.g., lava flows, roads) to help control the fire perimeter, and where limited resources are at risk. A full range of available responses is available to implement protection and fire use objectives—full and aggressive suppression to minimize acreage burned; monitoring and holding actions to check or confine spread; monitoring with pre-planned contingency actions; or monitoring actions only. Wildland fire and prescribed fire may be used in this unit to benefit such resources as wildlife/livestock habitat, ponderosa pine habitat, and watershed values, as well as to protect other resources such as private property by reducing fuel loads.

The West Malpais Wilderness is the only BLM area identified for Wildland Fire Use For Resource Benefits (see Map 2-9).

Conditional Wildland Fire Use Unit. The goal of management of the Conditional Fire Use Unit is to reduce fuels to a more natural range of variability through approved treatment strategies. The lands in this unit contain areas of fuels concentrations that could, under high fire danger conditions, potentially threaten resource and other values through unwanted crownfires. Such localized but significant areas of unnaturally high stand densities, down and dead surface fuels, and ladder fuels led to this unit's being designated a high priority fuels management area. Emphasis will be placed on the application of a combination of management strategies to accomplish stated fuels management and resource protection objectives. These strategies include suppressing unwanted wildland fires; use of non-fire treatments to achieve fuels management objectives; use of prescribed fires for resource benefits; and managing naturally ignited wildland fires for resource benefits.

Once the approved fuels treatments are complete, and where objectives have been met, areas within the Conditional Fire Use Unit will be assessed for inclusion in the Wildland Fire Use For Resource Benefits Fire Management Unit.

The Chain of Craters and Canyons Wilderness Study Areas; most of the Cebolla Wilderness; the Continental Divide, Cerro Brillante, and Brazo Units; and parts of the Spur and Breaks Units are in the Conditional Fire Use Fire Management Unit (see Map 2-9).

Approved Plan Resource Decisions

A full range of management techniques (forest and woodland, livestock grazing, riparian, fire, and watershed) will be used to achieve the potential natural community vegetative objectives.

Allotment Management Plans/Coordinated Resource Management Plans (AMPs/CRMPs) prepared for grazing allotments/leases will contain objectives and actions for forestry and woodlands, wildlife, riparian, fire, and watershed management. If monitoring studies indicate the need, existing plans can be revised, new plans developed, and/or livestock grazing use reduced.

Prescribed fires and wildland fire use will be used to manage fuel loads (hazardous fuel reduction), protect private property, and accomplish potential natural community vegetative objectives, including reducing piñon-juniper in potential ponderosa pine habitat. Fires ranging in size from 50 to 1,000 acres each will be used each year. Ponderosa seedlings will be planted on some locations if needed to ensure reestablishment. In areas proposed for prescribed fires, pre- and post-burn rest from grazing will be planned in coordination with the affected allottee(s).

To support appropriate animal populations, the AFO will use the two types of fire, prescribed fire and wildland fire use, throughout the Plan Area in a balanced approach to maintain and/or enhance wildlife habitats in the desired vegetative condition. Each wildland fire use or prescribed fire will be used to accomplish specific resource management objectives within a defined geographic area. The fires will generally range from 50 to 1,000 acres in size, with an average of 500 acres.

The environmental impact statement accompanying the Approved El Malpais Plan analyzed the environmental impacts of prescribed fire/wildland fire use on up to 3,000 acres a year. Planned fire use on more than 3,000 acres a year would require further analysis of impacts under the National Environmental Policy Act.

Eight well-preserved homesteads have been singled out as high-priority fire suppression zones. Additional sites may be added to this list if significant cultural

resource values are threatened. Reconnaissance-level surveys looking for sites with flammable materials will be conducted in areas where prescribed fires are proposed. Areas proposed for prescribed fires will not generally be inventoried to Class III standards if they have low site density (see Map 2-7). Class III inventory will be considered in zones of high site density, and a cultural resource advisor will be required during fire suppression activities, regardless of the source of ignition. Class III inventory will be required for all planned surface-disturbing activities such as construction of fire lines.

Within designated wilderness, vegetation treatments, including fire, will be considered on a case-by-case basis under guidance found in the *BLM Wilderness Management Policy* (USDI, BLM 1981c).

Fires will be controlled within designated wilderness to prevent their spread outside wilderness and to prevent the loss of human life or property. Fire suppression methods will be those that cause the minimum adverse impact on wilderness character.

Criteria for Resolution of El Malpais Plan Issues

The following factor which applies to the Fire Management Program was considered in developing answers to the Vegetation issue questions. This factor will continue to be considered as the El Malpais Plan is implemented.

- Vegetative treatments or manipulation methods, including prescribed fire

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. One of these decisions continues to apply to El Malpais. This decision is listed below under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

One of the criteria used to guide resolution of the Rio Puerco RMP issues remains applicable as guidance for future actions in the Fire Management Program:

- Use of military, fire, emergency, or law enforcement vehicles being used for emergency purposes; vehicles whose use is expressly authorized by the authorized officer, or otherwise officially approved; vehicles in official use; and combat or combat support vehicles when used in times of national defense emergencies is excluded and will not be affected by "closed" or "limited" designations.

Decisions Carried Forward From Previous Planning

The following decision from previous planning which was carried forward into the Rio Puerco RMP still affects the Fire Management Program for the Plan Area:

- Burn and/or chain 10,000 acres of piñon-juniper [in the entire Divide MFP Area] in 50 to 100 acre irregularly-shaped plots. Seed with browse, grass, and forbs. This land treatment will take precedence over fuelwood management. [See "Decisions From Approved El Malpais Plan, Prescribed Fire & Wildland Fire Use," above.]

Monitoring/Studies

The fire effects monitoring program specified in the *Joint El Malpais Fire Management Plan* will support BLM-NPS objectives as identified below:

- Through documentation and analysis of fire effects, verify that *Joint Fire Management Plan* prescribed fire program objectives are being met.
- Increase knowledge of fire behavior and effects on ecosystems.
- Document base information for all prescribed fires and keep all monitoring information organized and properly backed up.

- Adhere to standardized data collection techniques for fire monitoring plots.
- Identify areas where research should be initiated.
- Follow trends in plant communities as related to fire effects.

Implementation Priorities

- Hazardous fuels reduction projects, including prescribed fire and mechanical fuels reduction.
- Rangeland management enhancement projects.
- Wildlife habitat enhancement projects.

Support Needs

Rangeland Management
Forest & Woodland Resources
Wildlife Habitat
Special-Status Species
Riparian & Wetland Habitats
Watershed

Many of the AFO resource programs share common goals and objectives. Rangeland Management, Forest

and Woodland Resources, Wildlife Habitat, Special-Status Species, Riparian and Wetland Habitats, Watershed, and Fire Management are all striving to ensure that management of the Plan Area will eventually allow establishment of its Potential Natural Communities. As a result, management of these resource programs must complement each other. Planning and coordination are the key support factors which will ensure that these programs are successful.

Engineering & Operations

The Engineering staff will be needed in support of the design and engineering components for prescribed fires. In addition, the Labor/Work Crew could be needed to support the execution of prescribed fires.

Cultural Resources

Cultural resources inventory will be needed for prescribed fires and all surface-disturbing actions.

American Indian Consultation

American Indian consultation will be required for all surface- and vegetation-disturbing actions.





Program Goals

The goals of this program are to continue to acquire land and easements within the Plan Area, to protect the resources for which the NCA was established, and to ensure that any rights-of-way or land-use permits issued are consistent with management goals for other resource programs and uses.

Management Guidance

Policy and Authorities

The AFO has an active land exchange program. All exchange proposals are examined in conformance with National Environmental Policy Act requirements, including extensive public review. Land exchanges take place under the authority of the Federal Land Policy and Management Act of 1976 (FLPMA), as amended by the Federal Land Exchange Facilitation Act of 1988. Guidance for exchanges is provided in BLM Manuals 2200 and H-2200-1, and 43 Code of Federal Regulations (CFR) 2200. Guidance for land acquisition is provided in BLM Manuals 2130 to 2136 and H-2101-1, and 43 CFR 2100. Leases, easements and permits are directed by BLM Manual 2920 and 43 CFR 2920. Rights-of-way are managed according to the provisions of Section 501 of FLPMA, BLM Manuals 2801, 2805, 2850, 2851, 2880, H-2801-1, and H-2860-1, and 43 CFR 2800. The BLM New Mexico Roads Policy (Instruction Memorandum NM-95-031) provides direction for constructing, maintaining, rehabilitating, abandoning, and closing roads under BLM jurisdiction. Withdrawals are directed by Section 204 of FLPMA, 43 CFR 2300, Departmental Manual 603, and policies and procedures established by Instruction Memorandums and Field Solicitor's opinions.

Field Office Program Guidance

None of the public lands within the NCA are subject to disposal, as the El Malpais Act withdraws the area from all public land laws. The *Land Protection Plan: El Malpais National Conservation Area* (USDI, BLM 1989b) provides the basic framework for acquiring surface and mineral interests within the NCA. Rights-of-way and land-use permit applications are author-

ized on a case-by-case basis, with mitigation measures to protect the resources and values for which the NCA was established.

The El Malpais Act withdrew the Federal lands (surface and subsurface) in the NCA from "... location, entry, and patent under the mining laws, and from operation of the mineral leasing and geothermal leasing laws and all amendments thereto." Thus, there will be no development of Federal minerals within the NCA. The Act also provides for the automatic withdrawal of all new acquisitions within the NCA from mineral entry and leasing, and from disposal under the public land laws. The Approved Plan recommends that Federal lands added to the NCA as the result of boundary adjustments also be withdrawn.

The AFO will continue to acquire surface and mineral interests in the NCA, as identified in the *Land Protection Plan*. There are still approximately 65,000 acres of privately owned mineral interests in the NCA. Higher priority will be given to acquiring lands and minerals within designated wilderness that are undeveloped, or those on which mineral development threatens the area's wilderness character. As private lands are acquired within the NCA, mineral rights will also be acquired.

The use of motorized vehicles and mechanical transport in designated wilderness will be prohibited, except in emergency situations and as permitted by law for livestock grazing and access to private lands and minerals.

The AFO is required by law to provide such access to private lands, including non-Federal minerals, as is adequate to secure to the landowner the reasonable use and enjoyment of non-Federally owned land which is completely surrounded or isolated by public lands administered under FLPMA. In determining adequate access, the AFO has the discretion to evaluate such things as proposed construction methods and location, to consider reasonable alternatives (trails, alternative routes, including aerial access, and degree of development), and to establish such reasonable terms and conditions as are necessary to protect the public interest. Reasonable use and enjoyment need not necessarily require the highest degree of access, but rather

could be some lesser degree of reasonable access. The AFO, however, must provide a degree of access that is commensurate with the reasonable use and enjoyment of the non-Federal land. The AFO must also consider such things as a landowner's options to develop new access over non-Federal or public lands.

If an owner of private mineral interests within wilderness wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the briefest impacts on wilderness character. Likewise, if an owner of private mineral interests within the Canyons Wilderness Study Area (WSA) wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the least impairment to the area's suitability for designation as wilderness. There are no private minerals within the Chain of Craters WSA.

In accordance with the El Malpais Act, the American Indian people recognized as using the NCA are ensured access for traditional uses and cultural purposes. Such access must be consistent with the American Indian Religious Freedom Act and the Wilderness Act. On request, the AFO will temporarily close the smallest practicable area for the minimum period of time needed to accommodate such religious activities. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.

Major new rights-of-way will be discouraged, and use of existing rights-of-way (including joint use whenever possible) will be promoted. When expansions or realignments are proposed, the AFO will work closely with the rights-of-way holders, especially State and county transportation departments and utilities, to develop appropriate mitigation. Such measures will be designed to protect the scenic quality and natural and cultural values of the Plan Area, and to ensure visitor safety.

When new construction is needed, the AFO will identify the least damaging routes and locations, working closely with private landowners in areas of mixed ownership. New construction for roads, pipelines, powerlines, and communication sites will be author-

ized only if no alternatives exist, and if mitigation measures can ensure protection of the scenic quality, and natural and cultural values of the Plan Area. The AFO will conduct compliance inspections on all rights-of-way and land-use permits.

The AFO will inform proponents of major rights-of-way adjacent to the Plan Area of the legislative requirements for protection of the scenic quality, and cultural and natural resources of the NCA. The AFO will oppose major rights-of-way proposals on lands adjacent to the Plan Area if they would adversely impact the area's viewshed. In such situations, the AFO will work with proponents to find alternative routes and develop appropriate mitigation.

Raptor protection will be implemented by requiring all new powerlines to be built to "electrocution-proof" specifications. To avoid collisions with powerlines by migrating birds, the mitigating measures identified by the Avian Power Line Interaction Committee (1994) will be incorporated into all new powerlines. Existing lines that are identified as causing electrocution and/or collision problems may also be modified where feasible.

The goals and strategies identified in the *Partners Against Weeds* action plan for BLM (USDI, BLM 1996a) will be implemented as needed to help prevent the introduction or spread of noxious weeds in the AFO. These preventative measures will be applied to AFO actions such as road maintenance and rights-of-way.

Throughout the Plan Area, the AFO will continue to coordinate riparian/wetland habitat management with other programs and activities, including Lands, Rangeland Resources, Wildlife, Watershed, and Recreation. Riparian habitat values will be addressed for all surface- and vegetation-disturbing actions.

Decisions From Approved El Malpais Plan

The Plan recommends that 24,200 acres in the Brazo Non-NCA and Breaks Non-NCA Units within the Plan Area but outside the NCA boundary be added to the NCA. The Plan also recommends that a total of

17,100 acres outside the Plan Area but contiguous to its boundary, in the Continental Divide-AFO Unit, the Tank Canyon-SFO Unit, and the Techado Mesa-SFO Unit, be added to the NCA (see Table 1-1 and Map 2-10). The total acreage, both within and outside the Plan area, recommended for addition to the NCA is 41,300 acres (38,900 acres of Federal land and 2,400 acres of private land). These parcels within Cibola, Socorro, and Catron Counties are contiguous to and a logical extension of the NCA. The AFO would acquire inholdings if owners were willing, with exchange being the preferred acquisition method. Adjustments to the NCA boundary can be made only through legislation. The AFO will withdraw from mineral entry and the public land laws any new Federal lands added to the NCA as the result of boundary adjustments if the legislation authorizing the boundary adjustment does not automatically withdraw the land.

At the request of Acoma Pueblo, the Approved El Malpais Plan recommends that Congress amend the NCA boundary to exclude 960 acres of Acoma lands currently within the NCA in the Spur Unit and the Cebolla Wilderness. This recommendation includes several parcels totaling 800 acres between NM 117 and the National Monument boundary, and 160 acres within the Cebolla Wilderness (T. 7 N., R. 10 W., sec. 12) recently acquired by Acoma Pueblo (see Map 2-10). This latter parcel, which is adjacent to other Acoma lands, consists of aboriginal lands that have recurring value to the Acoma people.

The Plan also recommends that Congress modify the boundary of the Cebolla Wilderness to include some newly acquired lands contiguous to the current wilderness boundary (an increase of approximately 4,000 acres). The areas recommended for addition to the Cebolla Wilderness are now known as the Canyons WSA (see Map 2-6). Until all or portions of the Canyons WSA are either designated by Congress as wilderness or released from wilderness study, it will remain in WSA status and be managed under the *Interim Management Policy* (USDI, BLM 1995).

The Plan recommends two acquisitions in areas not covered by the *Land Protection Plan*: (1) acquisition of a treadway for the Continental Divide National Scenic Trail by easement, exchange, or purchase in the Cerro Brillante-AFO Unit, if owners were willing; and (2) acquisition of a 160-acre parcel in the Breaks Non-NCA Unit that includes an early twentieth-century historic ruin with interpretive potential (portions

of T. 5 N., R. 11 W., sec. 3 and T. 6 N., R. 11 W., sec. 34). All other acquisition recommendations were carried forward from the *Land Protection Plan*.

Within designated wilderness, the AFO will continue to seek acquisition of mineral interests and approximately 800 acres of surface inholdings, 300 acres within the Cebolla Wilderness and 500 acres within the West Malpais Wilderness from willing sellers. Priority will be given to those lands that are undeveloped or where use, including mineral development, would pose a threat to wilderness character. These lands will be managed as wilderness, if acquired.

In areas of major archeological or historic values within or adjacent to public land, the AFO will seek legal access easements across key parcels of private land. The AFO will also attempt to consolidate ownership by purchase or exchange from willing sellers in these areas.

The AFO will continue to seek to acquire scenic or conservation easements along Federal, State, and county roads passing through the Plan Area to prevent the views along these roads from being obstructed or degraded by developments.

The AFO will close the 2-mile-long two-track road leading into the Cebolla Canyon Community. Other access routes not identified for closure elsewhere in this Plan can be closed if this were essential for resource protection.

Pending decisions from Congress, the AFO will manage the Breaks and Brazo Non-NCA Units [within the Plan Area] in accordance with provisions of this Plan. The Continental Divide-AFO Unit [outside the Plan Area] will continue to be managed under the Rio Puerco RMP, as would any lands acquired within the Cerro Brillante-AFO Unit. The AFO will complete a short-term withdrawal from the public land and minerals laws on all public lands within the Breaks and Brazo Non-NCA Units.

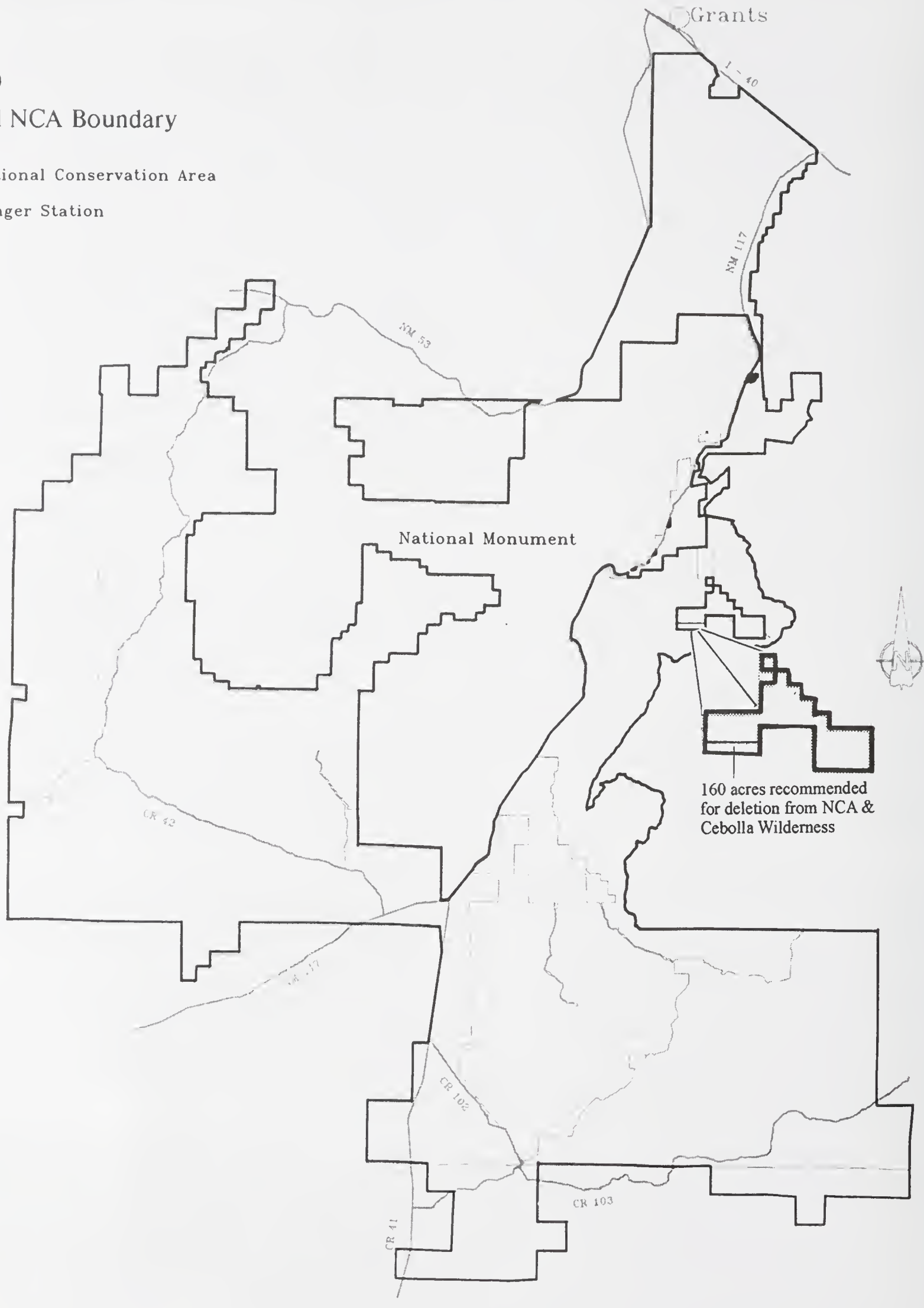
The Techado Mesa-SFO and Tank Canyon-SFO Units will continue to be managed under the Socorro RMP. [The Socorro RMP is currently being amended. The uses proposed by the El Malpais Plan for the units managed by the SFO, including withdrawal from the public land and minerals laws, will be considered in some of the alternatives.]

El Malpais Plan Area

Map 2-10

Proposed NCA Boundary

- National Conservation Area
- Ranger Station



Criteria for Resolution of El Malpais Plan Issues

The following factors were considered in developing answers to the Boundary and Land Ownership Adjustments issue questions. These factors will continue to be considered as the El Malpais Plan is implemented.

- Resource values that exist on lands within and adjacent to the NCA
- Concerns of local communities, governments, and private landowners
- The land ownership pattern

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Four of the criteria used to guide resolution of the RMP issues remain applicable as management guidance for future actions in the Lands and Realty Program:

- Where possible, public lands identified for disposal will be exchanged for non-Federal lands that have been identified for acquisition to enhance BLM resource management programs.
- OHV use performed in conformance with existing leases, permits, rights-of-way stipulations, or other land-use authorizations will not be restricted.
- OHV use related to mining claim operations will not be restricted, except by regulations and re-

quirements found in 43 CFR 3809, as amended on March 2, 1983.

- Use of military, fire, emergency, or law enforcement vehicles being used for emergency purposes; vehicles whose use is expressly authorized by the authorized officer, or otherwise officially approved; vehicles in official use; and combat or combat support vehicles when used in times of national defense emergencies is excluded and will not be affected by "closed" or "limited" designations.

Implementation Guidance from RMP

Acquisitions. It is not feasible to identify all of the State and private lands whose acquisition would benefit AFO resource management programs. As they are identified in the future, their acquisition will be examined through the National Environmental Policy Act (NEPA) process, including full public involvement. As long as any future ownership adjustments conform to the theme of the approved RMP, such actions will be considered consistent with the RMP.

Exchanges. After an exchange is initiated with an interested party, the AFO must determine whether the exchange is in the public interest. If this is found to be the case, a NEPA document will be prepared, including detailed inventories of the public land for cultural resources, and threatened, endangered, or rare species. An appraisal of both parcels will be completed to ensure that economic values of the lands are equal and a cadastral survey of the parcels will be completed if necessary. The conveyance documents will be prepared, including any patent reservations to protect valid existing rights such as rights-of-way. Grazing allottees will be given a two-year notice of cancellation of their grazing licenses. After a final exchange agreement is reached, the titles to the land will be exchanged.

Exchanges are slow, complex processes. Land ownership adjustment is considered to be a long-term program.

Public Land Withdrawals. It is the policy of the BLM to keep the public lands open for public use and enjoyment. However, there are conditions which

warrant the removal or withdrawal of certain public lands from general use. Through withdrawal of these public lands, public safety or integrity of special uses is assured. The other typical use of mineral withdrawals in the AFO is to protect values within Special Management Areas.

Indian Land Claims. Acoma Pueblo has expressed interest in acquiring certain tracts of public land because of aboriginal use or for the purpose of improving their economy. Such tracts can be transferred to pueblos and tribes through land exchanges, sales, or direct transfers via Congressional legislation. The BLM cannot support direct transfers without considering the resource values lost to the general public. Consequently, a land exchange is usually the preferred method of transfer since resource values that will benefit the general public will be replaced. Less desirable than an exchange, but more favorable than a direct transfer, is a public land sale since sale at least benefits the general public by returning the money collected from the sale to the "Federal Land Disposal Account" in the United States Treasury. This approach is not only consistent with FLPMA, but it also agrees with the Indian Land Consolidation Act of 1983 (96 Stat. 25156). When an Indian exchange or sale proposal is determined to be in the public interest, then a cooperative agreement may be used to aid in implementing the proposal.

Rights-of-Way. The AFO grants rights-of-way, leases, and permits to qualified individuals, businesses, and governmental entities for the use of the public lands. These rights-of-way are issued so as to protect natural and cultural resources associated with the public lands and adjacent lands. Rights-of-way are issued to promote the maximum utilization of existing rights-of-way, including joint use whenever possible. All right-of-way actions are coordinated, to the fullest extent possible, with Federal, State and local government agencies, adjacent land owners, and interested individuals and groups. All right-of-way applications are analyzed on a case-by-case basis.

Rights-of-way corridors are designated to prevent haphazard right-of-way placement and reduce adverse environmental impacts. Designated corridors also decrease the repeated analysis of alternative routes during the environmental analysis process. Consolidating rights-of-way also assists utility companies by providing an area in which transmission line placement

is the primary use. A right-of-way corridor was designated through sections of Cibola County just north of the Neck Unit by the *Divide Management Framework Plan* (USDI, BLM 1983) and carried forward into the Rio Puerco RMP. The right-of-way corridor is the preferred location for future transmission line placements in the Grants area.

Transportation Management Plan. The AFO will prepare a Transportation Management Plan. This Plan will identify the specific transportation management actions to be implemented to accomplish the objectives of the RMP and its amendments, including the Approved El Malpais Plan. The AFO road inventory (USDI, BLM 1996c) will be incorporated into the Transportation Management Plan and will be updated as new information becomes available. In addition, access, transportation, and rights-of-way needs will be incorporated into the Transportation Management Plan. Priorities for implementation of the Transportation Management Plan will be specified in the annual RMP Update document. All NEPA requirements will be complied with prior to implementing specific actions.

Decisions Carried Forward from Previous Planning

The following decisions from previous planning which were carried forward into the Rio Puerco RMP still affect the Lands and Realty Program for the Plan Area:

- Establish a north-south right-of-way corridor for future ROW needs, which will follow the two existing Tucson Power and Electric 345 kV lines. [This ROW corridor designated by the Socorro District was carried forward into the AFO by the Rio Puerco RMP. It is shown on Map 20 in the RMP and parallels Interstate 40 just north of the Neck Unit of the NCA. The right-of-way corridor is the preferred location for future transmission line placements in the Grants area.]
- Retain all public lands with a B or higher Recreation Inventory System (RIS) rating in public ownership, specifically within El Malpais. [In compliance with the El Malpais Act, all lands within El Malpais NCA will be retained in public ownership.]

- Acquire private lands in Cebollita Canyon and begin a stabilization, interpretation, and surveillance program of cultural resources in the canyon. [*The private lands listed for this Divide Management Framework Plan decision, except for a small residential area, have all been acquired by Acoma Pueblo. This decision can no longer be implemented.*]
- Acquire through exchange the riparian/wetland habitat, specifically Cebolla Spring and Laguna Americana. [*Both have been acquired.*]
- Attempt to acquire private lands within sensitive areas in Big Hole-in-the-Wall and Chain of Craters. [*This action has been accomplished.*]
- Attempt to acquire through a Bureau motion exchange process, the private and State lands in the Chain of Craters area. Establishment of total estates (surface and subsurface) will be a priority for the lands identified for acquisition by exchange. [*This action has been accomplished.*]

Guidance from El Malpais NCA Land Protection Plan

The *Land Protection Plan* (USDI, BLM 1989b) calls for a combination of land protection methods to be used to protect NCA resources on private lands. The

recommendations in the *Land Protection Plan* are based on

the legislative intent and direction established by the El Malpais Act which requires the AFO to protect important natural, cultural, and scenic values within the designated boundaries of the NCA, but does not direct the AFO to consolidate all

land within the NCA in Federal ownership. It should be stressed that the recommendations of the *Land Protection Plan* do not in any



way diminish the rights of non-Federal landowners. The Federal government has no control over legal uses of private lands within the NCA, even those uses considered to be incompatible, except of course, where the government has acquired a scenic or conservation easement. It is the intent of Congress that when private land within the NCA needs to be acquired, it should be acquired only with the consent of the property owner, unless there is an imminent threat that the land is to be developed in a manner that would be detrimental to the purposes for which the NCA was established.

As authorized by Sections 502 through 506 of the Act, the AFO will acquire lands or interests in lands (i.e., mineral estate and conservation or scenic easements) by the following methods: (1) donation, (2) purchase with donated or appropriated funds, (3) exchanges, and (4) transfer from any other Federal agency. Cooperative agreements and covenants may also be utilized for protection of privately owned resources.

The following priorities for land protection and/or acquisition were identified. Immediate threats by private uses to lands containing important natural and/or cultural resources could cause a shift in priorities. In addition, these priorities may be pursued concurrently as funding is available. Other opportunities for protecting resources on private lands through cooperative agreements or technical assistance have not been identified as priorities, but will be pursued as appropriate.

Priorities and Rationale

1. The first priority for acquisition, preferably by exchange, includes all subsurface private interests within the NCA (see Map 2-11). Mineral development anywhere within the boundaries of the NCA is incompatible with the Congressionally mandated goals and purposes of the NCA. Federal minerals were withdrawn by the El Malpais Act and acquisition of private minerals would provide the same protection to the non-Federal parcels.

[*Minerals have been acquired through exchanges and fee acquisition from the principal subsurface landowners, New Mexico and Arizona Land Company (NZ) and Cerrillos Land Company (Santa Fe Pacific Minerals Corporation). Approximately 65,000 acres of private minerals remain in the NCA.*]

2. The second priority for acquisition, preferably by exchange, includes all private inholdings and edge holdings within and adjacent to the Cebolla Wilderness and most inholdings and one edge holding adjacent to the West Malpais Wilderness (see Map 2-12). Most edge holdings to the West Malpais Wilderness are not included due to the presence of major range improvements. The Chain-of-Craters WSA contains no private surface; therefore, no acquisition is needed.

Intensification of use on private land within wilderness areas is incompatible with the goals and purposes for which Congress designated the wildernesses. Acquisition of the private inholdings would prevent any such change in land use and improve the manageability of the wildernesses. Acquisition of the edge holdings would provide access into the wilderness areas. Especially important is acquisition of private edge holdings (to the Cebolla Wilderness) in the Breaks Management Unit which provide access into the Cebolla Wilderness. Acquisition and rehabilitation of Cebolla Spring and the Cebolla Spring riparian area in the Cebolla Wilderness and the Brazo and Breaks Management Units would ensure protection of a critical riparian area. The private portion of the Pinole Site in the Breaks Management Unit would be acquired under this priority. The "Old Hughes Place," a historic homestead in the Brazo Unit, may merit preservation.

[The majority of the lands in this priority have been acquired. However, one edge holding to the West Malpais Wilderness still remains as an acquisition priority. All private lands within the Breaks Management Unit have been acquired except for 22 acres. Four edge holding parcels remain for acquisition in the Brazo Management Unit. Cebolla Spring, the Cebolla Spring riparian area, and the Pinole Site have been acquired.]

3. The third priority is acquisition of scenic and/or conservation easements along the Federal, State, and County highways passing through the NCA (see Map 2-12).

Commercial development and visual intrusions along the roadways (e.g., installation of billboards) are incompatible with the goals and purposes of the NCA. Protection of the viewshed along NM 117 in the Neck Management Unit, the scenic gateway to the NCA, is most important, followed by Interstate 40 in the Neck, NM 53 in the Neck, and portions of CR 42 in the Continental Divide Management Unit.

[While no easements have been acquired, several purchases of surface estate have been completed under this priority.]

4. The fourth priority would be the Acoma Exchange, if initiated by the Pueblo of Acoma. This exchange is mandated by the El Malpais Act if requested by the Pueblo of Acoma.

[The Pueblo of Acoma has chosen not to pursue this exchange. The Approved El Malpais Plan recommends that this area be excluded from the NCA.]

5. The fifth priority for acquisition is lands containing natural and/or cultural resources requiring management or protection, and/or lands needed for visitor access and facility development.

For those areas where private uses are incompatible with NCA goals and purposes, or where important resources are on private land, acquisition may be the only feasible means of protection. However, other options, such as cooperative agreements and easements, may be explored. Exchange will be the preferred method of acquisition.

All private inholdings in the Brazo and Breaks Management Units should be acquired. Cebolla Spring, the Pinole Site, and the "Old Hughes Place" were discussed above under Priority 2 as part of acquisition of edge holdings to the Cebolla Wilderness.

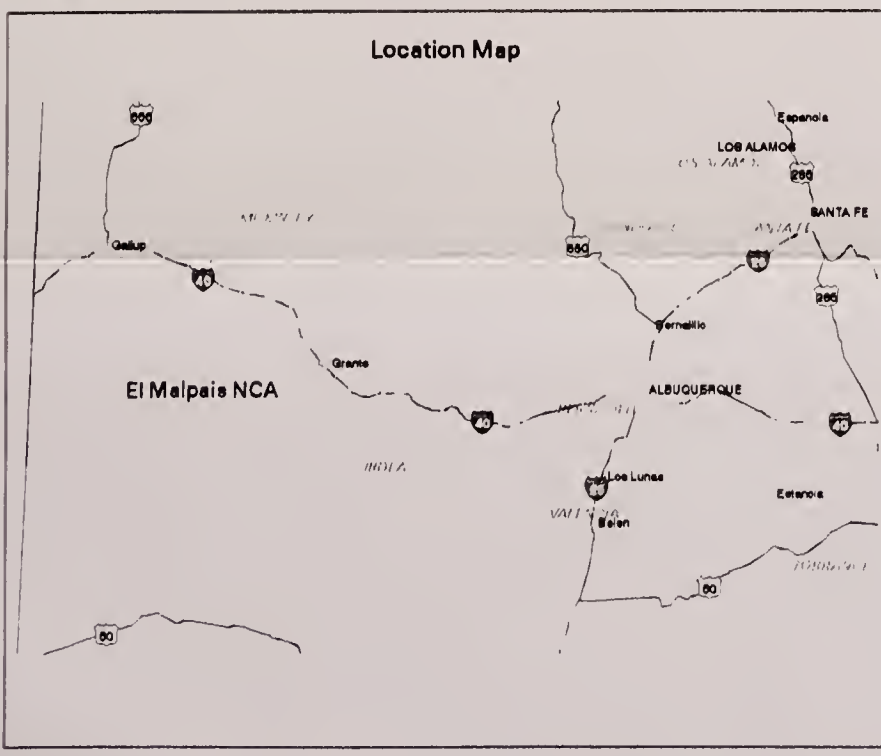
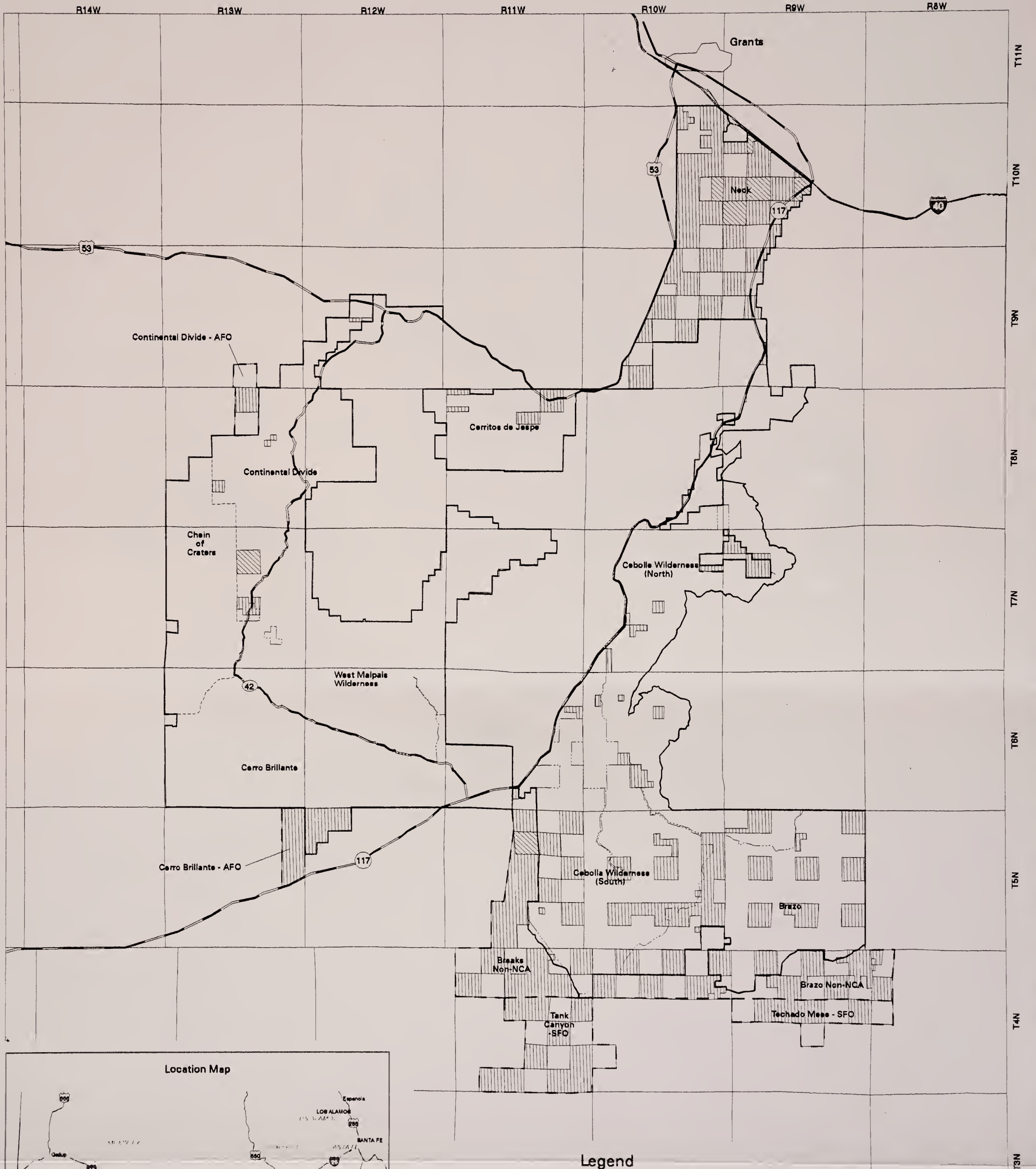
[All private lands within the Breaks Management Unit have been acquired except for 22 acres. Nine scattered small parcels remain for acquisition in the Brazo Management Unit.]

In the Cerritos de Jaspe Management Unit, the trailhead for the Outlaw Trail is on private land, as is part of the Bandera Flow. Extremely destructive unscientific excavation of cultural resources has occurred on private land in this unit. The AFO would acquire under this priority any private land in Cerritos de Jaspe shown on Map 2-12 offered by owners.

[About 850 acres in the Cerritos de Jaspe Management Unit have been acquired under this priority.]

Surface inholdings owned by the New Mexico-Arizona Land Company in the Continental Divide Management Unit, as well as private land owned by any other willing sellers, would be acquired under this

El Malpais Plan Area Private Minerals in NCA



- Legend**
- National Conservation Area (NCA) Boundary
 - Proposed NCA Units
 - Wilderness Boundary
 - Wilderness Study Area (WSA) Boundary
 - Interstate Highway
 - Other Road
 - Private Minerals In NCA
 - Private Minerals excluding Oil & Gas

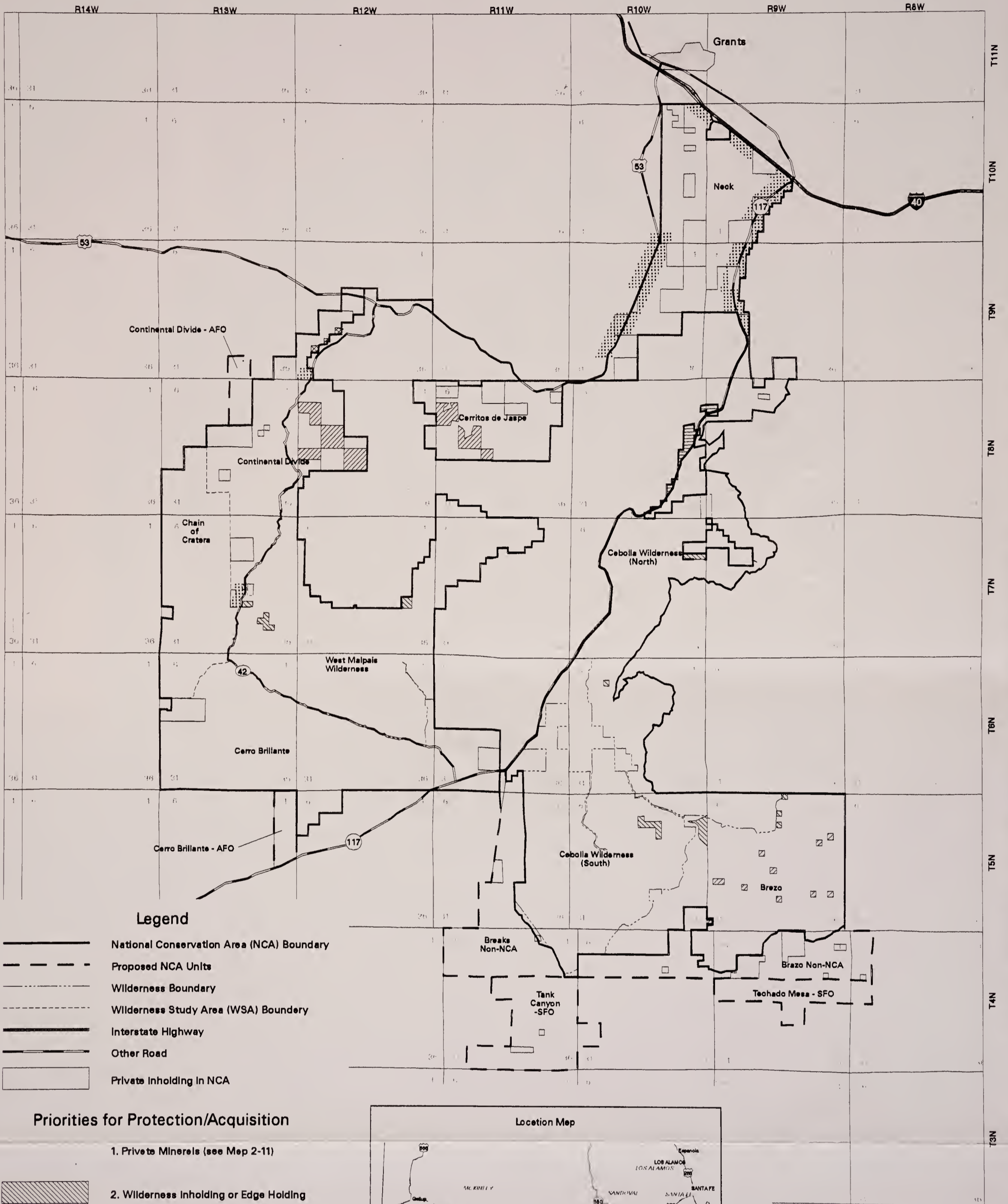
Map 2-11

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El Malpais Plan Area Private Inholdings in NCA

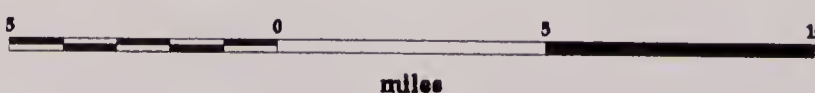
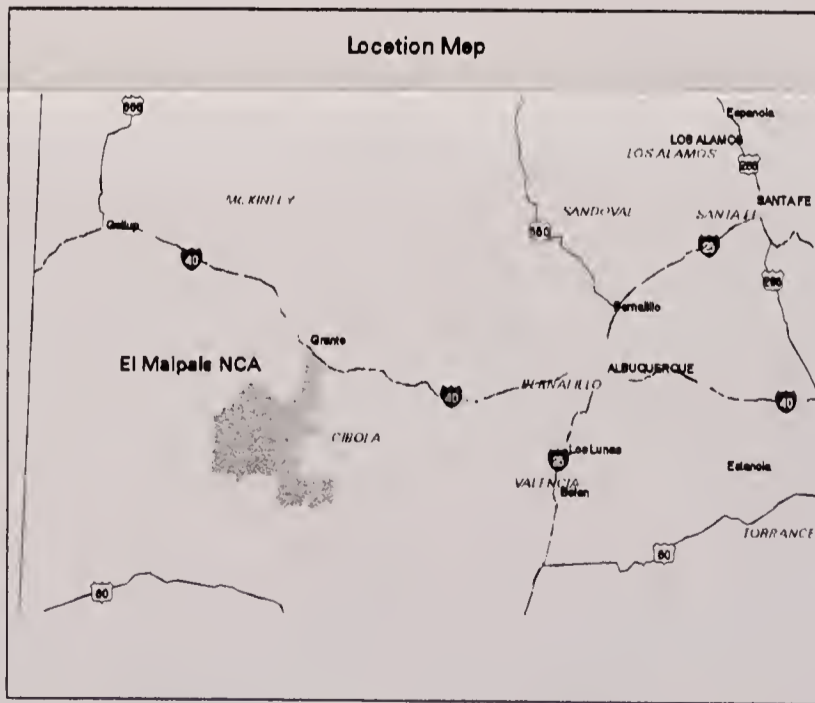


Legend

- National Conservation Area (NCA) Boundary
- Proposed NCA Units
- Wilderness Boundary
- Wilderness Study Area (WSA) Boundary
- Interstate Highway
- Other Road
- Private Inholding In NCA

Priorities for Protection/Acquisition

1. Private Minerals (see Map 2-11)
2. Wilderness inholding or Edge Holding
3. Scenic and/or Conservation Easement
4. Acoma Exchange (Pueblo has chosen not to follow through with exchange)
5. Resource Protection/Facility Development
6. NPS Protection Needs (others may be identified in the NPS GMP)



Map 2-12



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priority if shown on Map 2-12. The AFO does not plan to acquire lands in the heavily subdivided areas of the Continental Divide Unit. Acquisition of other private inholdings in the Continental Divide Management Unit may be proposed by the General Management Plan.

[New Mexico-Arizona Land Company has sold all or most of their surface inholdings in the Continental Divide Unit to private individuals. No further acquisitions in the Continental Divide Unit were proposed by the Approved El Malpais Plan.]

As historic structures become available in the NCA, they will be evaluated for historic and architectural value for adaptive use.

6. The sixth priority is protection of private lands and resources within the NCA to benefit resources within El Malpais National Monument (see Map 2-12).

Any development visible from CR 42 in the Continental Divide Management Unit would intrude on the natural scenic quality of the National Monument. Acquisition of scenic or conservation easements along CR 42 would protect the viewshed in the National Monument.

[While no easements have been acquired, several purchases of surface estate completed under Priority 3 also benefit El Malpais National Monument.]

Proliferation of access roads into the subdivided areas within and west of the Continental Divide Management Unit in the NCA would also intrude on the natural scenic quality of the National Monument. The AFO and NPS will work with Cibola County and landowners to limit the number of access roads across the National Monument and NCA, while still providing access from outside the NCA and National Monument.

7. The seventh priority is lands where there is no immediate threat to natural or cultural resources.

As lands become available in these other areas, they will be evaluated for their suitability for acquisition. Only exchange and sales proposals from private landowners that are in the best interest of the Federal government and that meet the goals and purposes of the NCA will be pursued.

[The AFO has acquired a small amount of land under this priority.]

Monitoring/Studies

Monitoring studies for the Lands and Realty Program consist primarily of compliance checks and inspections. Land-use permit sites are checked to ensure adherence to permit terms and conditions. Rights-of-way are inspected for proof of construction or relinquishment. Unauthorized land uses are also inspected by this program to ensure cessation of unauthorized activities and ensure that prescribed reclamation procedures, where required, are followed.

Implementation Priorities

The implementation priorities listed below may change due to funding allocations, changes in policy, new directives, and staffing.

- Acquire the identified private land, minerals, and easements located in El Malpais NCA. Exchange is the preferred means of acquisition.
- Process public land and mineral withdrawal for all public land within the non-NCA units in AFO.
- Process land-use permit applications as received.
- Process right-of-way applications as received.
- Perform compliance checks as needed.

Support Needs

Cadastral Survey

It is likely that support to the Lands Program from the Cadastral Survey Program will be identified.

Hazardous Materials

Support from the Hazardous Materials Management Program is necessary for all land exchanges and acquisitions.

Cultural Resources

Support from the Cultural Resources Program is required for all surface-disturbing actions, as well as for land exchanges.

American Indian Consultation

American Indian consultation is required for all surface-disturbing actions, as well as for land exchanges.

Special-Status Species

Consideration of special-status species is required for all surface-disturbing actions, as well as for land exchanges.

Minerals

The Minerals Program prepares a mineral report for all exchanges and mineral acquisitions.

Appraisals

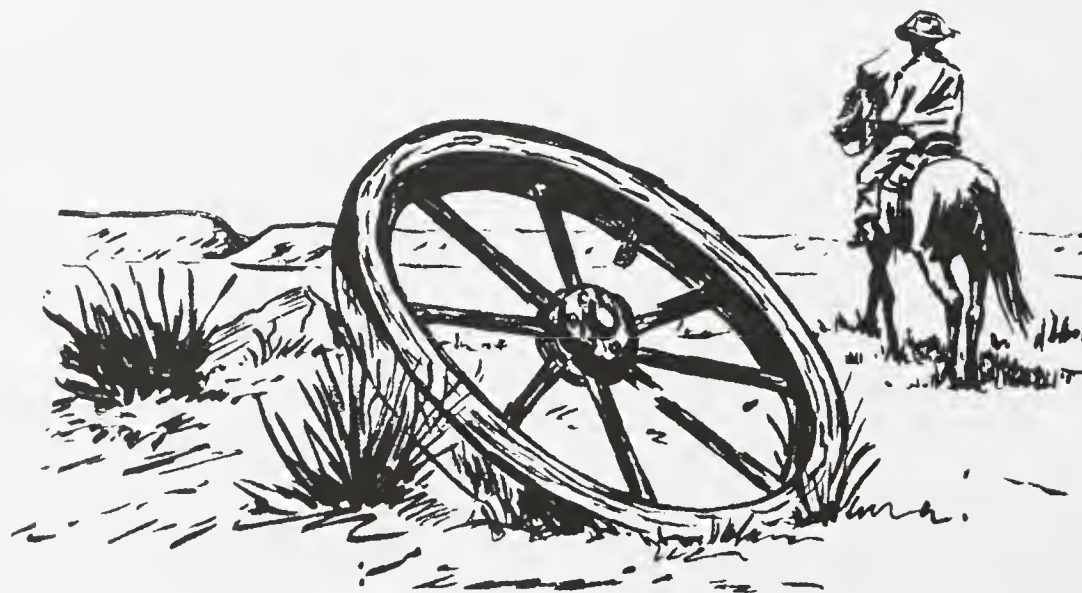
Appraisals are needed for all land acquisitions, easements, exchanges, and purchases.

Engineering & Operations

Support from the Engineering and Operations Programs is needed for construction of new BLM roads and for the right-of-way program.

Soil, Water, & Air Resources

Support from the Soil, Water, and Air Resources Program is needed for land exchanges and for rights-of-way.





Program Goals

The goal of the Geology and Paleontology Programs is to protect important, environmentally sensitive geologic and paleontological resources while allowing scientific collection and research, recreational and hobby collecting, and educational and interpretive activities.

Management Guidance

Policy and Authorities

The geologic and paleontological resources of the Plan Area are protected by the Antiquities Act of 1906, the Federal Land Policy and Management Act of 1976, and the Archeological Resources Protection Act of 1979. The El Malpais Act does not specifically address geologic or paleontological resources, but does address the protection of scientific resources.

Field Office Program Guidance

In areas where potentially important geologic values or fossils may be involved, the AFO will evaluate all permit applications for scientific study and develop appropriate stipulations for resource protection.

Participation in the formulation of activity plans is an integral part of managing geologic and paleontological resource values. Proposed actions from AFO land-use programs will be reviewed, and permit applications will be processed as received.

The AFO will develop appropriate interpretive materials to explain the significance of the special geologic features of the Plan Area, such as the Chain of Craters, the cliffs at The Narrows, La Ventana Natural Arch, Cerro Rendija, Hole-in-the-Wall, and Cerritos de Jaspe.

Interpretive wayside exhibits that emphasize area geology, wilderness, and wilderness use ethics will be developed at La Ventana Natural Arch.

Interpretive objectives (themes) will be developed for each resource whose management can be assisted through visitor education efforts. Potential themes

have been developed for several programs; these are not all-inclusive or final. A potential theme for the Geology Program is:

- Visitors should be informed of significant geologic features and the physical processes that produced them.

Decisions From Approved El Malpais Plan

AFO will enter into agreements with appropriate institutions to conduct research on La Rendija (Maxwell's Fault) and other areas of geologic and paleontological interest.

Guidance From Rio Puerco RMP

Some of the decisions in the Rio Puerco RMP continue to be applicable to management of the geologic and paleontological resources in El Malpais NCA and adjoining lands. This guidance is listed below as "Criteria for Resolution of RMP Issues" and "Implementation Guidance From RMP." In addition, the RMP carried forward decisions from previous planning that still apply to El Malpais. These decisions are listed under "Decisions Carried Forward From Previous Planning."

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Geology and Paleontology Programs:

- Designation of OHV use will consider protection of resources such as . . . cultural resource values . . . and other resource uses. [*Paleontological and geologic resources will be considered under this criterion.*]
- Fuelwood will not be made available in areas where harvesting would degrade or disturb . . . cultural [or] historic . . . values of the area. [*Paleontological and geologic values will be considered under this criterion.*]

Implementation Guidance From RMP

Develop activity plans which carry out the objectives of this Plan for the protection of those geologic or paleontological resources considered to be of significant scientific interest.

Review proposed actions from AFO land-use programs to avoid or mitigate impacts to scientifically significant geologic and paleontological resources.

Evaluate all permit applications both for mineral extraction and for scientific study in areas where significant fossils or geologic values may be involved, and develop appropriate stipulations for resource protection.

Decisions Carried Forward From Previous Planning

The following decision applicable to management of geologic resources was carried forward into the Rio Puerco RMP from a previous planning document:

- Complete a descriptive brochure and interpretive areas for each quality geologic feature in the Divide Planning Area: El Malpais lava flow and Chain of Craters. [*Pamphlets are now available for Chain of Craters; the El Malpais lava flow is within El Malpais National Monument.*]

Monitoring/Studies

The AFO will conduct compliance inspections on all activities involving valuable geologic and paleontological resources.

Implementation Priorities

As a practical matter, demand-driven actions receive high priority. Individual projects which could affect areas with significant fossils or geologic values will continue to receive priority consistent with the priority of the individual projects proposed by the various AFO resource programs.

Review actions proposed by AFO land-use programs to avoid or mitigate impacts to scientifically significant geologic and paleontological resources.

Evaluate all permit applications both for mineral extraction and for scientific study in areas where significant fossils or geologic values may be involved, and develop appropriate stipulations for resource protection.

Develop interpretive wayside exhibits that emphasize area geology, wilderness, and wilderness use ethics at La Ventana Natural Arch.

Support Needs

Support would be needed from the interdisciplinary staff of resource specialists in the processing of any geologic or paleontological research/collecting application received.

Interpretation/Public Education

The Interpretation/Public Education Program will support the Geology Program in developing interpretive materials to explain the significance of the special geologic features of the Plan Area, as well as in developing interpretive material emphasizing area geology for wayside exhibits at La Ventana Natural Arch.



MINERAL RESOURCES



Program Goals

The goal of the Mineral Resources Program is to make mineral resources available for development while minimizing environmental damage and protecting sensitive and special areas.

Management Guidance

Policy and Authorities

The Federal minerals in El Malpais NCA are managed under the authority of the El Malpais Act, and were withdrawn from mineral entry and leasing by the Act. Newly acquired minerals within the NCA are automatically withdrawn by the Act. The Federal minerals in the remainder of the Plan Area (the Brazo and Breaks Non-NCA Units), as well as those outside the Plan Area (the Continental Divide Non-NCA Unit) are covered by the following acts: Mining Law of 1872, as amended; Mineral Leasing Act of 1920, as amended; Minerals Materials Act of 1947; Multiple Mineral Development Act of 1954; Federal Land Policy and Management Act of 1976; Surface Mining Control and Reclamation Act of 1977; and Department of Energy Organization Act of 1977.

Development of Federal minerals underlying the lands outside the NCA but within the Plan Area would be covered by the following regulations and BLM manual sections: 43 Code of Federal Regulations (CFR)/BLM Manual 3100—Oil and Gas Leasing Operations; 43 CFR/BLM Manual 3200—Geothermal Resource Leasing and Operations; 43 CFR/BLM Manual 3400—Coal Management; 43 CFR/BLM Manual 3500—Management of Solid Minerals other than Coal; 43 CFR/BLM Manual 3600—Mineral Materials Disposal; 43 CFR/BLM Manual 3800—Mining Claims under the General Mining Law.

The AFO is responsible for management of Federal minerals on split-estate lands and Federal minerals where the surface is administered by another Federal agency.

Field Office Program Guidance

The AFO will protect the resources for which the NCA was established. The El Malpais Act withdrew

the public lands (surface and subsurface) in the NCA from “. . . location, entry, and patent under the mining laws, and from operation of the mineral leasing and geothermal leasing laws and all amendments thereto.” Thus, there will be no development of Federal minerals within the NCA. The Act also provides for the automatic withdrawal of all new acquisitions within the NCA from mineral entry and leasing, and from disposal under the public land laws. The Approved Plan recommends that Federal lands added to the NCA as the result of boundary adjustments also be withdrawn.

No discretionary development of Federal minerals will be authorized within the non-NCA portion of the Plan Area (the Brazo and Breaks Non-NCA Units). The AFO will comply with the 43 CFR 3809 regulations for non-discretionary actions related to development of Federal minerals in the Brazo and Breaks Non-NCA Units until the short-term withdrawal called for by the Approved Plan can be implemented. Likewise, no discretionary development of Federal minerals will be authorized in the units outside the Plan Area (the Continental Divide-AFO Unit, as well as the Cerro Brillante-AFO Unit, if any minerals are acquired by the Federal government in the Cerro Brillante Unit).

The AFO will continue to acquire mineral interests in the NCA (see the Lands and Realty section). There are still approximately 65,000 acres of privately owned mineral interests in the NCA. As private lands are acquired within the NCA, mineral rights will also be acquired.

The use of motorized vehicles and mechanical transport in designated wilderness will be prohibited, except in emergency situations and as permitted by law for livestock grazing and access to private lands and minerals.

The AFO is required by law to provide such access to non-Federal lands, including non-Federal minerals, as is adequate to secure to the landowner the reasonable use and enjoyment of non-Federally owned land which is completely surrounded or isolated by public lands administered under FLPMA. In determining adequate access, the AFO has the discretion to evaluate such things as proposed construction methods and location, to consider reasonable alternatives (trails, alternative routes, including aerial access, and degree of develop-

ment), and to establish such reasonable terms and conditions as are necessary to protect the public interest. Reasonable use and enjoyment need not necessarily require the highest degree of access, but rather could be some lesser degree of reasonable access. The AFO, however, must provide a degree of access that is commensurate with the reasonable use and enjoyment of the non-Federal land. The AFO must also consider such things as a landowner's options to develop new access over non-Federal or public lands.

If an owner of private mineral interests within wilderness wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the briefest impacts on wilderness character.

Until Congress decides on the Approved Plan's wilderness suitability recommendations, the Chain of Craters and Canyons Wilderness Study Areas (WSAs) will be managed under the BLM *Interim Management Policy* (USDI, BLM 1995). There are no privately owned minerals in the Chain of Craters WSA, while ownership of minerals is a mixture of Federal and private in the Canyons WSA. As in the rest of the NCA, the Federal minerals in the WSAs were automatically withdrawn from the mining and mineral leasing laws by the El Malpais Act. If an owner of private mineral interests within the Canyons WSA wishes to develop them, the AFO will work to provide reasonable access and development opportunities with the least impairment to the area's suitability for designation as wilderness.

The goals and strategies identified in the *Partners Against Weeds* action plan for BLM (USDI, BLM 1996a) will be implemented as needed to help prevent the introduction or spread of noxious weeds in the AFO. These preventative measures will be applied to AFO-authorized actions such as oil and gas activities.

Decisions From Approved El Malpais Plan

The AFO will withdraw any new Federal lands added to the NCA as the result of boundary adjustments [*if the legislation authorizing the boundary adjustment does not automatically withdraw the lands*].

The AFO will seek to acquire all subsurface (mineral) interests within designated wilderness. Priority will be

given to those lands that are undeveloped or where use would pose a detrimental threat to wilderness character.

Until all or portions of the new Canyons WSA is either designated by Congress as wilderness or released from wilderness study, it will remain in WSA status and be managed under the *Interim Management Policy*, except as applied to minerals. [*This exception for minerals does not apply at this time since all Federal minerals within the NCA have been automatically withdrawn by the El Malpais Act, and the one tract of the Canyons WSA that is outside the NCA boundary is underlain by private minerals. However, if the minerals under that tract are acquired before Congress amends the boundary or designates the parcel as wilderness, the exception would apply and the minerals would be managed under the 43 CFR 3802 regulations until the short-term withdrawal called for by the Approved Plan could be implemented.*]

Pending decisions from Congress, the AFO will manage the Breaks and Brazo Non-NCA Units [within the Plan Area] in accordance with provisions of this Plan. The Continental Divide-AFO Unit [outside the Plan Area] will continue to be managed under the Rio Puerco RMP, as would any lands acquired within the Cerro Brillante-AFO Unit. The AFO will complete a short-term withdrawal from the public land and minerals laws on all public lands within the Breaks and Brazo Non-NCA Units.

The Techado Mesa-SFO and Tank Canyon-SFO Units will continue to be managed under the Socorro RMP. The Socorro RMP is currently being amended. The uses proposed by the El Malpais Plan for the units managed by the SFO, including withdrawal from the public land and minerals laws, will be considered in some of the alternatives.

Guidance From Rio Puerco RMP

The RMP minerals management prescriptions were superseded by the El Malpais Act for Federal minerals within El Malpais NCA. However, some of the decisions in the Rio Puerco RMP continue to be applicable to management of the Brazo Non-NCA Unit, Breaks Non-NCA Unit, and Continental Divide-AFO Unit. There are no public minerals in the Cerro Brillante-AFO Unit. This guidance is listed below as

“Criteria for Resolution of RMP Issues” and “Implementation Guidance From RMP.”

Criteria for Resolution of RMP Issues

Two of the criteria used to guide resolution of the Rio Puerco RMP issues remain applicable as guidance for future actions in the Mineral Resources Management Program:

- OHV use related to mining claim operations will not be restricted, except by regulations and requirements found in 43 CFR 3809, as amended.
- OHV use performed in conformance with existing leases, permits, rights-of-way stipulations, or other land-use authorizations will not be restricted.

Implementation Guidance From RMP

The El Malpais Act automatically withdrew all Federal minerals within the NCA from the mining and mineral leasing laws. The Approved El Malpais Plan calls for a short-term withdrawal from the public lands and minerals laws for all public land within the Breaks and Brazo Non-NCA Units. While no discretionary development of Federal minerals within the Brazo or Breaks Non-NCA Units will be authorized before the

withdrawal can be implemented, all public land (including the Breaks and Brazo non-NCA Units) is open to mineral entry and development unless previously withdrawn. Mineral exploration and development on public land are regulated under 43 CFR 3800 to prevent unnecessary and undue degradation of the land.

Monitoring/Studies

The AFO conducts surface compliance inspections on all mineral development activities.

Implementation Priorities

Mineral development activities are driven by public demand.

Support Needs

Support from the interdisciplinary staff of resource specialists would be needed in the processing of any mineral development application received.

Lands and Realty

The Lands Program will implement the short-term withdrawal called for by the Approved Plan.





HAZARDOUS MATERIALS MANAGEMENT



Program Goals

The Hazardous Materials Management Program is relatively new, having been introduced into the BLM and its planning process during the late 1980s and early 1990s. The goals of the Hazardous Materials Management Program are to protect public health, safety, and environmental resources by minimizing environmental contamination on public lands and BLM-owned and operated facilities; to comply with applicable Federal and State hazardous materials laws and regulations; to maintain the health of the land through assessment, cleanup, and restoration of contaminated sites; and to integrate environmental protection and compliance and all environmental statutes into all BLM activities.

Management Guidance

Policy and Authorities

The Hazardous Materials Management Program is based upon a myriad of environmental laws, regulations, and Executive Orders (EOs) requiring the Federal government to adhere to the same environmental standards as the private sector. The most important of these laws are:

Comprehensive Environmental Response, Compensation, and Liability Act (amended by the Superfund Amendments and Reauthorization Act of 1980, as amended); Resource Conservation and Recovery Act of 1976, as amended (which amends the Solid Waste Disposal Act of 1965); Emergency Planning and Community Right-to-Know Act of 1986; Federal Facilities Compliance Act of 1992; Community Environmental Response Facilitation Act of 1992; Oil Pollution Act of 1990; Pollution Prevention Act of 1990; Toxic Substances Control Act of 1976; Clean Water Act of 1972, as amended (which amends the Federal Water Pollution Control Act of 1952); Clean Air Act of 1970, as amended (which amends the Air Pollution Control Act of 1955); Safe Drinking Water Act of 1974, as amended; Transportation Safety Act of 1974 and subsequent Hazardous Materials Transportation Act amendments of 1976 and 1990; Federal

Insecticide, Fungicide and Rodenticide Act of 1975 (which amends the Federal Environmental Pesticide Control Act of 1972); and Occupational Safety and Health Act of 1970 (OSHA).

The most important of the EOs and regulations are:

EO 12580–Superfund Implementation; EO 12898–Environmental Justice Strategy; EO 12088–Federal Compliance with Pollution Control Standard; EO 12856–Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements; regulations implementing OSHA–29 CFR 1910.1001-1910.1043; regulations implementing the Transportation Safety Act and Hazardous Materials Transportation Act amendments of 1976 and 1990–49 CFR 171-173, 177, 383, 392, 395, and 397; and the Natural Resource Damage Assessment regulations–43 CFR 11.

Field Office Program Guidance

Acting primarily as a support function, the Hazardous Materials Management Program focuses on providing guidance to other programs to ensure that those programs adhere to all Federal and State environmental laws and regulations. In addition, all National Environmental Policy Act (NEPA) compliance documents produced for actions within the Plan Area will be reviewed for hazardous materials management environmental compliance.

No sites within the Plan Area have been identified as containing hazardous substances. If such sites are identified in the future, all surface and/or subsurface activities will be suspended until the AFO obtains direction from the appropriate Federal and/or State regulatory agency.

Decisions From Approved El Malpais Plan

No decisions from the El Malpais Plan apply to the Hazardous Materials Management Program; however, hazardous materials management was considered in the decision-making process.

Criteria for Resolution of El Malpais Plan Issues

The following factor that applies to the Hazardous Materials Management Program was considered in developing answers to the Recreation and Facility Development issue questions. This factor will continue to be considered as the El Malpais Plan is implemented.

- Public health and safety

Guidance From Rio Puerco RMP

Because the Rio Puerco RMP was written prior to the development of the Hazardous Materials Management Program, there are no criteria for resolution of RMP issues, implementation guidance, or decisions carried forward from previous planning related to hazardous materials management that apply to management of El Malpais NCA.

Monitoring/Studies

Monitoring is carried out in response to assessment, cleanup, and/or restoration of a contaminated site. Monitoring will be coordinated with other programs to ensure that those program objectives are met.

Implementation Priorities

If sites containing hazardous substances are identified in the Plan Area, all surface and/or subsurface activities will be suspended until the AFO obtains direction from the appropriate Federal and/or State regulatory agency.

The Hazardous Materials Management Program will provide guidance to other programs to ensure that those programs adhere to all Federal and State environmental laws and regulations.

All NEPA documents produced for actions within the Plan Area will be reviewed for hazardous materials management environmental compliance.

Support Needs

The Hazardous Materials Management Program would need support from the following resource programs in order to implement any cleanup or rehabilitation projects:

Law Enforcement

Law enforcement support may be required when a contaminated site is discovered to protect the public from inadvertent contamination, and for investigations.

Cultural Resources

Prior to cleanup of contaminated sites, a cultural resource inventory is required if it can be completed without jeopardizing the safety of the resource personnel.

Special-Status Species

Prior to cleanup of contaminated sites, a special-status species inventory is required if it can be completed without jeopardizing the safety of the resource personnel.



Program Goals

The goal of the Invasive and Noxious Plants Program is to prevent the introduction and spread of noxious weeds in the AFO administrative area.

Management Guidance

Policy and Authorities

The Invasive and Noxious Plant Program is carried out under the following laws: Federal Noxious Weed Act of 1974, as amended by the Food, Agriculture, Conservation and Trade Act of 1990, Section 1453 (Management of Undesirable Plants on Federal Lands); Carlson-Foley Act; Omnibus Consolidated Appropriations Act of 1997 (Section 124); and the Plant Protection Act of 2000. In addition, Executive Order 13112 of 1999 directs all Federal agencies to control the spread of noxious weeds. The Final Environmental Impact Statement *Vegetation Treatment on BLM Lands* (USDI, BLM 1991a) provides policy and procedures for conducting weed treatments through the use of “integrated weed management programs.”

The *Partners Against Weeds* (PAWS) action plan for BLM (USDI, BLM 1996a) and the *Pulling Together National Strategy for Invasive Plant Management* (Federal Interagency Committee for Management of Noxious and Exotic Weeds 1998) establish general guidelines to be implemented to help prevent the introduction or spread of noxious weeds.

In addition to the PAWS action plan and the Pulling Together Initiative, the AFO works under an Information Memorandum (IM) addressing prevention of noxious weeds—IM NM-010-99-01 (Noxious Weed Prevention Schedule) and a cooperative agreement between Cibola County and the Rio Puerco Resource Area [now the AFO]—Management of Undesirable Plants, Including Noxious Weeds.

Field Office Program Guidance

The goals and strategies identified in the PAWS action plan will be implemented as needed for noxious weed management in the AFO. These preventative

measures will be applied to AFO actions such as range improvements, fire rehabilitation, and road maintenance, as well as AFO-authorized actions including rights-of-way, oil and gas activities, grazing permits, and recreation permits.

A summary of the portions of the PAWS action plan being implemented in the AFO follows:

- The AFO will delineate high priority areas for prevention of noxious weed infestation. All activities authorized or conducted on public land will be reviewed for their potential to spread weeds and modified as necessary. The effects analysis for each National Environmental Policy Act (NEPA) document will evaluate the potential for noxious weed invasion. Newly introduced weed species will be identified and documented.
- The AFO will conduct workshops for all field personnel to update their knowledge of noxious weeds. The workshops will include identification of noxious and invasive weeds and a review of the problems noxious weeds can cause. The AFO will continue to work to establish weed management areas and partnerships in developing and implementing outreach plans.
- The construction of access roads and creation of public access creates a moderate to high risk of introducing noxious weeds. Therefore, the AFO will be monitored for noxious weeds. Any noxious weeds found will be mapped and treated upon discovery. Site-specific monitoring will then continue for three years following treatment.

Under the guidelines found in IM NM-010-99-01, the AFO will determine the best management options for preventing the introduction or spread of noxious weeds by implementing an integrated weed management program using a combination of the four general categories of weed management—cultural, physical control, biological control, and herbicides.

The AFO will continue and expand cooperation with other Federal agencies, State and county governments, organizations, and private landowners in the fight against weeds.

The AFO will continue to work with the Cooperative Extension Service and others on research for control methods for noxious weeds. Monitoring programs will be established to determine if the weed management program is meeting the AFO's management objectives.

The following stipulations will be applied to all ground-disturbing projects:

- When a ground-disturbing project is proposed, the proposed route or site shall be inventoried for the presence of noxious weeds listed on the New Mexico Noxious Weed List. The following noxious weeds have been identified as occurring on lands within the boundaries of the AFO:
 - 1) Russian Knapweed (*Centaurea repens*)
 - 2) Musk Thistle (*Carduus nutans*)
 - 3) Bull Thistle (*Cirsium vulgare*)
 - 4) Canada Thistle (*Cirsium arvense*)
 - 5) Scotch Thistle (*Onopordum acanthium*)
 - 6) Hoary Cress (*Cardaria draba*)
 - 7) Perennial Pepperweed (*Lepidium latifolium*)
 - 8) Halogeton (*Halogeton glomeratus*)
 - 9) Spotted Knapweed (*Centaurea maculosa*)
 - 10) Dalmatian Toadflax (*Linaria genistifolia*)
 - 11) Yellow Toadflax (*Linaria vulgaris*)
 - 12) Camelthorn (*Alhagi pseudalhagi*)
 - 13) Yellow Starthistle (*Centaurea solstitialis*)
 - 14) Saltcedar (*Tamarix spp.*)
- Construction equipment shall be inspected and cleaned prior to coming onto the work site. This is especially important on vehicles from out-of-state or if coming from a weed-infested area.
- The source for fill dirt or gravel must be noxious weed free.
- The site shall be monitored for the life of the project for the presence of noxious weeds (including maintenance and construction activities). If weeds are found, the AFO shall be notified and the AFO will determine the best method for the control of the particular weed species.
- When the work site is abandoned, the area shall be reclaimed and revegetated with the species specified by the AFO. All seed shall be certified weed free. The area will be monitored to deter-

mine the success of the revegetation, and will be reseeded if necessary.

Decisions From Approved El Malpais Plan

Control of noxious weeds (e.g., knapweed, bindweed, leafy spurge, thistle) is allowed by mechanical, chemical, or biological means. Site-specific NEPA compliance will be completed before any noxious weeds are treated. [*A Field Office-wide programmatic environmental assessment for noxious weed treatment has been prepared. Site-specific NEPA compliance will tier from the programmatic document.*]

To allow for fully functioning riparian condition, exotic species such as saltcedar and Russian olive will be removed using mechanical, biological, or chemical treatments. The AFO will plant willows, cottonwoods, and other native riparian species as needed.

Criteria for Resolution of El Malpais Plan Issues

The following factor which applies to the Invasive and Noxious Plants Program was considered in developing answers to the Wildlife Habitat issue questions. This factor will continue to be considered as the El Malpais Plan is implemented.

- Conflicts between exotic and native species

Guidance From Rio Puerco RMP

Some of the guidance in the Rio Puerco RMP continues to be applicable to management of El Malpais NCA and adjoining lands. This guidance is listed below as "Implementation Guidance From RMP."

Implementation Guidance From RMP

Poisonous or noxious plants are controlled where spot infestations occur. In addition, the AFO cooperates with other affected landowners in controlling infestations on relatively large areas. Chemical control will conform to all applicable State and Federal regulations. Biological controls will also be considered where practical. Mechanical controls (chaining, cabling, and pushing) can be used for areas where

juniper is considered to be a noxious plant, but this method is not a preferred means of control. All chemical applications will be preceded by an approved Pesticide Use Proposal. All applications of pesticides will be under the supervision of a certified pesticide specialist. All applications will be carried out in compliance with the New Mexico pesticide laws.

Monitoring/Studies

The AFO will be monitored for noxious weeds. Any noxious weeds found will be mapped and treated upon discovery. Site-specific monitoring will then continue for three years following treatment.

The AFO will monitor all known populations of noxious weeds on a yearly basis and update the inventory as needed.

Ground-disturbing projects permitted by the AFO will be monitored for the life of the project for the presence of noxious weeds (including maintenance and construction activities). If weeds are found, the AFO will be notified and the AFO will determine the best method for the control of the particular weed species.

The AFO will continue to work with the Cooperative Extension Service and others on research for control methods for noxious weeds. Monitoring programs will be established to determine if the weed management program is meeting the AFO's management objectives.

The perimeters of large populations of noxious weeds with low potential for total eradication in the short-

or long-term will be monitored and spot infestations will be eradicated upon discovery.

Implementation Priorities

The following are the priorities for the Invasive and Noxious Plants Program:

Identification, treatment, and monitoring of small populations of Class A, B, or C noxious weeds with a high potential for total eradication is the highest priority.

Identification, treatment, and monitoring of large populations of noxious weeds with less potential for short-term eradication but high potential for control and eventual eradication will have second priority.

Identification, treatment, and monitoring of large populations of noxious weeds with low potential for total eradication in the short or long term will receive less attention. These populations will be managed to prevent their spread to uninfested areas. Their perimeters will be monitored and spot infestations will be eradicated upon discovery. These will be the first areas treated with biological control agents.

Support Needs

The AFO will conduct workshops on identification of noxious and invasive weeds for all field personnel. The Invasive and Noxious Plants Program will rely on the support of field personnel to report the presence of noxious weeds.



Scotch Thistle

HIGHLIGHTS OF THE EL MALPAIS ACT
(P. L. 100-225)

APPENDIX A

APPENDIX A

HIGHLIGHTS OF THE EL MALPAIS LEGISLATION (P. L. 100-225)

Title I - National Monument

Establishment of Monument

Section 101 Designates a 114,000-acre National Monument to protect highly significant natural and cultural resources.

Transfer

Section 103 Transfers management of certain lands from the Cibola National Forest to the Department of the Interior to be managed as part of the National Monument.

Management

Section 103 National Monument will be managed according to laws of the National Park System. Management purposes of the monument are to preserve scenery and natural, historic, and cultural resources and to provide public understanding and enjoyment of these resources.

Permits

Section 104 Grazing privileges within the monument will end on January 1, 1998.

Title II - Masau Trail [now known as Pueblo Heritage Trail]

Designation of Trail

Section 201 Authorizes the National Park Service (NPS) to designate a vehicular tour route linking prehistoric and historic cultural sites in New Mexico and eastern Arizona.

Areas Included

Section 202 Initially the trail will link El Malpais National Monument, El Morro National Monument, Chaco Culture National Historical Park, Aztec Ruins National Monument, Canyon de Chelly National Monument, Pecos National Monument, and Gila Cliff Dwellings National Monument. Additional trail segments may be designated later by the Secretary of the Interior.

Information and Interpretation

Section 203 The Secretary may enter into cooperative agreements to help interpret natural and cultural resources of such sites. The Secretary, in cooperation with other public, Indian, and non-profit entities, must prepare and distribute information about sites along the trail.

Markers

Section 204 The trail will be marked appropriately. Signs and other informational devices may be accepted as donations.

(Senate Report) The NPS should work closely with the States of New Mexico and Arizona in establishing the trail markers, sharing the costs. If petroglyphs on the Albuquerque West Mesa are added to the National Park System, they should be incorporated into the Masau Trail.

Title III - El Malpais National Conservation Area

Establishment of Area

Section 301 Establishes a 262,690-acre National Conservation Area (NCA) to be managed by the Bureau of Land Management (BLM) to protect natural, cultural, scenic, and wilderness resources of national importance.

(Senate Report) The BLM is to erect a ranger station along NM State Road 117.

Management

Section 302(a) The NCA shall be managed according to applicable laws.

(Senate Report) Resource management plans referred to in this act are those required by the Federal Land Policy and Management Act (FLPMA).

Section 302(b) Hunting and trapping are to be permitted in the conservation area, subject to limitations of the State of New Mexico.

Section 302(c) Commercial wood collection is prohibited.

Section 302(d) Livestock grazing will continue.

Title IV - Wilderness

Designation of Wilderness

Section 401 Designates the 60,000-acre Cebolla Wilderness and the 38,210-acre West Malpais Wilderness.

Management

Section 402 Wilderness is to be managed in accordance with the Wilderness Act of 1964, and grazing is allowed to continue.

Title V - General Provisions

Management Plans

Section 501(a) Separate General Management Plans will be prepared for the monument and conservation area within 3 years. Each must include an interpretation and public education plan, a public facilities plan (providing for both a visitor center and a multi-agency orientation center), natural and cultural resource plans, and a wildlife management plan.

(Senate Report) Cultural resource plans will include wilderness. Appropriate forms of archeological research, including identification, excavation, stabilization, conservation, and protection of cultural resource sites will be permitted. Short-term disturbances resulting from these activities will be rehabilitated. Long-term scientific use of archeological values will conform to the concept that wilderness is devoted to recreational, scenic, scientific, educational, conservational, and historical use.

(House Report) Wilderness is to be included in the cultural resource plans, which will provide for active identification and management of historic properties, including protection of archeological values from looting, vandalism, and artifact collection. Appropriate forms of research and related activities should be permitted in wilderness, including investigation, identification, stabilization, conservation, and protection of cultural resource sites from deterioration by natural forces or vandalism. Research should be conducted so as to minimize impacts, and short-term disturbances resulting from such activities must be rehabilitated. The BLM should consult with the Advisory Council on Historic Preservation and the State Historic Preservation Officer to establish guidelines for

identification, management, and research of historic properties within wilderness. This guidance is consistent with the Wilderness Act. The need to prevent looting and vandalism is stressed, and public support for protection, recognition, and interpretation is noted.

- Section 501(b) A 17,500-acre Wilderness Study Area is established. Wilderness potential of this area will be protected until completion of the General Management Plan, which shall include a review of the wilderness suitability of these lands and a recommendation on this subject.
- Section 501(c) All roadless areas within the National Monument (except potential development areas) will be reviewed for wilderness suitability, with a recommendation made in the General Management Plan. Pending submission of the recommendation, managers will protect wilderness potential of the areas.
- (Senate Report) Protection of wilderness values does not preclude improving access and providing interpretive and recreational facilities in areas currently penetrated by roads.
- (Senate and House Reports) The NPS should use the BLM wilderness inventory policy definition of "road" in determining which lands are "roadless." "Potential development areas" may be included in the wilderness suitability study at the discretion of the agency.
- (Senate Report) The Department of the Interior is urged to enter into a cooperative agreement with the Department of Defense to locate and clear military ordnance in the monument and conservation area.
- (House Report) The Secretary of the Interior is expected to consult with the Secretary of Defense concerning the nature and extent of unexploded ordnance in the monument and conservation area, and the cost and feasibility of removing these materials or protecting the public from them.

Acquisitions

Section 502 The Secretary of the Interior is authorized to acquire lands and interests within the monument and conservation area. Lands owned by the State of New Mexico may be acquired only by exchange. The Congress expects acquisition of subsurface interests to be completed within three years.

(Senate and House Reports) Authority to acquire lands and minerals may extend beyond three years. Indian trust lands may not be condemned, and Indian lands should only be acquired with the consent of the Indian owners.

State Exchanges

Section 503(a) Upon request by the State of New Mexico, the Secretary is required to exchange State land within the monument or conservation area for equal value parcels elsewhere in the State.

Section 503(b) Within 6 months, the Secretary will identify for the State Land Commissioner those State lands within the monument and conservation area and those Federal lands that are available for transfer to the State of New Mexico in exchange. Such listing is to be updated annually. Congress expects the land exchanges to be completed within two years.

(Senate and House Reports) Authority for State exchange may extend beyond two years.

Mineral Exchanges

Section 504 The Secretary is directed to exchange approximately 15,000 acres of Federal mineral rights identified in the Act for approximately 15,000 acres of mineral rights owned by Santa Fe Pacific Industries within the conservation area. Such exchange is to be on the basis of equal value, consistent with FLPMA, and the Secretary must determine that the exchange is in the public interest. The exchange is to be completed within three years.

(Senate and House Reports) Authority for the exchange may extend beyond three years.

(House Report) The Committee believes that this exchange is in the public interest and intends these provisions to facilitate the exchange, consistent with FLPMA.

Acoma Pueblo Exchanges

- Section 505 (Senate and House Reports) Congress intends that the NPS and the BLM be sensitive to needs of Native American groups. Boundaries of the National Monument and Cebolla Wilderness were drawn specifically to allow continued road access to Acoma deeded land. Acoma grazing may continue for ten years within the monument and indefinitely within the conservation area.
- Section 505(a) The Secretary is authorized, at the request of Acoma Pueblo, to exchange certain lands within the conservation area or other lands of equal value outside the conservation area for Acoma trust lands west of NM 117. Lands exchanged to the Acoma shall be held in trust while the acquired lands will be incorporated into the monument.
- Section 505(b) Consistent with law and existing land use plans, BLM lands within New Mexico shall be available for exchange.
- Section 505(c) Certain identified lands within the conservation area are available for exchange, provided Acoma Pueblo requests exchange within one year. Otherwise these public lands are incorporated into the conservation area and certain areas will be included in the Cebolla Wilderness.
- (Senate Report) The NPS and the BLM should pursue exchanges before purchasing these lands. All lands within the conservation area need not be consolidated into Federal ownership. Power of condemnation will be used to acquire lands in the conservation area only where there is an imminent threat to the purposes for which the conservation area was established. Both agencies should work cooperatively with private land owners and range users to minimize construction of permanent fences and to maintain existing access to private property, where possible.
- (House Report) The one-year deadline for the Acoma exchange involving conservation area lands is intended to minimize potential interference with proper management of the conservation area and wilderness. Additional proposals for transfer of lands in these areas to the Pueblo of Acoma are not considered necessary or desirable.

Exchanges and Acquisitions Generally; Withdrawal

- Section 506(a) Generally, exchanges should be on the basis of equal value. However, the Secretary may make exceptions if they are in the public interest.
- Section 506(b) "Public lands" has the same meaning as in FLPMA.
- Section 506(c) Lands or interests acquired within the monument or conservation area after enactment of this legislation shall be incorporated into the monument or conservation area.
- Section 506(d) No Federal lands within the monument or conservation area shall be transferred out of Federal ownership or placed in trust, except as provided for in this Act. Subject to valid existing rights, Federal lands within the monument and conservation area are withdrawn from all forms of entry, appropriation, or disposal and from location, entry, and patent under the mining laws. They are closed to mineral and geothermal leasing.
- Section 506(e) Acreages in the Act are approximate; referenced maps take precedence over acreage figures.
- Section 506(f) The Secretary is authorized to accept land contiguous to Pecos National Monument by donation.
- Section 506(g) Capulin Mountain National Monument is redesignated Capulin Volcano National Monument, and other administrative details of records and boundaries of this monument are enacted.

Access

- Section 507(a) The Secretary is required to permit access for continued traditional cultural and religious use of the monument and conservation area by Native Americans.
- Section 507(b) The Secretary shall request the recommendations of Acoma Pueblo and other Indian tribes about methods of ensuring access, enhancing the privacy of traditional cultural and religious activities, and protecting traditional cultural and religious sites.
- Section 507(c) The Secretary may temporarily close to public use specific, limited portions of the conservation area and monument to protect the privacy of the religious activities of Indian people. Written notification of such action must be provided to the Energy and Natural Resources Committee of the Senate, and to the Interior and Insular Affairs Committee of the House, within seven days after initiation of any such closure.
- Section 507(d) An advisory committee including representatives of Acoma, Zuni, other appropriate Indian tribes and other persons or groups may be established to advise the Secretary on these matters.
- (Senate and House Reports) The Secretary must consult appropriate Indian tribes and their traditional cultural and religious authorities during preparation of the General Management Plans to determine what the traditional cultural and religious uses have been.

Cooperation

- Section 508 The Secretary is authorized and encouraged to cooperate with other agencies and groups to further the interpretation of prehistoric civilizations of New Mexico and eastern Arizona. Specifically, the Secretary is encouraged to cooperate in development of a multi-agency orientation center near Grants, New Mexico.

Water Rights

- Section 509 Water rights are reserved for the minimum amount of water needed to carry out the purposes for which the monument, conservation area, and wildernesses were established. This clause shall not affect any existing water right or pending application, and this subsection does not require the NPS to drill wells. Nothing in this action establishes a precedent with regard to future designations, nor does it affect interpretation of any other Act or designation.
- (Senate Report) The Committee reiterates that reservation of water applies only to this Act and should have no bearing on interpretation of any other reserved rights doctrine. The water rights reservation is junior to those of all existing wells and pending applications. No conflicts are anticipated between the Federal government's need for water and any valid existing or pending rights.

Authorization

- Section 510 This section authorizes \$16,500,000 for purposes of the Act: \$10,000,000 for land acquisition in the monument, \$1,000,000 for development in the monument, \$4,000,000 for land acquisition in the conservation area, \$1,000,000 for development in the conservation area, and \$500,000 for planning and developing the Masau Trail.

RECORD OF DECISION FOR THE EL MALPAIS PLAN

APPENDIX B

Record of Decision
El Malpais Plan
A Resource Management Plan

September 2001



United States Department of the Interior
Bureau of Land Management
Albuquerque Field Office

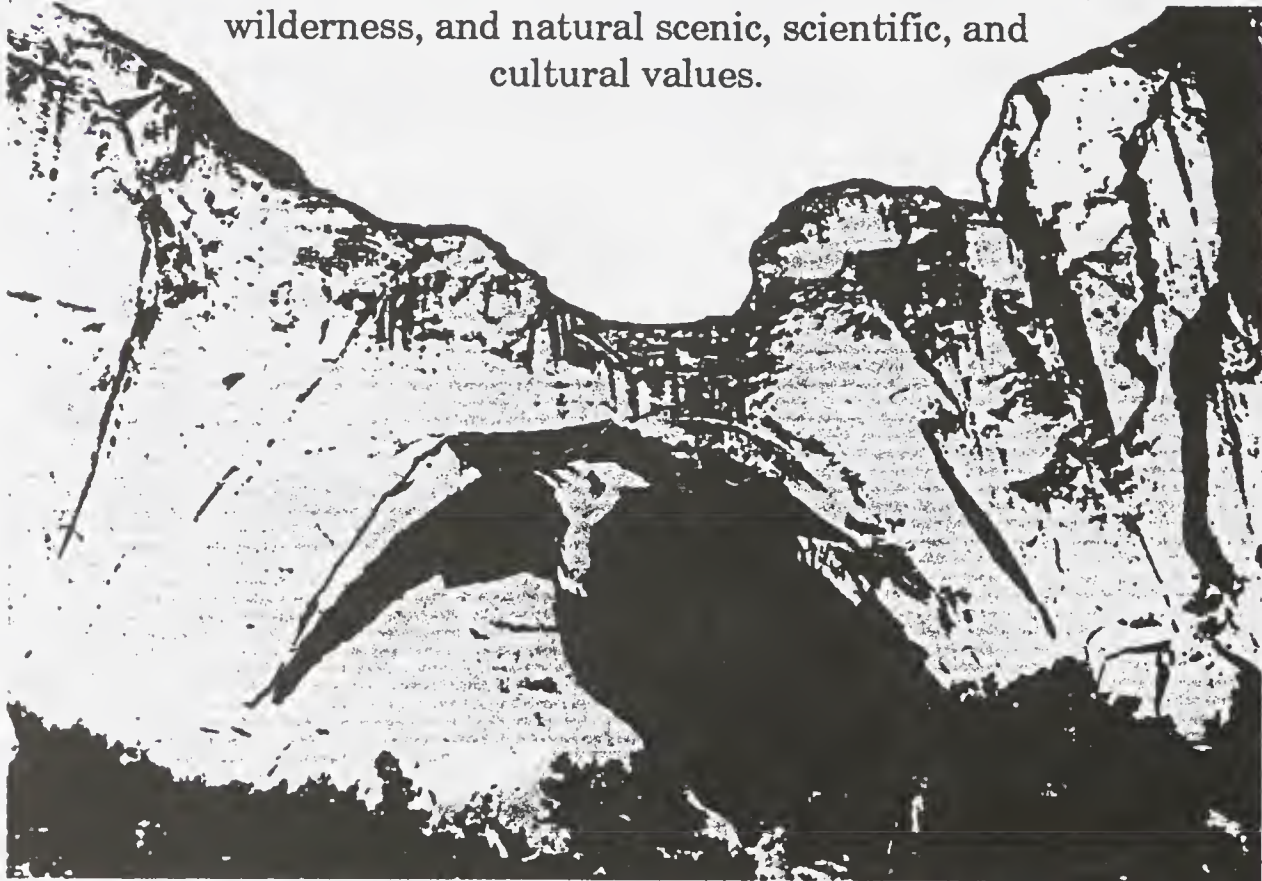


BLM/NM/PL-01-007-1610

The Bureau of Land Management...

is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the need of the American people.

Management is based upon the principles of multiple use and sustained yield, a combination of uses that takes into account the long-term needs of future generations for renewable and non-renewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural scenic, scientific, and cultural values.





United States Department of the Interior

Bureau of Land Management
New Mexico State Office
1474 Rodeo Road
P.O. Box 27115
Santa Fe, New Mexico 87502-0115

IN REPLY REFER TO:
1610 (010)

SEP 26 2001

Dear Reader:

In July 2001 BLM sent a document to you through the mail entitled **Record of Decision, El Malpais Plan, A Resource Management Plan**, dated June 2001. The June 2001 document is being replaced by the enclosed corrected document of the same name dated September 2001. Corrections were made in the document on page one under the "DECISION" heading.

DECISION 2) read, "The Plan specifies motor vehicle use designations. Wilderness areas will be closed to motor vehicles. Motor vehicle use will be limited to *existing roads* and trails in the remainder of the Planning Area. In addition, approximately 84 miles of road within the Planning Area will be closed and reclaimed."

DECISION 2) is changed to read, "The Plan specifies motor vehicle use designations. Wilderness areas will be closed to motor vehicles. Motor vehicle use will be limited to *designated routes* and trails in the remainder of the Planning Area. In addition, approximately 84 miles of road within the Planning Area will be closed and reclaimed."

DECISION 3) read, "The Plan makes wilderness recommendations to the Congress. The Chain of Craters Wilderness Study Area (WSA) is not recommended as suitable for designation as wilderness, but additional acreage contiguous to the existing Cebolla wilderness was reviewed for suitability; and 4,090 acres are recommended suitable."

DECISION 3) is changed to read, "The Plan makes wilderness recommendations to the Congress. The Chain of Craters Wilderness Study Area (WSA) is not recommended as suitable for designation as wilderness, but additional acreage contiguous to the existing Cebolla Wilderness was reviewed for suitability and *approximately 4,000* acres are recommended suitable, *and are now the Canyons Wilderness Study Area.*"

DECISION 4) read, "The Plan recommends changes in the NCA boundary. An additional 24,000 acres within the Planning Area are recommended for inclusion in the NCA. Another 19,100 acres outside the Planning Area are also recommended for inclusion. A portion of this acreage (about 2000 acres) would be acquired either through purchase of surface ownership or easement from a willing seller for a treadway for the Continental Divide National Scenic Trail."

DECISION 4) is changed to read, The Plan recommends changes in the NCA boundary. An additional 24,000 acres within the Planning Area are recommended for inclusion in the NCA. Another 19,100 acres outside the Planning Area are also recommended for inclusion. About 2,000 of these acres would only be recommended for inclusion if the surface ownership is acquired. Otherwise an easement would be sought for the Continental Divide National Scenic Trail Treadway. Either action requires a willing seller.

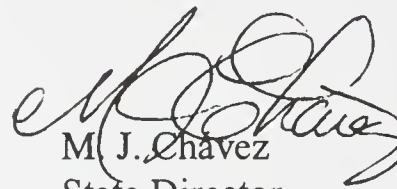
These corrections make the decision as stated in the Record of Decision (ROD) consistent with the Proposed Action as stated in the Proposed Plan and analyzed as Alternative D, the agency preferred alternative, in the Final EIS.

Also enclosed is a copy of the September 2001 ROD for the Proposed El Malpais Plan and Final Environmental Impact Statement called "The El Malpais Plan." It replaces the ROD issued in June 2001. The ROD records the decision to amend the Rio Puerco Resource Management Plan and to implement activity level decisions called for in the Proposed Action (Alternative D) of the Proposed El Malpais Plan and Final Environmental Impact Statement. "The El Malpais Plan" is a 15- to 20-year plan for managing the El Malpais National Conservation Area (NCA) and certain adjoining lands. The Plan recommends that the Congress add acreage to the NCA and designate additional acreage as part of the wilderness system. These recommendations can only be implemented as part of the Plan after the Congress has acted.

As a conclusion to this planning process BLM will prepare a Resource Management Plan/Stand Alone Plan. This Plan will identify the actions to be implemented in the area covered by this amendment.

Your interest in and contributions to the environmental assessment and planning process are appreciated.

Sincerely,



M. J. Chavez
State Director

Enclosures

EL MALPAIS PLAN RECORD OF DECISION

INTRODUCTION

This document records the decision of the Bureau of Land Management (BLM) to amend the Rio Puerco Resource Management Plan (RMP), as it relates to management of El Malpais National Conservation Area (NCA) established by the El Malpais Act (Public Law 100-225, December 31, 1987), and certain adjoining lands. The Planning Area boundary includes approximately 248,000 acres of public lands administered by BLM's Albuquerque Field Office (AFO). Also within the Planning Area are 1,800 acres of Indian-owned and -managed land and another 36,500 acres privately owned and managed. The Planning Area includes 24,200 acres outside the NCA boundary as designated by Congress. This acreage and an additional 19,100 acres outside the Planning Area were studied for possible addition to the NCA.

DECISION

The decision is to approve the Proposed Plan as described in the "Proposed El Malpais Plan and Final Environmental Impact Statement" (September 2000) as the land use plan for the NCA and certain adjoining lands. With the signing of this record of decision, the "Proposed" El Malpais Plan becomes the "Approved" El Malpais Plan and amends decisions in the Rio Puerco RMP. The decisions amending the RMP are: 1) The Plan designates visual resource management (VRM) classes for the Planning Area. Classes were assigned to lands that were acquired after completion of the RMP, and some previously assigned classes were adjusted. 2) The Plan specifies motor vehicle use designations. Wilderness areas will be closed to motor vehicles. Motor vehicle use will be limited to designated routes and trails in the remainder of the Planning Area. In addition, approximately 84 miles of road within the Planning Area will be closed and reclaimed. 3) The Plan makes wilderness recommendations to the Congress. The Chain of Craters Wilderness Study Area (WSA) is not recommended as suitable for designation as wilderness, but additional acreage contiguous to the existing Cebolla Wilderness was reviewed for suitability; approximately 4,000 acres are recommended suitable, and are now the Canyons Wilderness Study Area. 4) The Plan recommends changes in the NCA boundary. An additional 24,200 acres within the Planning Area are recommended for inclusion in the NCA. Another 19,100 acres outside

the Planning Area are also recommended for inclusion. About 2,000 of these acres would only be recommended for inclusion if the surface ownership is acquired. Otherwise, an easement would be sought for a Continental Divide National Scenic Trail treadway. Either action requires a willing seller. Implementation of the NCA boundary change recommendations would require Congressional action. All public lands within the NCA boundary as set or modified by Congress, as well as those lands acquired in the future within the boundary, would be retained in Federal ownership.

In addition to the decisions which amend the Rio Puerco RMP, the El Malpais Plan also includes activity-level decisions related to the use and protection of the resources of the Planning Area. Because these decisions were included for analysis in the environmental impact statement (EIS) associated with the Plan, as funding becomes available to implement them, they will require only site-specific cultural resources clearances, threatened and endangered species clearances, and in some cases American Indian consultation, to complete compliance with the National Environmental Policy Act of 1969 (NEPA). A few of these activity-level decisions may be implemented without further notice prior to the end of this year, but the public will be notified of planned implementation of most of the activity-level decisions through AFO's Annual RMP Update early each calendar year.

The El Malpais Plan was prepared under the regulations for implementing the Federal Land Policy and Management Act (FLPMA) of 1976 (43 CFR 1600). The EIS for the Plan was prepared in compliance with NEPA. The Plan meets the requirements of the El Malpais Act that BLM prepare a General Management Plan for the NCA, an implementation plan for a continuing program of interpretation and public education, a proposal for public facilities, and management plans for natural resources, cultural resources and wildlife resources. The Rio Puerco RMP is the management plan for the entire Albuquerque Field Office. RMP decisions applicable to the El Malpais Planning Area continue to be valid except as they are amended by this Plan. The AFO is preparing a "stand alone plan" which will combine the RMP amendment decisions and activity decisions of the El Malpais Plan with the still applicable Rio Puerco RMP decisions.

THE ALTERNATIVES CONSIDERED AND PROPOSED PLAN

Several alternatives were considered. Four were analyzed in detail including the Proposed Plan (Alternative D) which was developed using parts of the other alternatives to balance management of the NCA. Four additional alternatives were considered but were not analyzed in detail.

Alternatives Analyzed in Detail

Alternative A—No Action (Existing Management)

This alternative represents continuation of the management practices defined in the Rio Puerco RMP, with minimal modifications needed to meet the requirements of the El Malpais Act. The management direction for this alternative was derived from existing management decisions and guidance. It provides a baseline for comparison with other alternatives but would not adequately resolve the issues identified in this Plan.

Alternative B—Resource Use

BLM management under Alternative B, the Resource Use Alternative, would support direct human actions. Economic uses such as grazing and recreational use served by outfitters and concessionaires would be emphasized. More developments related to recreation, livestock, and wildlife were proposed, and extractive activities such as archeological excavations would be allowed. A large number of existing roads would remain open under this alternative, and vegetative management would include prescribed fires, wildland fires under prescription, and seedings. Livestock developments could be built if monitoring indicated that management changes were needed and NEPA compliance requirements were met.

Alternative C—Natural Processes

Under Alternative C, the Natural Processes Alternative, the BLM would minimize human activities in the Planning Area. This is the "environmentally preferable" alternative required by NEPA. The agency would close a maximum number of roads and place restrictions on scientific investigations and other activities that would remove materials from the Planning Area. Developments such as interpretive signing,

archeological ruin stabilization, erosion control, trail development, and range and wildlife improvements would be minimized. Dispersed recreational use would be emphasized, grazing reduced, and no deliberate manipulation of vegetative communities would be implemented. However, the El Malpais Act makes it clear that Congress intended that BLM would provide some visitor facilities, interpretation, and public education within the NCA. Therefore, this alternative, while minimizing environmental impacts, does not promote or encourage the public use that Congress intended in designating the NCA.

Alternative D—Balanced Management (PROPOSED PLAN)

Alternative D was developed by combining actions selected from the other alternatives to balance management of the NCA. While a number of roads would remain open under this alternative, some roads would be closed to allow natural restoration. Recreation, while a focus of this alternative, would not be emphasized as much as in Alternative B. Livestock developments could be built if monitoring indicated that management changes were needed and NEPA compliance requirements were met. Wildlife improvements would be developed as required to maintain wildlife numbers and diversity, but not to the extent proposed under Alternative B. Vegetative management would include some prescribed fires, wildland fires under prescription, and seedings, but at a lower level than proposed under Alternative B.

Alternatives Considered But Not Analyzed in Detail

Four additional alternatives were considered based on comments received in the scoping process but eliminated from detailed analysis. These alternatives are listed below with the reasons they were not analyzed in detail as part of the planning process.

Eliminate Grazing from the Planning Area

Some individuals suggested that grazing be eliminated completely from the NCA. However, this measure is not consistent with the El Malpais Act, which specifies that livestock grazing shall be permitted to continue within the NCA, including in wilderness areas.

In addition, resource conditions within the Planning Area do not warrant area-wide prohibition of live-

stock grazing. The Rio Puerco RMP, the Socorro RMP (which covers a small portion of the Planning Area south of the NCA), and recent permit renewals contain the management prescriptions needed to meet resource management objectives, including the vegetative objectives established in the El Malpais Plan. Therefore, BLM did not analyze elimination of grazing from the Planning Area as part of an alternative.

Designate the Chain of Craters Area as an ACEC

The option to designate Areas of Critical Environmental Concern (ACECs) was established in FLPMA for those areas where special management is needed to protect and prevent irreparable damage to an important value, resource, system or process, or to protect human life and safety from natural hazards. For the Chain of Craters area, inclusion in the NCA, with the management attention and direction associated with that status, was considered sufficient to protect such values. The NCA has been withdrawn from mineral development and commercial woodcutting because of the potential for irreparable damage to natural and cultural values. Therefore, the BLM did not consider the designation of the Chain of Craters as an ACEC within the NCA.

Designate the Chain of Craters Area as an American Indian Wilderness

The El Malpais Act established the Chain of Craters as a WSA and required the BLM to review its suitability for designation as wilderness. Several American Indian groups use the Chain of Craters, as well as other areas within the NCA, for traditional cultural practices. At issue was the need for motor vehicle access to sacred places, privacy for traditional practices, as well as continued access to areas used for hunting, piñon nut picking, and gathering of other traditional plants and minerals. The frequency of need for access varies by Indian group.

The Ramah Navajo Chapter and Acoma Pueblo requested unrestricted vehicle access to the Chain of Craters. This is contrary to uses allowable under the Wilderness Act. Unless specifically allowed in the Wilderness Act or an individual wilderness designation law, temporary or permanent roads and the use of motorized equipment, motor vehicles, or other forms of mechanical transport are prohibited under Section 4(c).

Only the Congress can designate the Chain of Craters as wilderness or release it from wilderness review. Should the Congress ultimately designate the area as wilderness, the BLM will make the legislators aware of requests by local American Indians to use motor vehicles for access to these lands for traditional cultural practices. Continuation of such use would require special provisions in the designating legislation, or the area would have to be managed under the Wilderness Act, and BLM policy and regulation. Designating the Chain of Craters as an American Indian Wilderness with unrestricted motor vehicle access as an alternative was therefore not considered in this plan.

Allow Unrestricted Collection of Prehistoric Pottery

The El Malpais Act directs the BLM to allow American Indians access to the NCA for traditional cultural practices. For this reason, the agency gave serious consideration to allowing unrestricted collection of pottery from the surface of prehistoric sites as a traditional cultural practice, either within the NCA as a whole or within particular portions.

However, collection of pottery is also explicitly prohibited by the Archaeological Resources Protection Act (ARPA). The El Malpais Act places a great deal of emphasis on the enforcement of ARPA, and the history of the Act makes it clear that protection of scientific values is one of the principal reasons for establishment of the NCA. Interpreting "access" to mean unrestricted collection could not be reconciled with provisions of ARPA or with the intent of the El Malpais Act. Therefore, unrestricted collection of pottery could not be allowed based on ARPA, and thus was not analyzed in detail in this plan.

MANAGEMENT CONSIDERATIONS

The decision to approve the El Malpais Plan amending the Rio Puerco RMP is based on a consideration of a number of factors. Chief among these are: 1) The intent of Congress as indicated by the requirements of the El Malpais Act and the Congressional Report related to the Act.; 2) A review of the EIS which indicated a low level of impacts; 3) The input received from the public, other Federal agencies, and Tribal, State and local governments. Alternative D—The Proposed Plan was selected to provide for use of the resources of the NCA by the American people while

keeping unavoidable impacts at low levels and providing for changes in management if impacts reach levels that are considered undesirable.

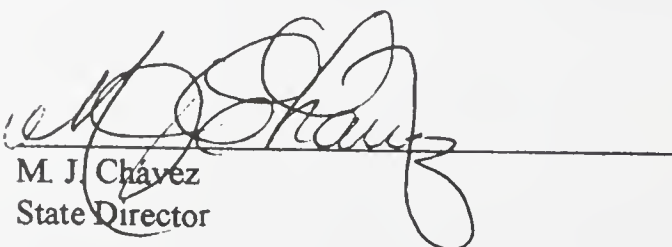
IMPLEMENTATION AND MONITORING

The El Malpais Plan as it amends the Rio Puerco RMP is approved to provide specific management decisions for the Planning Area (El Malpais NCA and adjoining lands as identified in the Proposed El Malpais Plan/Final EIS) for the next 20 years. Many activity-level implementation decisions are included in the Plan. These decisions have already undergone NEPA analysis in the EIS portion of the document. Implementation will require only completion of cultural clearances, threatened and endangered species clearances, and in some cases American Indian consultation. Plan monitoring will be performed by periodic managerial reviews to ensure that subsequent land-use management decisions conform to the Plan and to established guidelines. On-the-ground actions resulting from management decisions will be monitored by BLM personnel to establish the effectiveness of mitigation measures at minimizing environmental impacts.

PUBLIC INVOLVEMENT

Public opinion, input, and involvement have been sought throughout the planning and decision making process. Public participation was documented in detail in Chapter 5 of the Proposed El Malpais Plan/Final EIS. The AFO prepares an Annual RMP Update document to inform the public of progress made

Approved:


M. J. Chávez
State Director

in RMP implementation and to notify the public of implementation actions planned for the following year and invite their participation. Actions implementing the El Malpais Plan (which amends the RMP) will now be included the Update.

CONSISTENCY

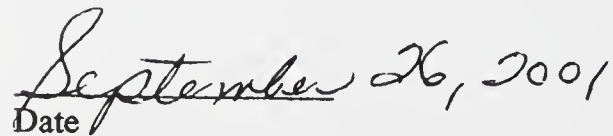
No inconsistencies with the plans, programs, or policies of other Federal, State, Tribal, or local governments were identified during the planning process.

PUBLIC AVAILABILITY OF THIS DOCUMENT

Copies of this document have been sent to those on the mailing list for the Proposed El Malpais Plan/Final EIS. Copies of this document can be obtained from the Bureau of Land Management, Albuquerque Field Office, 435 Montañó NE, Albuquerque, NM 87107. It is also available at website www.nm.blm.gov/www/aufo/el_malpais_feis/elma_feis.html.

CONCLUSION

This Record of Decision constitutes the final BLM action involved in the approval of the El Malpais Plan—the amendment to the Rio Puerco RMP for El Malpais NCA and adjoining lands. Any person adversely affected by the decision of the BLM Officer in implementing some portion of an RMP may appeal such action to the Interior Board of Land Appeals pursuant to 43 Code of Federal Regulations 4.400 at the time the action is proposed for implementation.


Date

RECREATION OPPORTUNITY SPECTRUM

APPENDIX C

APPENDIX C

RECREATION OPPORTUNITY SPECTRUM

Introduction

The goal of the recreationist is to have satisfying leisure experiences by participating in preferred activities in favorable environmental settings. Opportunities for achieving satisfying experiences depend on natural elements such as vegetation, landscape and scenery, and conditions controlled by land management agencies, such as developed sites, roads, and regulations. The goal of the recreation resource manager then becomes to provide the opportunities to obtain such experiences by managing the natural setting and the activities within it.

The Recreation Opportunity Spectrum (ROS) is the BLM's framework to inventory, plan, and manage recreational opportunities. The ROS is divided into six classes, ranging from essentially natural, low-use areas (resource-dependent recreational opportunities) to highly developed, intensive use areas (facility/vehicle-dependent recreational opportunities). Each class is defined in terms of three principal components: the environmental setting, the activities possible, and the experiences that can be achieved.

The primary factor in determining ROS classes is the setting. This describes the overall outdoor environment in which activities occur, influences the types of activities, and ultimately determines the types of recreation that can be achieved.

Activities are not completely dependent on opportunity class, and most can take place in some form throughout the spectrum. However, general activities can be characterized for each ROS class. For each person, her/his recreational experience depends on the environmental setting and individual differences based on background, education, sex, age, and place of residence.

Recreation Opportunity Settings

The ROS encompasses a variety of recreational settings under which certain experiences are possible. Seven elements provide the basis to inventory and

delineate recreational settings. These are: access, remoteness, naturalness, facility and site management, visitor management, social encounters, and visitor impacts.

Access—Includes the mode of travel used within the area and influences both the level and type of recreational use an area receives.

Remoteness—Concerns the extent to which individuals perceive themselves removed from human activity. Vegetation or topographic variation can increase this sense of remoteness. Lack of remoteness is important for some recreational experiences.

Naturalness—Concerns the varying degrees of human modification of the environment. Often described in terms of scenic quality influenced by the degree of alteration of the natural landscape.

Site Management—Refers to the level of site development. Lack of site modifications can facilitate feelings of self-reliance and naturalness, while highly developed facilities can enhance comfort and increase the opportunity to meet and interact with others.

Visitor Management—Includes both regulation and control of visitors as well as providing them with information and services. A continuum of visitor management can be described, ranging from subtle techniques such as site design, to strict rules and regulations. In some recreational settings controls are expected and appropriate; in others, on-site controls detract from the desired experience.

Social Encounters—Involves the number and type of others met in the recreation area. Also measures the extent to which an area provides experiences for solitude or social interaction.

Visitor Impacts—Affects natural resources such as soil, vegetation, air, water, and wildlife. Even low levels of use can produce significant ecological impacts, and these impacts can influence the visitor's experience.

Recreation Opportunity Classes

Based on the seven elements described above, six recreation opportunity classes have been developed and are described below. Reclassification of lands can occur in response to alternative management prescriptions.

Primitive

This setting is characterized by a large-sized area of about 5,000 acres or more, lying at least 3 miles from the nearest point of motor vehicle access. It is essentially an unmodified natural landscape, with little evidence of others and almost no on-site management controls. Activities include overnight backpack camping, nature study and photography, back country hunting, horseback riding, and hiking. The experience provides visitors with a chance to achieve solitude and isolation from human civilization, feel close to nature, and encounter a greater degree of personal risk and challenge.

Semi-Primitive Non-Motorized

This setting consists of about 2,500 acres lying at least ½ mile from the nearest point of motor vehicle access. The area is predominantly a natural landscape. Where there is evidence of others, interaction is low, and few management controls exist. Activities include backpack camping, nature viewing, back country hunting (big game, small game, and upland birds), climbing, hiking, and cross-country skiing. The experience provides for minimal contact with others, a high degree of interaction with nature, and a great deal of personal risk and challenge.

Semi-Primitive Motorized

This setting consists of about 2,500 acres within ½ mile of primitive roads and two-track vehicle trails. The area has a mostly natural landscape with some evidence of others (but numbers and frequency of contact seem to remain low) and few management controls. Activities include hunting, climbing, vehicle trail riding, back country driving, mountain biking, hiking, and snowmobiling. The experience provides for isolation from human civilization, a high degree of interaction with the natural environment, and a moderate degree of personal risk and challenge.

Roaded Natural

This setting consists of areas near improved and maintained roads. While these areas are mostly natural in appearance, some human modifications are evident, with moderate numbers of people, visible management controls, and developments. Activities include wood gathering, downhill skiing, fishing, off-highway vehicle driving, interpretive uses, picnicking, and vehicle camping. The experience provides for a sense of security through the moderate number of visitors and developments, but with some personal risk-taking and challenges.

Rural

This setting is characterized by a substantially modified natural environment. Resource modification, development, and use are obvious. Human presence is readily evident, and interaction between users is often moderate to high. Activities consist mostly of facility/vehicle-dependent recreation and generally include vehicle sightseeing, horseback riding, on-road biking, golf, swimming, picnicking, and outdoor games. The experience provides for modern visitor conveniences, moderate to high levels of interactions with others, and a feeling of security from personal risk.

Urban

This setting consists of areas near paved highways, where the natural landscape is dominated by human modifications. Large numbers of users can be expected. Sights and sounds of others dominate, while management controls are numerous. Activities are facility/vehicle-dependent and include concerts, wave pools, amusement parks, zoos, vehicle racing facilities, spectator sports, and indoor games. The experience provides for numerous modern conveniences, large numbers of people, interaction with an exotic and manicured environment, and a feeling of high personal security.

Management Objectives for ROS Classes

Objectives for a specific class contain minimum guidelines and standards as well as directions concerning the type of activities, physical and social settings, and recreational opportunities to be managed for.

Primitive

The primitive class is managed to be essentially free from evidence of humans and on-site controls. Motor vehicle use within the area is not permitted. The area is managed to maintain an extremely high probability of experiencing isolation from others (not more than three to six encounters per day) and little to no managerial contact. Independence, closeness to nature, self-reliance, and an environment that offers a high degree of challenge and risk characterize this class. Back country use and management of renewable resources is subject to the protection of back country recreational values.

Semi-Primitive Non-Motorized

Semi-primitive non-motorized areas are managed to be largely free from the evidence of humans and on-site controls. Motor vehicle use is not permitted (except as authorized). Facilities for the administration of livestock and for visitor use are allowed but limited. Project designs stress the protection of natural values and maintenance of the predominantly natural environment. Areas are managed to maintain a good probability of experiencing minimum contact with others, self-reliance through the application of back country skills, and an environment that offers a high degree of risk and challenge.

Back country use and management of renewable resources are dependent on maintaining naturally occurring ecosystems. The consumption of renewable resources is subject to the protection of back country recreational values.

Semi-Primitive Motorized

These areas are managed to provide a natural-appearing environment. Evidence of humans and management controls are present but subtle.

Motor vehicle use is allowed, but the concentration of users should be low. On-site interpretive facilities, low-standard roads and trails, trailheads, and signs should stress the natural environment and be the minimum necessary to achieve objectives.

The consumption of natural resources is allowed. Effort is taken to reduce the impact of utility corridors, rights-of-way, and other surface-disturbing

projects on the natural environment. Frequency of managerial contact with visitors is low to moderate.

Roaded Natural

Roaded natural areas are managed to provide a natural-appearing environment with moderate evidence of humans. Motor vehicle use is permitted and facilities for this use are provided. Concentration of users is moderate with evidence of others prevalent. Resource modification and use practices are evident but harmonize with the natural environment.

Placement of rights-of-way, utility corridors, management facilities, and other surface-disturbing activities would be favored here over placement in semi-primitive non-motorized and semi-primitive motorized areas. The consumption of natural resources is allowed except at developed trailheads, developed recreational areas and sites, and where geological, cultural, or natural interests prevail. Frequency of managerial contact with visitors is moderate.

Rural

Rural areas are managed to provide a setting that is substantially modified with moderate to high evidence of civilization. Motor vehicle use is permitted. Concentration of users is often high with substantial evidence of others. Resource modification and use practices are mostly dominant in a somewhat manicured environment. Standards for road, highway, and facility development are high for user convenience. Frequency of managerial contact with visitors is moderate to high.

Urban

Urban areas are managed to provide a setting that is largely modified. Large numbers of users can be expected, and vegetation cover is often exotic and manicured. Facilities for highly intensified motor vehicle use and parking are available, with mass transit often included to carry people throughout the site. The probability for encountering other individuals and groups is prevalent, as is the convenience of recreational opportunities. Experiencing natural environments and their challenges and risks is relatively unimportant. Opportunities for competitive and spectator sports are common.

LIMITS OF ACCEPTABLE CHANGE

APPENDIX D

LIMITS OF ACCEPTABLE CHANGE

Introduction

As developed by George Stankey and others (1985), using Limits of Acceptable Change (LAC) is a process that requires deciding what kinds of conditions are acceptable in recreational settings, then prescribing actions to protect or achieve those conditions. The objective of the LAC system is not to prevent change but rather to control it, and to decide what management actions are required to maintain or enhance the desired conditions.

The LAC process consists of four major components: (1) specifying acceptable and achievable resource and social conditions, defined by a series of measurable parameters, (2) analyzing of the relationships between existing conditions and those judged acceptable, (3) identifying management actions necessary to achieve these conditions, and (4) a program of monitoring and evaluating management effectiveness. These four components are broken down into nine steps to ease application. Each of the nine steps is designed to achieve a particular task and provide the basis for later activities.

By following the LAC process, managers, with public input, identify issues and concerns that need to be resolved through the land-use planning and environmental assessment processes. First they define opportunity classes, select resource and social indicators, and inventory the planning area to determine current indicator status. After this inventory, managers specify standards for the indicators within each opportunity class. The management actions needed to maintain resource and social indicators within these standards are written as prescriptions. The final phase involves monitoring the indicators and comparing the results against previous measurements and acceptable standards to see if the objectives are being achieved or maintained to the desired standard. Unacceptable change signals the need for corrective management action.

The Role of Opportunity Classes

When an area contains a diversity of physical and biological features and uses, subdivisions or opportu-

nity classes can be applied. Within diversified areas, the type of management needed is expected to vary throughout. Opportunity classes delineate zones where different resources, and social and managerial conditions will be maintained. Map D displays the four opportunity classes set for the El Malpais National Conservation Area in 1993.

The Role of Indicators

BLM managers will monitor how much change is occurring in El Malpais NCA. They will need to look at the indicators, which are specific elements of the NCA setting that change in response to human activities.

Indicators provide quantitative documentation on how much conditions have changed, serve as tools to examine trends and highlight problems, and can act as an early warning to predict future conditions. When compared with standards that describe the acceptable limits of change, indicators can signal the need for corrective action, evaluate the effectiveness of management actions, and help determine if desired NCA conditions are being achieved.

Criteria For Indicator Selection

Quantitative—Can the indicator be measured?

Correlated— Does the indicator detect a change in conditions caused by humans?

Feasible—Can the indicator be measured using simple equipment and sampling techniques?

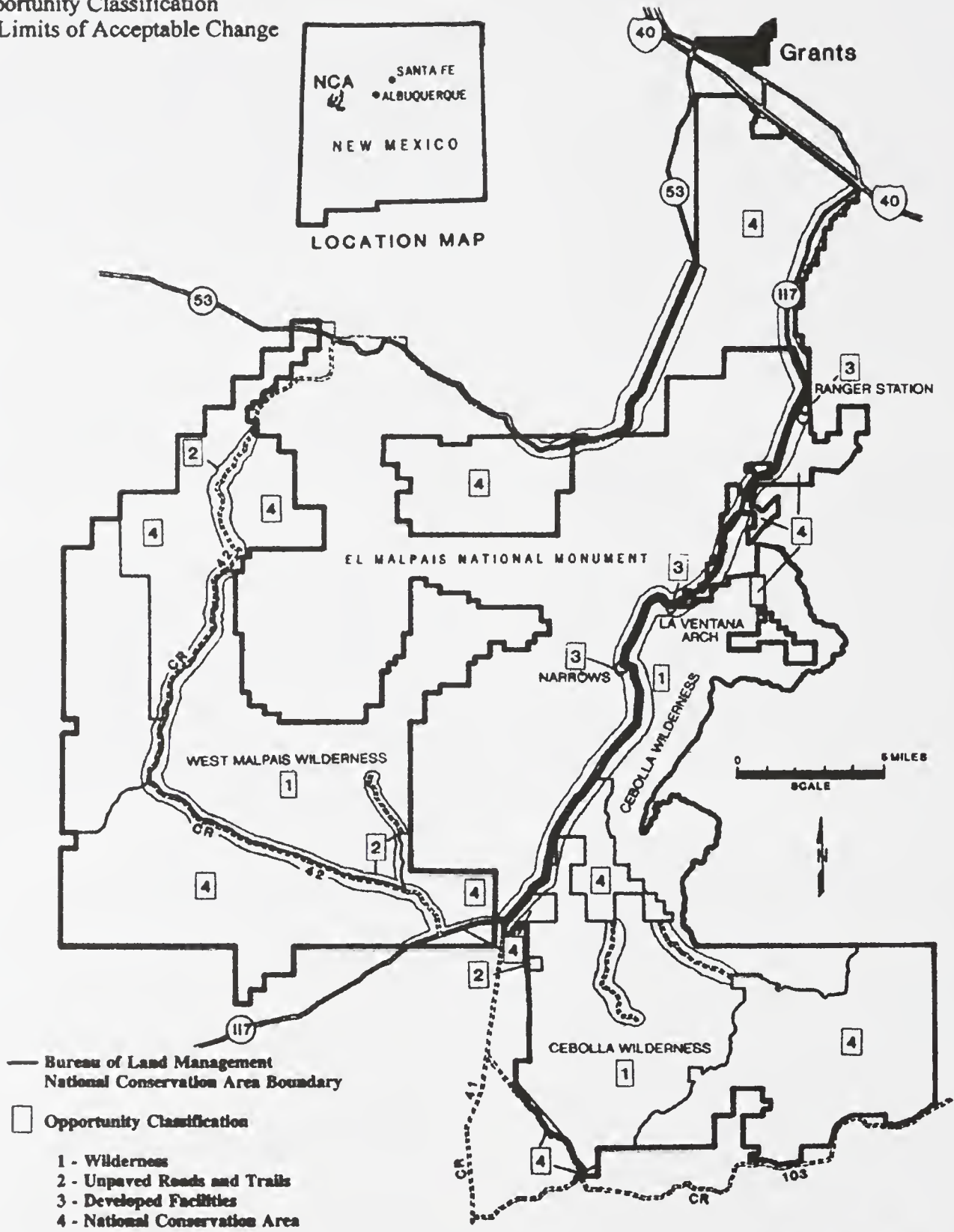
Reliable—Can the indicator be measured consistently (i.e., will different observers collect the same information)?

Responsive—Does the indicator detect a change in conditions in response to management control?

Sensitive—Can the indicator detect a change in conditions that occur within a year?

Map D

Opportunity Classification
for Limits of Acceptable Change



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Integrated—Does the indicator reflect the conditions of more elements than itself?

Early Warning Ability—Does the indicator act as an early warning, alerting managers to deteriorating conditions before unacceptable changes have occurred?

Significance—Does the indicator detect a change in conditions that persist for a long time (e.g., five years), disrupts ecosystem functioning, or reduces the future desirability of the area for visitors, researchers, grazing allottees, and other NCA users?

The Role of Standards

Standards provide a way to monitor existing and future conditions against those defined as acceptable. They establish (quantitatively, qualitatively, and judgmentally) the range of conditions or "limits of acceptable change" for each indicator.

Why Monitor?

The designation of an area as an NCA does not ensure that desired conditions will be protected, or opportunities will exist for visitors to obtain a positive recreational or wilderness experience. However, the desired NCA conditions for which the BLM strives and monitors include:

- Air quality maintained at levels that meet or exceed Federal and State standards.
- Water quality maintained at levels that protect aquatic ecosystems, and drinking water free from fecal contamination.
- Wildlife and plant species in natural distributions and abundances.
- Outstanding opportunities for diverse recreational experience within a natural setting.
- Outstanding opportunities in wilderness for solitude, challenge, self-reliance, primitive and unconfined recreation, and scientific study.
- The imprint of human activities substantially unnoticeable in wilderness.

- Natural processes operating freely in wilderness.

Various uses will inevitably cause some change in NCA conditions. Recreational use, transportation and trail systems, livestock grazing, fire suppression, exotic species introduction, air pollution, crowding, littering, and excessive regulation all can threaten the values the NCA was designated to conserve. However, change does not necessarily have to be bad. Under careful observation, some existing conditions need to change to become acceptable.

Steps in a Monitoring Program

1. Describe the area's natural and human characteristics. Identify unique area attributes. Gather all available data.
2. Identify human activities that impact conditions. Identify issues and concerns.
3. Define goals and objectives that reflect the desired NCA conditions.
4. Select indicators of environmental and experiential conditions.
5. Describe sampling and measurement methods for each indicator.
6. Specify standards for acceptable limits of change for each indicator.
7. Inventory indicator conditions and compare with standards.
8. Identify management actions in areas where conditions need to be brought up to standard.

NCA Monitoring Forms

The El Malpais NCA has been divided into four opportunity classes, as shown on Map D. Within each class, key monitoring locations have been identified. A standard form has been developed for each class to ensure consistency of data and decrease subjectivity. The following forms used for data collection show selected indicators, standards, sampling methods for collecting information, monitoring locations, and corrective actions to be taken when standards are exceeded for each opportunity class.

TABLE D-1

REVISED 6/95

I EL MALPAIS NATIONAL CONSERVATION AREA--LIMITS OF ACCEPTABLE CHANGE							
ELEMENT	MONITORING LOCATIONS	INDICATORS	STANDARDS	VISUAL MONITORING	PHOTO-MONITORING	ACTIONS (based on present condition)	OBSERVER RECOMMENDATIONS
Opportunity Classification I Wilderness Unmodified natural environment, surface disturbance small; trails acceptable; no motorized vehicles; no facilities for user convenience; little evidence of previous recreation use. Compare with baseline photos & data (observations)	Proposed Narrows Rim Trail (Cebolla Wilderness)	Number/distribution of campsites	≤2 campsites visible within 300 feet of each campsite	Establish baseline data collection Visual observation of 100% for each site, 1 time/year	Establish baseline inventory photos Establish 1 photo point/site where standard was exceeded	Use "Leave No Trace" ethics Increase patrols	Date: Time: Observer:
		Fire-ring density	One fire-ring/campsite				
	Armijo Canyon (Cebolla Wilderness)	Number of encounters with other groups/day	80% probability during all use periods of <3 other groups encountered/day while traveling along trails	Once during high-use period, May-September or hunting season	Photo-monitor sites 1 time/year	Sign trailheads & access points outside wilderness boundary	
		Group size	80% probability during all use periods of <6 persons/group encountered/day while traveling along trails				
	Homestead Canyon (Cebolla Wilderness)					Restrict areas for rehabilitation	
		Number of unauthorized trails (leading to Narrows Rim Trail)	2 distinct trails from designated trail (leading to Narrows Rim Trail)			Remove undesired fire rings	
		Vegetative loss	Bare mineral soil ≤100 sq. ft. at desired campsites			Collect trash	
		Trail erosion	Location of erosion or gullying ≤1 ft. /¼ mile				

TABLE D-2

REVISED 6/95

II EL MALPAIS NATIONAL CONSERVATION AREA—LIMITS OF ACCEPTABLE CHANGE							
ELEMENT	MONITORING LOCATIONS	INDICATORS	STANDARDS	VISUAL MONITORING	PHOTO-MONITORING	ACTIONS (based on present condition)	OBSERVER RECOMMENDATIONS
<p>Opportunity Classification II</p> <p>Unpaved roads & trails</p> <p>Frequency of contact is low to moderate on unpaved roads & trails; primitive roads & motorized use are present; small isolated structures may be present; surface disturbance is limited & small.</p> <p>Compare with baseline photos & data (observations)</p>	<p>Hole-in-the-Wall Cherry-Stemmed Road & Trailhead</p> <p>Dittert Site & Trailhead</p> <p>CR 42</p>	Unauthorized trails	2 distinct trails from designated trail	<p>Establish baseline data collection</p> <p>Visual observation of 100% for each site, 1 time/year</p> <p>Once during high-use period, May-September or hunting season</p>	<p>Establish baseline inventory photos</p> <p>Establish 1 photo point/site where standard was exceeded</p> <p>Photo-monitor sites 1 time/year</p>	<p>Use "Leave No Trace" ethics & interpretive programs</p> <p>Increase BLM patrols</p> <p>Increase signing</p> <p>Law enforcement actions</p> <p>Restrict areas for rehabilitation</p> <p>Contact County Highway Department for road maintenance (CR 42)</p> <p>Notify public at Ranger Station & Grants Field Station on road conditions for CR 42</p>	<p>Date:</p> <p>Time:</p> <p>Observer:</p>
		Number of complaints concerning road or trail conditions	≤10 complaints/year				
		Road conditions presenting safety hazard (potholes, ruts)	Seasonally monitor road conditions annually				
		Damage to ROW, poor weather conditions	Notify County Highway Department for maintenance (CR 42)				

TABLE D-3

REVISED 6/95

III EL MALPAIS NATIONAL CONSERVATION AREA--LIMITS OF ACCEPTABLE CHANGE							
ELEMENT	MONITORING LOCATIONS	INDICATORS	STANDARDS	VISUAL MONITORING	PHOTO-MONITORING	ACTIONS (based on present condition)	OBSERVER RECOMMENDATIONS
<p>Opportunity Classification III</p> <p>Developed facilities</p> <p>Developed recreational facilities; facilities available for user convenience; frequency of contact is moderate to high in developed sites & on roads & trails; on-site controls obvious & numerous.</p> <p>Compare with baseline photos & data (observations)</p>	<p>Trail at La Ventana Natural Arch</p> <p>Narrows Picnic Area</p>	Trail width	Width \leq 12 inches over design trend	<p>Establish baseline inventory data collection</p> <p>Visual observation of 10% for each facility, 3 times/year</p> <p>3 times during high-use period, May-September or hunting season</p>	<p>Establish baseline inventory photos</p> <p>Establish 1 photo point/site where standard was exceeded</p> <p>Photo-monitor sites 1 time/year</p>	<p>Use "Leave No Trace" ethics & interpretive programs</p> <p>Increase BLM patrols</p> <p>Establish "Public Land Watch" Program</p> <p>Increase signing</p> <p>Rehabilitate area or restrict areas for rehabilitation</p> <p>Law enforcement actions</p> <p>Issue permits for visitor use or reservations for Ranger Station programs</p> <p>Keep records/data of vandalism</p>	<p>Date:</p> <p>Time:</p> <p>Observer:</p>
		Trail erosion	2 locations of erosion or gullying \leq 1 ft./ $\frac{1}{4}$ mi.				
		Unauthorized trails	2 distinct trails from designated trail				
		Number of incidents of vandalism	\leq 5 incidents of vandalism/facility				
		Vegetation trampled or disturbed that does not recover annually	\leq 25% vegetation trampled or disturbed when compared with adjacent undisturbed area				

TABLE D-4

REVISED 6/95

IV EL MALPAIS NATIONAL CONSERVATION AREA--LIMITS OF ACCEPTABLE CHANGE							
ELEMENT	MONITORING LOCATIONS	INDICATORS	STANDARDS	VISUAL MONITORING	PHOTO-MONITORING	ACTIONS (based on present condition)	OBSERVER RECOMMENDATIONS
<p>Opportunity Classification IV</p> <p>National Conservation Area</p> <p>Facilities for user safety & resource protection; limited evidence of previous recreation use; low to moderate frequency of contact; primitive roads & motorized use are present.</p> <p>Compare with baseline photos & data (observations)</p>	Sand Canyon Road	Number of pieces of trash	≤25 pieces of trash/location	<p>Establish baseline data collection</p> <p>Visual observation of each site, minimum 1 time/year</p> <p>Once during high-use period, May-September or hunting season</p>	<p>Establish baseline inventory photos</p> <p>Establish 1 photo point/site where standard was exceeded</p> <p>Photo-monitor sites 1 time/year</p>	<p>Use "Leave No Trace" ethics & interpretive programs</p> <p>Increase BLM patrols</p> <p>Law enforcement action</p> <p>Restrict areas for rehabilitation or repair</p> <p>Operation Respect during hunting season</p>	Date:
	Chain of Craters WSA (Cerro Piedrita, Cerro Lobo, Cerro Chato)	Number/distribution of campsites	≤3 campsites visible within 300 ft. of each campsite				Time:
	Cerro Rendija	Number of unauthorized roads	≤2 distinct unauthorized roads from designated road in BLM road inventory				Observer:
		Vegetative loss	Base mineral soil ≤400 sq. ft. at established campsites				

WILDLIFE SPECIES KNOWN OR POTENTIALLY
OCCURRING WITHIN CIBOLA COUNTY
(EL MALPAIS PLAN AREA)

APPENDIX E

APPENDIX E

WILDLIFE SPECIES KNOWN OR POTENTIALLY OCCURRING WITHIN CIBOLA COUNTY (EL MALPAIS PLAN AREA)

Common Name	Scientific Name	Status ^a
<u>Mammals</u>		
Abert's squirrel	<u>Sciurus aberti</u>	
badger	<u>Taxidea taxus</u>	
banner-tailed kangaroo rat	<u>Dipodomys spectabilis</u>	
big brown bat	<u>Eptesicus fuscus</u>	
big free-tailed bat	<u>Nyctinomops macrotis</u>	SC/BS
black bear	<u>Ursus americanus</u>	
black-footed ferret	<u>Mustela nigripes</u>	FE
black-tailed jack rabbit	<u>Lepus californicus</u>	
bobcat	<u>Lynx rufus</u>	
Botta's pocket gopher	<u>Thomomys bottae</u>	
brush mouse	<u>Peromyscus boylii</u>	
Cebolleta southern pocket gopher	<u>Thomomys umbrinus paquatae</u>	SC/BS
cliff chipmunk	<u>Eutamias dorsalis</u>	
Colorado chipmunk	<u>Eutamias quadrivittatus</u>	
coyote	<u>Canis latrans</u>	
deer mouse	<u>Peromyscus maniculatus</u>	
desert cottontail	<u>Sylvilagus audubonii</u>	
Eastern cottontail	<u>Sylvilagus floridanus</u>	
elk	<u>Cervus elphus</u>	
fringed myotis	<u>Myotis thysanodes</u>	SC/BS
gray fox	<u>Urocyon cinereoargenteus</u>	
Gunnison's prairie dog	<u>Cynomys gunnisoni</u>	
hoary bat	<u>Lasiurus cinereus</u>	
long-eared myotis	<u>Myotis evotis</u>	SC/BS
long-legged myotis	<u>Myotis volans</u>	SC/BS
meadow vole	<u>Microtus pennsylvanicus</u>	
Mexican free-tailed bat	<u>Tadarida brasiliensis</u>	
Mexican woodrat	<u>Neotoma mexicana</u>	
mountain lion	<u>Felis concolor</u>	
mule deer	<u>Odocoileus hemionus</u>	
Northern grasshopper mouse	<u>Onychomys leucogaster</u>	
occult little brown bat	<u>Myotis lucifugus occultus</u>	SC/BS
Ord's kangaroo rat	<u>Dipodomys ordii</u>	
pallid bat	<u>Antrozous pallidus</u>	
piñon mouse	<u>Peromyscus truei</u>	
porcupine	<u>Erethizon dorsatum</u>	
Plains pocket mouse	<u>Perognathus flavescens</u>	
pronghorn antelope	<u>Antilocapra americana</u>	
raccoon	<u>Procyon lotor</u>	
red squirrel	<u>Tamiasciurus hudsonicus</u>	
ringtail	<u>Bassaricus astutus</u>	
rock mouse	<u>Peromyscus difficilis</u>	

Common Name	Scientific Name	Status ^a
<u>Mammals, concl'd</u>		
rock squirrel	<u>Spermophilus variegatus</u>	
silky pocket mouse	<u>Perognathus flavus</u>	
silver-haired bat	<u>Lasionycteris noctivagans</u>	
small-footed myotis	<u>Myotis ciliolabrum</u>	SC/BS
Southern Plains woodrat	<u>Neotoma micropus</u>	
spotted bat	<u>Euderma maculatum</u>	SC/BS/ST
spotted ground squirrel	<u>Spermophilus spilosoma</u>	
spotted skunk	<u>Spilogale gracilis</u>	
Stephen's woodrat	<u>Neotoma stephensi</u>	
striped skunk	<u>Mephitis mephitis</u>	
Western pipistrelle	<u>Pipistrellus hesperus</u>	
Western harvest mouse	<u>Reithrodontomys megalotis</u>	
white-throated woodrat	<u>Neotoma albigula</u>	
Yuma myotis	<u>Myotis yumanensis</u>	SC/BS
<u>Birds</u>		
American avocet	<u>Recurvirostra americana</u>	
American bittern	<u>Botaurus lentiginosus</u>	
American coot	<u>Fulica americana</u>	
American crow	<u>Corvus brachyrhynchos</u>	
American kestrel	<u>Falco sparverius</u>	
American peregrine falcon	<u>Falco peregrinus anatum</u>	SC/SE
American robin	<u>Turdus migratorius</u>	
American wigeon	<u>Anas americana</u>	
acorn woodpecker	<u>Melanerpes formicivorus</u>	
Arctic peregrine falcon	<u>Falco peregrinus tundrius</u>	SC
ash-throated flycatcher	<u>Myiarchus cinerascens</u>	
bald eagle	<u>Haliaeetus leucocephalus</u>	FT/ST
band-tailed pigeon	<u>Columba fasciata</u>	
bank swallow	<u>Riparia riparia</u>	
barn owl	<u>Tyto alba</u>	
barn swallow	<u>Hirundo rustica</u>	
belted kingfisher	<u>Ceryle alcyon</u>	
Bendire's thrasher	<u>Toxostoma bendirei</u>	
Bewick's wren	<u>Thryomanes bewickii</u>	
black-billed magpie	<u>Pica pica</u>	
black-chinned hummingbird	<u>Archilochus alexandri</u>	
black-headed grosbeak	<u>Pheucticus melanocephalus</u>	
black-throated gray warbler	<u>Dendroica nigriscens</u>	
black-throated sparrow	<u>Amphispiza bilineata</u>	
blue-gray gnatcatcher	<u>Polioptila caerulea</u>	
blue-winged teal	<u>Anas discors</u>	
Brewer's blackbird	<u>Euphagus cyanocephalus</u>	
Brewer's sparrow	<u>Spizella breweri</u>	
broad-tailed hummingbird	<u>Selasphorus platycercus</u>	
brown creeper	<u>Certhia americana</u>	
brown-headed cowbird	<u>Molothrus ater</u>	

Common Name	Scientific Name	Status ^a
<u>Birds</u> , cont'd		
bufflehead	<u>Bucephala albeola</u>	
Bullock's oriole	<u>Icterus bullockii</u>	
burrowing owl	<u>Athene cunicularia gypugea</u>	SC/BS
bushtit	<u>Psaltriparus minimus</u>	
canvasback	<u>Aythya valisineria</u>	
canyon towhee	<u>Pipilo fuscus</u>	
canyon wren	<u>Catherpes mexicanus</u>	
Cassin's finch	<u>Carpodacus cassinii</u>	
Cassin's kingbird	<u>Tyrannus vociferans</u>	
Cassin's sparrow	<u>Aimophila cassinii</u>	
Chihuahuan raven	<u>Corvus cryptoleucus</u>	
chipping sparrow	<u>Spizella passerina</u>	
cinnamon teal	<u>Anas cyanoptera</u>	
Clark's nutcracker	<u>Nucifraga columbiana</u>	
cliff swallow	<u>Hirundo pyrrhonota</u>	
common goldeneye	<u>Bucephala clangula</u>	
common nighthawk	<u>Chordeiles minor</u>	
common poorwill	<u>Phalaenoptilus nuttallii</u>	
common raven	<u>Corvus corax</u>	
common snipe	<u>Gallinago gallinago</u>	
common yellowthroat	<u>Geothlypis trichas</u>	
Coopers's hawk	<u>Accipiter cooperii</u>	
crissal thrasher	<u>Toxostoma crissale</u>	
curve-billed thrasher	<u>Toxostoma curvirostre</u>	
dark-eyed junco	<u>Junco hyemalis</u>	
downy woodpecker	<u>Picoides pubescens</u>	
dusky flycatcher	<u>Empidonax oberholseri</u>	
European starling	<u>Sturnus vulgaris</u>	
ferruginous hawk	<u>Buteo regalis</u>	SC/BS
flamulated owl	<u>Otus flammeolus</u>	
Gamble's quail	<u>Callipepla gambelii</u>	
gadwall	<u>Anas strepera</u>	
golden eagle	<u>Aquila chrysaetos</u>	
Grace's warbler	<u>Dendroica graciaei</u>	
gray-breasted jay (see Mexican jay)		
gray catbird	<u>Dumatella carolinensis</u>	
gray vireo	<u>Vireo vicinior</u>	ST
gray flycatcher	<u>Empidonax wrightii</u>	
great blue heron	<u>Ardea herodias</u>	
great horned owl	<u>Bubo virginianus</u>	
greater roadrunner	<u>Geococcyx californianus</u>	
green-tailed towhee	<u>Pipilo chlorurus</u>	
green-winged teal	<u>Anas crecca</u>	
Hammond's flycatcher	<u>Empidonax hammondii</u>	
hepatic tanager	<u>Piranga flava</u>	
hermit thrush	<u>Catharus guttatus</u>	
horned lark	<u>Eremophila alpestris</u>	
house finch	<u>Carpodacus mexicanus</u>	

Common Name	Scientific Name	Status ^a
<u>Birds</u> , cont'd		
house wren	<u>Troglodytes aedon</u>	
indigo bunting	<u>Passerina cyanea</u>	
killdeer	<u>Charadrius vociferus</u>	
ladder-backed woodpecker	<u>Picoides scalaris</u>	
lazuli bunting	<u>Passerina amoena</u>	
least sandpiper	<u>Calidris minutilla</u>	
lesser goldfinch	<u>Carduelis psaltria</u>	
lesser nighthawk	<u>Chordeiles acutipennis</u>	
Lewis' woodpecker	<u>Melanerpes lewis</u>	
loggerhead shrike	<u>Lanius ludovicianus</u>	SC/BS
long-eared owl	<u>Asio otus</u>	
MacGillivray's warbler	<u>Oporornis tolmiei</u>	
mallard	<u>Anas platyrhynchos</u>	
marsh wren	<u>Cistothorus palustris</u>	
merlin	<u>Falco columbarius</u>	
mountain bluebird	<u>Sialia currucoides</u>	
mountain chickadee	<u>Parus gambeli</u>	
mountain plover	<u>Charadrius montanus</u>	PT
mourning dove	<u>Zenaida macroura</u>	
Mexican jay (gray-breasted jay)	<u>Aphelocoma ultramarina</u>	
Mexican spotted owl	<u>Strix occidentalis</u>	FT
Northern flicker	<u>Colaptes auratus</u>	
Northern goshawk	<u>Accipiter gentilis</u>	SC/BS
Northern harrier	<u>Circus cyaneus</u>	
Northern mockingbird	<u>Mimus polyglottos</u>	
Northern oriole (see Bullock's oriole)		
Northern pygmy owl	<u>Glaucidium gnoma</u>	
Northern pintail	<u>Anas acuta</u>	
Northern rough-winged swallow	<u>Stelgidopteryx serripennis</u>	
Northern saw-whet owl	<u>Aegolius acadicus</u>	
Northern shoveler	<u>Anas clypeata</u>	
orange-crowned warbler	<u>Vermivora celata</u>	
phainopepla	<u>Phainopepla nitens</u>	
pine siskin	<u>Carduelis pinus</u>	
piñon jay	<u>Gymnorhinus cyanocephalus</u>	
plain titmouse	<u>Parus inornatus</u>	
prairie falcon	<u>Falco mexicanus</u>	
pygmy nuthatch	<u>Sitta pygmaea</u>	
red-breasted nuthatch	<u>Sitta canadensis</u>	
red crossbill	<u>Loxia curvirostra</u>	
red-tailed hawk	<u>Buteo jamaicensis</u>	
red-winged blackbird	<u>Agelaius phoeniceus</u>	
rock dove	<u>Columba livia</u>	
rock wren	<u>Salpinctes obsoletus</u>	
rough-legged hawk	<u>Buteo lagopus</u>	
ruby-crowned kinglet	<u>Regulus calendula</u>	
ruddy duck	<u>Oxyura jamaicensis</u>	
rufous-crowned sparrow	<u>Aimophila ruficeps</u>	

Common Name	Scientific Name	Status ^a
<u>Birds</u> concl'd		
rufous hummingbird	<u>Selasphorus rufus</u>	
rufous-sided towhee (see spotted towhee)		
sage sparrow	<u>Amphispiza belli</u>	
sage thrasher	<u>Oreoscoptes montanus</u>	
savannah sparrow	<u>Passerculus sandwichensis</u>	
Say's phoebe	<u>Sayornis saya</u>	
scaled quail	<u>Callipepla squamata</u>	
Scott's oriole	<u>Icterus parisorum</u>	
scrub jay (see Western scrub jay)		
sharp-shinned hawk	<u>Accipiter striatus</u>	
snowy egret	<u>Egretta thula</u>	
solitary sandpiper	<u>Tringa solitaria</u>	
solitary vireo	<u>Vireo solitarius</u>	
song sparrow	<u>Melospiza melodia</u>	
sora rail	<u>Porzana carolina</u>	
Southwestern willow flycatcher	<u>Empidonax traillii extimus</u>	FE/ST
spotted sandpiper	<u>Actitis macularia</u>	
spotted towhee (rufous-sided towhee)	<u>Pipilo maculatus</u> (<u>Pipilo erythrophthalmus</u>)	
Steller's jay	<u>Cyanocitta stelleri</u>	
Swainson's hawk	<u>Buteo swainsoni</u>	
Townsend's solitaire	<u>Myadestes townsendi</u>	
Townsend's warbler	<u>Dendroica townsendi</u>	
turkey vulture	<u>Cathartes aura</u>	
vesper sparrow	<u>Poocetes gramineus</u>	
Virginia rail	<u>Rallus limicola</u>	
Virginia's warbler	<u>Vermivora virginiae</u>	
warbling vireo	<u>Vireo gilvus</u>	
Western bluebird	<u>Sialia mexicana</u>	
Western kingbird	<u>Tyrannus verticalis</u>	
Western meadowlark	<u>Sturnella neglecta</u>	
Western screech owl	<u>Otus kennicotti</u>	
Western scrub-jay (scrub jay)	<u>Aphelocoma californica</u> (<u>Aphelocoma coerulescens</u>)	
Western tanager	<u>Piranga ludoviciana</u>	
Western wood-pewee	<u>Contopus sordidulus</u>	
whip-poor-will	<u>Caprimulgus vociferus</u>	
white-breasted nuthatch	<u>Sitta carolinensis</u>	
white-crowned sparrow	<u>Zonotrichia leucophrys</u>	
white-throated swift	<u>Aeronautes saxatalis</u>	
wild turkey	<u>Meleagris gallopavo</u>	
Williamson's sapsucker	<u>Sphyrapicus thyroideus</u>	
Wilson's phalarope	<u>Phalaropus tricolor</u>	
yellow-bellied sapsucker	<u>Sphyrapicus varius</u>	
yellow-billed cuckoo	<u>Coccyzus americanus</u>	SC
yellow-breasted chat	<u>Icteria virens</u>	
yellow-headed blackbird	<u>Xanthocephalus xanthocephalus</u>	
yellow-rumped warbler	<u>Dendroica coronata</u>	

Common Name	Scientific Name	Status ^a
<u>Fish</u>		
Zuni bluehead sucker	<u>Catostomus discobolus yarrowi</u>	SC/BS/SE
Rio Grande sucker	<u>Catostomus plebeius</u>	SC
<u>Amphibians</u>		
Great Plains toad	<u>Bufo cognatus</u>	
leopard frog	<u>Rana pipiens</u>	
red-spotted toad	<u>Bufo punctatus</u>	
tiger salamander	<u>Ambystoma tigrinum</u>	
Western spadefoot	<u>Scaphiopus hammondi</u>	
Woodhouse's toad	<u>Bufo woodhousei</u>	
<u>Reptiles</u>		
blackneck garter snake	<u>Thamnophis cyrtopsis</u>	
Chihuahua whiptail	<u>Cnemidophorus exsanguis</u>	
coachwhip	<u>Masticophis flagellum</u>	
collared lizard	<u>Crotaphytus collaris</u>	
desert striped whipsnake	<u>Masticophis taeniatus</u>	
Eastern fence lizard	<u>Sceloporus undulatus</u>	
gopher snake	<u>Pituophis catenifer</u>	
Great Plains skink	<u>Eumeces obsoletus</u>	
longnose leopard lizard	<u>Crotaphytus wislizenii</u>	
lesser earless lizard	<u>Holbrookia maculata</u>	
many lined skink	<u>Eumeces multivirgatus</u>	
night snake	<u>Hypsiglena torquata</u>	
racer	<u>Coluber constrictor</u>	
short-horned lizard	<u>Phrynosoma douglassi</u>	
side blotched lizard	<u>Uta stansburiana</u>	
Texas horned lizard	<u>Phrynosoma cornutum</u>	SC/BS
tree lizard	<u>Uta ornata</u>	
Western bullsnake	<u>Pituophis melanoleucus</u>	
Western diamondback rattlesnake	<u>Crotalus atrox</u>	
Western garter snake	<u>Thamnophis elegans</u>	
Western rattlesnake	<u>Crotalusviridis</u>	
<u>Invertebrates</u>		
New Mexico silverspot butterfly	<u>Speyeria nokomis notocris</u>	SC
Grants tiger beetle	<u>Cicinedela fulgida winonae</u>	SC

Notes: ^a Status Codes: FE ^b - Federal Endangered, FT ^b - Federal Threatened, FC ^b - Federal Candidate (Old Category 1 Species), SC ^b - Species of Concern (Old Category 2 Species), BS ^c - BLM Sensitive Species, SE ^d - State Endangered, ST ^d - State Threatened.
^b USDI, FWS 1995, 2000.
^c USDI, BLM 1996.
^d NMDG&F 1996.

COMMON & SPECIAL-STATUS PLANT SPECIES (VASCULAR)
KNOWN OR POTENTIALLY OCCURRING WITHIN
CIBOLA COUNTY (EL MALPAIS PLAN AREA)

APPENDIX F

APPENDIX F

COMMON AND SPECIAL-STATUS PLANT SPECIES (VASCULAR) KNOWN OR POTENTIALLY OCCURRING WITHIN CIBOLA COUNTY (EL MALPAIS PLAN AREA) ^{a, b}

Common Name	Scientific Name	Status ^c
GRASSES/FORBS		
<u>Forbs</u>		
Eaton's lip-fern	<u>Cheilanthes eatonii</u>	
slender lip-fern	<u>Cheilanthes feei</u>	
Fendler's lip-fern	<u>Cheilanthes fendleri</u>	
purple cliffbrake	<u>Pellaea atropurpurea</u>	
grass fern	<u>Asplenium septentrionale</u>	
maidenhair spleenwort	<u>Asplenium trichomanes</u>	
rockfern	<u>Woodsia plummerae</u>	
pussytoes	<u>Antennaria plantaginifolia</u>	
ragleaf bahia	<u>Bahia dissecta</u>	
horseweed	<u>Conyza canadensis</u>	
Acoma fleabane	<u>Erigeron acomanus</u>	SC/BS/SS
spreading fleabane	<u>Erigeron divergens</u>	
Zuni (rhizome) fleabane	<u>Erigeron rhizomatus</u>	FT/SE
fleabane	<u>Erigeron vetensis</u>	
white thoroughwort	<u>Eupatorium herbaceum</u>	
puzzle sunflower	<u>Helianthus paradoxus</u>	FT/SE
hairy goldenaster	<u>Heterotheca villosa</u>	
hawkweed	<u>Hieracium fendleri</u>	
white ragweed	<u>Hymenopappus filifolius</u>	
silver sunflower	<u>Hymenoxys argentea</u>	
Colorado rubberweed	<u>Hymenoxys richardsonii</u>	
white aster	<u>Leucelene ericoides</u>	
aster	<u>Machaeranthera linearis</u>	
spiny goldenweed	<u>Machaeranthera pinnatifida</u>	
Tahoka daisy	<u>Machaeranthera tanacetifolia</u>	
tailleaf pericome	<u>Pericome caudata</u>	
greenstem paperflower	<u>Psilostrophe sparsiflora</u>	
lavendar thistle	<u>Cirsium neomexicanum</u>	
groundsel	<u>Senecio multicapitatus</u>	
lobeleaf groundsel	<u>Senecio multilobatus</u>	
Wright's goldenrod	<u>Solidago wrightii</u>	
common sow-thistle	<u>Sonchus oleraceus</u>	
slender daisy	<u>Townsendia leptotes</u>	
annual goldeneye	<u>Viguiera annua</u>	
yellow hiddenflower	<u>Cryptantha flava</u>	
James' hiddenflower	<u>Cryptantha jamesii</u>	
stickweed	<u>Lappula redowskii</u>	
puccoon	<u>Lithospermum incisum</u>	
Fendler rockcress	<u>Arabis fendleri</u>	
Richardson's tansy mustard	<u>Descurainia richardsonii</u>	

Common Name	Scientific Name	Status ^c
<u>Forbs, cont'd</u>		
spectacle pod	<u>Dithyrea wislizenii</u>	
Western wallflower	<u>Erysimum capitatum</u>	
Fendler's bladderpod	<u>Lesquerella intermedia</u>	
narrow-leaf mustard	<u>Thelypodopsis linearifolia</u>	
(none)	<u>Thelypodium wrightii</u>	
wild candytuft	<u>Thlaspi montanum</u>	
Fendler's sandwort	<u>Arenaria fendleri</u>	
sandwort	<u>Arenaria lanuginosa</u>	
Mexican campion	<u>Silene laciniata</u>	
narrow-leaved goosefoot	<u>Chenopodium leptophyllum</u>	
dayflower	<u>Commelina erecta</u>	
Western spiderwort	<u>Tradescantia occidentalis</u>	
pinedrops	<u>Pterospera andromedeae</u>	
rattlesnake weed	<u>Chamaesyce chaetocalyx</u>	
thymeleaf spurge	<u>Chamaesyce serpyllifolia</u>	
spurge	<u>Euphorbia lurida</u>	
enema weed	<u>Astragalus humistratus</u>	
Zuni milkvetch	<u>Astragalus missouriensis</u>	SS
deervetch	<u>Lotus nummularius</u>	
silvery lupine	<u>Lupinus argenteus</u>	
American vetch	<u>Vicia americana</u>	
catchfly gentian	<u>Eustoma exaltatum</u>	SE
purple geranium	<u>Geranium eremophilum</u>	
white geranium	<u>Geranium lentum</u>	
blue scorpionweed	<u>Phacelia coerulea</u>	
cinder cone phacelia (scorpionweed)	<u>Phacelia serrata</u>	SC/BS
Inland rush	<u>Juncus interior</u>	
pale horsemint	<u>Agastache pallidiflora</u>	
false pennyroyal	<u>Hedeoma drummondii</u>	
beebalm	<u>Monarda punctata</u>	
craglily	<u>Anthericum torreyi</u>	
Plains flax	<u>Linum puberulum</u>	
gypsum blazing star	<u>Mentzelia perennis</u>	SS
globemallow	<u>Sphaeralcea digitata</u>	
Fendler's globemallow	<u>Sphaeralcea fendleri</u>	
four-o'clock	<u>Mirabilis diffusa</u>	
desert four-o'clock	<u>Mirabilis linearis</u>	
Silvestre four-o'clock	<u>Mirabilis multiflora</u>	
umbrellawort	<u>Mirabilis oxybaphoides</u>	
tufted evening primrose	<u>Oenothera caespitosa</u>	
evening primrose	<u>Oenothera coronopifolia</u>	
spike broomrape	<u>Orobanche ludoviciana</u>	
pale trumpets	<u>Ipomopsis longiflora</u>	
woody dogretch	<u>Ipomopsis multiflora</u>	
winged buckwheat	<u>Eriogonum alatum</u>	
annual buckwheat	<u>Eriogonum annuum</u>	
wild buckwheat	<u>Eriogonum hieracifolium</u>	
antelope-sage	<u>Eriogonum jamesii</u>	
marsh rosemary	<u>Limonium limbatum</u>	SS
Northen fairy candelabra	<u>Androsace septentrionalis</u>	
Plains larkspur	<u>Delphinium virescens</u>	

Common Name	Scientific Name	Status ^c
<u>Forbs, concl'd</u>		
Fendler's meadowrue	<u>Thalictrum fendleri</u>	
Pennsylvania cinquefoil	<u>Potentilla pennsylvanica</u>	
desert innocence	<u>Hedyotis rubra</u>	
alumroot	<u>Heuchera parvifolia</u>	
wholeleaf paintbrush	<u>Castilleja integra</u>	
beardlip penstemon	<u>Penstemon barbatus</u>	
meadow penstemon	<u>Penstemon oliganthus</u>	SS
wandbloom beardtongue	<u>Penstemon virgatus</u>	
(none)	<u>Schistophragma intermedia</u>	
spikemoss	<u>Selaginella densa</u>	
desert verbena	<u>Glandularia wrightii</u>	
Western sagebrush	<u>Artemisia campestris</u>	
flat sagebrush	<u>Artemisia carruthii</u>	
Mexican sagebrush	<u>Artemisia ludoviciana</u>	
threadleaf groundsel	<u>Senecio douglasii</u>	
Riddelli's groundsel	<u>Senecio riddellii</u>	
rough menodora	<u>Menodora scabra</u>	
<u>Grasses & Grasslike Plants</u>		
Western wheatgrass	<u>Agropyron smithii</u>	
big bluestem	<u>Andropogon gerardii</u>	
Fendler threeawn	<u>Aristida fendleriana</u>	
pine dropseed	<u>Blepharoneuron tricholepis</u>	
sideoats grama	<u>Bouteloua curtipendula</u>	
black grama	<u>Bouteloua eriopoda</u>	
blue grama	<u>Bouteloua gracilis</u>	
hairy grama	<u>Bouteloua hirsuta</u>	
red brome	<u>Bromus lanatipes</u>	
sedge	<u>Carex eleocharis</u>	
threadleaf sedge	<u>Carex filifolia</u>	
Rocky Mountain sedge	<u>Carex occidentalis</u>	
Fendler's flat sedge	<u>Cyperus fendlerianus</u>	
flat sedge	<u>Cyperus schweinitzii</u>	
spike pappusgrass	<u>Enneapogon desvauxii</u>	
hairy tridens	<u>Erioneuron pilosum</u>	
Idaho fescue	<u>Festuca idahoensis</u>	
galleta grass	<u>Hilaria jamesii</u>	
foxtail barley	<u>Hordeum jubatum</u>	
Junegrass	<u>Koeleria cristata</u>	
wolftail	<u>Lycurus phleoides</u>	
muhly	<u>Muhlenbergia fragilis</u>	
mat muhly	<u>Muhlenbergia richardsonis</u>	
mountain muhly	<u>Muhlenbergia montana</u>	
spike muhly	<u>Muhlenbergia wrightii</u>	
New Mexico muhly	<u>Muhlenbergia pauciflora</u>	
sandhill muhly	<u>Muhlenbergia pungens</u>	
Indian ricegrass	<u>Oryzopsis hymenoides</u>	
littleseed	<u>Oryzopsis micrantha</u>	

Common Name	Scientific Name	Status ^c
<u>Grasses & Grasslike Plants, concl'd</u>		
muttongrass	<u>Poa fendleriana</u>	
Parish's alkali grass	<u>Puccinellia parishii</u>	
little bluestem	<u>Schizachyrium scoparium</u>	
bottlebrush squirreltail	<u>Sitanion hystrix</u>	
alkali sacaton	<u>Sporobolus airoides</u>	
sand dropseed	<u>Sporobolus cryptandrus</u>	
New Mexico porcupine grass	<u>Stipa neomexicana</u>	
<u>SHRUBS (Shrubs, half shrubs, vines & cacti)</u>		
skunkbush sumac	<u>Rhus trilobata</u>	
slender gray sagebrush (Bigelow sage)	<u>Artemisia bigelovii</u>	
sand sagebrush	<u>Artemisia filifolia</u>	
fringed sagebrush	<u>Artemisia frigida</u>	
short-leaved brickelbush	<u>Brickellia brachyphylla</u>	
California brickelbush	<u>Brickellia californica</u>	
tasselflower brickelbush	<u>Brickellia grandiflora</u>	
(none)	<u>Chrysothamnus nauseosus greenei</u>	
rubber rabbitbrush	<u>Chrysothamnus nauseosus</u> Var. <u>albicaulis</u>	
rubber rabbitbrush	<u>Chrysothamnus nauseosus</u> Var. <u>bigelovii</u>	
broom snakeweed	<u>Gutierrezia sarothrae</u>	
gray horsebrush	<u>Tetradymia canescens</u>	
snowberry	<u>Symphoricarpos oreophilus</u>	
fourwing saltbush	<u>Atriplex canescens</u>	
winterfat	<u>Ceratoides lanata</u>	
feather indigobush	<u>Dalea formosa</u>	
wavyleaf oak	<u>Quercus pauciloba</u> Var. <u>undulata</u>	
wax current	<u>Ribes cereum</u>	
cliff fendlerbush	<u>Fendlera wrightii</u>	
flowering ash	<u>Fraxinus cuspidata</u>	
Western virgin's bower	<u>Clematis ligusticifolia</u>	
silver-leaf mountain-mahogany	<u>Cercocarpus montanus</u> Var. <u>argenteus</u>	
alder-leaf mountain-mahogany	<u>Cercocarpus montanus</u> Var. <u>montanus</u>	
Apache plume	<u>Fallugia paradoxa</u>	
rock spirea	<u>Holodiscus dumosus</u>	
pale wolfberry	<u>Lycium pallidum</u>	
Virginia creeper	<u>Parthenocissus inserta</u>	
New Mexico wild olive	<u>Forestiera neomexicana</u>	
Western black chokecherry	<u>Prunus virginiana</u>	
fineleaf yucca	<u>Yucca angustissima</u>	
banana yucca	<u>Yucca baccata</u>	
Wright's pincushion cactus	<u>Mammillaria wrightii</u> Var. <u>wrightii</u>	
pincushion cactus	<u>Coryphantha vivipara</u>	
Fendler's hedgehog cactus	<u>Echinocereus fendleri</u>	
claret-cup cactus	<u>Echinocereus triglochidiatus</u> Var. <u>Melanacanthus</u>	
claret-cup hedgehog	<u>Echinocereus triglochidiatus</u> Var. <u>Triglochidiatus</u>	
tree cholla	<u>Opuntia imbricata</u>	
berry pricklypear	<u>Opuntia phaeacantha</u>	
central pricklypear	<u>Opuntia polyantha</u>	

Common Name	Scientific Name	Status ^c
SHRUBS, concl'd		
Santa Fe cholla	<u>Opuntia viridiflora</u>	SC/BS
grama grass cactus	<u>Pediocactus papyracanthus</u>	BS/SE
small-flower devil's claw	<u>Sclerocactus parviflorus</u>	SE
TREES		
Douglas fir	<u>Pseudotsuga mensiesii</u>	
alligator juniper	<u>Juniperus deppeana</u>	
oneseed juniper	<u>Juniperus monosperma</u>	
Rocky Mountain juniper	<u>Juniperus scopulorum</u>	
Gambel oak	<u>Quercus gambelii</u>	
piñon pine	<u>Pinus edulis</u>	
ponderosa pine	<u>Pinus ponderosa</u>	
netleaf hackberry	<u>Celtis reticulata</u>	
quaking aspen	<u>Populus tremnloides</u>	
Fremont cottonwood	<u>Populus fremontii</u>	

Notes: ^a This list includes only common species and is not comprehensive, except for special-status species.
^b Sources: Francis & Williams 1988; Sivinski & Lightfoot 1992; USDI, FWS 1995, 1996; Vincent 1997.
^c Status Codes: FE ^d - Federal Endangered, FT ^d - Federal Threatened, PE ^d - Proposed Endangered, FC ^d - Federal Candidate (Old Category 1 Species), SC ^d - Species of Concern (Old Category 2 Species), BS ^e - BLM Sensitive Species, SE ^f - State Endangered, SS ^f - State Sensitive.
^d USDI, FWS 1995, 2000.
^e USDI, BLM 1996.
^f Sivinski & Lightfoot 1992.

BACKGROUND INFORMATION ON
POTENTIAL NATURAL VEGETATIVE COMMUNITIES

APPENDIX G

APPENDIX G

BACKGROUND INFORMATION ON POTENTIAL NATURAL VEGETATIVE COMMUNITIES

The AFO has chosen the achievement of Potential Natural Communities (PNCs) as one of its vegetative goals for the Plan Area (see Chapter 2). Background information on the PNCs is briefly described below.

Vegetative Communities

Soils in the Plan Area are described in the *Cibola Area Soil Survey* completed by the Soil Conservation Service, now the Natural Resources Conservation Service (USDA, SCS 1993). Areas with similar soil classification characteristics (e.g., depth, texture, source materials) are grouped as "soil map units" in the soil survey.

The soil survey further categorizes the soil map units into "ecological sites." An ecological site is an area of rangeland with a specific potential natural vegetative community which differs from other kinds of rangeland in its ability to produce a unique mixture of vegetative species and respond to management techniques (BLM Technical Reference 4400-4). In other words, an ecological site is an area that has the potential to produce a unique vegetative community.

The ecological sites presented in the *Cibola Area Soil Survey* have been grouped into four different vegetative communities—Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex (USDA, SCS 1993). These groupings of ecological sites present the optimum or potential areal extent of these four vegetative communities. Three of the communities contain a mixture of vegetation, but are named for the predominant plant species. In contrast, the Lava Complex consists primarily of various types of rock and is named accordingly; it supports some vegetation on older flows where soils have formed.

A vegetative community usually occurs in a distinct area of the landscape. The natural range or limit of occurrence for each community varies depending on soils, climate, topography, aspect, slope, and elevation. The communities compete with each other for

space, sunlight, moisture, and nutrients. Changes in climatic conditions and disturbances such as fire and livestock grazing can favor one species over another, altering the mix of species to the extent that one vegetative community may displace all or part of another community. Human use can make significant contributions to shifts in vegetative communities.

A comparison of the areal extent of the potential vegetative communities with the existing vegetative communities allows location of areas where current vegetation is different from the potential vegetative communities. The *Cibola Area Soil Survey* provided the information for mapping the four potential vegetative communities within the Plan Area.

The AFO delineated the current vegetative communities in the Plan Area based on satellite remote sensing data gathered in 1994. Using Geographic Information Systems (GIS) computer capabilities, data on the Plan Area's existing soils, vegetation, landforms, and drainage patterns were compared and grouped to map distinct and unique areas referred to as Biophysical Land Units (BLUs). From the vegetation layer of the BLU data, four vegetative classes—Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex were derived and mapped.

The AFO also used GIS to compare the potential communities from the *Cibola Area Soil Survey* with the BLU vegetative classes. The results of the comparison are shown on Table G-1. The table indicates the disparity between the potential vegetative communities and the existing vegetative communities. From these comparisons, areas of concern or interest were identified for further evaluation. For example, the area determined to have a Grass-Shrub PNC contains a higher acreage of piñon-juniper than expected, and the area with a Ponderosa Pine PNC is instead dominated by piñon-juniper. These differences are believed to be the result of past tree harvesting, grazing practices and fire suppression, as well as periodic droughts.

TABLE G-1

POTENTIAL NATURAL COMMUNITIES
 COMPARED WITH EXISTING VEGETATION
 IN EL MALPAIS NCA
 (rounded to nearest hundred acres)

Potential Natural Communities ^a		Existing Vegetative Classes ^b			
		Totals	Grass-Shrub	Piñon-Juniper	Ponderosa Pine
Grass-Shrub	101,300	81,900	18,400	900	100
Piñon-Juniper	97,000	15,500	61,700	16,000	3,800
Ponderosa Pine	49,800	8,200	27,200	13,400	1,000
Lava Complex	14,000	500	1,200	3,900	8,400
Totals	262,100	106,100	108,500	34,200	13,300

Notes: ^a Based on data from the Natural Resources Conservation Service (USDA, SCS 1993)

^b Based on satellite remote sensing data (1994) and Geographic Information Systems analysis

In addition to highlighting areas where management change should be considered, these comparisons provide a baseline for future comparisons.

Ecological Condition

In its Ecological Site Guides, the NRCS describes ecological sites in terms of their potential natural vegetative communities (PNCs)—the mixture of plants that would become established on an ecological site if natural processes were allowed to be completed. For example, a site guide may describe an ecological site's PNC as 20 to 30 percent trees, 50 to 60 percent grasses, 10 to 20 percent shrubs, and 10 to 20 percent forbs.

Comparing the PNC species mixture to the existing plant mixture on a given site provides a measure of that site's similarity to its PNC. This similarity is referred to as "ecological condition." Ecological condition is based on the concept of plant succession. Succession is the orderly process of community change, or the sequence of communities that replace each other in a given area over time as the result of natural processes (e.g., climate change, fire). Each successional community is referred to as a "seral stage," ranging from Early to Climax. Table G-2 shows the acreage by seral stage in the Plan Area. Table G-3 summarizes the ecological condition of the grazing allotments in the Plan Area.

TABLE G-2

SERAL STAGES IN THE PLAN AREA

Seral Stage	Plan Area Acres	% Similarity to PNC ^a
Early	598	0-25
Middle	107,296	26-50
High	209,697	51-75
Climax (PNC)	0	76-100
Total Acres	317,591	---

Note: ^a PNC-Potential Natural Community

TABLE G-3

ECOLOGICAL CONDITION OF GRAZING ALLOTMENTS
WITHIN THE PLAN AREA ^a
(public land acres)

Allotment Number	Allotment Name	Ecological Condition (Seral Stage) ^b		
		Early	Middle	High
201	Cerritos de Jaspe	0	1,753	6,779
202	Bright's Well	0	80	545
203	Malpais	0	57,930	118,659
204	Raney	0	1,582	551
205	Los Pilares	546	862	14,342
206	Little Hole-in-the-Wall ^c	0	794	880
207	Cerro Brillante	0	5,239	17,849
208	Loma Montosa	0	3,907	0
209	Techado Mesa	0	23,063	6,515
210	Los Cerros ^d	0	9,817	36,701
211	Ventana Ridge	0	2,216	6,821
438	Monument Lake	0	2,560	0
439	La Vega	52	53	55
Totals		598	107,296	209,697

Notes: ^a Allotments #222 (Chical) and #457 (Palomas) shown on Map 2-8 were acquired from the State of New Mexico and have not yet been inventoried.

^b No allotments in the Plan Area are in the climax seral stage.

^c Includes 640 acres in the Arrossa Allotment (#226).

^d Combined allotment created in 1995 to include the former Cerro Chato allotment (#200).

CHANGES IN LIVESTOCK GRAZING MANAGEMENT
IN EL MALPAIS NCA & PLAN AREA

APPENDIX H

APPENDIX H

CHANGES IN LIVESTOCK GRAZING MANAGEMENT IN EL MALPAIS NCA AND PLAN AREA

Administrative Changes

In 1987, the BLM completed a major land exchange with the New Mexico State Land Office. Approximately 27,000 acres of public land in Torrance County were exchanged for approximately 29,000 acres of State land in Cibola County.

The State had leased all the acquired acres for grazing. The BLM agreed to honor these leases until their expiration, and then to incorporate them into public land grazing. The majority of the acquired lands were already within BLM grazing allotments and were easily incorporated.

However, in two situations, the acquired State lands were completely surrounded by large blocks of private land, with no other BLM public land available in the grazing area. As a result, the two State lessees did not already have public land grazing privileges. Each person was found to be qualified for these privileges, and was issued a grazing lease, one on the Chical (#222) and one on the Palomas (#457) Allotment.

In another administrative change, the BLM in April 1995 combined the Cerro Chato (#200) and the Los Cerros (#210) Allotments to form a single allotment. The combined allotment is now referred to as the Los Cerros (#210) Allotment.

Other Changes

As specified in both the Rio Puerco and the Socorro RMPs, the AFO initiated intensive monitoring studies on the I category allotments. Based on the studies, the AFO reviewed grazing preferences and issued decisions in 1992 to establish new preferences. Using New Mexico Department of Game and Fish estimates of big game populations (antelope, deer, and elk) for each of the I allotments, the AFO allocated sufficient wildlife forage. Table H-1 displays the grazing preference at the onset of the monitoring studies and after the decisions (including the wildlife allocations) were issued.

In addition to adjusting grazing preferences, the AFO has made other changes in grazing management in the Plan Area. These are listed in Table H-2.

TABLE H-1

ADJUSTMENTS IN GRAZING PREFERENCE
IN THE PLANNING AREA (1992)

Allotment Number	Allotment Name	Grazing Preference (AUMs) ^a		Wildlife Forage Allocation (AUMs)
		Before Monitoring	After Monitoring	
203	El Malpais	14,899	14,899	2,332
205	Los Pilares	2,446	1,716	483
207	Cerro Brillante	4,086	3,572	238
208	Loma Montosa	672	997	87
209	Techado Mesa	5,294	4,768	1,470
210	Los Cerros ^b	5,670	5,420	349
Totals		33,067	31,372	4,959

Notes: ^a Grazing preference is the total number of AUMs grazed by livestock on the public lands (43 CFR 4100.0-5). An AUM is an Animal Unit Month, or the amount of forage needed to sustain one cow or its equivalent for one month (43 CFR 4100.0-5)

^b AUMs are the combined total for Los Cerros and the former Cerro Chato Allotments.

TABLE H-2

ONGOING GRAZING MANAGEMENT PLANNING
FOR ALLOTMENTS OVERLAPPING THE PLANNING AREA

Allotment Number	Allotment Name	Management Change
205	Los Pilares	Grazing Plan (1993) ^a
208	Loma Montosa	No grazing, June through September (1992)
209	Techado Mesa	Grazing Plan (1993) ^a
210	Los Cerros ^b	Grazing Plan (1995) ^a

Notes: ^a Includes pasture use schedule that provides for regular rest from livestock grazing use.

^b Plan includes the former Cerro Chato Allotment.

ABBREVIATIONS & ACRONYMS

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AFO (formerly ADO & RPRA)	Albuquerque Field Office (formerly Albuquerque District Office & Rio Puerco Resource Area)
AMP	Allotment Management Plan
APHIS	Animal and Plant Health Inspection Service
APLIC	Avian Power Line Interaction Committee
ARPA	Archeological Resources Protection Act
AUM	animal unit month
BLM	Bureau of Land Management
BLU	Biophysical Land Unit
C	Custodial (category for grazing allotments)
CDNST	Continental Divide National Scenic Trail
CFR	Code of Federal Regulations
CR	County Road
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FR	Federal Register
FS, USFS	U. S. Forest Service
FWS	U. S. Fish and Wildlife Service
GMP	General Management Plan
HMP	Habitat Management Plan
I	Improve (category for grazing allotments)
IBLA	Interior Board of Land Appeals
IM	Instruction Memorandum

LAC	Limits of Acceptable Change (monitoring system)
M	Maintain (category for grazing allotments)
NAGPRA	Native American Graves Protection and Repatriation Act
NCA	National Conservation Area
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	New Mexico
NMDG&F	New Mexico Department of Game and Fish
NMSH&TD	New Mexico State Highway and Transportation Department
NPS	National Park Service
NRCS (formerly SCS)	Natural Resources Conservation Service (formerly Soil Conservation Service)
NWPS	National Wilderness Preservation System
OHV	off-highway vehicle
PNC	Potential Natural Community
R.	Range
RIM Plan	Range Improvement Maintenance Plan (for wilderness)
RMP	Resource Management Plan
RN	roaded natural (recreation opportunity)
ROS	Recreation Opportunity Spectrum
RPRA	Rio Puerco Resource Area (now Albuquerque Field Office)
Sec.	Section
SPM	semi-primitive motorized (recreation opportunity)
SPNM	semi-primitive non-motorized (recreation opportunity)
SFO (formerly SRA)	Socorro Field Office (formerly Socorro Resource Area)
SRP	special recreation permit
T.	Township

T&E	threatened and endangered species
USC	United States Code
USDA	U. S. Department of Agriculture
USDC	U. S. Department of Commerce
USDI	U. S. Department of the Interior
VRM	visual resource management
WSA	wilderness study area

GLOSSARY

GLOSSARY

allotment	An area of land designated and managed for livestock grazing.
allotment management plan (AMP)	A documented program that applies to rangeland operations on public land. An AMP (1) is prepared in consultation with the permittee(s) or lessee(s) involved; (2) prescribes the manner and extent to which livestock operations will be conducted; (3) describes the type, location, ownership, and general specifications for the rangeland developments to be installed and maintained; and (4) contains other provisions relating to livestock grazing and prescribed objectives, consistent with applicable law.
animal unit month (AUM)	The amount of food or forage required for one month by a mature cow, cow and calf, or the equivalent.
arterial road	Often referred to as a “primary access route,” provides main access to a large block of public land for its use, development, protection, and administration. Generally open to public use.
back country byway	A BLM component of the National Scenic Byway System that focuses primarily on corridors with high scenic, historic, archeological, or other public interest values. The road may vary from a single-track bike trail to a low-speed paved road traversing back country areas. The byways are subdivided into four types based on characteristics. (Source: BLM Manual 8357)
BLM sensitive species	Those wildlife and plant species (formerly Category 2) for which the FWS has information available that indicates they might warrant listing, but more information is needed to propose them as endangered or threatened.
candidate species	Those wildlife and plant species (formerly Category 1) for which the FWS has sufficient information on their biological status to propose them as endangered or threatened, but for which a proposed rule has not been developed.
cherry-stemmed road	An unofficial term used to describe the way a boundary is drawn to exclude such things as a road or other route of travel, a feature, facility, or structural range improvement that enters into the area with the resulting boundary resembling a cherry-stem.
collector road	A BLM road that usually provides primary access to a large block of public land, and connects with arterial and local roads, or is an extension of a public road system. Such a road accommodates mixed traffic and serves many uses, generally receiving the highest volume of traffic of all roads in the BLM road system.
community	General term that can be applied to vegetation types of any size or longevity.
composition	Typically refers to the makeup of a plant community whose individual plant species are designated as parts of a unified whole.
Conditional Wildland Fire Use Fire Management Unit	Fire management unit defined by the <i>El Malpais Joint Fire Management Plan</i> (USDI, BLM and NPS 2001). Fuel loads will be reduced to a more natural range of variability in this unit through approved treatment strategies. Once the approved fuels treatments are complete, and where objectives have been met,

	areas within the Conditional Fire Use Unit will be assessed for inclusion in the Wildland Fire Use For Resource Benefits Fire Management Unit.
contiguous lands	Pertains to wilderness, lands, or legal subdivisions having a common boundary. Lands having only a common corner are not contiguous.
critical habitat	Portions of the habitat of a wildlife population that, if destroyed or adversely modified, would result in a reduction of the population to a greater extent than destruction of other portions of the habitat. Also, a specific area formally designated by the Secretary of the Department of the Interior or Commerce that is determined to be essential to the survival and recovery of a threatened or endangered species or one proposed for listing.
cultural resource inventory classes	<p><u>Class I-Existing Data Inventory</u>: An inventory study of a specific area designed to provide a narrative overview from existing cultural resource information, and to provide a compilation of existing cultural resource site data.</p> <p><u>Class II-Sampling Field Inventory</u>: A sample-oriented field inventory designed to locate and record, from surface and exposed profile indications, all cultural resources within a portion of a specific area. This inventory allows an objective estimate of the nature and distribution of cultural resources in a larger area, and is used in management and planning activities as an accurate predictor of cultural resources in a planning area. Alternatively, a Class II inventory is used for a specific project in which an intensive field inventory (Class III) is not practical or necessary.</p> <p><u>Class III-Intensive Field Inventory</u>: An inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a specific area. Usually, upon completion of such inventories, no further cultural resource inventory work is needed in that area. Appropriate on small project areas, all areas to be disturbed, and primary cultural resource areas.</p>
designated route	A vehicular route of travel that has been approved through the land-use planning process for motor vehicle use in accordance with the OHV area designation.
dirt tank (earthen tank)	Usually a permanent earthen structure for holding water temporarily, built in areas of high rainfall runoff such as arroyos, canyons, or swales.
dispersed recreation	Refers to more spatially dispersed, resource-dependent (not facility-dependent) types of outdoor recreation such as fishing, hunting, backpacking, and back country exploring.
easement	An interest in land that entitles the holder to enter upon land owned by another for a particular purpose. The easement confers a right of entry, not merely a permissive license that can be revoked at any time. An exclusive road easement grants control to the U. S. and may allow it to authorize third-party use and set road use rules.
ecosystem	The sum of the plant community, animal community, and physical environment in a particular region or habitat.

endangered species	<p><u>Federally Listed</u>—Any species of animal or plant in danger of extinction throughout all or a significant portion of its range.</p> <p><u>State Listed (Group One)</u>—Species whose prospect of survival or recruitment in a certain area of the State is in jeopardy in the foreseeable future.</p> <p><u>State Listed (Group Two)</u>—Species whose prospect of survival or recruitment in a certain area of the State may become jeopardized in the foreseeable future.</p>
environmental assessment (EA)	A concise public document for which a Federal agency is responsible that serves to (1) briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact, (2) aid an agency's compliance with the National Environmental Policy Act (NEPA) when no EIS is needed, or (3) facilitate preparation of an EIS when needed. An EA includes brief discussions of the need for the proposal, of alternatives including the proposed action [as required by Sec. 102(2) of NEPA], of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.
ephemeral water	A body of water (e.g., stream, pond) that flows or exists only in direct response to precipitation. Such flow or existence is usually of short duration.
exchange	A trading of public land (surface or subsurface estate) that usually does not have high public value, for land in other ownerships that does have value for public use, management, protection, and enjoyment. The exchange may benefit other agencies as well as the BLM.
exotic	Typically a non-native plant or animal.
FLPMA	Federal Land Policy and Management Act of 1976.
forage	Plants used as food by large herbivores such as cattle, and by large and small wildlife.
forb	Any herbaceous (non-woody) plant that is not a grass or grass-like plant.
grandfathered	Section 603(c) of FLPMA directs the BLM to manage lands under wilderness review "so as not to impair the suitability of such areas for preservation as wilderness" However, Section 603(c) also provides a special exception to the "nonimpairment" criteria. Mining, grazing, and mineral leases existing on the date of approval of FLPMA (October 21, 1976) may continue in the same manner and degree even if these uses impair wilderness values. Such uses are "grandfathered."
grazing preference	The total number of AUMs of livestock grazing on public land apportioned and attached to base property owned or controlled by a permittee or lessee.
guzzler	A development to provide water for wildlife. Guzzlers come in many varieties, but most are in the 400-square-foot range. A 10,000 square-foot area is generally fenced to protect the water development from livestock.
habitat	An area where a plant or animal lives. Sum total of environmental conditions in the area.

habitat management plan (HMP)	A written and officially approved wildlife habitat plan for a specific geographic area of public land. An HMP identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving them, and outlines procedures for evaluating accomplishments.
herbaceous	Any flowering plant (i.e., grass, grass-like, or forb) except those that develop persistent woody stems above ground.
herbaceous vegetation	Having the nature of an herb, grass, or grass-like plant whose stem withers to the ground after each season's growth.
historic cultural resources	All historic mines, ranches, towns, resorts, railroads, trails, and other evidence of human use in the United States from the entrance of the Spanish to 1945.
inholding	Private or state-owned land inside the boundary of a wilderness or wilderness study area but excluded from it.
kipuka	An island of older vegetated basalt flows surrounded by more recent flows.
local road	This usually serves a smaller area than a collector road, and connects to collector roads or public road systems. Local roads receive lower volumes, carry fewer traffic types, and generally serve fewer users. Often called two- tracks, ways, or back country routes, they are usually not maintained.
malpais	Rough country composed of dark basaltic lava.
Minimize Wildland Fire Presence Fire Management Unit	Fire management unit defined by the <i>El Malpais Joint Fire Management Plan</i> (USDI, BLM and NPS 2001). All wildland fires, regardless of ignition source, will receive prompt suppression action commensurate with human safety in all instances. In some circumstances, prescribed fires may be used to reduce the risk of catastrophic fires to protect resource values by reducing fuel loading.
minimum tool rule	Tools, equipment, or structures may be used in wilderness by land management agencies when they are the minimum needed to protect wilderness resources, or in emergency situations for the health and safety of visitors. The chosen tool, equipment or structure should be the one that <u>least degrades</u> wilderness values temporarily or permanently.
multiple use management	The management of the various surface and subsurface earth resources so they are used in the combination that best meets the present and future needs of the American people. Consists of managing the following resources and uses: domestic livestock grazing, fish and wildlife-development and use, industrial development, mineral production, human occupancy, outdoor recreation, timber production, watershed protection, and preservation of wilderness and other public values.
noxious	An undesirable plant or animal that potentially produces a harmful or undesirable chemical compound.
off-highway vehicle (OHV)	Any motorized vehicle designed for or capable of cross-country travel on or over land, water, sand, snow, ice, marsh, swampland, or other terrain.
OHV use	Any use by a motorized vehicle off paved roads; or roads and trails that are regularly and frequently maintained for general transportation purposes.

perennial stream	A stream or portion of a stream that flows continuously.
petroglyph	A form of rock art manufactured by incising, scratching, or pecking designs into rock surface.
playa	The usually dry and level lake plain that occupies the lowest part of a closed depression.
prescribed burning	Controlled deliberate application of fire to wildland fuels in either their natural or modified state. Such burning is done under specified environmental conditions that allow the fire to be confined to a certain area, while at the same time producing the effects required to meet planned resource management objectives.
primitive and unconfined recreation	In the BLM wilderness review process, refers to those activities that provide dispersed, undeveloped recreation not requiring facilities or motorized equipment.
public land	Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the BLM, without regard to how the U. S. acquired ownership. The exceptions are lands held on the Outer Continental Shelf; held for the benefit of Indians, Aleuts and Eskimos; and those for which the U. S. retains the minerals, but the surface is private.
public land laws	The body of laws that regulate the administration of the public land and its resources.
rangeland	Land used for grazing by livestock and big game animals on which the vegetation is dominated by grasses, grass-like plants, forbs, or shrubs.
rangeland improvement	Any activity or program on or relating to rangelands that is designed to improve production of forage, change vegetative composition, control patterns of use, provide water, stabilize soil and water conditions, or provide habitat for livestock or wildlife.
raptor	Any predatory bird (e.g., falcon, hawk, eagle, owl) that has feet with sharp talons adapted for seizing prey and a hooked beak for tearing flesh.
reconnaissance survey	Cultural resources field survey that is less systematic, less intensive or otherwise does not fully meet inventory standards (see “cultural resource inventory classes, Class II and Class III”). May be useful for checking Class I or II inventory conclusions, or for developing recommendations about further inventory needs in previously unsurveyed areas.
right-of-way	An authorization to use public land for a specified purpose such as a road, powerline, pipeline, water well, or communication site.
riparian	Relating to, living, or located on the bank of a watercourse (river, stream) or lake.
riparian functional ratings	<u>Properly Functioning Condition</u> –Riparian areas are functioning properly when adequate vegetation, landform, or large woody debris is present to (1) reduce the stream energy associated with high waterflows, thereby decreasing erosion and improving water quality; (2) filter sediment, capture bedload, and aid floodplain development; (3) improve floodwater retention and groundwater recharge; (4)

develop root masses that stabilize streambanks against cutting action; (5) develop diverse ponding and channel characteristics to provide the habitat, water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and (6) support greater biodiversity.

Functional-At Risk—Riparian areas in functional condition, but an existing soil, water, or vegetative attribute makes them susceptible to degradation.

Nonfunctional—Riparian areas clearly not providing adequate vegetation, landform, or large woody debris to reduce the stream energy associated with high waterflows. These areas do not decrease erosion, improve water quality, or have the other characteristics listed above.

riparian/wetland
vegetation

Vegetation that occurs in or adjacent to drainage ways or their floodplains.

rock art (petroglyph
or pictograph)

A general term for the pecking, incising or painting of designs onto rock surfaces.

seral stage

The developmental stage of a plant community in which the community exhibits some directional, cumulative, non-random change in species composition over a period of 1 to 500 years.

Sikes Act program

A program among the U. S. Forest Service, BLM, and New Mexico Department of Game and Fish wherein \$5 is collected from each hunter and fisher using Forest Service and BLM lands in New Mexico. The collected funds go back to the agencies to restore and improve fish and wildlife habitats.

solitude

For the purpose of the BLM wilderness review process, defined as the state of being alone or remote from habitation. An isolated, unfrequented, or secluded place with the opportunity to avoid the sights, sounds, and evidence of humans and their activities.

special-status plants
& animals

Species that are (1) officially listed, proposed for listing, or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act, (2) listed or proposed for listing by a state in a category implying potential endangerment or extinction, and (3) designated by each BLM State Director as sensitive.

split estate

A situation in which the mineral (subsurface) estate is owned or controlled by a party other than the owner of the surface land area.

thinning

A forestry process used to remove a portion of the trees or shrubs within a stand through mechanical means.

trail

A route of travel usually associated with recreational use and considered a recreational facility. May be designed and built for one or more uses, or developed through continuous use.

trailhead

The parking area, signs, and other facilities available at the beginning and/or end of a trail.

threatened species

Any species likely to become endangered within the foreseeable future throughout all or a significant part of its range.

vegetation treatments	Methods used to control the growth and spread of undesirable vegetation by chemical or mechanical means, or by fire.
vegetative manipulation	Vegetative manipulation can be accomplished by five main methods: livestock management, prescribed and wildland fires, mechanical means, chemical means, or biological means. Vegetative manipulation for wildlife enhancement is generally accomplished through the use of livestock management and prescribed fires.
visual resource management (VRM) classes	VRM classes are based on relative visual ratings of inventoried lands. Each describes the different degree of modification allowed to the basic elements of the landscape.
wilderness	As defined in Section 2(c) of the Wilderness Act of 1964, "A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." Such an area (1) generally appears to have been affected primarily by the forces of nature, with the imprint of humans substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) contains at least 5,000 acres of land for its preservation and use in an unimpaired condition; and (4) may also contain ecological, geologic, or other features of scientific, educational, scenic, or historic value. Also, an area formally designated by the Congress as part of the National Wilderness Preservation System.
wilderness review	The entire wilderness inventory, study, and reporting phases of the BLM's wilderness program.
wilderness study	The process of analyzing and planning opportunities for wilderness preservation, along with other resource uses, within the BLM's land-use planning system.
wilderness study area (WSA)	A roadless area that has been inventoried and found to have wilderness characteristics as described in Section 603 of FLPMA and Section 2(c) of the Wilderness Act.
Wildland Fire Use For Resource Benefits Fire Management Unit	Fire management unit defined by the <i>El Malpais Joint Fire Management Plan</i> (USDI, BLM and NPS 2001). Naturally ignited wildland fires will be used to accomplish specific, pre-stated resource management objectives in the pre-defined geographical areas outlined in the <i>Joint Fire Management Plan</i> .
wildland fire use	The management of naturally ignited wildland fires to accomplish specific, pre-stated resource management objectives in predefined geographic areas outlined in a fire management plan.
wildlife	Includes all species of mammals, birds, crustaceans, amphibians, reptiles, or their offspring or eggs, that whether raised in captivity or not, are normally found in a wild state. Feral horses and burros are excluded.
withdrawal	An action that restricts the use of public land and segregates it from some or all of the public land and/or mineral laws.

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