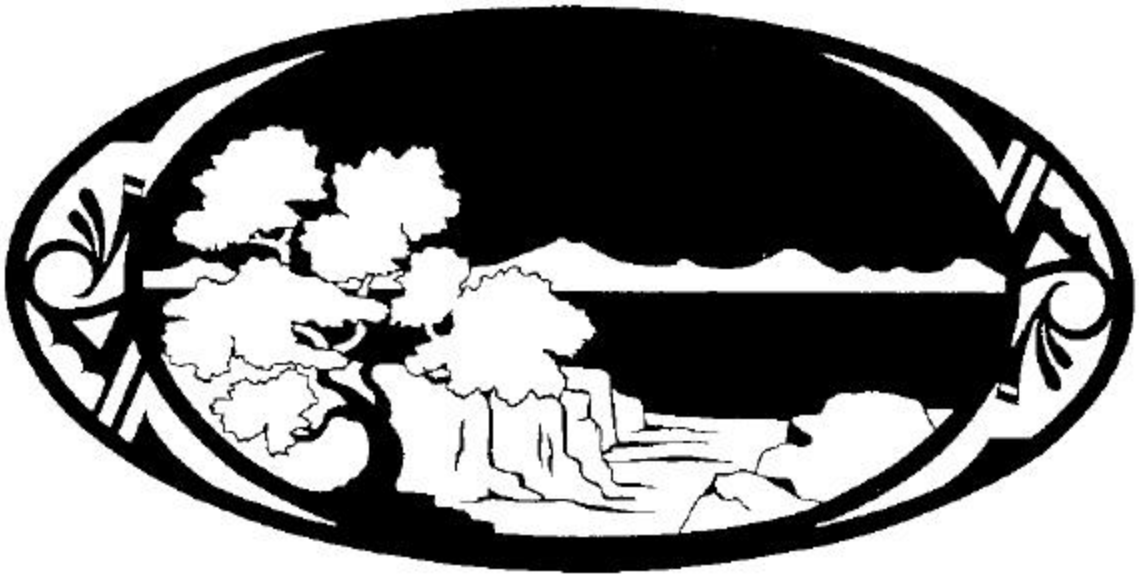
United States Department of the Interior
Bureau of Land Management

Albuquerque Field Office

PROPOSED
EL MALPAIS PLAN
AND
FINAL ENVIRONMENTAL IMPACT STATEMENT
VOLUME I



September 2000

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.

BLM/NM/PL-00-006-1220

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Albuquerque Field Office
435 Montaño Rd. N.E.
Albuquerque, New Mexico 87107- 4935
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IN REPLY REFER TO:
1610 (010)

September, 2000

Dear Reader:

Enclosed for your review is the Proposed El Malpais Plan and Final Environmental Impact Statement.

The Planning Area includes El Malpais National Conservation Area (NCA) and recently acquired contiguous lands. It provides the vision for managing the natural resources of the NCA and contiguous lands to meet the intent of the enabling legislation, P.L. 100-225, and the Bureau of Land Management's (BLM) land management policies. With minor changes based on public comment, the BLM has selected Alternative D from the draft as the Proposed Plan. This Proposed Plan includes plan amendment decisions related to four of the Resource Management Plan issues (Recreation-Visual Resources Management, Access and Transportation, Wilderness Suitability, and Boundary and Land Ownership Adjustments). The plan also includes integrated activity plan decisions related to nearly all the resources in the planning area.

Protests related to the Resource Management Plan (RMP) level decisions (pages 1-11, 2-68, 2-70, 2-71, 2-73, and 2-77 shaded portion) must be filed in writing to: Director (WO-210), Bureau of Land Management, Attention: Brenda Williams, 1849 C Street, NW, Washington, D.C. 20240. Protests must be postmarked no later than October 30, 2000.

To be considered complete, your protest must contain, at a minimum, the following information:

1. The name, mailing address, telephone number, and interest of the person filing the protest.

2. A statement of the part or parts of the RMP amendment being protested. To the extent possible, this should be done by reference to specific pages, paragraphs, sections, tables, or maps included in the document.

3. A copy of all documents addressing the issue(s) that you submitted during the planning process or a reference to the date the issue(s) were discussed by you for the record.

4. A concise statement explaining why the Proposed Plan is believed to be incorrect. *This is a critical part of your protest.* Document all relevant facts and as much as possible reference or site the planning or environmental analysis document. A protest that merely expresses disagreement with the Proposed Plan without any data will not provide us with the benefit of your information and insight. In this case, the decision maker's review will be based on the existing analysis and supporting data.

At the end of the 30-day protest period, a Record of Decision may be issued approving all decisions not affected by a protest. If there are protests they will be resolved and a Record of Decision will be issued based on the protest resolution. Following the protest period and resolution of protests, the Plan will be prepared as a separate stand-alone document and distributed to interested parties. Progress on the Plan's implementation would be reported through RMP Updates for the Albuquerque Field Office.

Thanks to those who have participated in the planning process. Continued public involvement in implementing planned actions will allow us to effectively manage the public lands and resources in the area administered by the Albuquerque Field Office.

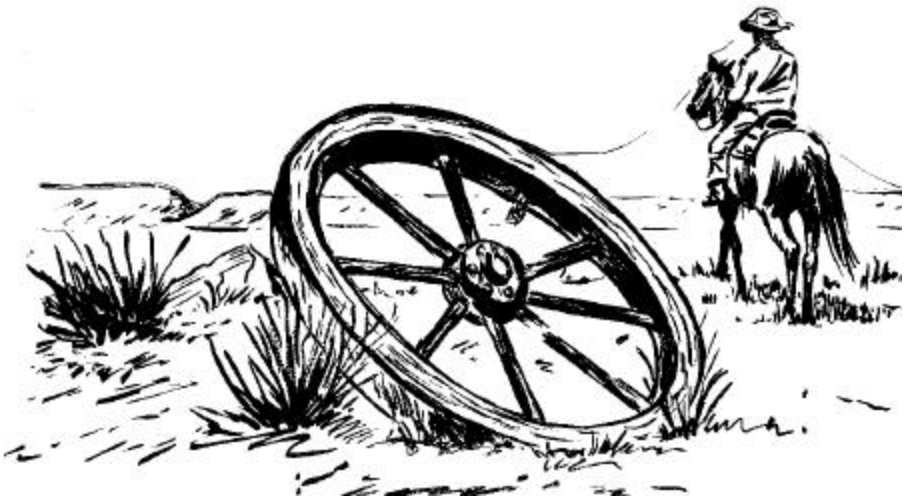
Sincerely,

Edwin J. Singleton

Edwin J. Singleton
Field Manager

Enclosure

Rio Puerco Resource Management Plan Amendment
Environmental Impact Statement
for
El Malpais National Conservation Area
and
Chain of Craters Wilderness Study Area



United States Department of the Interior
Bureau of Land Management
Albuquerque Field Office

Rio Puerco Resource Management Plan Amendment
and Environmental Impact Statement
for El Malpais National Conservation Area
and Chain of Craters Wilderness Study Area

Draft ( ) Final (X)

United States Department of the Interior, Bureau of Land Management

1. Type of Action: Administrative (X) Legislative (X)

2. This Proposed Resource Management Plan (PRMP) Amendment and Final Environmental Impact Statement (FEIS) describes and analyzes four alternatives for managing the public land and resources of the El Malpais National Conservation Area, Albuquerque Field Office, New Mexico, and contiguous lands. The alternatives are: (A) Existing Management (No Action) Alternative, (B) Resource Use Alternative, (C) Natural Processes Alternative, and (D) Balanced Management (Preferred) Alternative.

3. Comments on the Draft RMP/EIS from the individuals, groups and agencies and the BLM's responses to those comments are included in this document.

4. For further information contact:

   Kent Hamilton
   Planning & Environmental Coordinator
   Bureau of Land Management
   435 Montaño Road NE
   Albuquerque, New Mexico 87107-4935
   Telephone (505) 761-8746

5. Date Document Filed with Environmental Protection Agency: October 29, 2000

RECOMMEND:

Edwin J. Singleton
Field Manager
Albuquerque Field Office

APPROVED:

Richard A. Whitley
Associate State Director
New Mexico

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SUMMARY

INTRODUCTION

This document includes the Proposed Rio Puerco Resource Management Plan Amendment/Final Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and contiguous lands. The Plan considers alternatives for managing the natural resources and uses in the NCA, addresses amendments to the Rio Puerco Resource Management Plan, and assesses the suitability of the Chain of Craters area for wilderness designation. The plan is intended to meet the Public Law 100-225 (Enabling Legislation) requirements for the preparation of a General Management Plan (GMP).

The document includes the complete EIS as printed in the draft document. Changes were made in response to comments requiring corrections or clarifications. These changes, where they required changes in text are shown in ***bolded italics***.

The Proposed Plan is comprised of the "Continuing Management Guidance & Actions Common to All Alternatives" and "Alternative D-Balanced Management (Proposed Plan)" sections of Chapter 2. The Chapter 4 section "Alternative D-Balanced Management (Preferred Alternative)" reflects the impacts of the Proposed Plan.

Table A-Summary Table summarizes the actions considered by alternative and Alternative D summarizes the major actions of the Proposed Plan by the planning issue.

Chapter 5 of the document includes copies of the comment letters we received on the draft document and the response we prepared to the comments. The Transcripts of the public hearings held during the comment period and responses to comments found in the transcripts.

TABLE A

SUMMARY TABLE

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Recreation Overall Emphasis	Providing dispersed recreational opportunities & maintaining existing developed recreational facilities	Providing increased facility development to support recreational use & protect resources	Providing dispersed recreational opportunities using few facilities; some existing facilities removed	Providing combination of developed & dispersed recreational opportunities
Recreational Opportunity Spectrum Classes (acres/% of Planning Area)	Roaded Natural --79,200/28 Semi-Primitive Motorized --85,000/30 Semi-Primitive Nonmotorized --122,100/42	Roaded Natural --79,200/28 Semi-Primitive Motorized --82,200/29 Semi-Primitive Nonmotorized --124,900/43	Roaded Natural --72,700/25 Semi-Primitive Motorized --56,900/20 Semi-Primitive Nonmotorized --156,700/55	Roaded Natural --79,000/28 Semi-Primitive Motorized --72,000/25 Semi-Primitive Nonmotorized --135,300/47
Dispersed Camping & Picnicking	Allowed throughout the Planning Area; The Narrows recreation site providing limited facilities	Allowed throughout the Planning Area; additional facilities developed	Allowed throughout the Planning Area; no additional facilities provided. Related facilities @ The Narrows removed.	Allowed throughout the Planning Area; additional facilities developed
Visitation @ Cultural/Historical Sites	Opportunity @ 9 sites through guided/interpretive services	Opportunity @ 14 sites through guided/interpretive services	No formal opportunity provided; available as dispersed activity	Opportunity @ 12 sites through guided/interpretive services
Back Country Byways	One designated byway would continue to be available.	Five byways would be designated (1 existing, 4 new).	No designation; existing byway decommissioned.	Three byways would be designated (1 existing, 2 new).

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Assignment of Visual Resource Management (VRM) Classes	Visual resources on 22,000 acres unclassified & managed on case-by-case basis	Would amend RMP to modify current VRM objectives & classify unclassified lands. ***Management Class assignments would emphasize preservation of scenic values while still providing opportunities for resource use and facility development.***	***Would amend RMP to modify current VRM objectives and classify unclassified lands. Management Class assignments would emphasize preservation of the natural scenic values and low levels of change to the landscape.***	***Would amend RMP to modify current VRM objectives and unclassified lands. Management Class assignments would emphasize preservation of scenic values while still providing limited opportunities for resource use and facility development.***
Recreation, concl'd VRM Classes (acres)	Class I--125,130 Class II--86,760 Class III--14,110	Class I--104,450 Class II--129,440 Class III--14,110	Class I--128,440 Class II--119,500 Class III--60	Class I--104,730 Class II--143,210 Class III-60
Facility Development Camping Facilities	Four single-family units @ existing Narrows recreation site available	40 single-family units & 1 multi-family/group unit developed @ new campground in Spur Unit; Narrows recreation site rehabilitated & converted for picnic & trailhead use	No units developed	20 single-family units & 1 multi-family/group unit developed @ new campground in Spur Unit; Narrows recreation site rehabilitated & converted for picnic & trail-head use
Picnic Facilities	***Four single family units @ existing Narrows recreation site available (same units that serve camping at site)***	Provided @ 3 sites (The Narrows, La Ventana Natural Arch, Cerro Americano CDNST trailhead)	Not provided	Provided @ 1 site (The Narrows)

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Hiking Trails	***Existing: 36 miles of trail, 4 trails & 4 trailheads Approved but not yet built;.5 mile of trail, 1 trail & 1 trailhead Total of 36.5 miles of trail, 5 trails & 5 trailheads***	***Total of 77 miles of trail, 25 trails (5 existing/approved, 20 new) & 16 trailheads***	***Total of 33 miles of trail, 4 trails (existing/approved) & 2 trailheads. Narrows Rim Trail (3.5 miles) not available***	***Total of 57 miles of trail, 15 trails (5 existing/approved, 10 new) & 11 trailheads***
Access & Transportation ***Closed to Motor Vehicle and Mechanical Access. Access by Nonmotorized, Nonmechanical Means Available***	***100,800 acres closed to vehicle and mechanical access***	***104,450 acres closed to vehicle and mechanical access***	***128,440 acres closed to vehicle and mechanical access***	***104,730 acres closed to vehicle and mechanical access***
Open to Cross-Country Vehicle Access	***12,000 open or undesignated acres available***	No acres available	Same as Alternative B	Same as Alternative B
Limited Off-highway Vehicle Access	135,200 acres available for access on existing routes	143,550 acres available for access on designated routes	119,560 acres available for access on designated routes	143,270 acres available for access on designated routes
Vehicle Routes	354.5 miles existing	337.5 miles designated	199.7 miles designated	273.1 miles designated

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Wilderness Management & Suitability Designated Acres (public land)	100,800 acres	104,450 acres (including those recommended)	128,440 acres (including those recommended)	104,730 acres (including those recommended)
Suitability Recommendations [reviewed Chain of Craters WSA (18,300 acres) & land contiguous to Cebolla Wilderness (10,380 acres) for suitability as wilderness]	No acres recommended to Congress as suitable	3,650 acres recommended to Congress as suitable, through expansion of Cebolla Wilderness	27,640 acres recommended to Congress as suitable, through inclusion of entire Chain of Craters & expansion of Cebolla Wilderness	3,930 acres recommended to Congress as suitable, through expansion of Cebolla Wilderness
Interim Management/ Release from Wilderness Review	18,300 acres managed under Interim Management Policy for Lands Under Wilderness Review (IMP--BLM Manual H-8550-1, 1995)	21,950 acres managed under IMP; 6,730 acres released	27,640 acres managed under IMP; 1,040 acres released	22,230 acres managed under IMP; 6,450 acres released
Amending Cebolla Wilderness Boundary	No recommendation to Congress	Recommendation to Congress to include additional 3,650 acres of public land, & exclude 160 acres of Acoma Pueblo land	Recommendation to Congress to include additional 9,340 acres of public land, & exclude 160 acres of Acoma Pueblo land	Recommendation to Congress to include additional 3,930 acres of public land, & exclude 160 acres of Acoma Pueblo land
Cultural Resources Use Allocation	Emphasize conservation for future use	Emphasize management for public & scientific use	Emphasize sociocultural use	Emphasize conservation for future use
National Historic Preservation Act Compliance	Standard procedures	Standard procedures w/expanded consideration of secondary impacts	Strong preference for avoidance of any disturbance or impact to sites eligible for National Register	Expanded consideration of secondary impacts & emphasis on avoidance of impacts

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Cultural Resources, cont'd Inventory & Baseline Condition	6,553 acres of new Class III inventory (2½% of Planning Area)	13,105 acres of new Class III inventory (5% of Planning Area)	No special inventories to identify resources & define baseline condition	6,553 acres of new Class III inventory (2½% of Planning Area), plus thematic reconnaissance
Scientific Investigations--General	Standard procedures; 3-5 projects over next 20 years	Scientific use encouraged; 5-8 projects over next 20 years	Generally no investigations causing physical alteration of sites; no projects over next 20 years	Discourage investigations causing physical alteration of sites; no such projects over next 20 years
--Wilderness	Extractive activities allowed if no significant short- or long-term impacts to other resources.	Extractive activities allowed if no long-term impacts to other resources.	No extractive activities, short- or long-term impacts to other resources allowed.	Extractive activities allowed if no significant short- or long-term impacts to other resources.
Pottery Collection	No special provisions	"Traditional use" collection allowed under special-use permit	No special provisions	"Traditional use" collection allowed under special-use permit
Signs	Small, inconspicuous antiquities signs @ 100 sites	Inconspicuous signs @ 200 sites	No antiquities signs	Small, inconspicuous antiquities signs @ 100 sites
Access Easements & Consolidation of Ownership	Seek easements & consolidation for specific cultural resources.	Seek easements & consolidation for areas containing major archeological & historical values.	Seek easements only when needed for law enforcement; no consolidation.	Seek easements & consolidation for areas containing major archeological & historical values.
Cadastral Survey	Cebolla Canyon Schoolhouse	Cebolla Canyon Schoolhouse	None	Cebolla Canyon Schoolhouse
Road Closure	Close Cebolla Canyon Community road; other closures possible.	Vehicle access least restrictive. No special closures for cultural resources.	Vehicle access most restrictive. No special closures for cultural resources.	Close Cebolla Canyon Community road; other closures possible.

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Cultural Resources, cont'd - Formal Monitoring	Dittert Site, Oak Tree Ruin, Arroyo Ruin; other sites possibly added in future	Dittert Site, Oak Tree Ruin, Arroyo Ruin, Pinole Site, The Citadel, Armijo Canyon Homestead, Lobo Canyon Petroglyphs, Aldridge Petroglyphs; other sites possibly added in future	No formal monitoring, other than Law Enforcement Ranger patrols	Dittert Site, Oak Tree Ruin, Arroyo Ruin; other sites possibly added in future
Stabilization--General	Maintain projects @ Dittert Site, Oak Tree Ruin, Arroyo Ruin, Armijo Canyon Homestead, & Armijo Canyon Springhouse. Implement minor repairs & major stabilization @ 10 other homesteads, & erosion control @ 12 other locations.	Maintain projects @ Dittert Site, Oak Tree Ruin, Arroyo Ruin, Armijo Canyon Homestead, & Armijo Canyon Springhouse. Implement new projects @ Stone House, Cebolla Canyon Schoolhouse, & 10 other homesteads. Take erosion control measures @ 25 additional sites.	Take remedial actions only if extraordinary scientific values were threatened. Otherwise, implement no new projects nor maintenance of existing projects.	Maintain projects @ Dittert Site, Oak Tree Ruin, Arroyo Ruin, Armijo Canyon Homestead, & Armijo Canyon Springhouse. Implement new projects only if highly valuable resources were endangered.
--Wilderness	Stabilization & erosion control allowed if no other methods existed.	Stabilization & erosion control allowed if no other methods existed.	No stabilization or erosion-control projects allowed.	Stabilization & erosion control allowed if no other methods existed.
Fire Suppression	Between 8 & 12 best-preserved homesteads identified as high-priority fire- suppression zones.	All structures w/standing wooden elements singled out as high-priority fire-suppression zones, including in wilderness.	No special high-priority fire-suppression zones.	Eight well-preserved homesteads identified as high-priority fire-suppression zones; others could be added.

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Cultural Resources, concl'd Special Designations	No special emphasis on National Register nominations, but 4-5 likely, plus 1 nomination to World Heritage List	High priority on expansion of existing National Register Districts and new nominations. Actively encourage World Heritage Listing of Dittert Site.	No special designations	No special emphasis on National Register nominations, but 4-5 likely, plus 1 nomination to World Heritage List
Boundary Modifications	No additions or boundary modifications to NCA	Recommend addition of adjacent AFO lands w/high density of cultural resources to NCA	Recommend addition of adjacent AFO & SFO lands w/high density of cultural resources to NCA	Recommend addition of adjacent AFO & SFO lands w/high density of cultural resources to NCA
Public Interpretation	Limited	Emphasize onsite & offsite interpretation	No onsite interpretation; offsite interpretation would not encourage visitation.	Onsite interpretation @ limited number of sites. Discourage visitation to some other sites. Develop offsite interpretation.
Long-Term Impacts, Summary of Alternatives	Continue as @ present. Cultural resources managed essentially like other cultural resources on Albuquerque Field Office lands.	Would emphasize scientific & interpretive use of cultural resources, while maximizing active protection of those values.	Maximum sensitivity to American Indian values, & prevention of human impacts, including those resulting from scientific & interpretive use. Would allow degradation through natural processes.	Increased emphasis on active management of cultural resources, relative to other areas in AFO. Would emphasize long-term preservation of scientific values, while discouraging scientific use. Limited provisions for interpretive use.

TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Wildlife Habitat Vegetative Enhancement (Prescribed Fires/Woodland Thinning) (Short-term impacts occurring annually to help improve wildlife habitat)	1,500 acres--includes 1 prescribed fire & 1 wildland fire under prescription. No woodland thinning projects.	4,100 acres--includes 4 prescribed fires & 1 wildland fire under prescription, 1 woodland thinning project (100 acres)	1,000 acres--includes no prescribed fires & 1 wildland fire under prescription. No woodland thinning projects.	3,100 acres--includes 4 prescribed fires & 1 wildland fire under prescription, 1 woodland thinning project (100 acres)
Wildlife Developments [Long-term impacts lasting the life of the plan (15-20 years)]	20 acres; no riparian fencing	60 acres; 1.5 miles of riparian fencing	3 acres; no riparian fencing	40 acres; 1.5 miles of riparian fencing
Prairie Dog Enhancement Project	None	1,000 acres	None	1,000 acres
Impacts of Recreation Activities on Wildlife [Long-term impacts created by human activities that would last the life of the plan (15-20 years)]	6,480 acres (refer to Chapter 2 for activities)	14,080 acres (refer to Chapter 2 for activities)	5,200 acres (refer to Chapter 2 for activities)	9,820 acres (refer to Chapter 2 for activities)
Vegetation Coordinated Resource or Allotment Management Plans (CRMP/AMPs)	Continue to develop new plans, & periodically review/revise existing plans.	Same as Alternative A	Same as Alternative A	Same as Alternative A
Minimum Rest Period included in CRMP/AMPs	May 15-September 15 for @ least one pasture/ allotment	Same as Alternative A	All year for at least one pasture/allotment	April 15-October 15 for @ least one pasture/allotment

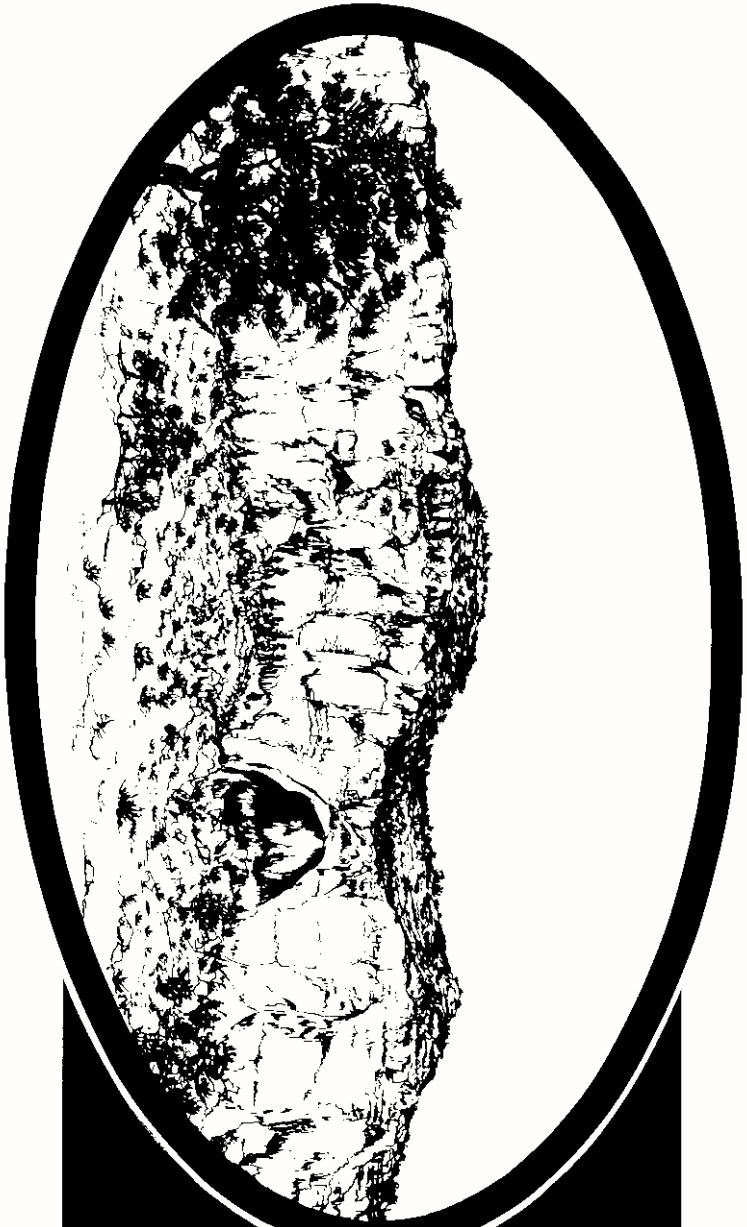
TABLE A (cont'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Vegetation, concl'd Range Improvement Projects	Considered with or without CRMP/AMPs	Same as Alternative A	No new projects developed	New projects could be developed if needed to provide rest from grazing.
Erosion Control Structures	Small structures to control/ divert water would be considered.	In addition to small structures, large structures to impound water would be considered.	No structures completed.	Same as Alternative A
Noxious Weeds	Treated by mechanical, chemical or biological means	Same as Alternative A	Treated by mechanical or biological means	Same as Alternative A
Woodland & Forest Management	No tree removal permitted.	***Estimate*** 100 acres of woodland thinned/year to meet vegetative objectives.	No tree removal permitted.	***Estimate*** 150 acres of woodland thinned/year to meet vegetative objectives.
Riparian Vegetation Management	Springs used by livestock would be fenced, but developed for continued use by livestock and wildlife. No riparian vegetation planting completed.	Same as Alternative A. In addition, riparian areas would either be scheduled for regular rest from livestock grazing or fenced to exclude livestock use.	No new fences constructed. Wet areas around springs scheduled for regular rest from livestock grazing.	Same as Alternative B. In addition, riparian planting could be completed.
Exotic Species Invading Riparian Areas	No control or removal treatments performed.	Same as Alternative A	Same as Alternative A	Removed by mechanical, chemical, or biological means

TABLE A (concl'd)

Issue/Action Item	Alternative A (Existing Management)	Alternative B (Resource Use)	Alternative C (Natural Processes)	Alternative D (Balanced Management)
Boundary & Land Ownership Adjustments				
Current NCA Acreage	262,100	262,100	262,100	262,100
Changes Recommended to Congress				
--Additions	0	26,200	41,300	41,300
--Reductions (Acoma)	0	(960)	(960)	(960)
Modified NCA Acreage	262,100	287,340	302,440	302,440
Planning Area Acreage				
--Outside NCA	24,200	0	0	0
--Managed Under Rio Puerco RMP	2,000	0	0	0
Outside Planning Area (Recommended NCA) Managed Under Socorro RMP	15,100	15,100	0	0
Wilderness in NCA (acres)				
--Cebolla	62,000*	65,490	71,180	***65,770***
--West Malpais	39,800	39,800	39,800	39,800
--Chain of Craters WSA	0 (unsuitable)	0 (unsuitable)	18,300 (suitable)	0 (unsuitable)
Total	101,800	105,290	129,280	***105,570***
Public Land Outside NCA, Open to Public Land & Mineral Laws (acres)	22,000	0	0	0

Note: * Rounded.



CHAPTER 1

CHAPTER 1

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CHAPTER 1

PURPOSE AND NEED

INTRODUCTION

This document is the *Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement for El Malpais National Conservation Area and Chain of Craters Wilderness Study Area*. The purpose of the document (referred to as "the El Malpais Plan" or "the plan") is land use planning for the public lands and resources of the El Malpais National Conservation Area (NCA) and certain adjacent lands (refer to Map 1). As required by Public Law (P.L.) 100-225, the enabling act for the NCA, this plan also amends the *Rio Puerco Resource Management Plan* (RMP--USDI, BLM 1986).

The plan provides a comprehensive framework for managing and allocating resources for the NCA and contiguous lands for the next 20 years. It includes four alternatives and a Draft Environmental Impact Statement (EIS) that fulfill requirements of P.L. 100-225, the Federal Land Policy and Management Act (FLPMA), and the National Environmental Policy Act (NEPA). In accordance with P.L. 100-225, this document also contains analysis and a recommendation on the suitability of the Chain of Craters Wilderness Study Area (WSA) for inclusion into the National Wilderness Preservation System.

Before Congressional designation of the NCA, management of the area was guided by the RMP. This plan amends some of the RMP decisions related to the NCA. As the NCA is a small part of the lands managed by the Albuquerque Field Office (formerly the Rio Puerco Resource Area), the majority of RMP decisions will not be affected by this amendment. Since enactment of P.L. 100-225, the BLM has acquired 13,400 acres in the NCA and 14,000 acres of land contiguous to it. Some of the acquired lands were not addressed in the RMP. As these lands contain resource values complimentary to those of the NCA, they are included in this plan.

This plan also considers recommendations to the Congress that the NCA boundaries be adjusted to remove certain contiguous lands and add others. The lands proposed for removal belong to the Acoma Tribe and total 960 acres. The contiguous lands for addition consist of 26,200 acres of public land in Cibola County that are managed by the Albuquerque Field Office, and 15,100 acres of public land in Catron and Socorro Counties managed by the Socorro Field Office. Regardless of this plan's recommendations, Congressional action will be needed to change the NCA boundary.

[Note: Except for the proposed recommendation to amend the NCA boundary, no other management decisions in this plan will apply to the Socorro Field Office federal lands. The *Socorro Resource Management Plan* (USDI, BLM 1989c) will continue to guide management of these lands pending Congressional action.]

BACKGROUND

The NCA was established by P.L. 100-225 on December 31, 1987. Congressional designation of the area as an NCA requires the BLM to manage the area's resources with a higher order of protection than that followed on other multiple use lands.

To ensure protection of the NCA's resources, P.L. 100-225 required the agency to prepare a General Management Plan (GMP) for the NCA. Between 1988 and 1991, the BLM developed a GMP and Environmental Assessment (EA) for NCA. The GMP/EA was appealed to the Interior Board of Land Appeals (IBLA) on the grounds that an RMP Amendment and EIS should have been prepared.

In 1994, the IBLA decided in favor of the appellants, directing the BLM to prepare an RMP and EIS for the NCA. This document is being prepared to meet the GMP requirements of P.L. 100-225 and the IBLA decision.

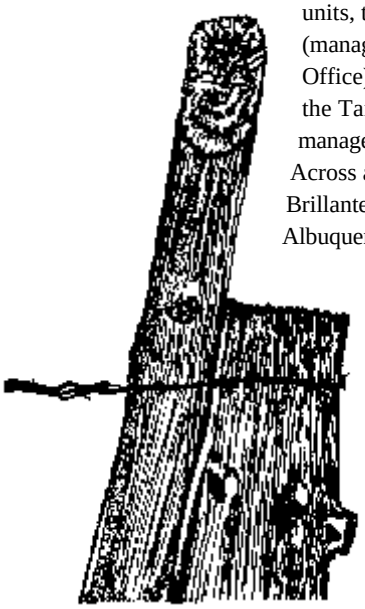
LOCATION OF THE PLANNING AREA

The Planning Area, including the NCA and contiguous lands, lies south of the city of Grants, New Mexico in Cibola County. This area is referred to as "the Planning Area"; the smaller area designated in P.L. 100-225 is referred to as "the NCA." The Planning Area encompasses 248,000 acres of federal and 36,500 acres of private 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 (refer to Map 2). The northern section of the Planning Area nearly surrounds, ***but does not include***, the El Malpais National Monument, administered by the National Park Service (NPS).

ADMINISTRATIVE UNITS WITHIN & ADJACENT TO THE PLANNING AREA

The NCA is the primary area for which this plan is being prepared. It contains three administrative units with additional special designations, the Cebolla Wilderness, the West Malpais Wilderness and the Chain of Craters Wilderness Study Area (WSA--refer to Map 2). For geographic and descriptive purposes, the remainder of the NCA has been divided into seven other administrative units, the Brazo, Breaks, Cerritos de Jaspe, Cerro Brillante, Continental Divide, Neck, and Spur (refer to Map 3, and to Table 1-1 for acreage).

The Planning Area also includes lands acquired by the BLM since 1987 that are within or adjacent to the NCA, and lands or easements needed to develop the Continental Divide National Scenic Trail (CDNST). Five areas adjoining the NCA are being considered for inclusion into it. The lands outside the NCA but within the Planning Area boundary have been divided into two separate units, the Brazo Non-NCA and the Breaks Non-NCA (refer to Map 3). The lands outside the Planning Area being considered for inclusion into the NCA consist of three separate units, the Continental Divide- AFO (managed by the Albuquerque Field Office), the Techado Mesa-SFO and the Tank Canyon- SFO (both managed by the Socorro Field Office). Across a sixth unit, the Cerro Brillante-AFO (also managed by the Albuquerque Field Office), the BLM would seek an easement for the CDNST. A description of all sixteen units follows.



[Note: Congressional action would be required before any of these adjoining units could become part of the NCA. If the Congress included them within the NCA, additional BLM planning would be needed (including amendments to the existing RMPs).]

[If Congressional action resulted in lands in Socorro and Catron Counties being added to the NCA, management would be under the existing Socorro RMP pending completion of an RMP amendment. The amendment would specifically address management of the resources and uses in the SFO units, including (among others) cultural resources, rights-of-way, minerals, visual resources, recreation and off-road vehicle travel. Some of these resources and uses are described briefly in Appendix R.]

NCA Units

Cebolla Wilderness

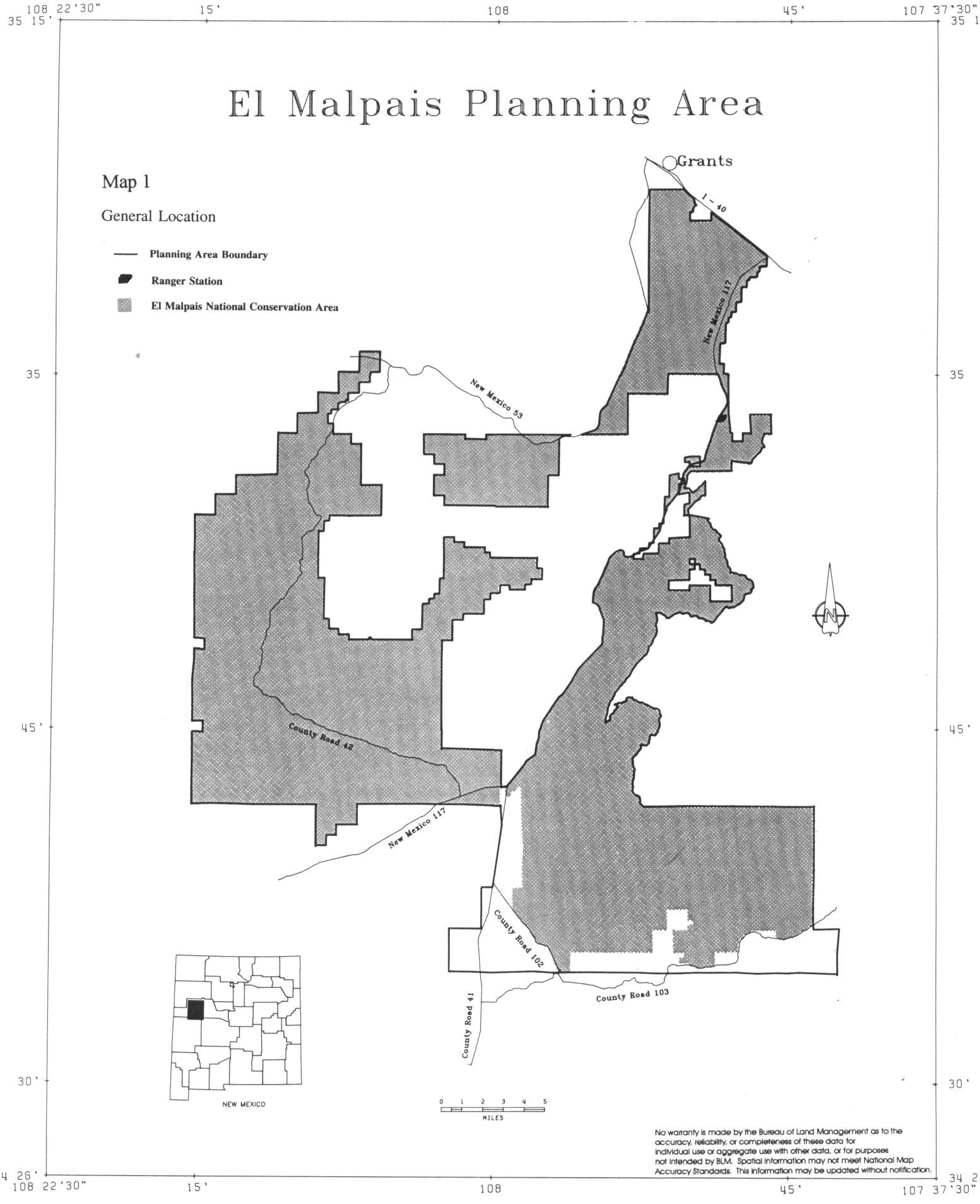
This wilderness is located along east side of New Mexico (NM) 117 from The Narrows to County Road 41 (to Pie Town). The area encompasses approximately 62,000 acres, of which 99 percent is under BLM administration.

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 approximately 8 miles south of the BLM Ranger Station in this wilderness.

West Malpais Wilderness

This wilderness is located north and east of County Road (CR) 42 and southwest of the 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.

El Malpais Planning Area



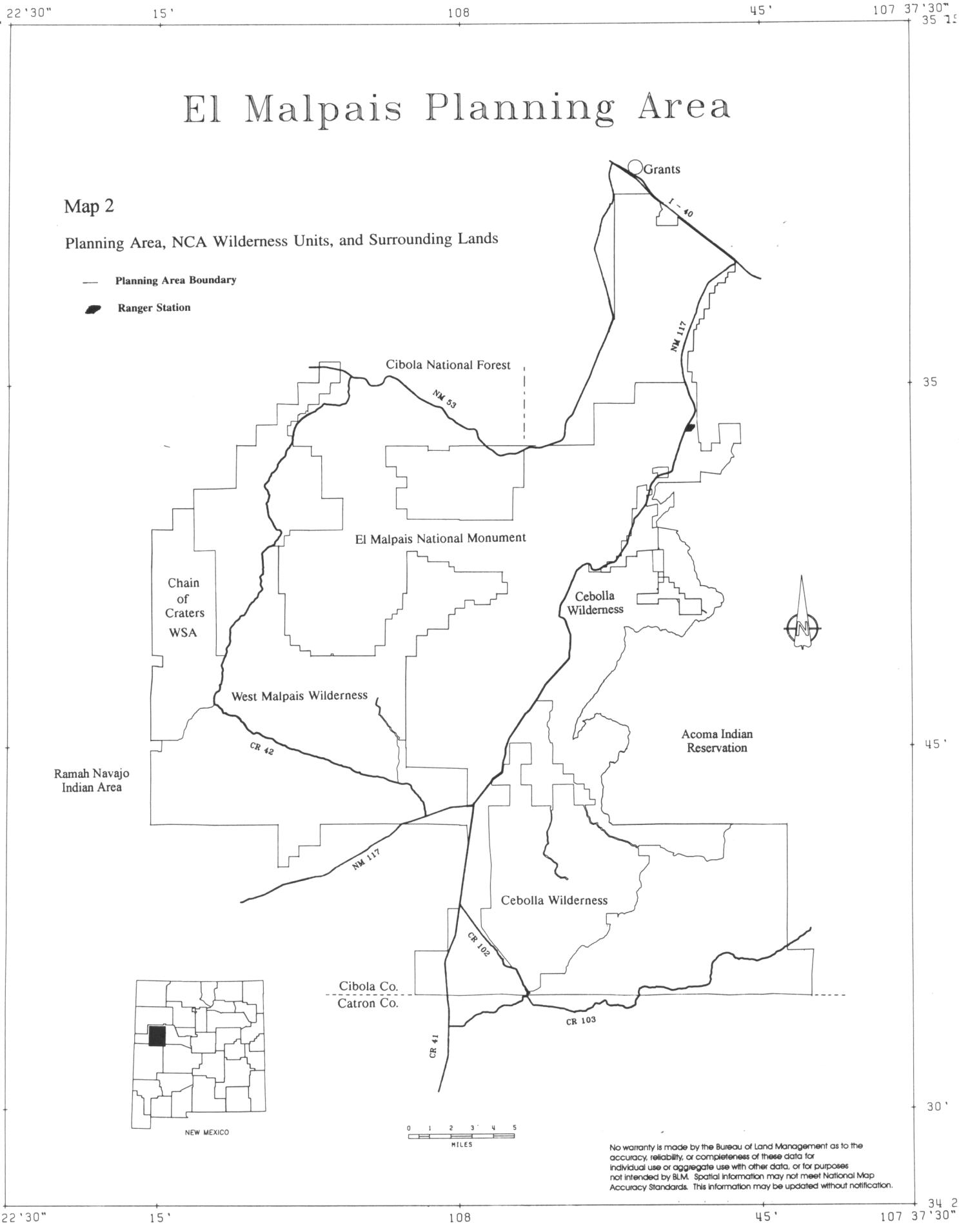
El Malpais Planning Area

Map 2

Planning Area, NCA Wilderness Units, and Surrounding Lands

— Planning Area Boundary

Ranger Station



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.

El Malpais Planning Area

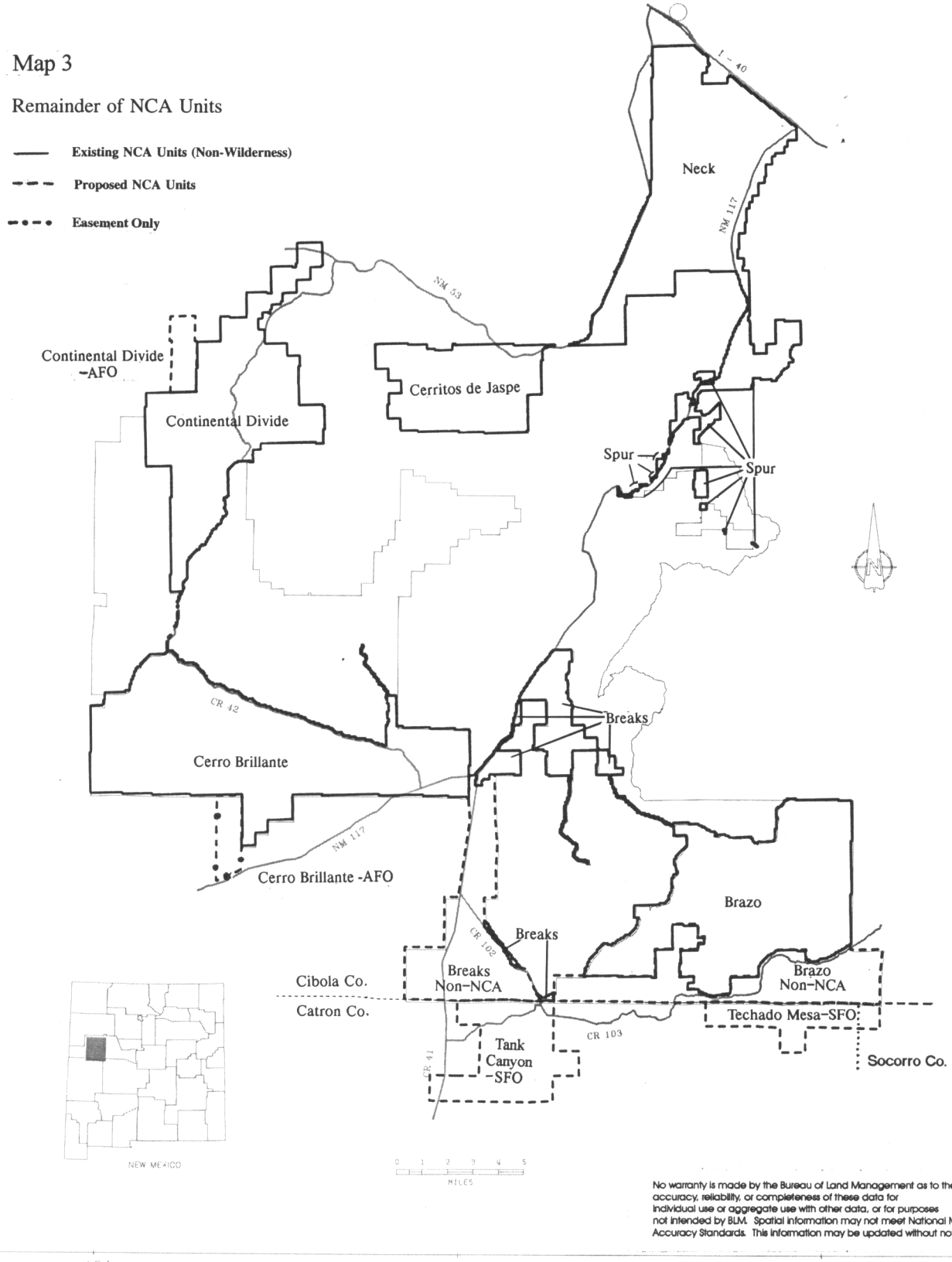


TABLE 1-1

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

Unit	BLM	Private	Indian	Total
Within NCA Cebolla Wilderness	61,500	300	200	62,000
West Malpais Wilderness	39,300	500	0	39,800
Chain of Craters Wilderness Study Area	18,300	0	0	18,300
Brazo	28,700	900	0	29,600
Breaks	6,500	0 [a]	0	6,500
Cerritos de Jaspe	9,200	3,500	0	12,700
Cerro Brillante	34,400	1,700	0	36,100
Continental Divide	17,500	6,800	0	24,300
Neck	6,100	20,300	800	27,200
Spur	4,500	300	800	5,600
Subtotal NCA	226,000	34,300(+) [a]	1,800	262,100
Within Planning Area/Outside NCA Brazo Non-NCA (Cibola County)	10,400	1,700	0	12,100
Breaks Non-NCA (Cibola County)	11,600	500	0	12,100
Subtotal Non-NCA	22,000	2,200	0	24,200
Total Planning Area	248,000	36,500	1,800	286,300
Outside Planning Area & NCA Cerro Brillante-AFO (Cibola County) [b]	0	2,000	0	2,000
Continental Divide-AFO (Cibola County)	2,000	0	0	2,000
Tank Canyon-SFO (Catron County) [c]	9,900	200	0	10,100
Techado Mesa-SFO (Catron, Socorro Counties)	5,000	0 [d]	0	5,000
Subtotal	16,900	2,200(+) [d]	0	19,100
Grand Total	264,900	38,700	1,800	305,400

Notes: [a] The Breaks Unit contains 22 acres of private land.
[b] AFO is the Albuquerque Field Office (formerly the Rio Puerco Resource Area of the Albuquerque District). The BLM would seek an easement for the CDNST across this unit, but would not include it within NCA boundaries unless owners were willing to sell or make an exchange.
[c] SFO is the Socorro Field Office (formerly the Socorro Resource Area of the Las Cruces District).
[d] The Techado Mesa-SFO Unit contains 40 acres of private land.

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 surrounding the area.

Chain of Craters Wilderness Study Area (WSA)

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

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

Brazo Unit

The Brazo Unit is located in the extreme southeastern corner of the Planning Area, east of the Cebolla Wilderness and south of the Acoma Indian Reservation. This unit provides access to the wilderness from the east-southeast, and encompasses approximately 29,600 acres, of which 97 percent is under BLM administration.

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 may be impassable during wet weather.

Breaks Unit

The Breaks Unit is located in the southeastern portion of the Planning Area just east of NM 117, and is surrounded by the Cebolla Wilderness. The unit encompasses approximately 6,500 acres, nearly all of which are under BLM administration (22 acres are private land).

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 Planning 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 72 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 topography 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 woodland found here at elevations lower than would be expected.

Cerro Brillante Unit

The Cerro Brillante Unit extends from the southwestern corner of the Planning Area 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 rol- ling 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 Planning Area, 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.

Neck Unit

The Neck Unit is bounded on the north by Interstate 40 (I-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 the Rio San Jose and Horace Mesa (southwest of Mount Taylor). Vegetation is mostly woody shrubs and grasses striving to exist on the older lava flows.

Spur Unit

The Spur Unit is located on the eastern edge of the Planning Area, 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.

Units Within the Planning Area but Outside the NCA

Brazo Non-NCA Unit

Located south of the Brazo Unit, this unit contains approximately 12,100 acres, of which 86 percent is under BLM administration. 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 96 percent is under BLM administration. (Over 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 Planning Area & NCA

Cerro Brillante-AFO Unit (Albuquerque Field Office)

This unit is located on the southern edge of the Cerro Brillante Unit, and is comprised of three sections of land outside the current NCA boundary south to NM 117. Similar to 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). No BLM-administered land exists within this unit, and the agency would seek only an easement here unless owners were willing to sell or make an exchange.

Continental Divide-AFO Unit (Albuquerque Field Office)

This unit 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 (Socorro Field Office)

This unit adjoins the southwestern edge of the Planning Area 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 (Socorro Field Office)

The Techado Mesa-SFO Unit adjoins the southeastern edge of the Planning Area, and contains approximately 5,000 acres of public land and 40 acres of private land. 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 NCA enabling act, Public Law 100-225, contains specific directives for the BLM (refer to Appendix A for legislative highlights). Since the signing of the act on December 31, 1987, the BLM (along with other agencies and groups) has completed key actions in the NCA that are listed in Appendix B.

THE PLANNING PROCESS

The BLM develops three types of plans, RMPs (and RMP Amendments), Activity Plans and Project Plans. An RMP is a general land use plan as prescribed by FLPMA. An RMP Amendment is a modification of a portion of an original RMP. An RMP or RMP Amendment is always accompanied by an EA or EIS.

An Activity Plan is a more detailed and specific plan for managing a single resource program or spe- cial management unit. Examples include a cultural resource management plan, a wildlife habitat management plan or a wilderness management plan. An Activity Plan is usually accompanied by an EA, or occasionally an EIS (for a more complex situation).

A Project Plan is a very 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.

In this document, both activity-level planning and RMP Amendment decisions are presented. Preparation of this document follows the BLM's nine-step process for preparing RMPs, which is summarized in Figure 1. (Publication of this document completes Step 8 in this process.) The process focuses on planning issues, which are significant resource problems, concerns or opportunities that strongly affect management direction.

The planning issues are identified after the completion of public scoping. The different ways of solving the issue questions provide the basis for the alternatives. This document presents the Plan-ning Area alternatives (Chapter 2), including the BLM's Preferred Alternative. Background resource information (Chapter 3) and an analysis of the impacts for each alternative (Chapter 4) are also presented.

After considering public comments on ***the draft*** document, the BLM ***has selected*** the Proposed Plan. The plan ***has a*** mixture of the actions and prescriptions from the various alternatives. ***This has become*** the ***agency's*** Proposed Plan and Final EIS, including responses to public comments received on the draft document. The Proposed Plan and Final EIS ***specifies*** activity-level planning decisions, and decisions that amend the RMP.

FIGURE 1

RESOURCE MANAGEMENT PLAN/ AMENDMENT PROCESS

Issue Identification

Development of Planning Criteria

Collection of Inventory Data & Information

Management Situation Analysis

Formulation of Alternatives

Estimation of Effects of Alternatives

Selection of Preferred Alternative (Draft RMP Amendment/EIS)

Selection of Resource Management Plan
(Proposed RMP Amendment/Final EIS)
(Approved Plan Amendment/Record of Decision)

When the BLM releases ***this*** Proposed Plan/ Final EIS, affected parties who ***have*** participate***d*** in the planning effort may protest the decisions that amend the RMP. (To protest an RMP Amendment decision, the protester must have made comments during the public review period provided for the Draft Plan and EIS.) After any protests are resolved, the BLM will prepare an Approved Plan and Record of Decision (ROD). Once the ROD is published, parties adversely affected by activity-

level planning decisions may appeal to the IBLA (in accordance with 43 CFR 4.400-.704).

[Note: P.L. 100-225 requires that the plan for the NCA must include the following: implementation plans for a continuing program of interpretation and public education, proposals for public facilities, a management plan for natural and cultural resources, and a management plan for wildlife. The BLM also develops management plans for designated wildernesses. This El Malpais Plan contains these elements; the BLM's management alternatives include prescriptions that, taken together, compose these plans and proposals. No other separate, individual documents containing these elements will be published.]

PLAN AMENDMENTS

Several proposals contained in this document would amend the *Rio Puerco Resource Management Plan* (RMP--USDI, BLM 1986). The RMP amendments apply to four issues: 1--Recreation (Visual Resource Management), 3--Access and Transportation, 5--Wilderness Suitability and 10--Boundary and Land Ownership Adjustments.

Proposals under ***the Proposed Plan*** would amend the RMP by adjusting some previously assigned Visual Resource Management (VRM) classes, and by assigning classes to acquired lands outside the NCA that were not addressed in the RMP. Table 2-8 shows a comparison of the acreage in each VRM class by alternative, and the text of Chapter 2 includes a discussion of these proposals. (The VRM classes influence where recreational or other facilities would be located.)

Also under these alternatives, motor vehicle use designations on varying amounts of public land in the Planning Area would be changed from “open” to “limited” (to designated routes and trails--refer to Table 2-10 and the accompanying text in Chapter 2). This change would also apply to acquired lands not addressed in the RMP. Varying numbers of miles of access routes would be designated as “open,” “closed” or “authorized” (for use by certain users only--refer to Table 2-11). All changes in motor vehicle use or route designations would amend the RMP.

For Issue 5, Wilderness Suitability, under the different alternatives the BLM would recommend varying amounts of acreage contiguous to the Cebolla Wilderness for designation. Under Alternative A, the 10,380 acres considered (refer to Map 25) would not be recommended, so the RMP decision would not be amended. The BLM would amend the RMP under Alternative B by recommending the designation of an additional 3,640 contiguous acres as wilderness (refer to Map 26). Under Alternative C, the agency would recommend the designation of an additional 9,180 contiguous acres (refer to Map 27), as well as the 18,300-acre Chain of Craters WSA. Under Alternative D (the ***Proposed Plan***), the agency would amend the RMP by recommending the designation of 3,930 contiguous acres as part of the Cebolla Wilderness (refer to Map 28).

Proposals under Alternatives B, C and D would amend the RMP for Issue 10, Boundary and Land Ownership Adjustments, by recommending various NCA boundary changes. These changes are described in more detail in Chapter 2 under the discussion of this issue for each alternative.

ENVIRONMENTAL CONCERNS NOT WARRANTING DETAILED ANALYSIS

NEPA regulations require that the following environmental concerns be considered in this document. They have been reviewed and for the reasons stated were determined not to warrant detailed analysis. These elements will also be reviewed during project-level environmental compliance to implement this plan.

1. Wild Horses and Burros--None of these animals are known to exist in the Planning Area.

2. Air Quality--Recreation, other activities and natural occurrences may cause dust, while smoke from fires may result in air quality standards being exceeded for short periods of time. Implementation of management prescriptions to meet vegetation objectives (refer to Chapter 2) should reduce dust and minimize fire-created smoke. No actions

proposed in this document are expected to cause substantial adverse effects to air quality. These effects will be assessed in EAs prepared to implement this plan.

3. Hazardous Materials--No sites within the Planning Area have been identified to contain hazardous substances. If such sites are identified in the future, all surface and/or subsurface activities will be suspended until the BLM obtains direction from the appropriate federal and/ or state regulatory agency.

4. Prime and Unique Farmlands--During the home- steading era (1930s-1940s) numerous small, family dry-farming operations were scattered throughout the Planning Area. These small farms disappeared by the end of the 1940s, and today no farming is occurring there. Because of the lack of water, the large lava flows and shallow rocky soils, no prime and unique farmlands exist within the Planning Area.

5. Floodplains--In the Planning Area, runoff results from high-intensity summer rainstorms and occasional snowmelt. As the area is a closed basin with no perennial streams, no floodplains exist.

6. Wild and Scenic Rivers--In investigating public land within the Planning Area, the BLM has found no rivers or segments that would meet eligibility criteria (as defined by the Wild and Scenic Rivers Act) for inclusion as components of the National Wild and Scenic Rivers System.

PLANNING ISSUES & CRITERIA FOR THE EL MALPAIS PLAN

As shown in Figure 1, issue identification is the first step in the BLM's planning process. For a given planning area, the ***issues are significant problems, concerns or opportunities that strongly affect management direction***. They can be identified by the general public, American Indian tribes, other federal agencies, state and local governments, and BLM staff. After all tentative issues have been identified, the Field Office Manager selects the topics to be addressed as issues for the RMP Amendment/EIS. These issues are the center or focal point of the plan.

The characteristics of **planning issues** include the following:

They represent significant decisions that must be made.

They are controversial (problems or opportunities) and demand management attention.

They raise choices to which alternative management responses can be made.

They can be dealt with under BLM authority and jurisdiction.

They lead to an action (i.e., protection, designation, or special management).

They do not pertain to a subject already resolved in a previous plan or environmental analysis unless new information shows that the previous decision is no longer accurate.

They apply to most or all of the Planning Area. They are not so site-specific as to be more appropriate for an activity-level plan.

Planning criteria are the factors the BLM evaluates to develop answers to (decisions about) the issues. These criteria direct the preparation of the RMP Amendment/EIS, establishing limits on the analysis needed to resolve the issues. They determine how the planning team approaches the development of alternatives and ultimately, selection of a Preferred Alternative.

Planning criteria consist of discretionary (optional) and non-discretionary (required) standards. Examples of non-discretionary criteria are various applicable laws (such as FLPMA and the Endangered Species Act), regulations, policies and Executive Orders. Discretionary criteria are reflected in the next section.

The following issues and criteria are based on input from the public and the planning team during the scoping process. These issues represent resource or program areas for which the BLM anticipates changes in management direction within El Malpais as a result of the planning process. The issues are not listed in order of priority.

[Note: Some issues raised during scoping meetings are not addressed because they are outside the BLM's jurisdiction, are covered by previous plans, or can be

better handled through day-to-day, standard operating procedures. Examples of issues outside the BLM's control include grazing fees, water rights or other matters determined by law or regulation, or those controlled by other agencies. Interpretation and public education were originally listed as a separate issue. However, the BLM has determined that these concerns can be adequately resolved administratively. These management tools are discussed with the other issues they support.]

Issue 1--Recreation

Designation of the NCA by the 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 has considered 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, interpretive signing, kiosks, parking areas, toilets, water sources or visitor centers.

Issue Questions

What level of facility development is appropriate?

Where should the BLM provide facilities?

Planning Criteria

The BLM has examined 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 RMP, the BLM limited vehicle use in the area to existing roads and trails. The exception is in the two wildernesses (refer to Issue 4), where vehicle use and mechanized travel are prohibited. 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* (1989) needed to ensure public access?

Planning Criteria

The BLM has considered 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

Two designated wildernesses lie within the Plan- ning Area, the West Malpais (39,800 acres) and the Cebolla (62,000 acres). P.L. 100-225 allows for the continuation of livestock grazing, hunting and trapping in these areas. This law 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?

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 P.L. 100-225, 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 law, these areas became the NCA and the National Monument.

By establishing the NCA, the Congress recognized the outstanding historic, scenic, natural and cultural resources of the area. P.L. 100-225 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 NCA was designated, the BLM has acquired some 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 has examined 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 Navajos have taken a strong interest in 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 P.L. 100-225.

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 ma- nipulation) 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, and scenic enjoyment for people. It catches rainfall and slows overland flows, reducing soil movement and increasing the amount of water absorbed by the soil. Vegetation 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 has considered 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 the 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* may be desirable.

Issue Questions

Should the BLM recommend to the Congress that the NCA boundaries be modified, and if so, in which areas?

Are there lands or interests in lands the BLM should acquire through exchange, purchase or donation to further the aims of P.L. 100-225?

Planning Criteria

To help answer the above questions for this issue, the BLM has considered 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.

CHAPTER 2

CHAPTER 2

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CHAPTER 2

PLAN ALTERNATIVES

INTRODUCTION

This chapter contains a description of the actions and prescriptions proposed to resolve each issue identified in Chapter 1 under the four management alternatives for the El Malpais Planning Area. Four alternatives are presented, each of which has a different blend and balance of resource allocations, uses, and protection. All are based on input from the El Malpais interdisciplinary planning team, other Bureau of Land Management (BLM) staff, and the concerns and issues expressed by the public during the scoping process for this plan. Actions proposed are discussed under "Planned Actions for Each Alternative," which forms the third and major part of the chapter.

Some existing actions, decisions and guidelines have been brought forward into this plan and would be continued no matter which alternative was selected. These have effectively met public needs and/ or resolved issues, so the BLM will continue to use them in the Planning Area. They are described in the next section, "Continuing Management Guidance and Actions Common to All Alternatives." The public land, resources, and programs not affected by the resolution of the issues in these alternatives will be managed as outlined in this section and the *Rio Puerco Resource Management Plan* (RMP--USDI, BLM 1986).

All four alternatives comply with the requirements defined in Public Law (P.L.) 100-225 that the NCA be managed to protect geological, archeological, ecological, cultural, scenic, scientific, and wilderness resources, in a manner consistent with the Federal Land Management and Policy Act of 1976 (FLPMA). Together with the Continuing Management Guidance and Actions Common to All Alternatives, each alternative forms a separate and feasible land-use plan.

Also included at chapter's end are discussions of four alternatives the BLM has considered but not analyzed in this plan. The impacts of each alternative analyzed are discussed in Chapter 4.

CONTINUING MANAGEMENT GUIDANCE & ACTIONS COMMON TO ALL ALTERNATIVES

This section describes the program objectives, resource management guidance, and activities that will continue in the Planning Area regardless of the alternative selected under this plan. These are based on BLM policy, the "Continuing Management Guidance" of the *Rio Puerco Resource Management Plan*, and the special management constraints specified in P.L. 100-225. Management guidance for resource programs is found in laws, Executive Orders, regulations, manuals and instruction memoranda from the BLM Washington Office, the BLM New Mexico State Office, and the BLM Albuquerque Field Office.

Recreation

Program Goal

The BLM's goal for this 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 Common to All Alternatives

Recreation programs are managed according to multiple use principles unless otherwise specified by law (e.g., FLPMA) or BLM policy. In areas formally recognized by the Congress, such as wilderness and

National Conservation Areas, providing recreational opportunities requires more intensive management and investment.

The BLM uses the Recreation Opportunity Spectrum (ROS) to inventory, plan for, and administer outdoor recreation resources on public land. A general description of the. six ROS classes is contained in Appendix C. ROS objectives for the NCA are those indicated in the Rio Puerco RMP. Table 2-6 under Alternative A displays land acreage for each of the three ROS classes in the Planning Area by
alternative.

For any project proposed in the Planning Area, the BLM 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 Planning Area and must comply with all applicable New Mexico Department of Game and Fish regulations. Patrols (Operation Respect) will continue during hunting/trapping seasons.

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

The BLM would inspect 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 BLM would identify and remove hazards or give warning of their presence. BLM personnel, volunteers, cooperative management agreements, contracts to the private sector and other means as necessary would be utilized to maintain BLM facilities to ensure an appropriate standard of care is provided. The Bureau would 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.

Recreation Partnerships

The BLM will continue to cooperate with the National Park Service (NPS) in developing, constructing, and operating the Northwest New Mexico Information Center near Grants, New Mexico. The agency will also 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 P.L. 100-225, the BLM 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. To assist with its goals of public outreach, interpretation, and environmental education, the BLM will develop and maintain cooperative agreements and contacts with teaching institutes, research institutes, and non-profit organizations.

The BLM will continue to support and cooperate with Los Amigos del Malpais, a volunteer association that has been assisting with managing El Malpais since 1987. Several group members are trained as hike leaders, and others regularly staff the Ranger Station.

Special Recreation Permits

Under all alternatives, the BLM will continue to issue special recreation permits to qualified outfitters and guides when requested, following the permitting process, which includes an Environmental Assessment (EA). Permits issued will be consistent with resource protection objectives, 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 or other

commercial outfitting. These include commercial, competitive and organized uses of public lands. However, no motorcycle race or other off-road vehicle competitive event will be allowed, as it would not be compatible with the intent of P.L. 100-225.

Management of Existing Facilities

Recreational facilities and actions already completed at the Ranger Station and La Ventana Natural Arch will continue to be managed for intensive use, with emphasis on completing approved projects. For example, the BLM will develop a ½-mile-long (round trip) interpretive/orientation nature trail at the Ranger Station (USDI, BLM 1990). The agency will also continue to provide interpretive programs, exhibits and demonstrations at this facility. At the arch, the BLM will develop and maintain interpretive wayside exhibits that emphasize wilderness, wilderness use ethics, and area geology.

Trails

All trail designs will incorporate accommodations***, where practicable,*** for universal access. Construction and location 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 would be done and a determination would be made concerning the environmental consequences of the proposal.***

The BLM and other agencies are developing a treadway for the Continental Divide National Scenic Trail (CDNST). The corridor for the trail was established in a Plan and EA developed jointly by the U. S. Forest Service (USFS) and the BLM (USDA, FS 1992, 1993).

Cave Management

The BLM 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. Significant cave locations will not be made public, and any actions that could adversely affect significant caves will be deferred or denied. The BLM will undertake appropriate protection measures as needed.

Visual Resource Management

Program Goal. The BLM seeks to manage public lands to protect or enhance the quality of visual (scenic) values.

Management Guidance. The Visual Resource Management (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 inventory guidance in BLM Manual Section 8410. The Contrast Rating System identified in BLM Manual Section 8431 will provide the means to evaluate proposed projects in the Planning Area and determine whether they conform with approved VRM objectives.

Interim VRM Classes will be established where a project is proposed and no RMP-approved VRM class objectives exist, including on Planning Area lands acquired after 1986. The agency will establish these interim classes using procedures identified in BLM Manual H-8410-1. The classes will remain in effect until VRM objectives are assigned when this plan is approved.

Management Common to All Alternatives. The BLM will administer visual resources in the Planning Area according to the objectives for each VRM class established through the land use planning process. The agency will continue to seek to acquire a scenic or conservation easement along federal, state and county roads passing through the Planning Area to prevent the views along these roads from being obstructed or degraded by developments. (Refer to Appendix E for description of each of the four BLM VRM Classes and management objectives.)

VRM Class I is assigned to Congressionally designated wilderness to maintain its existing scenic values. VRM Class II is assigned to all lands under wilderness review until they have been released from further review or designated as wilderness. Classes II, III, IV will be assigned to other areas based on a combination of scenic quality, sensitivity level, and distance zones, and on management decisions based on the RMP or directed by policy.

Monitoring. The BLM's Visual Contrast Rating

System (Handbook H-8431-1) will be used to monitor potential visual impacts of non-BLM- and BLM-initiated projects and activities to ensure they are within acceptable limits. Through the RMP amend-ment and maintenance process, the BLM will maintain the inventory of visual values. Staff from each program involved in resource development work will be responsible to monitor the impacts on visual resources to ensure the changes are within acceptable limits.

Interpretation

Interpretive objectives will be developed for each resource whose management can be assisted through such visitor education efforts. Some proposed objectives are listed below by program; these are not all-inclusive nor 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)

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

- 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 & Air)

- 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 Planning Area. (Wildlife)

- Livestock grazing is a legal activity in the Planning Area, and it is important to maintain and protect fences, waters, gates and other range improvements. (Rangeland Management)

- Vegetative manipulation plays a part in conserving our public lands, including fire and fuelwood harvesting. (Vegetation) Visitors should be informed of significant geologic features and the physical processes that produced them. (Geology)

- 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 (ARPA), monetary rewards may be offered for information leading to the arrest and conviction of violators. (Cultural Resources & American Indian Practices)

Access & Transportation

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 agency designates all public lands as open, limited, or closed to motorized vehicle use, and determines whether restrictions are needed to manage nonmotorized uses (e.g., hiking, mountain biking, horseback riding).

Management Guidance

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

The BLM has identified motor vehicle routes of travel in a 1996 survey. Any new routes in the Planning Area created by management action or land acquisition will be designated through this plan or an activity-level plan amendment.

Management Common to All Alternatives

In accordance with P.L. 100-225, the American Indian people recognized as using the NCA are ensured nonexclusive access for traditional uses and cultural purposes. Such access must be consistent with the American Indian Religious Freedom Act and the Wilderness Act.

Existing state, county, and private roads with valid rights-of-ways will remain open. The BLM will work with these entities, the NPS, USFS and private individuals on a case-by-case basis to build, realign, upgrade and rehabilitate roads that lie within the Planning Area or access the National Monument through the Planning Area. The 18.4 miles of arterial vehicle routes identified in the 1996 inventory will remain open for use by the public, except when they are 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).

Non-commercial, non-motorized and non-mechanized forms of access (e.g., backpacking, hiking, walking and horseback riding) will continue. Acquir- ed land will be managed for motor vehicle use in the same manner as adjacent land with the same designation.

Monitoring

Monitoring will be done with a frequency based on the level of use, as well as resource and safety concerns. The BLM will gather information to ensure compliance with 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.**

Wilderness

Program Goals

Through this program, the BLM identifies lands with wilderness characteristics, and recommends for designation those on which wilderness is the most appropriate land use. To preserve wilderness character as the 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 historical 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

Wilderness is managed according to the provisions of the Wilderness Act, as amended; FLPMA; BLM Manuals 8560, H-8560-1, and 8561; New Mexico BLM Manual Supplement 8100/8560; the BLM's Wilderness Management Regulations (43 CFR 8560); and the specific directives contained within P.L. 100-225.

For the Chain of Craters WSA and additions to the Cebolla Wilderness, supporting analyses to determine wilderness suitability will meet the requirements of the BLM's Wilderness Study Policy (1982). To provide a basis for the Congress to determine whether lands should be added to the National Wilderness Pre-servation System, each area under wilderness review is being analyzed for its values, resources and uses.

Management Common to All Alternatives

As recognized in P.L. 100-225, the Cebolla and West Malpais Wildernesses will remain as part of the Planning Area. The Chain of Craters WSA will be managed under the BLM's *Interim Management Policy and Guidelines for Lands Under Wilderness Review* (USDI, BLM 1995) to prevent impairment of its values until the Congress decides on its suitability.

If the Congress decided not to designate the lands under review as wilderness and released them from further consideration, the Interim Management Policy would cease to apply. The released lands would be managed under the appropriate RMP or plan amendment.

If the Congress designated all or a portion of the Chain of Craters or any other suitable lands as wilderness, they would be managed under the El Malpais Plan and the guidance identified above. If the designated area could not be incorporated under the El Malpais Plan or an existing RMP, the BLM would develop a site-specific management plan.

Until the Congress decides on the BLM's recommendation, the lands contiguous to the Cebolla Wilderness that are found to be suitable for designation will be managed under the Interim Management Policy, with an exception for mining. Existing and new mining operations under the 1872 Mining Law will be regulated under 43 CFR 3802 only to prevent unnecessary and undue degradation of the lands, not impairment of wilderness suitability. Those lands found to be non-suitable for wilderness designation will be released from interim management after approval of the El Malpais Plan.

All activities in designated wilderness will be carried out in conformance with the mandates of FLPMA, the Wilderness Act, and P.L. 100-225. 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.

The use of motorized vehicles and mechanical transport will be prohibited, except in emergency situations and as permitted by law for mining, livestock grazing, and private and state land access. 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.

Boundary adjustments of designated wilderness will be made only through legislation. To enable easier identification of WSA and wilderness boundaries, the BLM will mark them with signs.

The BLM will seek to acquire all private surface lands and subsurface (mineral) interests within wilderness. Higher priority will be given to acquiring lands that are undeveloped, or those on which mineral development threatens the area's wilderness character. Once acquired, these lands will be managed as wilderness. Acquired subsurface interests within the existing NCA boundary will be withdrawn from the mining and mineral leasing laws, and from disposal under the public land laws. If an owner of private mineral interests within wilderness wishes to develop them, the BLM will work to provide reasonable access and development opportunities with the briefest impacts on wilderness character.

Monitoring

Monitoring of lands under wilderness review is guided

by the Interim Management Policy (BLM Handbook H-8550-1). This monitoring is done at least once a month when the areas are accessible by the public to ensure compliance, and to gather data on use and condition. Non-degradation of biophysical and social conditions is achieved through the Limit of Acceptable Change (LAC) management system and the VRM system. 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 a wilderness or study area are recorded; when needed, the BLM establishes a case file.

Specific conditions for monitoring authorized projects are identified when each proposal is evaluated and authorized. Monitoring procedures and schedules for range improvement maintenance are identified in the Range Improvement Maintenance (RIM) Plans for the two wildernesses.

American Indian Uses & Traditional Cultural Practices

Program Objectives

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

Management Common to All Alternatives

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), and the Religious Freedom Restoration Act. P.L. 100-225 underscores these responsibilities by its emphasis on traditional cultural practices.

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. Any activity that requires a permit under ARPA on Albuquerque Field Office lands also triggers a formal consultation with potentially interested tribes.

For the most part, traditional cultural practices within the Planning Area are private matters of concern only to the tribes and individuals who are directly involved. It is therefore not appropriate for the BLM to develop alternative management actions specifically related to traditional cultural practices. However, this issue is an important consideration in formulating alternatives for other issues and in analyzing impacts that could result from implementing the alternatives.

For routine activities, the BLM 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 this plan have been completed, more specific activity plans or proposals for particular projects are evaluated through an envi-ronmental analysis process mandated by the National Environmental Policy Act.

The BLM 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 the Acoma, Laguna, and Zuni Pueblos, as well as the Ramah Navajo Chapter. For all except minor projects, the BLM 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.

The BLM 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 Planning Area. The objective is to encourage communication while still recognizing the need for privacy in many situations. The agency responds when these groups express concerns.

Cultural Resources

Program Goals

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

Management Common to All Alternatives

Federal laws such as the National Historic Preservation Act (NHPA) of 1966, the Archeological and

Historic Preservation Act of 1974, ARPA (1979), AIRFA (1978), and FLPMA (1976) provide for the protection and management of cultural resources. P.L. 100-225 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.

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 2-1. (The terms themselves are defined in the Glossary.) Under any alternative, cultural resources that meet the definition of an "Isolated Manifestation" will be allocated to the "Discharged Use" category after they have been adequately documented. Otherwise, the allocation of different types of cultural resources varies among the four alternatives.

Compliance with the National Historic Preservation Act

Before any surface-disturbing or other activity that could affect cultural resources, the BLM routinely conducts an intensive (Class III) inventory to ensure that important resources are not inadvertently damaged. The agency then completes administrative steps required by NHPA, including consultations with the New Mexico State Historic Preservation Officer. These measures will remain in effect under any alternative proposed in this plan.

P.L. 100-225 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. Under any alternative, 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 BLM will use more cautious and conservative practices.

Inventory & Baseline Documentation

The BLM conducts cultural resource inventories at four levels of intensity (Class I, II, and III, as well as reconnaissance level--refer to the 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 dete-rioration, and describe the current condition of the property.

In this plan, the alternatives vary in terms of the amount and kinds of inventory proposed in the Planning Area, and the circumstances under which inventories would be conducted. However, these activities and maintenance of the records they generate will continue in one form or another under any alternative.

Permits & Scientific Investigations

To qualified individuals and organizations employing them, the BLM issues permits that authorize various types of cultural resource investigations. Subject to certain restrictions and requirements, the most common permits authorize surveys and minor testing needed to determine whether subsurface archeological remains are present. Typically these are state-wide permits. Under any alternative, the BLM will continue to issue these permits within the Planning Area.

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. Some of the alternatives in this plan would allow continued issuance of ARPA permits under certain circumstances, while under other alternatives, activities requiring these permits would be greatly restricted.

TABLE 2-1

CULTURAL RESOURCE MANAGEMENT OBJECTIVES AND USE ALLOCATIONS

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

Patrol & Surveillance

Enforcement is accomplished largely by BLM Rangers, who patrol back- country areas, maintaining a presence and looking for violation of ARPA and other acts 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. BLM cultural resource specialists and volunteers also visit sites and sensitive areas on a regular basis. These activities, referred to as "patrol and surveillance," will continue under any alternative.

Monitoring

The BLM 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 BLM 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 Planning Area sites, including the Dittert Site, Oak Tree Ruin, and Arroyo Ruin.

Wildlife Habitat

Program Goals

The BLM wildlife program focuses on habitats for terrestrial, aquatic, and special-status species (including threatened and endangered), and on rare or representative habitats or ecosystems. These habitats are managed to maintain or enhance the desired conditions that support the variety of wildlife species using the Planning Area. BLM staff members identify opportunities to maintain, improve, and expand wildlife habitats on public lands consistent with other consumptive and non-consumptive uses. They also identify and manage priority species and habitats (including rare and representative habitats, plant communities, and biological diversity).

The agency 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--USDI, BLM 1988). New Mexico BLM has developed a version of this document that outlines specific objectives in managing the wildlife program statewide (USDI, BLM 1989). Other federal laws and policies that direct the BLM to improve the management of habitat to meet wildlife needs include FLPMA, the Endangered Species Act (ESA--1973 as amended), the Public Rangelands Improvement Act (1978, as amended), BLM Manual Section 6840, and program policy emphasizing Fish and Wildlife 2000 practices and biological diversity.

The Albuquerque Field Office's wildlife habitat management program is also influenced by various memoranda of understanding and cooperative agreements.

Management Common to All Alternatives

The BLM'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 Planning Area and will continue under any alternative selected.

Habitat Management Plans & Special Designations

The BLM has developed an activity-level Habitat Management Plan (HMP) to enhance wildlife habitats in a large portion of the Planning Area, primarily for deer, antelope, turkey and Abert's squirrel. The *El Malpais Wildlife Habitat Management Plan* (USDI, BLM 1981) contains goals, objectives, and planned management actions, and is revised to satisfy changes in law, policy, and RMP decisions. Additional HMPs may be developed and other special designations identified for priority habitats where appropriate (e.g., Research Natural Areas).

Habitat Maintenance, Improvement & Expansion

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 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 (USDI, BLM 1993; 1994). Those features in the Nonfunctional or Functional--At Risk categories will be managed to improve them to the Properly Functioning Condition category (refer to the Glossary). The BLM 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.

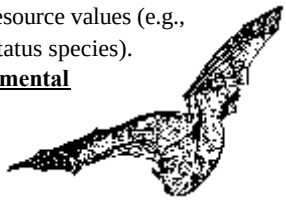
In accordance with BLM fence standards, new fences will be designed to allow for wildlife passage. Any existing fences that block wildlife movements will be modified. Wildlife escape ramps will be installed in all new and existing water tanks or troughs within the Planning Area.

Existing wildlife projects will be properly maintained (refer to Table 3-10 in Chapter 3). 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.

By scheduling use/non-use in critical wildlife areas during the appropriate season and to the greatest extent possible, the BLM will design and implement new livestock 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 BLM may close roads or trails permanently or seasonally where problems exist or are expected to occur within sensitive wildlife areas.

Raptor protection will be improved by requiring all new powerlines to be built to "electrocution-proof" specifications (Olendorff, *et al.* 1981). To avoid potential collisions with powerlines by migrating birds, the BLM will incorporate mitigating measures as identified by the Avian Power Line Interaction Committee (1994) into all new powerlines where applicable. Any 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 Planning 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., health and safety, special-status species).



Inventory & Environmental Analysis

The BLM Albuquerque Field Office maintains an

inventory of wildlife habitat and species occurrence for use in land use planning, habitat management, and multiple use decisions. These inventories identify important areas used by many species for breeding, migration, cover, resting and feeding, such as forests, wildlife snags, playas, wetlands, perennial springs and streams, raptor nesting areas, prairie dog towns, and sensitive use areas (for antelope fawning or elk calving, for example).

The agency reviews and analyzes all management actions in the Planning Area to determine whether they could affect wildlife (including special-status species) and/or their habitats. Also considered are impacts to habitat improvement projects, and compatibility with the NMDG&F comprehensive wildlife plan and population goals. Before the BLM authorizes activities in sensitive wildlife habitats (e.g., winter ranges, raptor nesting areas, fawning areas) staff members consider how to avoid or minimize
disturbances.

Monitoring

Wildlife habitat monitoring follows BLM Manual 6600. In addition, the BLM follows recommendations in the text, *Inventory and Monitoring of Wildlife Habitat* (Cooperrider, *et al*. 1986) when designing inventory and monitoring efforts. In monitoring condition and trend on key/sensitive wildlife use areas, wildlife staff coordinate with range and watershed staff. Water quality monitoring of natural springs used by wildlife is coordinated with the soil, air, and watershed staff. All existing wildlife projects (e.g., water developments, wildlife exclosures) are monitored regularly to determine any maintenance needs.

Threatened, Endangered & Other Special-Status Species

Program Goal

The goal of this program is to protect and/or enhance the habitats of threatened, endangered and other special-status species and to ensure their continued existence in the Planning Area. Special-status species are plants and animals that fall into one of five groups, including those: listed as endangered or threatened under the Endangered Species Act (ESA); proposed for listing as endangered or threatened under the ESA; candidate species (formerly Category 1 species); species of concern (formerly Category 2 species), designated by the BLM State Director as sensitive; or listed by the state government as endangered or threatened (state listed).

BLM policy is to ensure the implementation of the ESA, as amended, and FLPMA. The agency is committed to comply with the ESA, other applicable laws, regulations, BLM policies and manual requirements.

The BLM is conducting informal consultation with the FWS under Section 7 of the ESA, which is anticipated to be completed by early 1999 and will determine if formal consultation on any specific species or habitat is needed. Seven species in the Planning Area are listed as threatened or endangered (the black-footed ferret, American peregrine falcon, Arctic peregrine falcon, bald eagle, Mexican spotted owl, Southwestern willow flycatcher and Zuni fleabane), one is proposed to be listed as threatened (puzzle sunflower), and one is listed as a candidate (mountain plover). These are all included in the consultation process. In addition, 18 species listed as BLM sensitive and 12 listed as state endangered or threatened are known or have the potential to occur within the Planning Area (refer to Appendices F, Wildlife and G, Plants).

Management Common to All Alternatives

The BLM has a complex set of responsibilities for managing the habitat 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 a listed species or adversely modify critical habitat. Under agency policy and guidance, the BLM manages all candidate and BLM sensitive species for their conservation and that of their habitats. The agency strives to ensure that its actions do not contribute to the need to list any species as threatened or endangered.

The BLM also manages to conserve state-listed plants and animals. As long as they are consistent with FLPMA and other federal laws, state laws

protecting these species apply to all BLM programs and actions.

Habitat & Species Management

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

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

Inventory & Environmental Analysis

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

Under any alternative, actions will not be allowed to occur where they will affect T&E or other special-status species or their habitats. This commitment will be met by preparation of an EA before any action is permitted. The EA 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.

To protect T&E and other special-status species, the BLM will use the following approach in reviewing actions proposed on agency-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 BLM will not authorize any action that will cause any irretrievable or irreversible impacts.
- 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 candidates) or the State of New Mexico (for state-listed species).
- Ensure that no agency action or authorization will adversely affect the likelihood of recovery of any threatened, endangered or other special-status species.

Monitoring

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

Vegetation

Potential Natural Communities

Program Goal & Objectives

The goal of the vegetation program for the Planning Area is to complement natural ecological processes with management practices that will provide for the establishment of the Potential Natural Communities (PNCs). Based on its soils, other physical features and climate, the environment in the Planning Area is capable of supporting four different PNCs: Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex (USDA, SCS 1993). These are the communities that would become established if natural processes were allowed to be completed (refer to Chapter 3 and Appendix K for more information). The community goals are long-term targets that are not expected to be reached during the 15- to 20-year life of this plan.

Consistent with the goals, the BLM has developed vegetative objectives for the grass-shrub, piñon-juniper and ponderosa pine communities in the Planning Area. Compared to the goals, these objectives are more species- and site-specific. Progress toward meeting them will be measured during the life of this

plan. Specific objectives are shown in Table 2-2 for the grass-shrubland communities and in Table 2-3 for the pinon-juniper (woodland) and ponderosa pine (forest) communities.

Management Common to All Alternatives

Management for the PNC goals and objectives is in accordance with the requirements of P.L. 100-225, which states that the NCA was established to protect the ecological resources of the area (among others). Where the existing vegetation differs from the PNCs, the BLM will consider using practices such as prescribed fires, tree thinning and livestock grazing management to encourage the growth of PNC vegetation. The agency will gather additional information (e.g., vegetative use by livestock and wildlife) to guide these practices.

Monitoring

This topic is discussed below under "Forest and Woodland Resources" and "Rangeland Resources."

Forest & Woodland Resources

Program Goals & Objectives

The BLM's long-term goal for the forest resources in the Planning 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. Table 2-3 shows the PNC objectives for woodlands. In addition, the BLM will use forest and woodland management practices such as tree thinning in the Planning Area to help meet the PNC goal discussed above.

(Note: The BLM will conduct no forest or woodland management practices in the Cebolla or West Malpais Wilderness, or the Chain of Craters WSA. If the Congress does not designate the Chain of Craters as wilderness, forest and woodland management practices will be considered there.)

Management Common to All Alternatives

FLPMA requires that forests and woodlands be managed on the basis of multiple use and sustained yield. The Public Domain Forest Management Policy and the Material Disposal Act furnish additional guidelines for managing these areas. P.L. 100-225 specifies that collection of green or dead wood for sale or other commercial purposes is not permitted in the NCA. However, to meet PNC goals and objectives, the BLM can contract for thinning or salvage of wood products outside wilderness and the WSA. When thinning results in a supply of fuelwood, the BLM will notify local groups that the wood is available for home use.

Before proposing any part of the Planning Area for woodland or forest management, the BLM will inventory and evaluate it. Based on the evaluation, the agency will prepare a site-specific EA for public review and comment before any action is taken.

Monitoring

The BLM will conduct site-specific monitoring on treated areas to evaluate success in attaining the vegetation objectives. The agency will also conduct compliance checks to ensure adherence to permit and contract terms and conditions, and will use patrols, surveillance and enforcement to deter unauthorized harvest of wood products. In addition, the BLM 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.

Rangeland Resources

Program Goals

The primary goals of this program in the Planning Area are to manage for healthy rangelands and ensure that livestock grazing management on each allotment contributes to the accomplishment of the PNC objectives. Proper management of grazing is essential to ensure that the PNCs are achieved.

Management Common to All Alternatives

The grazing program is authorized by the Taylor Grazing Act, FLPMA, the Public Rangeland Improvement Act, and the grazing regulations (43 CFR 4100, including the recently adopted standards and guidelines for healthy rangelands at 43 CFR 4180). P.L. 100-225 provides for the continuation of livestock

TABLE 2-2

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 25 [c]	5-15
Savanna	20-45	15-40	5-15, P-J canopy 25 [c]	5-10

Notes: [a] These are areas that have the potential to produce a unique vegetative community (refer to Appendix K 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 2-3

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

grazing within the NCA under these and other applicable federal laws.

Livestock grazing management must be coordinated and designed to facilitate other programs. For example, reintroducing natural fire to open ponderosa pine habitat can improve forest health, wildlife forage, and ground cover for watershed. In general, grazing regimes must be designed to allow for frequent, routine rest for all forage species. However, 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 must not be allowed to graze there. The BLM must 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.

The *West Socorro Rangeland Management Program and EIS* (USDI, BLM 1982) contains additional proposed actions and management objectives for public land within the NCA. Grazing management changes to achieve the PNCs will continue to be made, following the guidance established in that document. (Note: 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 Planning Area were part of this transfer.)

(In 1992 the BLM issued decisions to establish new grazing preferences, which included sufficient forage to provide for wildlife needs. Table L-1 in Appendix L 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 L-2 in the same appendix.)

Allotment Management Categories. Sixteen livestock grazing allotments overlap the Planning Area (refer to Map 4 in the map section following this chapter). The BLM has placed each allotment 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 in Table 2-4, with the specific category for each allotment found in Table 2-5.

The I category (Improve) allotments are managed to improve their ecological condition and resolve resource conflicts. These are the allotments on which the BLM can apply vegetative management techniques, where the PNC data indicate the potential is good for change. The M category (Maintain) allotments are managed to maintain current satisfactory resource conditions. The 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.

Allotment Management Plans. The BLM will continue to implement specific prescriptions to accomplish vegetation goals and objectives through developing and revising Allotment Management Plans (AMPs). In these plans, the agency will outline the manner and extent of livestock grazing management. [Note: The agency ***has*** develop***ed a*** Coordinated Resource Management Plans (CRMP), which ***is*** similar to ***an*** AMP, for Cerro Brillante (#207) ***allotment within the Planning Area.]***

These plans and their revisions are key to ensuring that livestock grazing use is not limiting the accomplishment of vegetation objectives. The plans will be prepared in cooperation with the affected allottee and/or interested parties, and with input from a variety of BLM specialists to ensure that all resource needs (e.g., wildlife, watershed, forestry) are considered.

The BLM will involve the public in preparing each AMP/CRMP, any revisions, and the accompanying EA. Coordination with affected allottees, involved landowners, the Resource Advisory Council, the state and interested members of the public will be part of the AMP/CRMP process.

TABLE 2-4

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 of 51 or higher and a static or improving vegetative trend.		
Other Considerations Contains 30% or more public land or more than 1,540 public land acres.	Other Considerations Contains 30% or more public land or more than 1,540 public land acres.	Other Considerations 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 this category.

TABLE 2-5

SELECTIVE MANAGEMENT CATEGORIES FOR GRAZING ALLOTMENTS OVERLAPPING THE PLANNING 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 Planning Area.
[b] Combined allotment created in 1995 to include the former Cerro Chato (#200).
[c] Allotments created by the BLM as the result of a land exchange with the State of New Mexico in 1987.

Improving Livestock Grazing Management. Improvements in livestock grazing management are made by changing one or more of the following: the kind or class of livestock, the season of use, the authorized number of Animal Unit Months (AUMs), or the pattern of livestock grazing. Generally, the BLM changes the number of AUMs permitted only on the I allotments. However, the agency also adjusts use on the M and C allotments in response to changes in resource demands and conditions.

AUM changes can be implemented either through documented mutual agreement with the affected allottee (including an AMP/CRMP) or by grazing decision. These changes are implemented after consultation with the affected permittee or lessee, the state, and the interested public.

Livestock Grazing in Wilderness. In the NCA wildernesses, P.L. 100-225 allows previously established livestock grazing to continue as long as the intent of the Congress regarding grazing in such areas is implemented (as expressed in the Wilderness Act and the Forest System Wilderness Act). Department of the Interior Wilderness Management Policy allows motorized and mechanized equipment to be used to maintain range improvements in wilderness. The BLM has developed Range Improvement Management (RIM) Plans for the West Malpais and Cebolla Wildernesses; the plans provide guidance and procedures for using such equipment, and the BLM will continue to follow them. Allottees may use motorized vehicles on already existing routes to access windmills for annual maintenance, fences every 5 years, and dirt tanks every 10 years. (The plans are on file at the Albuquerque Field Office.)

Monitoring

The BLM 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 allotments are field checked before permit/lease renewal or transfer. For the M allotments, vegetative trend data is collected and reviewed before permit renewal. Trend and forage utilization studies are done and evaluated every 5 years on the I allotments. If evaluations indicate the need, the BLM implements changes in livestock grazing management through agreements with allottees or management decisions. An allotment's selective management category is changed based on new resource information.

The BLM will continue to do on-the-ground monitoring studies. To enhance these monitoring methods and increase the success of vegetative management practices, the BLM will also consider using satellite data and Geographic Information Systems (computer) analysis. Based on the comparison and evaluation of these data, the agency will continue to make adjustments in grazing use (including reduced livestock numbers). The BLM will also evaluate the 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.

Riparian & Wetland Habitats

Program Goal

The goal of this program is to manage the riparian and wetland habitats in the Planning Area for their protection and enhancement. BLM policy is to achieve a healthy and productive ecological condition for all public riparian areas (USDI, BLM 1991).

Riparian/wetland areas are those lands directly influenced by permanent water. Within the Planning Area, two springs are known to have riparian/wetland areas (refer to Chapter 3 for more information).

Management Common to All Alternatives

The BLM will take all appropriate actions (e.g., fencing, using grazing management practices) to protect these riparian/wetland habitats in the Planning Area. Construction activities that remove or destroy riparian vegetation will be avoided.

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 properly functioning

condition. The maintenance or improvement of these springs and associated riparian/wetland habitat could be accomplished either by using exclosures or by implementing grazing management practices that would allow these areas to continue to be maintained at or improved to properly functioning condition.

In managing livestock grazing, the BLM 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 the riparian zones.

Throughout the Planning Area, the BLM 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.

Monitoring

The BLM will monitor riparian/wetland habitats using the process for assessing proper 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).

Fire Management

Program Goal

The goal of the fire management program is to protect visitors, other land users, wildlife, livestock, and special physical resource features of the Planning Area. Prescribed fires and wildland fires under prescription will be used by other resource programs (e.g., wildlife, range, watershed) to improve the vegetative resources and help achieve vegetative objectives; protect, improve, or enhance wildlife and livestock habitats and watershed values; reduce the fuel load; and blend fire back into the natural process of a functioning ecosystem.

Fire has played an integral role in the Planning 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.

Individual burn plans with appropriate prescriptions are required before prescribed or wildland fires are used to improve the vegetative habitats of the Planning Area. In addition to an individual burn plan, a state burn permit that includes a smoke management plan is also required.

BLM policy requires the development of a Fire Management Plan for the Planning Area, which is anticipated to be completed after this El Malpais Plan is approved. This fire plan will identify management objectives to protect, maintain, and/or enhance resource values using fire. It will also establish restrictions for actions that could cause unacceptable resource damage (e.g., bulldozers in riparian areas).

In developing the Fire Management Plan for the Planning Area, the BLM will work closely with the NPS. This will allow the integration of objectives and restrictions for the Planning Area and the National Monument.

Management Common to All Alternatives

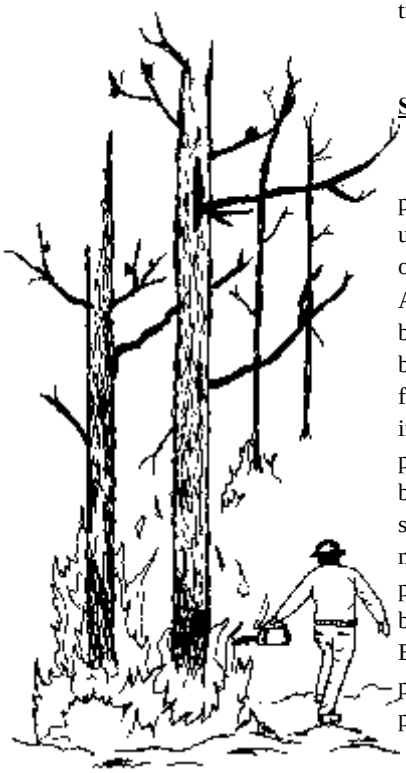
To protect land users, property and other resource values, the BLM will take appropriate action for all wildfires on or threatening public lands. Such action can range from full suppression to allowing a fire to burn as a wildland fire where it is in compliance with appropriate prescriptions.

Under any alternative, 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 BLM can help restore the natural place of fire in a functioning ecosystem, the Planning Area.

The BLM will evaluate and approve all burn plans through an EA process, paying close attention to cultural resource values (e.g., homesteads, hogans), wilderness values, visual resources, and recreational values within the area. Appropriate cultural clearances, T&E evaluations, and other environmental documentation will be required before any prescribed fire is initiated.

Within wilderness, wildland fires under prescription will be used to the greatest extent possible. Except for fuel management to reduce the risk of catastrophic fires, prescribe fires will generally not be used within wilderness. When suppression of wildfires within wilderness is necessary, the "minimum tool" philosophy will be used.

In the Fire Management Plan, the BLM will divide the Planning Area into fire suppression zones. For each zone, the BLM will identify general management practices to allow fire to become part of the natural process, while still protecting other resources values. (The initial suppression zones for the Planning Area are identified on Map 5 in the map section following this chapter.) During preparation of the Fire Management Plan and subsequent updates, the agency may modify these zones 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).



Full Suppression

Full suppression will be used in all parts of the Planning Area where no burn plan has been approved, fire prescriptions in approved burn plans are not being met, or smoke management plans are not being met. Because of their proximity to private lands, structures, recreational use areas or critical wildlife habitats, certain areas have been identified as full suppression zones (refer to Map 5). To prevent unacceptable resource damage and/ or loss of life and property, fires will generally not be allowed to burn in these zones. In some circumstances, prescribed fires may be used to protect the resource values within these zones by reducing fuel loading. Such fires will reduce the risk of catastrophic fires in the future.

In addition to these larger, full-suppression zones, smaller locations that are widely scattered over the Planning Area and contain facilities, homesteads, historical structures or private lands will receive full fire suppression. The Spur Unit, Neck Unit, Cerritos de Jaspe Unit, and Cebolla Wilderness (along NM 117) contain the majority of such locations.

Prescribed Fire

Prescribed fires will be used throughout the Planning Area where appropriate (outside of wilderness and full suppression zones) to protect, improve, or enhance wildlife/livestock habitats and watershed values. The BLM will use such fires to maintain or restore desired vegetation. In addition, the agency will use these fires to reduce fuel loading and the risk of large fires in areas where high-value resources exist (e.g., houses, land improvements).

Area burn plans will be developed on a case-by-case basis, with each taking into account the desired outcomes (vegetative response and/or fuel reduction). In each plan, the BLM 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.

Within wilderness and full-suppression zones, the BLM will only use prescribed fires to reduce fuel loading and the threat of large, catastrophic fires. Burn plans will be developed on a case-by-case basis as described above.

A prescribed fire is begun only when the conditions outlined in the burn 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 burn.

Areas within the Chain of Craters, Continental Divide,

Breaks, Cerro Brillante and Brazo Units will be identified for prescribed fires to maintain and enhance wildlife/livestock habitat and watershed values. Other units (Cerritos de Jaspe, Neck, Spur, West Malpais Wilderness, portions of Cebolla Wilderness) will be identified for pre-scribed fires only to reduce the threat of catastrophic wildfire in wilderness and other locations in which full suppression is generally required.

Wildland Fire (Under Prescription)

Wildland fires are those that meet the conditions outlined in a prescribed burn plan, but begin naturally and are monitored to make sure they remain within prescription. Such fires usually are located in areas with natural fuel breaks (e.g. lava flows, roads) to control the fire perimeter, and where limited resources are at risk.

Areas within the West Malpais Wilderness and the Continental Divide Unit are identified on Map 5 for wildland fires under prescription.

Lands & Realty

Program Goals

The goals of this program are to continue to acquire land and easements within the Planning 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 Planning Area management goals for other resource programs and uses.

Management Common to All Alternatives

None of the public lands within the NCA are subject to disposal, as P.L. 100-225 withdraws the area from all public land laws. The *Land Protection Plan, El Malpais National Conservation Area* (USDI, BLM 1989) provides the basic framework for acquiring lands and mineral interests within the NCA. Rights-of-way and land use permit applications are authorized on a case-by-case basis, with mitigation measures to protect the resources and values for which the NCA was established.

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 BLM 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, natural and cultural values of the Planning Area, and to ensure visitor safety.

When new construction is needed, the BLM 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 authorized only if no alternatives exist, and if mitigation measures can ensure protection of the scenic quality, natural and cultural values of the Planning Area. The BLM will conduct compliance inspections on all rights-of-way and land use permits.

The BLM will inform any proponents of major rights-of-way adjacent to the Planning Area of the legislative requirements to protect its scenic quality, cultural and natural resources. The agency will also oppose major rights-of-way proposals on lands adjacent to the Planning Area if they would adversely impact the area's viewshed. In these situations, the BLM will work with proponents to find alternative routes and develop appropriate mitigation.

Geology, Minerals & Paleontology

Program Goal

Protecting important, environmentally sensitive geologic and paleontologic resources while allowing for scientific collection and research, recreation and hobby collecting, and educational and interpretive activities is the major goal of this program.

Management Common to All Alternatives

To protect the resources for which the NCA was established, the BLM will authorize no mineral development on public lands within the area. P.L. 100-225 withdraws public lands in the NCA from the mining, mineral leasing and geothermal leasing laws.

The agency will continue to acquire mineral interests for public lands in the NCA, as identified in the Land Protection Plan. Approximately 40,000 acres of privately owned mineral interests exist in the NCA. As private lands are acquired within the NCA, mineral rights will also be acquired. P.L. 100-225 provides for the automatic

withdrawal of all new acquisitions within the NCA from mineral entry and leasing. This plan recommends that any new federal lands added to the NCA as the result of boundary adjustments also be withdrawn.

In areas where potentially important geologic values or fossils may be involved, the BLM will evaluate all permit applications for scientific study and develop appropriate stipulations for resource protection. The agency will also enter into agreements with appropriate institutions to conduct research on La Rendija (Maxwell's Fault) and other areas of geologic and paleontologic interest.

The BLM will develop appropriate interpretive materials to explain the significance of the special geologic features of the Planning 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. The agency will conduct compliance inspections on all activities involving valuable geologic and paleontologic resources.

Soil, Water, & Air Resources

Program Goals

The goals of this program are to protect, maintain, and enhance the soil, water and air resources of the Planning Area for the benefit of humans, wildlife and livestock. The program will continue to support other resource activities in the Planning Area.

Management Common to All Alternatives

The BLM will continue to participate with the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) in the National Cooperative Soil Survey. Detailed soil surveys for individual projects will be conducted as needed. Areas in which soils are sensitive and susceptible to high erosion will be monitored.

Allottees will be encouraged to enter into cooperative agreements with the NRCS to develop erosion control plans on private land within the Planning Area. As needed, the BLM will develop watershed activity plans as a part of grazing AMPs/CRMPs for the Planning Area. Through implementing AMPs/ CRMPs, the BLM will work to increase vegetative cover to reduce erosion.

The BLM will monitor and maintain water quality at the Ranger Station and any other developed drinking water sites in accordance with state standards. Water quality at natural springs on public lands in the Planning Area will also be monitored.

Soil, water and air resources will be considered when the BLM initiates or authorizes projects. As needed, BLM conservation practices and the State of New Mexico's best management practices will be applied to surface-disturbing activities.

To obtain valid water rights on public lands in the Planning Area, the BLM will file for them with the New Mexico State Engineer's Office.

Water wells and watershed projects that are no longer functioning or serving their original purpose will be reclaimed and abandoned as appropriate.

PLANNED ACTIONS FOR EACH ALTERNATIVE

Four alternatives are identified in this section, with their impacts analyzed in Chapter 4:A-- Con- tinuation of Existing Management (No Action), B--Resource Use (emphasizing human activities), C--Natural Processes, and D--Balanced Management or the Preferred Alternative (seeks an optimal, balanced mixture of management prescriptions).

In response to the planning issues, these alternatives have been developed as a range of reasonable combinations of resource uses and management practices. In combination with the continuing management guidance and actions (discussed above), the alternatives provide management direction for all resources and uses. They also provide a distinct choice of potential management strategies. Each alternative conforms to FLPMA and is consistent with P.L. 100-225.

Alternative A--No Action (Existing Management)

This alternative represents a continuation of the management practices defined in the *Rio Puerco Resource Management Plan*, with minimal modifications needed to meet the requirements of P.L. 100-225. It provides a baseline for comparison with other alternatives and may not adequately resolve the issues identified in this plan. The management direction for this alternative is derived from existing management decisions and guidance, as discussed above under "Continuing Management Guidance."

Issue 1--Recreation

Under this alternative the emphasis for recreation would be on dispersed recreational opportunities, with some site-specific opportunities offered. Most available activities would be related to roads and motorized uses (except in designated wilderness) as identified through the ROS classification system. (Refer to Table 2-6 and Map 6 for display of ROS Classes in the Planning Area under this alternative, and to Appendix C for a description of the ROS System.) Only small or subtle modifications would be made in the Planning Area to facilitate and direct recreational use, except at the Ranger Station and La Ventana Natural Arch.

The BLM would provide opportunities to participate in such activities as camping, hiking, horseback riding, hunting, mountain biking, picnicking, sightseeing, backcountry driving, wildlife watching, and exploring and learning about historical and archaeological sites. Opportunities to participate in recreational activities of interest to smaller populations, such as caving, climbing, skiing, shooting, trapping, photography, pack trips, enjoying wilderness solitude, and road biking would continue to be offered. Wilderness designation, wildlife habitat protection, and off-highway vehicle (OHV) designations would limit the opportunity to participate in some activities at some locations within the Planning Area. Those users seeking to recreate without motorized vehicles and equipment would be directed to the 100,800 acres of wilderness within the Planning Area.

Recreational activities associated with caving would be dependent on the significance of the cave. Within the Planning Area, caves would be managed in accordance with the Federal Cave Resources Protection Act and related BLM policy. Recreational use that would adversely affect significant cave resources would be deferred or denied. Information about the location of significant caves would not normally be made available to the general public, and use of these caves would be regulated.

Recreational facilities and actions already completed or approved would continue to be managed for their intended use. This includes the Ranger Station on NM 117 with its nature trail; a parking lot, toilets, and a trail at La Ventana Natural Arch; and the CDNST and two trailheads (refer to Map 10).

Camping would remain primarily a dispersed activity throughout the Planning Area. One semi-developed site at The Narrows would provide facilities for campers and picnickers. This site contains four units with portable toilets and tables for single-family use. Overnight backpacking would be encouraged elsewhere to disperse camping activities and impacts. Camping would remain prohibited at La Ventana Natural Arch.

Use of the existing Narrows Rim Trail, CDNST, La Ventana Natural Arch Trail, Hole-in-the-Wall Trail, and Ranger Station Nature Trail (approved but not yet built) would provide opportunities for hiking and other trail-related recreational activities under this alternative. Visitors could also hike cross-country to unique and important cultural and natural resources in the Planning Area, including the Dittert Site and homesteads in Armijo Canyon; the Rowe Homestead, at the mouth of Cebolla Canyon; the Stone House, located farther into this canyon; La Rendija, a large

crack in an old basalt flow; Hole-in-the-Wall, a kipuka (island of older vegetated basalt flows surrounded by more recent flows); and the cinder cones in the Chain of Craters (refer to Table 2-7).

Hiking through the Chain of Craters would be encouraged along the CDNST, with other opportunities along existing and closed vehicle routes for users not interested in cross-country travel. Visitors would be encouraged to practice a Leave No Trace backcountry ethic.

The Hole-in-the-Wall portion of the West Malpais Wilderness would be promoted for its rugged terrain. Access can be gained by hiking or backpacking along an authorized vehicle route (for maintenance of existing range improvements) that is about 7 miles long and cuts through the lava flows.

To enable more convenient horseback access and use of the Cebolla and West Malpais Wildernesses, the BLM would maintain the wilderness boundary entrances at The Narrows and Hole-in-the-Wall.

TABLE 2-6

RECREATION OPPORTUNITY SPECTRUM CLASSIFICATIONS FOR THE PLANNING AREA (PA), BY ALTERNATIVE [a]
(acres, rounded to nearest hundred)

ROS Class	Alternative A		Alternative B		Alternative C		Alternative D	
	Acres	% PA	Acres	% PA	Acres	% PA	Acres	% PA
Roaded natural	79,200	28	79,200	28	72,700	25	79,000	28
Semi-primitive motorized	85,000	30	82,200	29	56,900	20	72,000	25
Semi-primitive nonmotorized	122,100	42	124,900	43	156,700	55	135,300	47
Totals	286,300	100	286,300	100	286,300	100	286,300	100

TABLE 2-7

UNDEVELOPED (NON-TRAIL) HIKING OPPORTUNITIES EMPHASIZED UNDER EACH ALTERNATIVE

Map ID Number [a]	Alternative				Area/Destination
	A	B	C	D	
H-1					Rowe Homestead
H-2					Stone House
H-3					Armijo Canyon Homestead & Springhouse, Dittert Site, Cebolla Wilderness
H-4					Hole-in-the Wall, West Malpais Wilderness
H-5					La Rendija
H-6					Chain of Craters, Worley Homestead
H-7					Narrows Rim, Cebolla Wilderness
Total Number of Identified Opportunities	6	2	6	3	

Note: [a] Refer to Maps 10 through 13 for the location of these opportunities.

Numerous other areas also provide opportunities for horseback riding, as shown on Map 10.

Hunting opportunities would remain the same as at present; hunting and trapping are permitted in the Planning Area in compliance with NMDG&F regulations. Licensed hunters must not drive off established roads except to retrieve legally taken big game where permitted under the motorized vehicle area designations within the Planning Area. The density of roads in the Planning Area provides good hunting access but limits solitude and isolation.

Mountain bike opportunities would continue to exist along NCA and Planning Area travel routes open to the public. Brochures and other informational material on mountain bike routes would be made available when the requests became more frequent or the need for resource protection increased.

The BLM would continue to provide picnicking opportunities at facilities at the southern end of The Narrows and throughout the Planning Area. This would be a dispersed activity not dependent on facilities.

Approximately 354.5 miles of BLM-administered roads would be available for sightseeing, driving for pleasure, or back-country driving. The Chain of Craters Back Country Byway would provide excellent opportunities for back-country driving, sightseeing and wildlife viewing in the western portion of the Planning Area.

Sightseeing for cultural interest would be offered at the Dittert Site, the Ranger Station Reservoir, and through guided hikes to the Aldridge Petroglyphs. Sightseeing for historical interest would be offered at one or more of six fenced or stabilized homesteads sites (Armijo Canyon Springhouse, Armijo Canyon Homestead, Stone

House (two sites), Rowe Homestead, and Worley Homestead).

Under Alternative A, no specific areas or stretches of road would be identified, signed or developed for watching wildlife. However, the BLM would provide information on wildlife viewing through brochures, other publications at the Ranger Station, and personal contact by staff members.

The BLM would continue to issue Special Recreation Permits to qualified applicants for commercial, competitive, and organized uses of public lands on an as-requested basis. The permit process includes an EA and determination of conformance with the management decisions for the area in which the proposed use is planned. When issued, permits would include stipulations for resource protection and reduced user conflicts.

The emphasis for interpretation under Alternative A would be on dispersed and wildland recreation. BLM staff would work with the local Chamber of Commerce and federal agencies to achieve this emphasis.

During the summer months or as time permitted, the BLM would conduct evening programs at the Ranger Station parking lot or local private campgrounds as available. At least eight programs would be offered each year. At the Dittert Site, selected homesteads and petroglyph panels, the BLM would continue to conduct guided hikes for groups requesting them.

Visual Resource Management

The VRM System would continue to be the basic tool for managing visual resources on public lands in the Planning Area. Under Alternative A, emphasis would be placed on managing the visual resources under the VRM classes assigned through the RMP (refer to Table 2-8 and Map 14) and BLM policy.

The management of visual resources on acquired lands outside the NCA but within the Planning Area would be handled on a case-by-case basis, because these lands were not included in the RMP and VRM classes have not been assigned. Lands with new projects would be assigned an interim VRM Class to conform with the land-use allocations and scenic quality of the surrounding area, using procedures identified in BLM Manual H-8410-1. Those acquired lands in the NCA and surrounded by lands with RMP-assigned VRM classes would be managed according to the appropriate class objectives. These classes and objectives would remain in effect until VRM objectives were assigned through this plan.

The Cebolla and West Malpais Wildernesses, containing approximately 100,800 acres of public land, would be managed under VRM Class I objectives. As shown on Map 14, most of the Cerritos de Jaspe, some of the northeast corner of the Continental Divide, the northeast corner of the Cerro Brillante, and the southern portion of the Neck Unit (another 24,330 acres of public land) would also be managed under VRM Class I objectives. Any new projects and management activities would be done in a way that would preserve the existing character of the landscape. Any visual contrast from the form, line, color or texture of the existing landscape that was created by new activities should be very low and not attract attention. To comply with Class I objectives, the projects would have to harmonize with and compliment the natural environment.

In the remainder of the Planning Area, the BLM would develop projects and management actions would be developed within the established VRM Class II or III objectives. Class III lands (approximately 14,110 acres) are located mostly in the southwest corner of the Planning Area and the north half of the Neck Unit. The other 86,760 acres within the Planning Area would be managed as VRM Class II.

The objective for Class II lands is to retain the existing character of the landscape but in a slightly less restrictive manner than for Class I. Changes in the landscape character from activities should be low; the activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form line, color and texture found in the predominant natural features of the characteristic landscape.

TABLE 2-8

VRM CLASSES ASSIGNED TO PUBLIC LAND

IN THE PLANNING AREA (PA), BY ALTERNATIVE [a]

VRM Class	Alternative A		Alternative B		Alternative C		Alternative D	
	Acres	%of PA	Acres	%of PA	Acres	%of PA	Acres	% of PA
I	125,130	50	104,450	42	128,440	52	104,730	42
II	86,760	35	129,440	52	119,500	48	143,210	58
III	14,110	6	14,110	6	60	<1	60	<1
Unclassified	22,000	9	0	0	0	0	0	0
Totals	248,000	100	248,000	100	248,000	100	248,000	100

Note: [a] No VRM Class IV areas exist in the Planning Area.

On Class III lands, a moderate level of change to the characteristic landscape would be allowed through landscape alteration by manipulation of the vegetation or soils, or the introduction of structures. Here management activities may attract attention but should not dominate the view of the casual observer. Visual changes on Class III public lands should repeat the basic elements of form, line, color and texture common to the predominant natural features of the characteristic landscape so they remain secondary to the natural surrounding.

The Ranger Station on New Mexico (NM) 117 was constructed to comply with the requirements of P.L. 100-225, harmonizing with the surrounding landscape but attractive to the public. It was built on lands acquired after the passage of P.L. 100-225 and the completion of the RMP.

Issue 2--Facility Development

Under Alternative A, the emphasis for recreation would be on dispersed opportunities. Therefore, only limited facility development beyond what already exists in the Planning Area would be undertaken (refer to Map 10). Existing facilities would be altered if needed to make them universally accessible, with any new facilities built to this standard. Monitoring would continue at selected locations; if it showed that resource damage caused by recreation and visitor use exceeded established limits of acceptable change (LAC), the BLM would develop additional facilities and/or take other appropriate actions. (Appendix D provides an overview of the LAC system and Monitoring Plan for the NCA, as revised in 1995.)

Camping would continue to be encouraged at the southern end of The Narrows. Existing facilities there (for picnicking, camping, and parking) would remain as they are now, with the addition of one portable toilet (for a total of two). The BLM would construct no other developments for picnicking or camping in the Planning Area.

The road providing access to the southern end of The Narrows would be improved to an all-weather, gravel surface. Vehicle access through the northern end of the site would be closed for safety reasons.

The two existing, paved parking lots on the east side of the Planning Area would be maintained; from them, people could continue to disperse to recreate. The lot at La Ventana Natural Arch has a capacity for 32 cars and 3 recreational vehicles or buses. At the Ranger Station, the lot has a capacity for 30 cars and 5 recreational vehicles or buses.

The horse access gates at the south end of The Narrows and into Hole-in-the-Wall would remain. No additional facilities would be planned for horseback riding opportunities at either location or elsewhere in the Planning Area.

Five established trails approximately 36.5 miles long, with five trailheads, would exist in the Planning Area. These trails would consist of the La Ventana Natural Arch Trail, the approved CDNST crossing the west side of the

Planning Area (with two trailheads to be installed), the Ranger Station Nature Trail, and two informal trails (at Hole-in-the-Wall and the Narrows Rim--refer to Table 2-9 for a listing of trailheads under each alternative). No additional trails or trailheads would be developed.

(Note: Informal trails have little or no tread development, a limited number of trail markers, and the lowest priority for maintenance. They become established along travel routes for other motorized and nonmotorized uses. Typically they are not in an appropriate location for resource
protection.)

When built, the Nature Trail (approved in 1989) would extend from the Ranger Station to form a loop about ½ mile long. This trail would pass the Ranger Station Reservoir and highlight scenic views, local flora and fauna.

Providing access to La Ventana Natural Arch is a constructed trail approximately ½ mile long. This trail, which leads from the parking lot, crosses the Cebolla Wilderness to the base of the arch. The first part of the trail (to a photographic viewpoint just outside the wilderness boundary) is paved to accommodate universal access.

The 3.5-mile-long, informal Narrows Rim Trail, which has been marked with rock cairns, would be available for hiking, backpacking and access to the Cebolla Wilderness. Visitors could continue to park at The Narrows, and the BLM would continue to maintain the trailhead signs. No new actions would be planned for this trail.

West Malpais Wilderness visitors would be able to continue using the informal Hole-in-the-Wall Trail (approximately 7 miles one way from where it enters the wilderness). The horse access gate near the wilderness entrance would be maintained, but no new developments would be planned for this trail.

The BLM, **volunteers, organizations,** and other agencies are developing a treadway for users and resource protection along approximately 25 miles of the CDNST that crosses public land in the
Planning Area (refer to Map 10) **(refer to Map 38 for updated location)**. The treadway will follow the selected route established in the CDNST plan (USDA, FS 1993). This CDNST plan also identifies the need to construct trailheads, two of which would be located in the Planning Area (at Cerro Americano and Cerro Brillante). Each trailhead, with a graded parking area for up to 10 vehicles, would serve as a staging area for CDNST users. As needed, informational and regulatory signing would also be installed at these locations. (Refer to Table 2-9 for a listing of the trailheads that would exist under each alternative.)

No trails for mountain bike users would be marked until established Limits of Acceptable Change (LAC) for bike social trails in particular locations were exceeded. This would trigger the need to inform visitors about riding opportunities on existing travel routes, marking these routes, and educating riders about resource protection. Opportunities for mountain biking on existing travel routes in the Chain of Craters, Cerritos de Jaspe, and/or Brazo Units would be promoted when LAC standards were exceeded.

The BLM would build no new facilities to enhance sightseeing, driving for pleasure, or back-country driving. The Chain of Craters Back Country Byway would be maintained and developed through coordination with Cibola County and the NPS. Within the Planning Area, the BLM would install and maintain up to four back-country byway signs and up to four kiosks. (Such signs typically measure 3 feet high by 5 feet wide and stand 6 feet tall with support posts; refer to Figure 2-a. A typical kiosk is shown in Figure 2-b with a pullout in Figure 2-c.)

To gather information about visitation, the BLM would install visitor registration boxes at up to four selected homesteads. These sites have access gates for visitors who have hiked in.

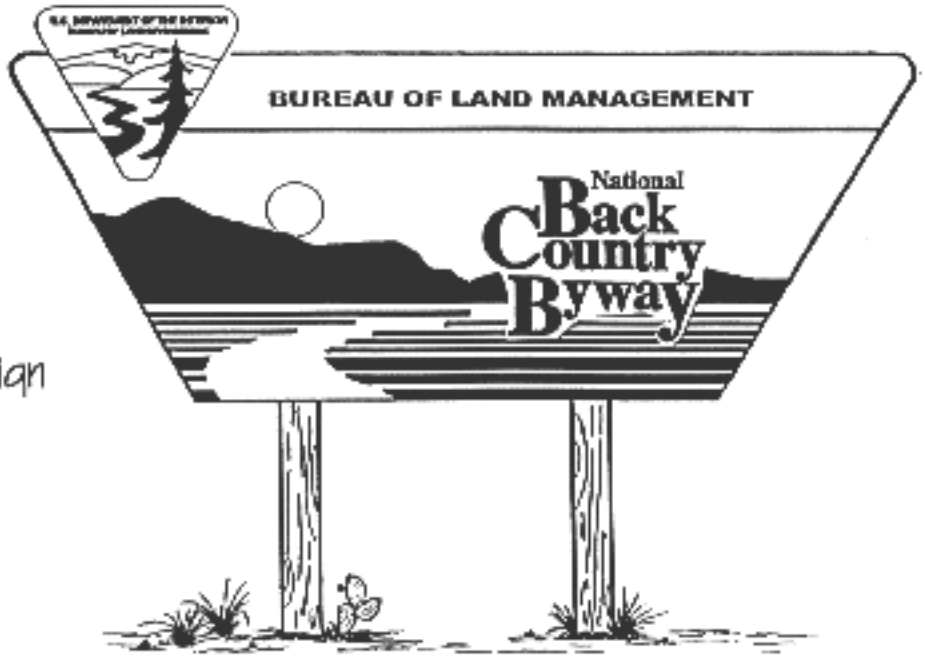


Figure 2-a
Back Country Byway Sign

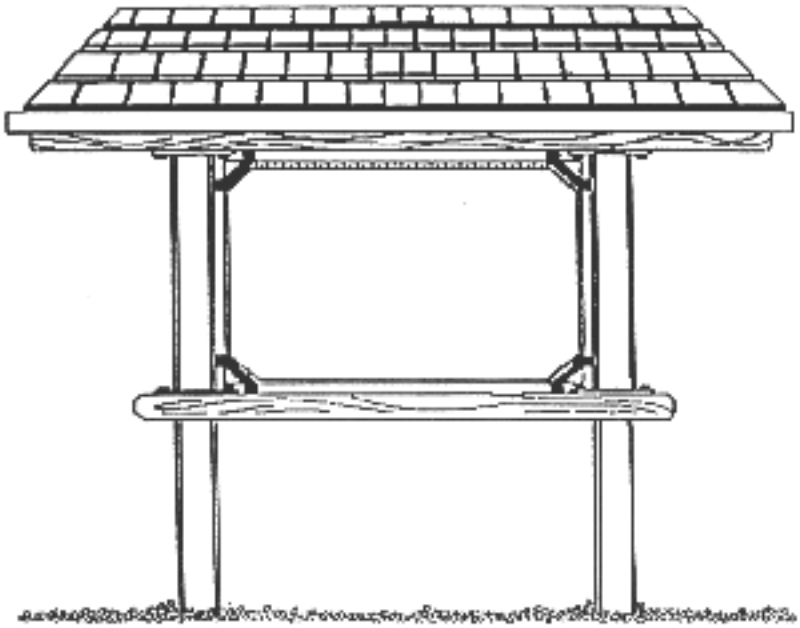


Figure 2-b
Typical Kiosk

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.

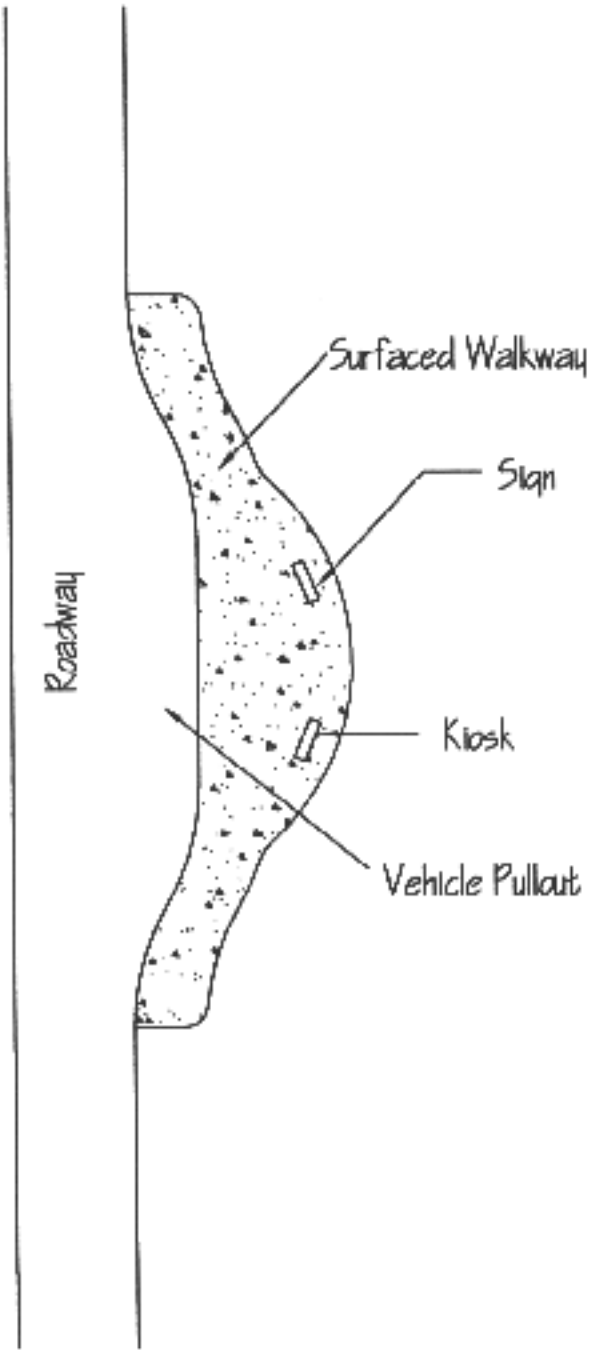


Figure 2-c
Typical Pullout for Sign and Kiosk

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.

TABLE 2-9

TRAILHEADS IN THE PLANNING AREA UNDER EACH ALTERNATIVE

Map ID No. [a]	Name	Alternative				Trail Use or Destination Served
		A	B	C	D	
Existing/Approved T-1	Ranger Station					Ranger Station Reservoir, Nature Trail
T-2	La Ventana Natural Arch					La Ventana Nat'l 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
Proposed T-6	Aldridge Petroglyphs					Prehistoric site in Cebolla Wilderness
T-7	Armijo Canyon/Dittert Sites					Cultural & historical sites in Cebolla Wilderness
T-8	Brazo (2 trailheads) [b]					Mountain bike use
T-9	Cebolla Canyon Community					Cultural sites, (Arroyo Ruin, The Citadel, Oak Tree Ruin, Rowe Homestead
T-10	Cebolla Canyon Schoolhouse					Historical schoolhouse in Cebolla Wilderness
T-11	Cerritos de Jaspe [b]					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-14	Pinole Site					Cultural site in Cebolla Wilderness
T-15	Spur Campground					Loop trail past amphitheater
T-16	Stone House					Cultural site in Cebolla Wilderness
	Total No. Under Each Alternative	5	16	2	11	

Note: [a] Refer to Maps 10 through 13 for the location of these trailheads.
[b] These trailhead locations are not yet pinpointed; they would only be developed if use showed the need.

To capture information from visitors hiking into the Cebolla Wilderness to the Dittert Site, the BLM would install another registration box at the informal parking area in Armijo Canyon (at the end of the public road near the wilderness boundary). Signing of the site to protect archeological resources would continue, and visitors would be informed of how to reach the site and the current road condition. No additional site developments would be planned.

No recreational facilities would be developed or constructed for viewing wildlife. The entire NCA is considered to be a "Watchable Wildlife" viewing area.

Entry signs would be maintained at nine locations (refer to Map 10), with additional signs posted as indicated by public comment or to eliminate confusion. (The dimensions of these signs are discussed above.)

No design standards for visual resources management would be used to maintain a consistent appearance for constructed facilities in the Planning Area.

If Alternative A was selected, limited interpretive facilities would be developed at recreation access points, picnic areas and trailheads. Most if not all interpretation would occur through one-on-one contact with visitors (including public programs and guided hikes); exhibits, interpretive media and publications at the Ranger Station; wayside exhibit panels and existing signs.

Issue 3--Access & Transportation

On 147,200 acres of public land (59 percent of the public land acres in the Planning Area), motor vehicle use would be allowed on existing inventoried routes (i.e., arterial, collector, and local travel routes, as shown on Map 18 and defined in the Glossary). About 41 percent of the public lands in the Planning Area would be closed to motorized vehicles and mechanical forms of transportation (except as authorized), mainly because of wilderness designation (refer to Table 2-10 and Map 22). Vehicle use in the 18,300-acre Chain of Craters WSA would be limited to existing inventoried routes.

On 3,600 acres of public land designated as open and 8,400 undesignated acres, users could travel by motor vehicle off routes and trails. This cross-country travel would be permitted unless monitoring showed that emergency closures or limitations were needed because of resource conditions, safety concerns, or user conflicts.

Except in designated wilderness and some scattered parcels of public land in the Neck Unit, access for recreational activities and other uses could occur on 354.5 miles of inventoried, BLM- administered figures 2-a & 2-b figure 2-carterial, collector and local vehicular routes scattered throughout 147,200 acres of the Planning Area (refer to Table 2-11, and to the Glossary for definitions). The BLM would maintain these routes on an as-needed or emergency basis. An additional 6.3 miles of routes outside wilderness are identified through agreements with the users for authorized use only.

(Note: Approximately 76 miles of state highways and county, U.S. Forest Service and private roads exist within the boundaries of the Planning Area. They would remain unaffected by management under this alternative, and are not included in Table 2-11.)

Existing facilities installed in association with this vehicle transportation network would remain in place (e.g., parking areas, trailheads, wayside exhibits and signs), including those for interpreted cultural, historical and geologic features. Signs, maps, and brochures informing the public of access opportunities and restrictions would remain limited, although the BLM would continue to install and maintain signs needed to inform and direct use.

Cross-country access by nonmotorized means (e.g., horseback, mountain biking, hiking) would be allowed to continue in the Planning Area. However, it is assumed that most of this would be concentrated on existing or abandoned back-country roads and a few trails because of terrain and vegetation conditions. Mountain bikers would be prohibited from accessing the wildernesses but would be allowed to use the remaining Planning Area lands without restriction to specific trails or roads.

Motorized and mechanical forms of transport on portions of the Narrows Rim and La Ventana Natural Arch Trails within wilderness would be prohibited. As at present, American Indians would be able to use existing roads for religious and cultural practices.

Issue 4--Wilderness Management (Cebolla & West Malpais)

Management would continue as at present until this plan is approved. The BLM would continue to focus on signing, prevention of unauthorized vehicle intrusions, patrolling and monitoring of the areas, and public education.

The BLM and volunteers would continue to patrol the areas at least once a month when they were accessible to the public, and more frequently when conditions warranted. Patrolling would be used to deter violations, gather information within the areas, and inform users about the resources and appropriate uses of designated wilderness.

The public would continue to use the areas for primitive types of recreation that do not require the use of motor vehicles, motorized equipment or other forms of mechanical transport such as mountain bikes. The BLM would continue to encourage recreational use of the areas through distributing maps and brochures identifying available opportunities. The existing facilities on the perimeter of the wildernesses, along with trail improvements, would remain in place for continued recreational use and resource protection.

La Ventana Natural Arch, The Narrows, and Armijo Canyon would continue to serve as access points to the Cebolla Wilderness. Cebolla Canyon Road (No. 2003), which splits the Cebolla Wilderness, and the Sand Canyon road (a dead-end, cherry-stemmed road) also would provide access. From The Narrows recreation site, the Narrows Rim Trail extends 3.5 miles into the Cebolla Wilderness.

For the West Malpais Wilderness, the trailhead at the end of the cherry-stemmed road off County Road (CR) 42 would continue to serve as the primary access point. A trail following a vehicle route that leads into Hole-in-the-Wall, a major attraction of this wilderness, would continue to be identified for access to the area.

Except at La Ventana Natural Arch, where permanent restroom facilities and a paved parking lot are provided, facilities at trailheads and other entry points would remain rustic in nature. Onsite information would remain limited. Through interpretation and signing, the BLM would identify the boundaries, the wilderness name, and some regulations governing use of the area. When users were encountered during patrols, BLM staff and volunteers would provide additional onsite information and education. Information about the areas, Leave No trace principles, and wilderness stewardship would also be available at the Ranger Station on NM 117, the wayside interpretive panels at La Ventana Natural Arch, BLM offices in Grants and Albuquerque, and on guided hikes.

Motorized vehicle access and other forms of mechanical transport (except as authorized under the Wilderness Act and P.L. 100-225) would be allowed only for access to nonfederal inholdings and livestock grazing operations; use of 5.5 miles of routes in Cebolla and 17.8 miles in West Malpais Wilderness have been authorized through prior agreements. Access and use for livestock grazing would continue under the conditions set in the BLM RIM Plans (USDI, BLM 1990) and AMPs/ CRMPs for individual allotments overlapping these two areas (refer to Map 23). Access to inholdings would continue over routes selected by the BLM to cause the least impact to the area's wilderness character, while serving the purposes for which the land was held or used.

Traditional American Indian cultural practices would 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 would be allowed, but such use inside the wilderness would be prohibited, unless the BLM has granted prior authorization after consultation and evaluation. When the BLM authorized such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character would be met. Upon request, the BLM would temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities.

TABLE 2-10

MOTOR VEHICLE AREA DESIGNATIONS IN THE PLANNING AREA (PA), BY ALTERNATIVE
(public land acres)

Area Status	Alternative A		Alternative B		Alternative C		Alternative D	
	Acres	% of PA	Acres	% of PA	Acres	% of PA	Acres	% of PA
Open	3,600	1	0	0	0	0	0	0
Closed	100,800	41	104,450	42	128,440	52	104,730	42
Limited	135,200	54	143,550	58	119,560	48	143,270	58
Undesignated	8,400	4	0	0	0	0	0	0
Totals	248,000	100	248,000	100	248,000	100	248,000	100

TABLE 2-11
STATUS OF BLM MOTOR VEHICLE ACCESS ROUTES
UNDER EACH ALTERNATIVE

Route Status	Alternative A		Alternative B		Alternative C		Alternative D	
	Miles	% of Total	Miles	% of Total	Miles	% of Total	Miles	% of Total
Open	354.5	98	337.5	93	199.7	55	273.1	75
Closed	2	<1	19	5	133.1	37	83.4	23
Authorized [a]	6.3	2	6.3	2	30	8	6.3	2
Totals	362.8	100	362.8	100	362.8	100	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.

In most instances, cultural and historical resources would be subject to the same forces of nature as other wilderness resources. However, stabilization and scientific studies of selected sites within the two wildernesses would continue as required to meet protection and preservation mandates. Research would be authorized if it could be carried out in an unobtrusive manner by methods compatible with preservation of the area's wilderness character. Except for guided trips, visitor information and education programs about selected cultural and historical sites within the wildernesses would be located outside the wilderness boundary.

Wildlife habitat management would continue to be guided by the BLM's Wilderness Management Policy (BLM Manual 8560). Hunting and trapping would be permitted under applicable state and federal laws and regulations. Use and maintenance of two existing wildlife exclosures and one water catchment would be allowed to continue under the "minimum tool" concept.

Proposed BLM vegetation treatments would be considered on a case-by-case basis in accordance with the Wilderness Management Policy. Fires would be controlled to prevent their spread to areas outside wilderness, the loss of human life or property. The BLM would suppress fires using methods that would cause the minimum adverse impact on wilderness character.

The BLM would continue to seek acquisition of wilderness surface (500 acres in each wilderness) and subsurface inholdings from owners willing to sell (refer to Map 24). Priority would be given to those lands that are undeveloped, or where their use would pose a threat to the area’s wilderness character. Under Alternative A, the BLM would recommend no adjustments of either wilderness boundary. The size of either wilderness would increase only as the result of acquisition of inholdings. No other lands outside these two areas would be recommended for wilderness designation.

Issue 5--Wilderness Suitability

Chain of Craters WSA

Under Alternative A, all 18,300 acres within this area would continue to be managed as part of the NCA under P.L. 100-225 and the BLM's wilderness Interim Management Policy, which contains non-impairment guidelines. The recommendation for the WSA would be that it was unsuitable for wilderness designation. When the Congress decides the area's wilderness status, the lands will either be managed as wilderness or released from study and managed under the existing land use plan.

Grazing operations in the WSA would continue to use 2,864 AUMs of forage per year, unless monitoring of forage condition and production indicated a need for change. Livestock operators would continue to maintain pre-FLPMA livestock developments using motorized equipment. The BLM could approve new, permanent livestock developments if they enhanced wilderness values, and would not require motorized access to maintain if the area was designated as wilderness.

The WSA would be managed to provide three ROS classes: roaded natural (7,800 acres), semi-primitive motorized (7,500 acres), and semi-primitive nonmotorized (3,000 acres; refer to Map 6). The unit would continue to offer opportunities for sightseeing, day hiking, mountain biking, backpacking, camping, semi-primitive motorized touring, horseback riding, birdwatching, landscape and nature photography, observation of geologic phenomena, and hunting.

Motorized vehicle use in the WSA would continue to be limited to existing vehicle routes (ways and trails). Approximately 44 of the 47 miles of inventoried routes would remain open, unless continued use was causing impairment of wilderness values. At that time the route(s) would be closed. Approximately 9 miles of the selected CDNST corridor passes through the WSA. This corridor was approved as part of the CDNST plan (USDA, FS 1993), and would remain open under Alternative A.

Visual resources in the WSA would be managed under a Class II designation. Any change in the basic landscape elements (form, line, color or texture) caused by a management activity could not be evident in the characteristic landscape.

Lands Contiguous to the Cebolla Wilderness

Under the No Action Alternative, 10,380 acres of lands contiguous to the Cebolla Wilderness (shown on Map 29) would continue to be managed in accordance with the decisions from the Rio Puerco RMP. The BLM would not recommend these lands for wilderness designation, nor would they be managed under the Interim Management Policy.

Issue 6--American Indian Uses & Traditional Cultural Practices

P.L. 100-225 explicitly recognizes the importance of continuing American Indian traditional cultural practices in the NCA. It is not appropriate for the BLM to develop alternative management actions specifically related to these practices. However, the agency has considered such uses as an important part of formulating proposed management actions for other issues under this plan's alternatives.

Issue 7--Cultural Resources

Under the Rio Puerco RMP, the NCA is designated a Special Management Area, with cultural resources recognized as an important contributing value. As directed in the RMP, specific activity plans were to have been prepared for key NCA resources, such as the Cebolla Canyon Community, the Armijo Canyon features, and the historical homesteads. The following section describes actions that would have been likely proposals under these activity plans but are now part of this El Malpais Plan.

(Note: Emphasis was also to have been placed upon management of Candelaria Ruin, a Chacoan outlier and designated Archeological Protection Site under the Chaco Protection Act. However, this ruin and much of its associated community are now included in the National Monument administered by the NPS so it is not discussed here.)

Use Allocation

The RMP allocates all PaleoIndian sites and most Archaic and Pueblo sites to be "Managed for Conservation," a goal that implies a commitment to maintain them in their present condition and protect them from potentially conflicting land or resource uses. Under this determination, the sites are assigned to the BLM's cultural resource use category, "Conservation for Future Use" (refer to the Glossary), which allows no physical alteration of the properties. However, the BLM would make exceptions to this determination when current scientific use was needed to evaluate the properties. For Archaic and Pueblo sites, when most would remain under the management for conservation goal, a few could be physically altered for scientific use. A few historical sites are to be managed for conservation and scientific use. Very few sites of unknown cultural affiliation would be managed for conservation. Finally, any site identified as having sociocultural value would be managed for that value.

Compliance with the National Historic Preservation Act

Under Alternative A, the BLM would complete Class III inventories in areas of direct impact before any surface-disturbing project was authorized, as stated in "Management Common to All Alternatives." The need to conduct inventories to address secondary impacts for development projects would be determined on a case-by- case basis, and decisions concerning mitigating measures would be made using routine procedures and considerations.

Inventory & Baseline Condition

Baseline information is needed for more effective ARPA enforcement and to identify sites vulnerable to natural deterioration. Additional inventories to document this condition would be proposed for the cultural resources in Cebolla Canyon, Armijo Canyon and other critical areas. The overall objective would be a 2½-percent inventory of the Planning Area over the life of this plan, which would result in approximately 6,553 acres of new Class III inventory.

Scientific Investigations

No special restrictions would be placed on archeological research outside wilderness. Applications for ARPA permits would be evaluated on a case-by-case basis, with the usual requirements for public participation, including American Indian consultation. It is difficult to predict the number of projects that would be proposed during the life of the plan, or the number of sites that might be affected. Past levels of activity on Albuquerque Field Office lands suggest that over the next 20 years, three to five projects would be permitted, with intensive investigations at a comparable number of sites, or less intensive investigations over a greater number of sites.

Scientific investigations in wilderness would have to conform to the "minimum tool" standard, that is, motorized vehicles and equipment would be prohibited unless no other reasonable alternative existed. If such use was approved it would be the minimum necessary. Extractive activities such as artifact collection would be allowed, but no significant impacts to visual, vegetative or other resources would be permitted.

Pottery Collection

Collection of potsherds is prohibited by ARPA. Under the No Action Alternative, the BLM would make no special provisions to accommodate sherd collection for pottery temper by American Indians.

Signs

Small, inconspicuous antiquities signs would be placed carefully to avoid drawing unnecessary attention to sites, while still discouraging casual vandalism and to aid in prosecuting violators. (These signs are usually 9 inches by 12 inches in size and are placed at ground level.) Under Alternative A, signs would be placed at approximately 100 sites during the life of the plan.

Access Easements
& Consolidation of Ownership

Where major archeological or historical values are located partially on public land, the BLM would seek legal access easements across key parcels of private land, and would attempt to consolidate ownership from willing sellers. Examples of such areas include Cebolla Canyon and Cerritos de Jaspe.

Cadastral Survey

An important homestead-era structure, the Cebolla Canyon Schoolhouse, is located in Cebolla Canyon near the boundary between public and private land. This structure should be included in the stabilization program outlined below, but cadastral survey would be needed first to determine if it is on public or private land.

Road Closure

The BLM would close the 2-mile, two-track road leading into the Cebolla Canyon Community. Other access routes not identified for closure elsewhere in this plan could be closed if this was essential for resource protection.

Formal Monitoring

Formal photomonitoring 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 1 to 5 years so changes in site condition can be documented systematically. Under Alternative A, photomoni-toring would continue at these sites with other sites potentially incorporated into the program as well.

Stabilization

The existing stabilization and erosion control projects at the Dittert Site, Oak Tree Ruin, Arroyo Ruin, Armijo Canyon Homestead, and Armijo Canyon Springhouse would be maintained. Stabilization and repair needs for ten homesteads in the Planning Area have been assessed (Gallagher and Goodall 1991), with recommended measures ranging from minor repairs to major stabilization, as well as an ongoing maintenance program. Under Alternative A, these recommended measures (or comparable ones designed to meet changed circumstances) would be implemented. New erosion control structures (e.g., checkdams, gabions) would be proposed for a dozen or so key properties to arrest natural deterioration.

Stabilization and erosion control measures would be allowed in wilderness, but only if resources unlikely to be duplicated elsewhere were threatened, and no other reasonable alternative existed. Such activities would be subject to the "minimum tool" requirement, and would not

be allowed to degrade the area's overall wilderness character.

Fire Suppression

Eight to twelve of the best-preserved homesteads would be singled out as high-priority fire suppression zones.

Special Designations

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

Boundary Modifications

No additions to the NCA or boundary modifications would be recommended under this alternative.

Public Interpretation

The No Action Alternative provides for only limited public interpretation. A brochure would be developed for the Dittert Site, with a visitor registration box installed nearby. Similar measures could be taken for up to six historical homesteads, and the Ranger Station Nature Trail would feature the Ranger Station Reservoir. BLM staff would continue to organize interpretive hikes and visits to cultural resources properties such as the Dittert Site, Aldridge Petroglyphs, Ranger Station Nature Trail, and up to six homesteads on an occasional basis.

Issue 8--Wildlife Habitat

Under Alternative A, the primary emphasis would be to maintain wildlife habitats in the proper quality and quantity necessary to support the existing populations within the area. Wildlife habitat projects (e.g., water developments, vegetative manipulation, fences) would be undertaken throughout the Planning Area. These projects (up to three annually) would generally be identified for areas where population-limiting factors occurred (e.g., deteriorating habitat), and are described below.

Prescribed fires and wildland fires under prescription would be used throughout the Planning Area to maintain wildlife habitats in the desired vegetative condition to support appropriate populations. These burns would range in size from 50 to 1,000 acres, but would average about 500 acres each. Sikes Act funding for projects would be used wherever appropriate.

Where appropriate, the BLM would work with the NMDG&F and the FWS to conduct feasibility evaluations for reintroducing native wildlife and/or plant species within the Planning Area. The NMDG&F has identified the adjacent National Monument as a high-potential area for reintroducing desert bighorn sheep, a state endangered species (NMDG&F 1995). The Ramah Navajos sighted the area's last bighorn sheep in the 1950s, and skeletal remains have been carbon dated to between 1950 and 1955. Four high-priority areas for transplants of these sheep exist in New Mexico; the National Monument ranks third, after the Fra Cristobal and Magdalena mountain ranges. It is estimated that the area could support as many as 100 animals. Because much of the National Monument is surrounded by the Planning Area, it is reasonable to assume that some reintroduced animals would use public lands within the Planning Area.

Water Developments

Water catchments (guzzlers) come in many varieties, but most measure in the size range of 400 square feet (20 feet by 20 feet). In addition, an area 100 feet by 100 feet square is generally fenced to protect the water development from use by domestic livestock.

Vegetative Manipulation

Vegetative manipulation can be accomplished using five main methods: livestock grazing management practices, prescribed fires and wildland fires under prescription, mechanical, chemical or biological treatments. Vegetative manipulation for wildlife enhancement would generally be accomplished through livestock grazing management practices and prescribed fires. However, one or more other methods could be used in specific areas where they would accomplish the desired vegetative response in a more acceptable manner.

Livestock Grazing Management. These practices would be used to ensure that livestock grazing is contributing to the accomplishment of the vegetative objectives. AMP/CRMPs would incorporate grazing rest periods for pastures, season-of-use changes, and range improvements (e.g., waters, fences).

Prescribed Fires & Wildland Fires Under Prescription. A portion of the existing vegetation (livestock/wildlife forage) within the treatment area would be consumed by fire. Individual burn plans would emphasize prescriptions to create a mosaic of different plant development stages throughout the vegetative community. To support the existing populations, the overall loss of forage would be minimized within any one allotment or wildlife habitat area.

Mechanical Treatments. No large-scale vegetative manipulation (e.g., chaining or clear cutting) would be undertaken within the Planning Area. Mechanical manipulation of vegetation would generally be limited to the use of chainsaws and other small equipment to remove saltcedar, rabbitbrush, sagebrush and piñon-juniper where vegetative or wildlife objectives have been identified. The areas of manipulation would ***generally occur in*** 50- to 100-acre plots, where ***selection will be the primary harvest method***.

The project plans would emphasize prescriptions to create a mosaic of different development stages throughout the vegetative community, except where saltcedar control was needed. In these areas, all trees would be removed to the greatest extent possible.

ALTERNATIVE A

Chemical Treatments. Approved Environmental Protection Agency (EPA) chemicals for the control of saltcedar, rabbitbrush, sagebrush and/or piñon-juniper would be applied only by hand. No aerial application of chemicals would be undertaken within the Planning Area. A portion of the existing vegetation (trees, brush) within a treatment area would be removed, except in areas where saltcedar is to be eliminated as discussed above.

Biological Treatments. Many agencies and private companies are working on biological agents to help control exotic plants (e.g., insects that attack saltcedar). When these biological controls became available, they would be evaluated with other current methods to determine which vegetative manipulations were most appropriate for a specific project.

Issue 9--Vegetation

Accomplishment of the vegetative objectives would require a comprehensive management program to include use of watershed, livestock grazing, fire, riparian, and forest and woodland practices. Under Alternative A, only livestock grazing and riparian management practices would be implemented.

Removal of trees to improve habitat, watershed and/or ecological condition is consistent with P.L. 100-225. However, no removal (thinning) of trees for resource improvement has been permitted since the NCA was established. Therefore, thinning of trees would not be considered under Alternative A.

To provide for improved livestock grazing use, AMPs/CRMPs have been developed for the Los Pilares, Techado Mesa and Los Cerros Allotments, and are scheduled for completion in 1998-99 for the Cerro Brillante and El Malpais Allotments. These plans would be periodically reviewed and revised as needed. Based on the results of monitoring, new plans would be developed and/or livestock grazing use reduced. The minimum livestock grazing rest period provided in the management plans would be May 15 to June 30 and July 1 to September 15 each year. At least one pasture per allotment would be rested during each period.

New range improvements (waters and fences) to facilitate rest from livestock grazing would be considered for grazing allotments (with or without an AMP/CRMP). A site-specific EA would be completed for any approved range improvements.

On the east side of the NCA, the BLM has fenced the riparian area surrounding Cebolla Spring to exclude livestock grazing. Spring areas used by livestock would continue to be fenced, and would be developed to provide

water for livestock and wildlife away from riparian areas. Springs not used for livestock water would remain unfenced. Riparian vegetation would not be planted under Alternative A, nor would treatments to remove exotic species such as saltcedar and Russian olive from riparian areas be permitted.

A Fire Management Plan is scheduled to be completed after this El Malpais Plan is finalized. Until this fire plan is completed, all wildfires in the Planning Area will be suppressed. The fire plan will allow for prescribed fires and wildland fires under prescription for fuels management, protection of private property, and (secondarily) vegetation management. Up to three fires ranging in size from 50 to 1,000 acres each would be expected each year.

Watershed management practices (e.g., structures and vegetative treatments) would provide for accomplishment of vegetative objectives. Since passage of P.L. 100-225, grazing permittees have built two small diversion dikes. In addition, small erosion control structures were constructed to protect an archeological site. Construction of other small structures to spread or divert water would be considered under this alternative. The treatment of noxious weeds would be allowed under this alternative. Control of noxious weeds (e.g., knapweeds, bindweed, leafy spurge, thistles) would be by mechanical, chemical or biological means. Site-specific EAs would be completed before any structural or noxious weed treatment.

Issue 10--Boundary & Land Ownership Adjustments

Under Alternative A, the BLM would not recommend to the Congress any changes in the NCA or Cebolla Wilderness boundaries. The total size of the NCA would remain at 262,100 acres (refer to Table 1-1 in Chapter 1 and Map 30). The Acoma Pueblo's request to exclude 960 acres of tribal lands from the NCA and Cebolla Wilderness would not be recommended to the Congress. The 24,200 acres outside the NCA boundary but within the Planning Area (Brazo and Breaks Non-NCA Units) would be managed under the Rio Puerco RMP. The 15,100 acres now managed by the Socorro Field Office (Tank Canyon-SFO and Techado Mesa-SFO Units) and 4,000 managed by the Albuquerque Field Office (Cerro Brillante-AFO and Continental Divide-AFO Units) would not be recommended as additions to the NCA, and would continue to be managed under the Socorro RMP and Rio Puerco RMP, respectively.

The acquisition priorities identified in the NCA Land Protection Plan (USDI, BLM 1989) would remain the same. These are based on the legislative intent and direction established by P.L. 100-225, which directs the BLM to acquire land and mineral rights to protect important natural, cultural, and scenic values within the NCA. However, the law does not direct the agency to consolidate all land within the NCA into federal ownership. (A summary of the Land Protection Plan priorities, rationale and status is included in Appendix H.)

The 22,000 surface acres of public lands in the Planning Area outside the NCA (Breaks and Brazo Non-NCA Units) would remain open to the public land laws, mineral exploration and development.

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 are proposed, and extractive activities such as archeological excavations and collection of potsherds by American Indians 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 made if management changes were needed as indicated by monitoring and NEPA compliance needs were met.***

Issue 1--Recreation

Under Alternative B, the BLM would provide recreation users of the Planning Area with semi-primitive nonmotorized, semi-primitive motorized, and roaded natural settings (as identified by the ROS classification system and displayed on Map 7). The acreage within these opportunity settings would be similar to that identified for the No Action Alternative (refer to Table 2-6). Increased development would be undertaken to facilitate activities taking place in the Planning Area, e.g., camping, picnicking, horseback riding, hiking and sightseeing. Opportunities to participate in such activities as hunting, mountain biking, back-country driving, exploring and learning about historical and archaeological sites would also exist. Recreational activities of interest to smaller populations, such as caving, climbing, skiing,

shooting, trapping, photography, pack trips, enjoying wilderness solitude, and road biking would continue to be offered.

Interpretive messages would be included on informational kiosks and wayside exhibits at recreational access points, picnic areas and trailheads. Locations with messages would include the NCA entry sites, the Narrows Rim Trail and Picnic Area, West Malpais Wilderness, CDNST, Dittert and other archeological and historical sites, the Ranger Station and others. More guided interpretive hikes would be offered than under Alternative A.

One developed campground would be built on the east side, and dispersed camping would be allowed throughout the remainder of the Planning Area. Camping at other BLM developed facilities would be prohibited. The NPS plans to develop a few camping units in the National Monument; these would serve campers on the west side of the Planning Area with a preference for developed or semi-developed sites.

Picnicking would be allowed to occur almost anywhere in the Planning Area. Such opportunities would be enhanced through upgraded facilities at the southern end of The Narrows, and developed facilities at La Ventana Natural Arch and the Cerro Americano CDNST trailhead.

The BLM would increase opportunities for trail hiking and associated activities by establishing up to 20 additional trails (5 now exist). This would result in an estimated 77 miles of trail, including the 25- mile-long CDNST (refer to Map 11). These additional short trails would provide more convenient access to selected natural, cultural, and historical features or links with other established trails in the Planning Area. In addition to the established trail system, approximately 19 miles of closed vehicle routes would be available for use as informal hiking trails. ***Until easements through non-Federal lands on the selected route for the CDNST within the Planning Area can be obtained, hikers and equestrian users would be directed to use other trails, vehicle routes, closed vehicle routes or to travel cross-country as ways of going around non-Federal lands to link with other segments of the CDNST.***

The new trails would lead to the Dittert Site, Aldridge Petroglyphs, Lobo Canyon Petroglyphs, Armijo Canyon Homestead and Springhouse, Stone House, three other selected homesteads, the West Malpais Schoolhouse, the Pinole Site, the Citadel, and the Cebolla Canyon Community. Others would connect as side ***or loop*** trails with established trails or intersect with the ***trails*** from established trailhead***s***. Other newly established trails would provide hiking opportunities to lava tubes in the Chain of Craters and the natural features of Cerro Americano, Cerro Brillante, and La Rendija. A short loop trail extending from the campground in the Spur Unit would also be established.

The BLM would provide additional horseback-riding facilities and upgrade existing ones. For use on the east side of the Planning Area and the Cebolla Wilderness, facilities and horse gates would be provided at The Narrows and Armijo Canyon trailhead. On the west side, facilities would be provided at the Cerro Brillante trailhead and near the end of the cherry-stemmed road leading to Hole-in-the-Wall.

Designated vehicle travel routes in the Chain of Craters, Cerritos de Jaspe and Brazo Units would be promoted as routes for mountain bike

use. These routes are not as heavily traveled by motor vehicles as some others in the Planning Area. (Note: The Chain of Craters WSA would be promoted for use only if released from wilderness review by the Congress. Mountain bike use would not be promoted while the area was in study status.) Approximately 166 miles of designated vehicle routes would be available for mountain bike use in these units, with a variety of experiences and levels of difficulty. These would provide a system of loop trails.

Approximately 338 miles of BLM-designated vehicle routes would be available for sightseeing, driving for pleasure, or back-country driving. Under Alternative B, four Back Country Byways would be designated to encourage driving where high scenic, historical or other public-interest values existed. To enrich visitors' recreational experience, the BLM would identify 15 areas or stretches along roads such as seasonal playas or cliff faces for wildlife viewing.

Visual Resource Management

The VRM Class objectives would continue to be the basic tools for managing visual resources on public lands. Map 15 displays the VRM classes the BLM would assign to the public lands within the Planning Area under Alternative B (refer to Table 2-8). The RMP would be amended by adjusting some previously assigned classes, and by assigning classes to those acquired lands outside the NCA not covered in previous land-use planning.

To emphasize the maintenance of natural values, the BLM would continue its policy of assigning VRM Class I to all designated wilderness lands, included the expanded portions of the Cebolla Wilderness. The assignment of VRM Classes II and III to lands outside wilderness would allow for limited to moderate levels of change to the basic elements of form, line, color, and texture found in the predominant natural features, while still affording protection of the scenic values in the Planning Area.

The BLM would provide for more resource use opportunities and facility development by reassigning 24,330 acres from the more restrictive Class I to the less restrictive Class II, (including acreage within the Neck, Cerritos de Jaspe, Cerro Brillante and Continental Divide Units). Under Alternative B, the BLM would assign VRM Class III to 14,110 acres of public land to accommodate resource use and moderate levels of visual change. The existing lands under Class III objectives in the southwest corner of the Cerro Brillante Unit and northern portion of the Neck Unit would remain under this classification. The 60 acres of public land immediately surrounding the Ranger Station on NM 117 would also be included as VRM Class III lands. (The Ranger Station is located on a parcel of state land acquired since the passage of P.L. 100-225; this parcel therefore was not assigned a VRM Class in the RMP.) To maintain the scenic values in the remainder of the Planning Area as required in P.L. 100-225, the BLM would manage it under assigned VRM Class II objectives.

Issue 2--Facility Development

As stated above, under Alternative B the emphasis for recreation would be on facilities to support developed opportunities such as picnicking, camping, hiking, horseback riding, mountain-bike use, caving, wildlife watching, and opportunities to explore and learn about historical and archeological sites. Most of the new development would be for trails, trailheads, parking and a campground. (Proposed developments are shown on Map 11.) The BLM would also upgrade some existing facilities. Interpretation would occur through one-on-one contact with visitors (in public programs, guided hikes, or visitor center contacts); printed brochures, exhibits, interpretive media and publications at the Ranger Station; wayside exhibit panels; and self-guided trails with interpretive signs and/or kiosks.

The agency would develop a campground in the Spur Unit. (The exact location would be determined after cultural resources surveys, T&E surveys, and site investigations were completed.) The facility would be designed to accommodate up to 40 units for single-family use and one unit for multi-family or group use over an area up to 10 acres in size. In addition to a table, cooking facilities and a leveled space for a tent, each single-family unit would have a leveled parking spur large enough to accommodate either a small, self-contained recreational vehicle or a vehicle with a trailer or tent camper. Parking for the group-use unit would be of sufficient size to accommodate visitors.

Two universally accessible vault toilets would be constructed within the campground, and if possible, drinking water would be provided. A 50-person amphitheater for interpretive and environmental education programs would be built within a 5-minute walk of the campground. The agency would conduct evening programs regularly during the summer.

The BLM would upgrade an existing dirt road provid-

ing access from NM 117 to an all-season, gravel condition. Within the campground, roads and parking would be surfaced for all-weather use. In conjunction with the campground, the agency would construct a ½-mile hiking trail that would loop through adjacent lands as it passed the amphitheater.

Under Alternative B, the BLM would develop additional trails and trailheads for resource protection, and to distribute visitors to the back country and selected features. The Cerro Brillante trailhead for the CDNST would be used for hiking access to the West Malpais Wilderness. From the Cerro Brillante trailhead, a trail would be marked to the old schoolhouse in the West Malpais Wilderness. The BLM would also develop trails from other trailheads and vehicle pullouts to the Lobo Canyon Petroglyphs, La Rendija, Cerro Rendija, and Cerro Americano. If "social trails" (paths developed as the result of continual undirected visitor use) exceeded the established LAC standards for trails in an area, the agency would consider developing them.

With most of its length in the Cebolla Wilderness, the Narrows Rim Trail would be improved using the minimum tool technique to facilitate resource and wilderness protection, and to help direct visitor use to a single pathway. The BLM would provide parking for up to 20 vehicles at the trailhead to accommodate hiking and horse access to the Cebolla Wilderness and the trail. The parking lot would be paved and located south of the picnic area. The trailhead facilities (including a kiosk) located outside the wilderness boundary would be built of rustic materials, and the trail would be marked as allowed in wilderness. Horseback riders at this trailhead would continue to be served by a horse-accessible gate. (Refer to Figure 2-d for a possible design of these facilities.)

For access to the West Malpais Wilderness and use of the informal Hole-in-the-Wall Trail, the BLM would establish a rustic-style trailhead with a kiosk, gravel parking lot, and horse facilities at the end of the cherry- stemmed road. The parking area would be built to accommodate up to 20 vehicles. (Refer to Figure 2-e for a possible design for these facilities.)

Alternative B would include the construction of trailheads with rustic facilities along the CDNST at Cerro Americano and Cerro Brillante. Each would contain a kiosk and graveled parking area for up to 30 vehicles. The trailhead at Cerro Brillante would provide for horse use. (Refer to Figure 2-e for a possible design of these facilities.)

Mountain-biking facilities would be provided at the Cerro Americano CDNST trailhead. Trailhead facilities to accommodate mountain-bike users in the Cerritos de Jaspe and Brazo Units would be built only if mountain bike routes were established there.

The BLM would develop picnic areas at La Ventana Natural Arch and the Cerro Americano CDNST trailhead. The developments would be designated for day-use only. Up to ten walk-in units for single-family picnicking would be scattered from the edge of the parking area at each of these sites. A vault toilet and water source, if possible, would be developed at Cerro Americano.

The agency would develop The Narrows for day use, with up to 20 sites, paved access and vault toilets. If possible, the BLM would develop a drinking water source. (Refer to Figure 2-d for a possible design.)

The BLM would designate four back country byways, the NM 117-CR 42-NM 53 loop drive, and routes in the Brazo, Cerritos de Jaspe, and the Chain of Craters Units. The agency would work in partnership with other agencies to promote these byways. For each byway, between one and four

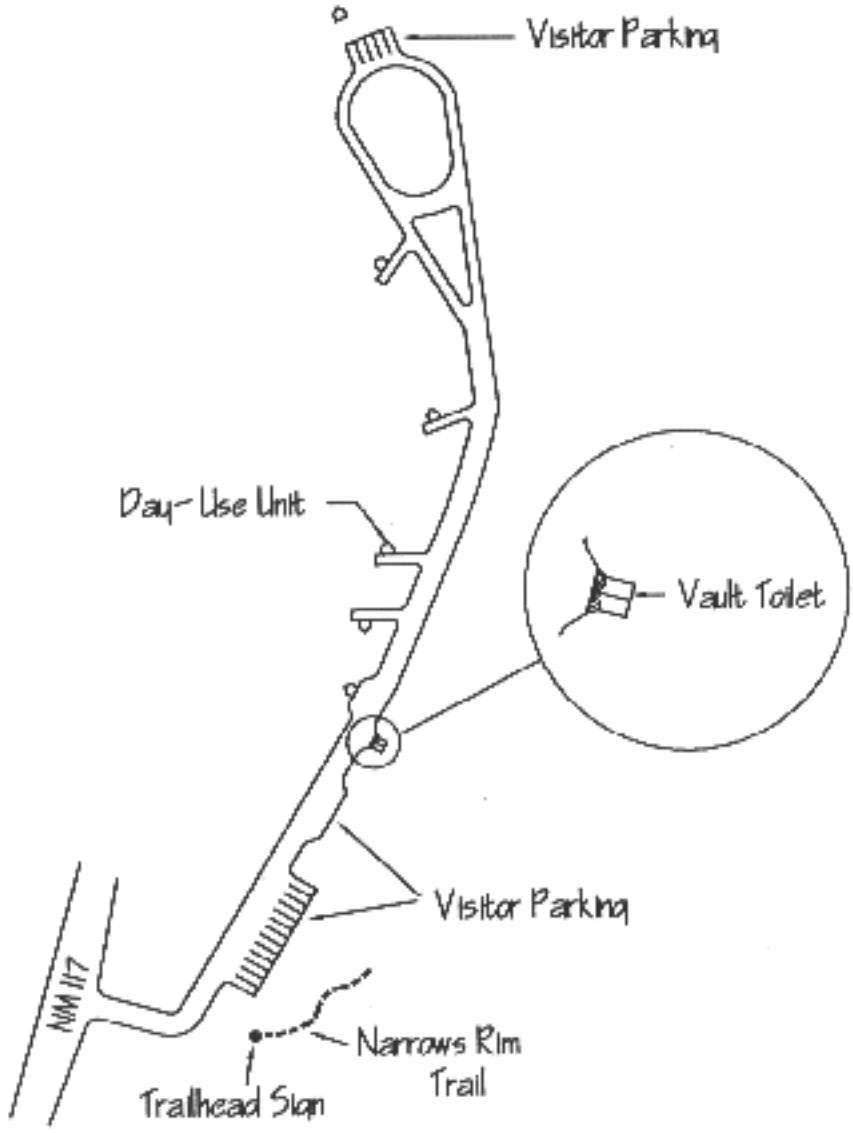


Figure 2-d
The Narrows Day-Use Recreational Site

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.

signs and between one and four kiosks would be installed and maintained (refer to Figures 2-c and 2-f, and to Map 11 for locations). The typical sign dimensions would be 3 feet high by 5 feet wide, with the full height (including support posts) at 6 feet.

In addition to the existing trail at the Ranger Station that passes by the reservoir, the BLM would develop a self-guided interpretive trail to another prehistoric cultural site and a homestead. A trailhead with a kiosk and surfaced parking for up to 10 vehicles would be constructed at the beginning of the trail. (Refer to Figures 2-g and 2-h for possible designs of such a facility.) Roads accessing these trailheads would be upgraded if needed to an all-weather, graveled condition. Primitive trailheads would be developed at the following cultural/historical properties as time, staff and budget allowed: the Pinole Site, The Citadel, Cebolla Canyon Community, Lobo Canyon Petroglyphs, Aldridge Petroglyphs, Stone House and other deserving properties.

The BLM would develop the Dittert Site to provide for recreation and interpretation. The agency would upgrade the access road, and install a surfaced parking lot (built initially for up to 25 vehicles, but expandable). At the trailhead for the Dittert Site, Cebolla Wilderness, Armijo Canyon Homestead and Springhouse, the agency would develop horseback riding facilities, a self-guided trail to and around the site, a kiosk and toilets. The trailhead would be fenced to confine use and protect resources. (Refer to Figure 2-i for a possible design and layout of these facilities.)

The agency would use three to five interpretive kiosks at Planning Area entry points to promote stretches of highways and roads for watchable wildlife. Watchable wildlife signs would be installed along CR 42, NM 53, and NM 117. The Cerro Americano trailhead kiosk would be used as another location for highlighting wildlife viewing opportunities (refer to Map 11).

The BLM would build between three and five larger identification signs at entry points along major highways and roads in the Planning Area, as shown on Map 11. Additional identification signs would be posted as indicated by public comment or to eliminate confusion. These signs would typically measure 4 feet high by 8 feet wide, and stand 8 feet tall (including support posts). The agency would develop and install one large identification sign on each side of I-40 in Sec. 16, T. 10 N., R. 9 W. for viewing from the interstate. Typical measurements for these signs would be 8 feet by 16 feet, with a total height of 10 feet, and a rock base approximately 3 to 4 feet wide by 16 to 20 feet long.

The agency would construct pullouts and develop interpretive kiosks at three to five NCA entry locations, as shown on Map 11. These locations would include the northern end of NM 117, the junction of NM 117 and CR 42, the western entrance along NM 53, the southern entrance along CR 41, and the first public land encountered along NM 53 (Sec. 16, T. 9 N., R. 10 W.). (Refer to Figure 2-f for possible design and layout of these kiosks.)

New facilities would be designed and built to have a consistent appearance throughout the Planning Area, and would blend with the area's surrounding landscape and local architectural styles.

Issue 3--Access & Transportation

Under the Resource Use Alternative, the opportunities for motorized access would be maximized to the extent allowable using existing routes. Opportunities for nonmotorized access would continue to be made available.

Motorized vehicle use on 143,550 acres (58 percent of the Planning Area) would be "limited" (refer to Table 2-10). (This would include lands not previously addressed in the RMP, and those designated as open through the RMP.) This restriction, which formerly limited motorized travel to *existing* roads and trails, would be changed to limit such travel to *designated* roads and trails. The remaining public lands within the Planning Area would be managed as "closed" because of wilderness.

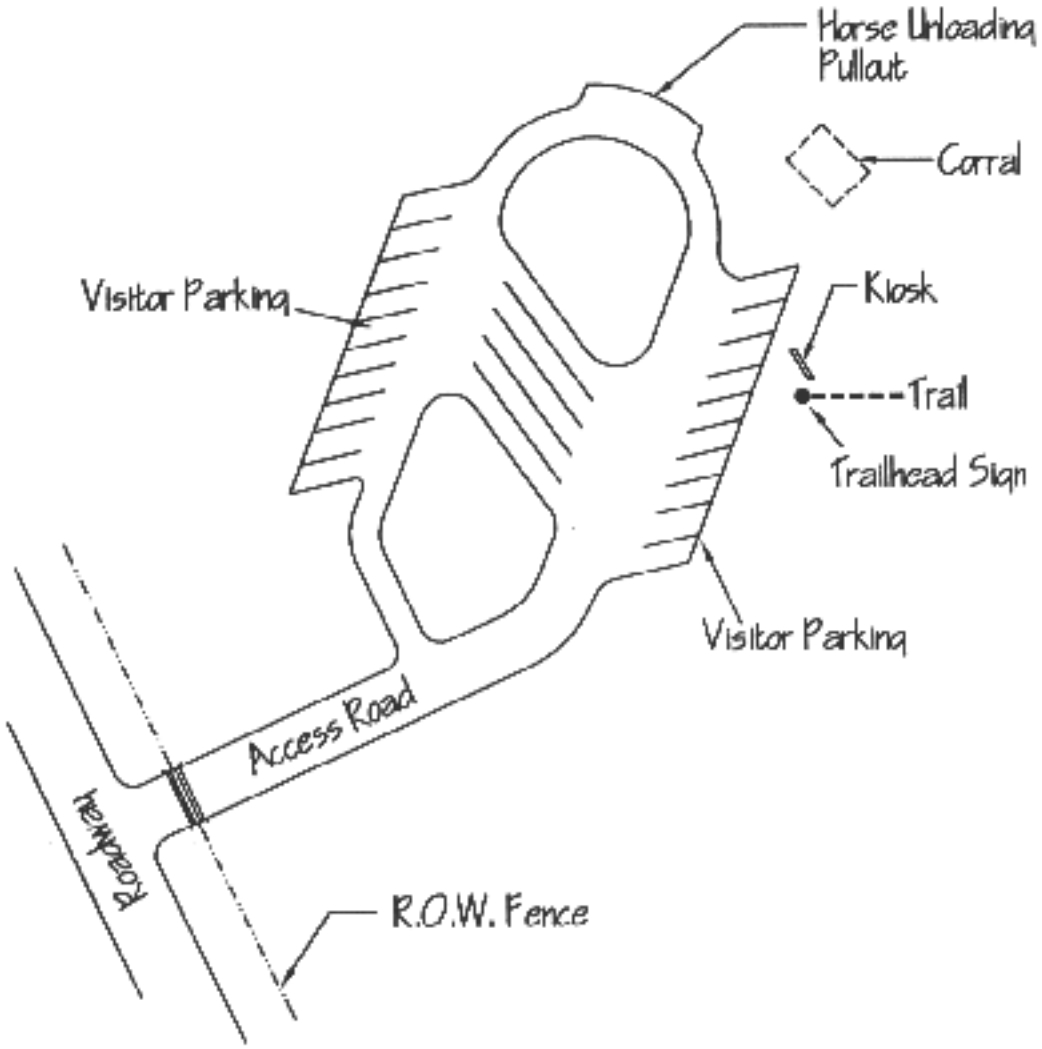


Figure 2-e
Typical Trailhead Facility
to Accommodate Horseback Riders

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.

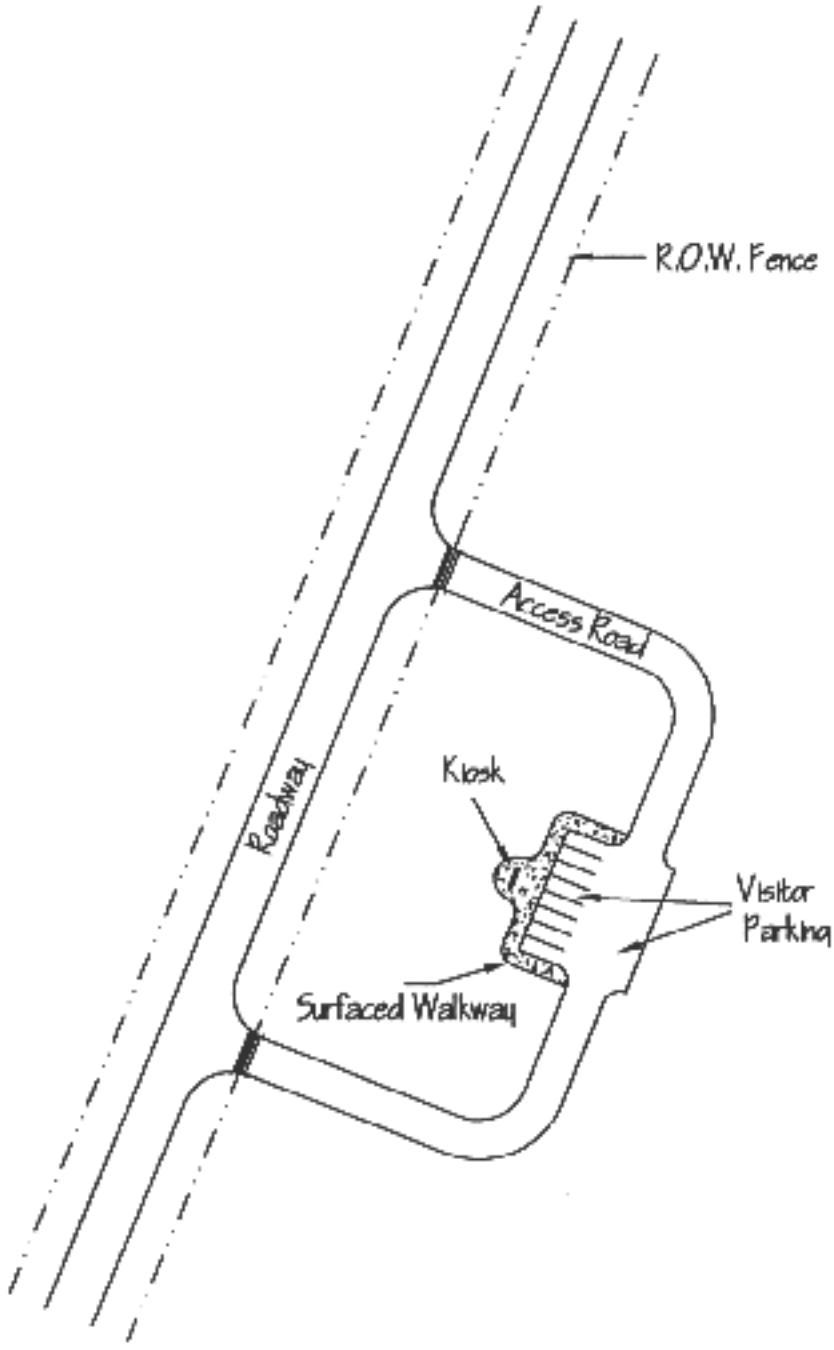


Figure 2-f
Typical Kiosk

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.

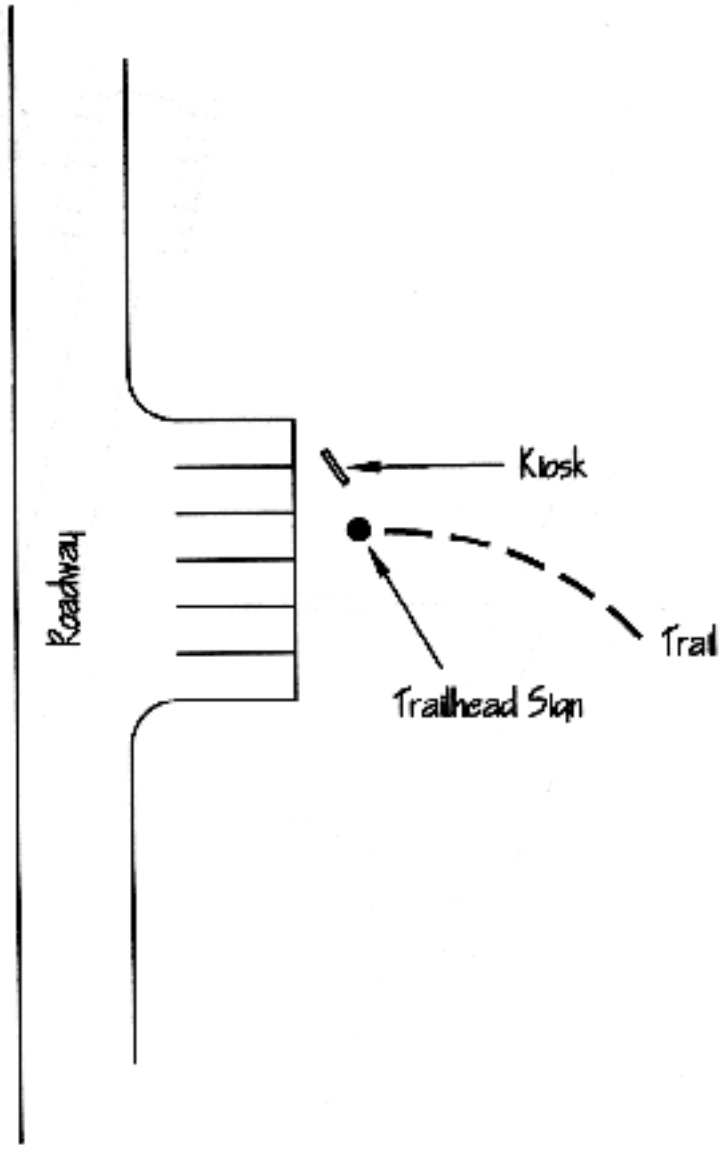


Figure 2-9
Typical Pullout Trailhead Facility

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.

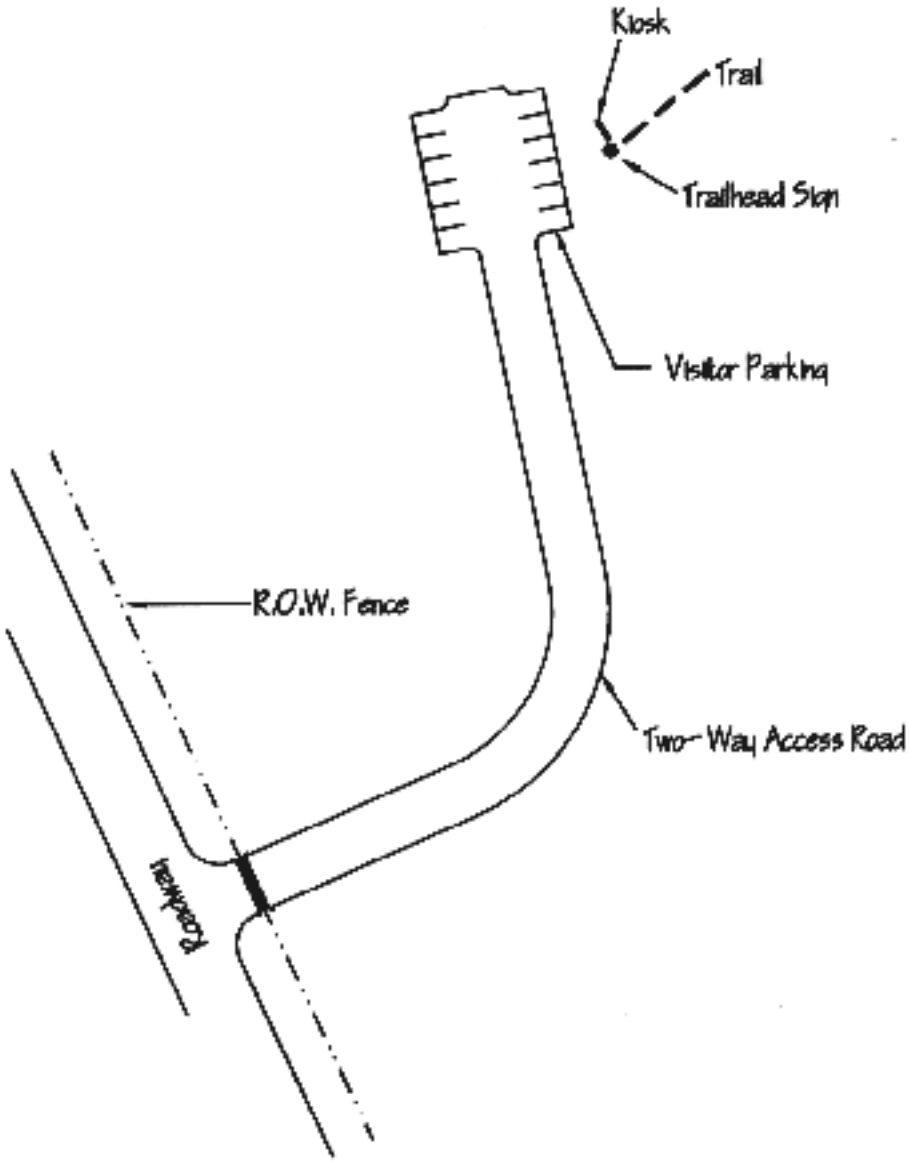


Figure 2-h
Typical Off-Roadway Trailhead Facility

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.

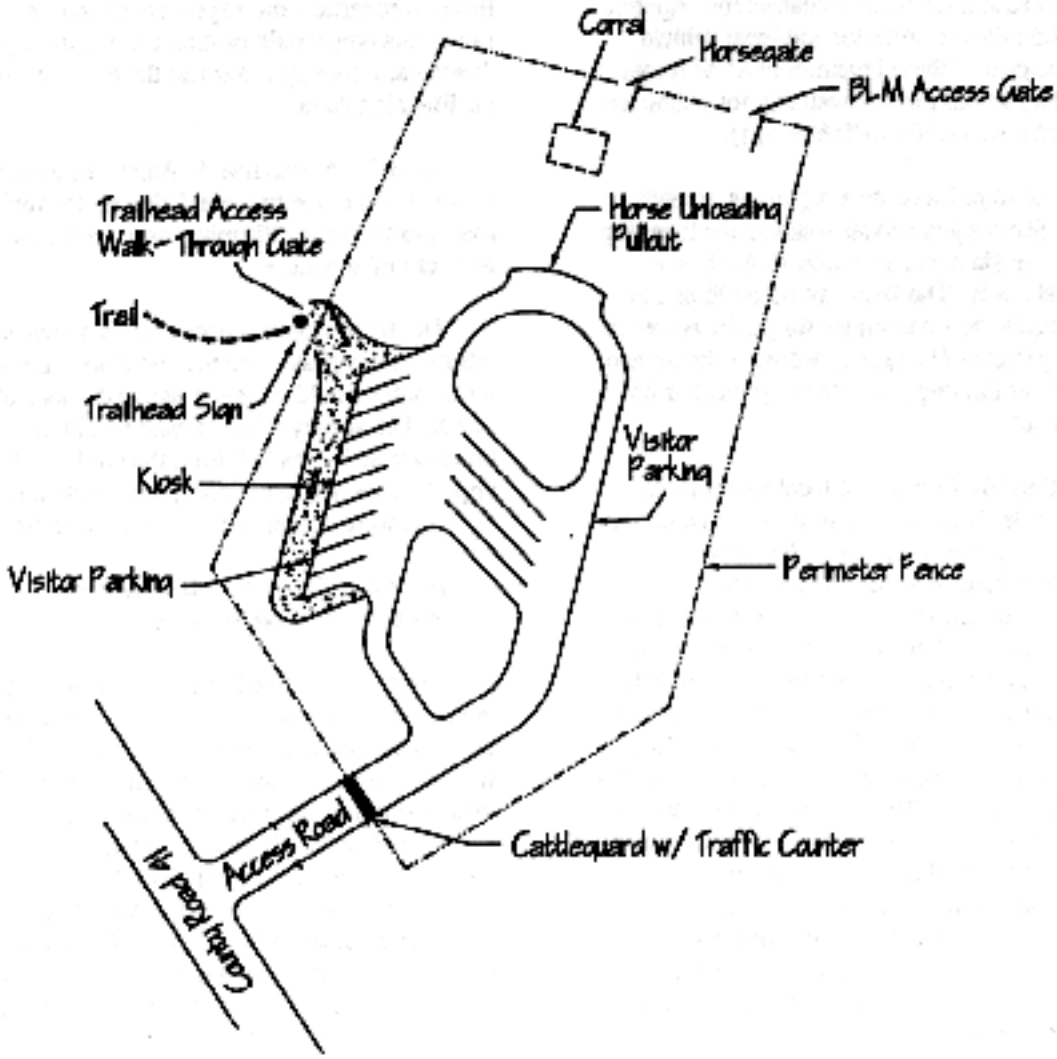


Figure 2-1
Dittert Site Trailhead Facility
to Accommodate Horseback Riders

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.

The number of inventoried routes left open for motorized vehicle use outside wilderness would be maximized. These roads, as shown on Map 19, would be those best suited and located for public use of the resources and for BLM management. Approximately 337.5 miles of collector and local vehicle routes (93 percent of these inventoried BLM routes now available) would remain available for public use as designated routes (refer to Table 2-11).

A total of 76 miles of state highways, county, U.S. Forest Service and private roads in the Planning Area would remain open, as would 18.4 miles of BLM arterial roads. The BLM would build no new roads nor acquire new easements for public access to public land parcels. The agency would maintain and reroute roads as funding permitted to protect or improve resources.

Approximately 17 miles of local routes in the NCA and 2 miles in non-NCA units would be closed to vehicle use. These would be reclaimed through natural and mechanical means to bring them back into resource production. Of the roads closed in the NCA, 2.3 miles would be within the Chain of Craters, 2.8 miles in the Spur, 7 miles in the Continental Divide, 2.4 miles in the Cerritos de Jaspe, 1.8 miles in the Breaks, and .3 mile in the Brazo Unit. Outside the NCA, inventoried vehicle routes in the Brazo (1.9 miles) and Breaks (.5 miles) Non-NCA Units would be closed. Vehicle use, except as authorized, would be prohibited on closed routes. Routes to be closed would be those abandoned or not showing signs of regular or continuous use during the most recent inventory (1996), and those duplicating other routes that serve the area, causing resource damage, or serving no apparent need.

Vehicle use would continue to be authorized on 6.3 miles of routes outside wilderness and 23.3 miles of routes within wilderness. All other use of motor vehicle and mechanical transport by the general public would be prohibited on the 104,450 acres of designated wilderness. (Note: For analytical purposes, it has been assumed that under Alternative B, the Congress would not designate the Chain of Craters WSA as wilderness and would release it from further study. Therefore, motor vehicle use of the area would still occur on designated routes.)

Access to public land within the Planning Area by cross-country, nonmotorized means, (e.g., horseback, backpacking, hiking) would be allowed to continue, except for mountain bike use in wilderness. Because of terrain and vegetative conditions, most use of this type would be directed to existing or abandoned back-country roads and the few trails within the Planning Area.

As under Alternative A, American Indians would continue to be able to use existing motor vehicle routes to access the Planning Area for traditional uses and cultural practices.

The BLM would concentrate its maintenance efforts on designated arterial and collector routes, so local routes would remain rough and impassable at times. The agency would develop additional maps, brochures and signs to inform the public of the access opportunities and restrictions, and would maintain the signs marking designated routes and directing users.

Issue 4--Wilderness Management (Cebolla & West Malpais)

Under Alternative B, the BLM would emphasize improved opportunities for users to access wilderness without diminishing the areas' character. The agency would recommend two adjustments to the Cebolla Wilderness boundary, the first to include an additional 3,650 acres of contiguous public land (shown on Map 26). At the request of Acoma Pueblo, the BLM would also recommend to the Congress that the boundary be amended to exclude 160 acres of formerly private land acquired by the pueblo. Located in Sec. 12, T. 7 N., R. 10 W., these are aboriginal lands claimed by Acoma that have recurring value to their people. These lands are adjacent to other Acoma lands excluded from the Cebolla Wilderness when the existing boundary was defined.

When the wildernesses were accessible to the public, BLM staff and volunteers would continue to patrol them once a month at minimum. More frequent patrols would occur during the spring through fall seasons, when use was greater.

The areas would continue to be used by the public for primitive types of recreation that did not require the use of

motor vehicles, motorized equipment or other forms of mechanical transport such as mountain bikes. Authorized users could continue to access non-federal inholdings and livestock grazing operations by motorized vehicle over 5.5 miles of routes in the Cebolla Wilderness and 17.8 miles in the West Malpais Wilderness. Livestock grazing access and use would continue under P.L. 100-225 and the conditions set in the BLM RIM plans (1990, revised 1996) and AMPs/ CRMPs for the individual allotments overlapping these two areas. The BLM has selected routes that would cause the least impact to the areas' wilderness character while serving the purposes for which the land was held or used.

The existing facilities on the wilderness perimeters along with trail improvements for recreation users and resource protection purposes, would remain in place for continued use and protection. La Ventana Natural Arch, The Narrows and Armijo Canyon would continue to serve as primary access points to the Cebolla Wilderness. The Dittert Site and The Narrows would be improved to accommodate visitors. Two roads would receive more frequent maintenance to control erosion and improve access. These are the Cebolla Canyon Road (No. 2003) that splits the Cebolla Wilderness, and the Sand Canyon Road, a dead-end cherry-stemmed road. The Narrows Rim Trail, which extends 3.5 miles into the wilderness, would be better marked to direct visitor use.

For the West Malpais Wilderness, the trailhead at the end of the cherry-stemmed road from CR 42 would continue to serve as the primary access point. Access to the trailhead and the trailhead itself would be improved to accommodate visitors and horseback use. The BLM would continue to identify a user access trail that follows an old vehicle route leading into the Hole-in-the-Wall, a major attraction of this wilderness.

At La Ventana Natural Arch, the BLM would continue to provide permanent restroom facilities and a paved parking lot. Other facilities at trailheads and other entry points would be upgraded to improve access opportunities, services and information. Additional onsite information would be provided to better inform and educate the public about the areas and their use, including during patrols. Signs would identify the boundaries, the wilderness name, and some regulations governing use of the areas. Information about the areas would continue to be available at the Ranger Station on NM 117 and BLM offices in Grants and Albuquerque, and would be given through personal contact when BLM staff and volunteers encountered visitors during area patrols.

Traditional American Indian cultural practices would 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 would be allowed, but such use inside the wilderness would be prohibited, unless the BLM has granted prior authorization after consultation and evaluation. When the BLM authorized such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character would be met. Upon request, the BLM would temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities.

In most instances, cultural and historical resources would be subject to the forces of nature in the same manner as other wilderness resources. Stabilization and scientific studies of selected cultural resources and historical sites within the two wildernesses would continue as required to meet protection and preservation mandates. Research would be authorized if it could be carried out unobtrusively using methods compatible with preserving the areas' wilderness character.

Except for guided trips, visitor information and education programs about sites within wilderness would be located outside the wilderness boundary or dispersed at other outside locations. Additional interpretive information about the Dittert Site, which is located within the boundaries of the Cebolla Wilderness, would be placed at the trailhead outside the boundary in Armijo Canyon. No additional onsite interpretation would be provided, although site maintenance and monitoring would continue.

Wildlife habitat management would continue to be guided by the BLM's Wilderness Management Policy. Hunting and trapping would be permitted, subject to applicable state and federal laws and regulations. Use and maintenance of the two wildlife exclosures and the one water catchment would be allowed to continue. The exclosures would be maintained using the “minimum tool” concept, with restricted vehicle access and use of motorized equipment.

Vegetative treatments would be considered on a case-by-case basis in accordance with the BLM's Wilderness Management Policy. Fires would be controlled to prevent their spread to areas outside wilderness, the loss of human

life or property. BLM fire suppression methods would be designed to cause the minimum adverse impact on wilderness character.

The BLM would continue to seek acquisition of wilderness inholdings from willing sellers, including approximately 300 acres of private surface in Cebolla (not to include 160 acres of Acoma aboriginal land) and 500 acres in West Malpais. Priority would be given to those lands that were undeveloped or where use would pose a threat to wilderness character. When acquired by the BLM, these lands and any subsurface (mineral) interests would be managed under wilderness restrictions.

Issue 5--Wilderness Suitability

Chain of Craters WSA

Under Alternative B, the BLM would not recommend the WSA as suitable for wilderness designation. For analytical purposes, it is assumed that the Congress would accept this recommendation and release the area from further wilderness study. The resources in the 18,300-acre Chain of Craters would then be managed and protected under this plan amendment, and restrictions on uses of the area would no longer apply. Users would have opportunities for roaded natural types of recreation on 7,800 acres, semi-primitive motorized types on 6,800 acres, and semi-primitive nonmotorized types on 3,700 acres.

Lands Contiguous to the Cebolla Wilderness

The BLM would recommend for inclusion approximately 3,650 acres of public land contiguous to the Cebolla Wilderness (refer to Map 26). Until the Congress designated or released these lands, the agency would manage them under the Interim Management Policy (except for minerals). Any land formerly designated as wilderness would be managed under BLM Manual 8560 (Management of Designated Wilderness Areas) and the regulations at 43 CFR 8560. A total of 6,730 acres recommended as non-suitable for designation would be managed by the BLM under the management prescriptions identified in this alternative and applicable to this area.

Issue 6--American Indian Uses & Traditional Cultural Practices

BLM management of this issue under Alternative B would be the same as discussed above for Alternative A. Although the BLM has formulated no specific actions related to these practices, the agency has considered them in developing actions under Alternative B for other issues (e.g., Issue 7 below).

Issue 7--Cultural Resources

Under Alternative B (Resource Use), the BLM would emphasize the information potential of archeological sites in the Planning Area, encouraging archeological research and seeking to preserve properties for this purpose. Significantly increased stabilization and inventory activities would be undertaken. The actions proposed under this alternative would be feasible at funding levels available in recent years, but would require that more of the available BLM funding and personnel be directed to the NCA, and less be directed toward management of cultural resources elsewhere on
Albuquerque Field Office lands.

Use Allocation

The following properties would be managed for public values and allocated to public use: Cebolla Canyon Community (including Oak Tree Ruin and The Citadel), Pinole Site, Dittert Site, Ranger Station Nature Trail, Lobo Canyon Petroglyphs, Aldridge Petroglyphs, Armijo Canyon Homestead, Armijo Canyon Springhouse, Cebolla Canyon Schoolhouse (if found to be on public land), Stone House, West Malpais Schoolhouse, Rowe Homestead, and Worley Homestead. These sites would be available for public interpretation.

Other prehistoric and historical sites would be managed for information potential and allocated to scientific use. These sites would be protected in their current condition, but would be available for scientific investigation. Any site could be shifted from scientific use to public use if needed for an interpretative program, and if adequate measures were taken to protect its information potential and scientific value.

Compliance with the National Historic Preservation Act

Because recreational activities would be emphasized under this alternative, secondary impacts would be of special concern. In addition to the routine Class III inventories (noted above in "Management Common to All Alternatives"), the BLM would require an inventory over an area of at least ¼ mile around each proposed visitor use development or cluster.

Inventory & Baseline Condition

To identify areas vulnerable to looting, vandalism, and natural deterioration, and to document their baseline condition, the BLM would adopt an aggressive inventory program in the Planning Area. Inventories would include sample surveys, intensive surveys of areas with known, high site densities, and those targeting rock art and homesteads. The agency would attempt to achieve Class III inventory of 5 percent of the NCA (13,105 acres of new inventory) during the 15- to 20-year life of this plan.

Scientific Investigation

Under Alternative B, the BLM would encourage scientific uses, including investigations that would result in alteration of the physical site characteristics. However, any such proposal would still be subject to consultations with local American Indians and compliance with NHPA. The BLM would also continue to ensure that all such projects met current professional standards, and that adequate provisions were made for analysis, write-up and curation of any collected materials. Over the life of the plan, five to eight such projects would be expected.

Scientific investigations in wilderness would conform to the "minimum tool" standard, i.e., motorized vehicles and equipment would be prohibited unless no other reasonable alternative existed. If approved, such use would be the minimum necessary.

Extractive activities such as artifact collection and excavation would be allowed. Short-term impacts to visual, vegetative, and other resources would be permitted, but only if long-term impacts could be fully mitigated.

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 Alternative B, the BLM would consider making such a determination on a site-by-site basis, but only if such activity was found to be a traditional cultural practice within the meaning of P.L. 100-225. Individuals wishing to collect potsherds from a particular location within the NCA for traditional purposes would apply to the BLM for a special-use permit. After the location had been thoroughly documented and a reference collection of the pottery taken for permanent curation, and after consultations required under NHPA, the BLM could issue the permit for collection from the surface.

Signs

Antiquities signs would be posted in areas of active or anticipated vandalism, taking care not to draw unwarranted attention to undamaged sites. Under Alternative B, as many as 200 signs could be posted.

Access Easements

& Consolidation of Ownership

In areas of major archeological or historical values within or adjacent to public land, the BLM would seek legal access easements across key parcels of private land. The agency would also attempt to consolidate ownership by purchase or exchange from willing sellers in these areas.

Cadastral Survey

The BLM would manage this function in the same way as discussed for Alternative A. A cadastral survey is needed to determine ownership of the Cebolla Canyon Schoolhouse.

Road Closure

Under Alternative B, no roads would be closed specifically to protect cultural resources.

Formal Monitoring

A program of formal, controlled photo-monitoring would be continued at the Dittert Site, Oak Tree Site and Arroyo Ruin, and new photo-monitoring would be established at the Pinole Site, The Citadel, Oak Tree Ruin, Armijo Canyon Homestead, Lobo Canyon Petroglyphs, Aldridge Petro-glyphs, and other high-value or seriously threatened cultural resource properties. (The purpose of photo-monitoring is to systematically document changes in site condition and identify corrective actions.) To ensure that maintenance needs were met, the BLM would regularly monitor the condition of all stabilized sites and those with this
potential.

Stabilization

The existing stabilization and erosion control projects at the Dittert Site, Oak Tree Ruin, Arroyo Ruin, Armijo Canyon Homestead, and Armijo Canyon Springhouse would be maintained. New erosion-control measures could be implemented at up to 25 additional sites. The measures outlined in the El Malpais *Stabilization Assessment of Selected Homesteads* (Gallagher & Goodall 1991) would be implemented, and major new stabilization projects would be undertaken at Stone House, Cebolla Canyon Schoolhouse (if found to be on public land), and other homesteads with standing structures. If new excavations exposed prehistoric architecture, the BLM would consider stabilizing the structures as well.

Stabilization and erosion-control measures would be allowed in wilderness, but only if unusual scientific values were threatened and no other reasonable alternative existed. Such activities would be subject to the "minimum tool" requirement and would not be allowed to degrade the area's overall wilderness characteristics.

Fire Suppression

All homesteads and other structures with standing wooden elements would be singled out as high-priority fire suppression zones, both within and outside of wilderness.

Special Designations

Under Alternative B, the BLM would place a higher priority on nominating deserving properties to the National Register of Historic Places. The area of the Dittert Site presently covered by National Register listing would be expanded, and other sites such as the Cebolla Canyon Community, The Citadel, and the Pinole Site would be nominated. The BLM would actively encourage addition of the Dittert Site to the Chacoan World Heritage Site listing.

Boundary Modifications

The BLM would recommend that the Breaks Non-NCA Unit (12,100 acres) be added to the NCA. This unit was recently acquired by the BLM and includes portions of the Armijo Canyon and Tank Canyon prehistoric communities. These lands and their cultural resources would receive a higher level of protection and would be managed more intensively as part of the NCA.

Public Interpretation

In addition to providing off-site interpretive measures such as brochures, exhibits, and other media, the BLM under Alternative B (Resource Use) would also encourage visitation and onsite interpretation at the Dittert Site, Ranger Station Reservoir, Pinole Site, The Citadel, Cebolla Canyon Community, Lobo Canyon Petroglyphs, and Aldridge Petroglyphs. Public interpretation would also be developed at up to six homesteads, including Armijo Canyon Homestead, Armijo Canyon Springhouse, Cebolla Canyon Schoolhouse (if found to be on public land), Stone House, and other suitable properties. The BLM would conduct frequent guided interpretive hikes to cultural resource sites.

Issue 8--Wildlife Habitat

In addition to maintaining existing habitats as described under Alternative A, the BLM's primary emphasis under Alternative B would be to increase the enhancement (quality and quantity) of wildlife habitats within the Planning Area. However, because of increased emphasis on recreational and other human uses (e.g., facility development), habitat enhancement could be limited in some geographic areas.

The BLM would undertake the following wildlife habitat projects to increase the enhancement of existing habitat quality and quantity. (Refer to Appendix P for descriptions of other typical projects that could be used; e.g., water developments, fences, vegetative manipulation.) Under Alternative B, the BLM would propose up to ten enhancement projects annually, generally in areas where limiting factors occurred (e.g., lack of water or appropriate vegetative habitat). Sikes Act funding would be used for projects wherever appropriate.

Prescribed Fire & Wildland Fire Under Prescription

To support appropriate animal populations, the agency would use these two types of fire throughout the Planning Area in a balanced approach to maintain and/or enhance wildlife habitats in the desired vegetative condition. Each prescribed burn would range from 50 to 1,500 acres in size, with an average of 750 acres.

Prairie Dog Colony Enhancement Area

This project would use the south half of the North Pasture and the Head Pasture of the El Malpais Allotment (Breaks Unit) as an enhancement area of approximately 1,000 acres for a prairie dog colony. This region contains the largest known prairie dog colony within the Planning Area, and its enhancement would also help support two local special-status species (the burrowing owl and mountain plover). If the colony expanded to an appropriate size (about 200 acres), the area would also be a potential release site for the black-footed ferret, one of the most endangered mammals on earth. Additionally, every 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. Because of other conflicting uses, the agency does not have a release area. This project would provide such a location, as well as enhancing additional habitat for special-status species.

Wildlife Water Catchments

To help provide wildlife water in areas where it is limited, the BLM would install three catchments (with an inverted umbrella or "flying saucer" design) within the Cerro Brillante Unit (T. 6 N., R. 12 W., Sec. 31, SE¼; Sec. 33, NE¼; Sec. 35, NE¼). These catchments are specifically designed to support the antelope population within the area, although they would provide water for numerous other wildlife species. They would be funded through the Sikes Act Program.

Riparian Fencing

The BLM would 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 that occur within the Planning Area; protection of these unique habitats is a BLM priority.

Reintroductions

As identified in Alternative A, the BLM would work with the NMDG&F and the FWS to conduct feasibility evaluations for reintroducing native wildlife and/or plant species within the Planning Area. The emphasis would be placed on special-status species.

Issue 9--Vegetation

Under Alternative B, the BLM would emphasize forest and woodland, livestock grazing, riparian, fire and watershed management techniques to achieve the vegetative objectives.

To meet woodland objectives, piñon/juniper thinning would be permitted. Areas at lower elevations where the Potential Natural Community was open savanna or grassland would be proposed for thinning. A variety of tree sizes and ages would be left. The ground cover from trees left after harvest would be between 10 and 20 percent.

Changes in livestock grazing management would be made to ensure that vegetative objectives were accomplished. The Cerro Brillante CRMP is planned for completion during 1998, and the El Malpais in 1999. If monitoring studies indicated that existing management plans should be revised, new plans would be developed and/or livestock grazing use would be reduced. The minimum livestock grazing rest period provided in the management plans would be May 15 to June 30 and July 1 to September 15 each year, with at least one pasture per allotment rested during each period. To facilitate rest from livestock grazing, the BLM would consider building new range improvements, waters and fences for grazing allotments with or without an AMP/ CRMP. A site-specific EA would be completed for any range improvements considered. AMPs would also include objectives and actions for forest and woodland, riparian, wildlife and watershed management.

To ensure progress toward fully functioning riparian areas, wet zones surrounding springs used by livestock would either be fenced to exclude these animals or receive regularly scheduled rest from such use. For either option, springs could be developed by piping the water away from the wet area. Springs not used for livestock water would remain unfenced and undeveloped.

Prescribed fires and wildland fires under prescription would be used to accomplish forest vegetative objectives by reducing piñon-juniper that has invaded or increased in ponderosa pine habitat. The BLM would employ fires annually, each ranging from 50 to 1,500 acres in size.

Watershed management practices (e.g., structures and vegetative treatments) would be allowed under Alternative B. The BLM would control noxious weeds (e.g., knapweeds, bindweed, leafy spurge, thistles) by mechanical, chemical or biological means. A site-specific EA would be completed before any treatment.

Any needed erosion-control structures would be proposed in AMPs/CRMPs. Small structures would be the primary focus, but larger structures that would also provide water for livestock and wildlife would be considered.

Erosion-control structures would also be considered to protect cultural resource sites. Where possible, construction of these protective structures would be addresses in AMPs/CRMPs. However, if cultural resource sites were in immediate jeopardy, site-specific project plans would be prepared.

Issue 10--Boundary
& Land Ownership Adjustments

The Planning Area includes 24,200 acres outside the NCA boundary. Another 17,100 acres lying outside the NCA boundary but contiguous to it are being considered as additions to the NCA.

Under Alternative B, the BLM would recommend to the Congress the following changes in the NCA boundary.

- Exclude 960 acres of Acoma Pueblo lands currently within the NCA boundary from the Spur Unit and Cebolla Wilderness. This would remove several parcels totalling 800 acres between NM 117 and the National Monument boundary, and 160 acres recently acquired by Acoma Pueblo within the Cebolla Wilderness (T. 7 N., R. 10 W., Sec. 12). These are adjacent to other Acoma lands, and are aboriginal, with recurring value to the Acoma people.

- Expand the NCA to include an additional 26,200 acres known as the Brazo and Breaks Non-NCA Units and the Continental Divide-AFO Unit (24,000 acres federal and 2,200 private--refer to Table 1-1 in Chapter 1, and Map 31). Acquire inholdings by exchange if own-

ers are willing. These parcels are within Cibola County, and are contiguous to and a logical extension of the NCA. (Refer to Chapter 1 for a more detailed description of each parcel.)

- In addition to the priorities in the BLM's Land Protection Plan (1989), Alternative B would include two acquisition recommendations: a treadway for the CDNST (via easement, sale or exchange) in the Cerro Brillante-AFO Unit, if owners were willing; and a 160-acre parcel that includes an early historical ruin with interpretive potential (portions of T. 5 N., R. 11 W., Sec. 3 and T. 6 N., R. 11 W., Sec. 34).

- Recommend that the Congress amend the boundary of the Cebolla Wilderness to include portions of newly acquired, contiguous lands (an increase of 3,650 acres), and allow for the reengineering, repair and realignment of the cherry-stemmed Cebolla and Sand Canyon Roads to correct severe erosion problems affecting visitor safety (no net change in wilderness acreage). These additions, less the excluded 160 acres of Acoma lands (discussed above), would result in a net increase of 3,490 acres in the Cebolla Wilderness (refer to Map 26).

Pending Congressional action, the BLM would manage the Breaks and Brazo Non-NCA Units in accordance with the provisions of this plan. The agency would temporarily withdraw all public land within the proposed NCA expansion units from the public land and mineral laws.

Alternative C--Natural Processes

Under Alternative C, the Natural Processes Alternative, the BLM would minimize human activities in the Planning Area. In implementing this alternative, 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, ruin stabilization, erosion control, trail development, and range and wildlife improvements would be minimized. ***Dispersed r***ecreational use would be ***emphasized,*** grazing reduced, and no deliberate manipulation of vegetative communities would be attempted.

Issue 1--Recreation

Under Alternative C, the emphasis for recreation would be on dispersed opportunities ***with*** few recreational developments ***available to facilitate recreational use***. However, opportunities would continue to exist for visitors to participate in activities such as camping, hiking, horseback riding, hunting, mountain and road biking, picnicking, sightseeing, back-country driving, wildlife watching, exploring and learning about historical and archaeological sites, caving, climbing, skiing, shooting, trapping, photography, pack trips and enjoying wilderness solitude. No formal indication would be offered of where or when these activities could be pursued.

The BLM would not promote camping, hiking, picnicking, and sightseeing for cultural or historical interest in the Planning Area, and would encourage them elsewhere. Visitors would be informed that these pursuits were available as dispersed activities, with no formal opportunities provided. No camping would be allowed at The Narrows.

As under the No Action Alternative, horse gates would be provided at The Narrows and Hole-in-the-Wall access points.

Through route designations and closures, the BLM would shift the ROS classes and recreational opportunities available toward semi-primitive, nonmotorized types. About 13 percent more roads would be closed under Alternative C than under the No Action Alternative (refer to Table 2-6 and Map 8). No areas would be identified for watchable wildlife opportunities.

Mountain biking opportunities would occur along roads designated as open in the Planning Area. The number of miles of open road would be decreased by 56 percent from the No Action Alternative. No additional developments would be proposed.

Approximately 200 miles of BLM-administered roads would be available for sightseeing, driving for pleasure, or back-country driving. No back country byways would be offered.

Visual Resource Management

Under Alternative C, the BLM would manage visual resources under the assigned VRM classes shown on Map 16. All public lands within the Planning Area would be assigned a VRM class (refer to Table 2-8). The BLM would place greater emphasis on preserving the natural appearance of the landscape by assigning the more restric-

tive Classes I and II to nearly all of the Planning Area. Under these two classes, human modifications to the characteristic landscape would be allowed only if they were substantially unnoticeable.

Implementing this alternative would amend the RMP to reflect the following changes in VRM classes. Class III for the Cerro Brillante and Neck Units would be changed to Class II. Class I for the Cerritos de Jaspe, Neck, Continental Divide, and Cerro Brillante Units would be amended to Class II. The Cebolla and West Malpais Wildernesses would continue to be managed under Class I, along with the 18,300-acre Chain of Craters WSA and an additional 9,340 acres proposed for addition to the Cebolla Wilderness. VRM Class II would be assigned to the recently acquired lands within the Brazo and Breaks Units. VRM Class III, which allows a moderate amount of visual change, would be assigned to only the 60 acres of public land around the Ranger Station on NM 117.

After evaluation, those facilities and roads not needed for managing and protecting the resources would be removed and the sites rehabilitated to benefit scenic resources. Few new facilities would be introduced into the landscape. To protect the viewshed along federal, state and county roads within the Planning Area, the BLM would seek scenic or conservation easements from willing private landowners.

Issue 2--Facility Development

Under Alternative C, the emphasis for recreation would be on dispersed opportunities. Few additional opportunities would be proposed, and facilities would be developed only where recreational activities exceeded the Limits of Acceptable Change (LAC--refer to Appendix D), to harden sites, to redirect activities ***for site and resource protection, or visitor and employee health and safety.***

Although few new facilities would be proposed, they would be designed and constructed to appear consistent throughout the Planning Area, blending with the surrounding landscape and local architectural styles. More rustic, simpler facilities would be used. Identification signs would be maintained at eight locations along roads entering the Planning Area (refer to Map 12).

No campground or amphitheater would be built in the Spur Unit, as proposed under Alternative B. The BLM would discourage use of The Narrows area, ceasing interpretation efforts, removing all developments and designating it for day use only with no camping allowed. The agency would encourage visitors to camp at dispersed sites using Leave No Trace and Tread Lightly practices.

No additional trails would be developed for hiking opportunities. Visitors would continue to use the informal trails along old roads such as those into the West Malpais Wilderness and Armijo Canyon, or the informal Narrows Rim Trail. The BLM would remove the trailhead sign for this trail, and would not develop nearby parking or horse facilities. Visitors would be encouraged to use trails outside the Planning Area. Social trails that exceeded the Limits of Acceptable Change would be closed, with the closures enforced (refer to Appendix D).

No recreational developments would be planned for the CDNST. The treadway would be constructed and easements acquired, but only the minimum required by the CDNST Plan (USDA, FS

1993). Any developments would be postponed until visitor use warranted and/or use exceeded the Limits of Acceptable Change for social trails and road pullouts.

Under Alternative C, the BLM would provide no additional developments for horseback riding, picnicking, watchable wildlife, sightseeing, driving for pleasure, or back-country driving. The horse and hiking trail access into the Cebolla Wilderness would remain, but no improvements would be made at the trailhead, nor would parking for horse facilities or hiking be installed. No additional byways would be proposed or developed, and the Chain of Craters Back Country Byway would be decommissioned.

No trails would be developed for mountain biking. As the Limits of Acceptable Change for mountain bike use were exceeded, any use would be discouraged. The BLM would encourage such use at locations outside the Planning Area.

No additional recreational or interpretive developments would be planned at any of the prehistoric and homestead sites. Neither would other cultural properties have recreational developments of any kind. The Dittert Site would be removed from guided tours, maps and public information developed in the future. Visitors would be discouraged from accessing the site or using it as a recreational opportunity, and would be directed to other sites outside the Planning Area.

Limited onsite interpretive facilities would be developed under Alternative C. Most if not all interpretation would occur through one-on-one contact with visitors, and printed brochures, exhibits, interpretive media, and publications at the Ranger Station. Brochures would emphasize the natural process occurring in the Planning Area.

Issue 3--Access & Transportation

To enhance the natural processes within the Planning Area, the BLM would close more public lands to motor vehicle access by reducing the number of routes available for public use. The closed lands would consist of 128,440 acres or 52 percent of the public land acres in the Planning Area, which would be under wilderness management. On the remaining 48 percent of the Planning Area, access would be limited to designated roads and trails (refer to Table 2-10). No lands would remain open or undesignated.

Under Alternative C, more roads would be closed than under any other alternative (refer to Table 2-11). These closures would reduce road density and decrease interference with natural processes; the BLM would then return these lands disturbed by vehicle use to resource production through natural and mechanical means. Vehicle use by the general public would be restricted to 199.7 miles (55 percent) of the inventoried BLM routes available under the No Action Alternative (Alternative A). The mileage of access routes authorized for administrative and grazing use would also be reduced. A total of 76 miles of state highways, U.S. Forest Service, county and private roads within the Planning Area would remain unaffected under this alternative, as would 18.4 miles of BLM arterial routes. A greater portion of the Planning Area would be available for nonmotorized and non-mechanized means of access.

Vehicle use would be limited to the designated routes shown on Map 20, unless otherwise authorized. Approximately 119 miles of vehicle routes in the NCA and about 14 outside the NCA but within the Planning Area would be closed. The greatest quantity of roads would be closed in the Brazo (19.1 miles), Cerritos de Jaspe (12 miles), Cerro Brillante (21 miles), Continental Divide (17.1 miles) and Chain of Craters Units (39.2 miles). Another 3.1 miles of roads would be closed in the Spur Unit, .3 mile in the Neck, and 7.3 miles in the Breaks. Of the routes within the Planning Area but outside the NCA, 8.7 miles would be closed in the Breaks Non-NCA Unit and 5.3 in the Brazo Non-NCA Unit. An additional 23.7 miles of local routes would be added to the existing 6.3 miles; these would be restricted to authorized use only.

The BLM would continue to allow cross-country access in the Planning Area by nonmotorized and nonmechanical means (e.g., horseback and foot). However, because of terrain and vegetation conditions, the agency assumes that most of this type of access would be concentrated on existing or abandoned back-country roads and the few existing trails. Mechanical transport (i.e., mountain and road bikes) would be prohibited from entering the wildernesses and could be used only on designated vehicle routes. Motorized and mechanical access for traditional American Indian cultural practices would also be restricted to designated routes unless otherwise authorized.

Maintenance would be concentrated on an as-needed or emergency basis over fewer miles of road, depending on available funding. The BLM would take measures to discourage use and eliminate evidence of closed roads, using

onsite materials (e.g., slash piles, rocks), revegetating through natural or mechanical means, fencing, signing, other barriers, or a combination of these treatments.

The agency would develop maps and brochures to inform the public of the access opportunities and restrictions. The agency would use and maintain signs to mark designated routes and closures.

Issue 4--Wilderness Management (Cebolla & West Malpais)

The BLM would recommend an adjustment to the Cebolla Wilderness boundary under Alternative C through the inclusion of an additional 9,340 acres of contiguous public lands (refer to the discussion under Issue 5 below). At the request of Acoma Pueblo, the BLM would also recommend to the Congress that the boundary of this wilderness be amended to exclude 160 acres of private land recently acquired by the pueblo. Located in Sec. 12, T. 7 N., R. 10 W. along the perimeter boundary of the wilderness (refer to Map 27), these lands are aboriginal, have recurring value to the Acomas, and are adjacent to other Acoma lands that were excluded from the wilderness when the existing boundary was defined.

The BLM would continue to concentrate on wilderness signing, prevention of unauthorized vehicle intrusions, patrolling and monitoring of uses for compliance, and educating the public through personal contact and interpretive materials. Management of wilderness under Alternative C would emphasize the preservation of naturalness and natural processes, with less focus on use and enjoyment for primitive and unconfined recreational activities.

The BLM and volunteers would continue to patrol the areas at least once a month when they were accessible to the public. More frequent patrols would be made when conditions warranted. Patrolling would be used to discourage violations, gather information about area resources and uses, and inform visitors about the resources and appropriate uses of designated wilderness.

The public could continue to use the areas for primitive types of recreation that did not require the use of motor vehicles, motorized equipment or other forms of mechanical transport such as mountain bikes. However, such use would not be encouraged through brochures identifying available opportunities. Information and maps would be available upon request; these would highlight the wilderness resource, the risks associated with use, and the regulations governing such use.

The existing recreational facilities and trails on the wilderness perimeter would remain in place for continued use and resource protection. La Ventana Natural Arch, The Narrows, and Armijo Canyon would continue to serve as primary access points to the Cebolla Wilderness. The Cebolla Canyon Road (No. 2003) that splits the Cebolla Wilderness, and the Sand Canyon Road (a dead-end, cherry-stemmed road) would also provide access opportunities. However, the natural erosion process would be allowed to close these two roads over the long term. Rock cairns and other signs marking the Narrows Rim Trail, which extends 3.5 miles into the Cebolla Wilderness, would be removed and the trail reclaimed.

For the West Malpais Wilderness, the trailhead at the end of the cherry-stemmed road from CR 42 would continue to serve as the primary access point. Another access point would continue to be a trail that follows an old vehicle route (authorized for use by the grazing operator) and leading into the Hole-in-the-Wall, a major attraction of this wilderness.

Except at La Ventana Natural Arch, where permanent restrooms and a paved parking lot would continue to be provided, other access facilities would remain rustic in nature. Their primary purpose would be resource protection, not user convenience or direction. Onsite information would remain limited. Signs would be placed around the wilderness perimeters to identify the boundaries and some regulations governing area use. Additional information and education would be provided through personal contact by BLM staff and volunteers when users were encountered onsite during patrols, and at the Ranger Station on NM 117, BLM offices in Grants and Albuquerque.

As authorized in accordance with the Wilderness Act and P.L. 100-225, motorized and mechanical access would be allowed to non-federal inholdings and for livestock grazing operations over 5.5 miles of routes in the Cebolla Wilderness and 17.8 miles in the West Malpais Wilderness. This access and use associated with livestock grazing would continue under the conditions set in the BLM's RIM Plans (1990) and AMPs/CRMPS for the individual allotments overlapping these two areas. Access to private inholdings would continue over BLM-selected routes that would cause the least impact to wilderness character while

serving the purposes for which the land was held or used.

Traditional American Indian cultural practices would 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 would be allowed, but such use inside the wilderness would be prohibited, unless the BLM has granted prior authorization after consultation and evaluation. When the BLM authorized such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character would be met. Upon request, the BLM would temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities.

In most instances, cultural and historical resources would be subject to the forces of nature in the same manner as other wilderness resources. Stabilization and scientific studies of selected cultural resources and historical sites within the two wildernesses would continue as required to meet the BLM's protection and preservation mandates. Research would be authorized if it could be carried out in an unobtrusive manner by methods compatible with preserving wilderness character.

Wildlife habitat management would continue to be guided by the BLM's Wilderness Management Policy. Hunting and trapping would be permitted, subject to applicable state and federal laws and regulations. Use and maintenance of the one wildlife exclosure and the one water catchment (inverted umbrella) in West Malpais would be allowed to continue (refer to Chapter 3 for a list). They would be maintained using the “minimum tool” concept.

Vegetation treatments would be considered on a case-by-case basis in accordance with guidance provided in the BLM's Wilderness Management Policy. Fires would be controlled to prevent their spread to areas outside the wilderness, the loss of human life or property. Fire suppression methods would be those that would cause the minimum adverse impact to wilderness character.

The BLM would continue to seek acquisition of approximately 300 acres in Cebolla and 500 acres in West Malpais of surface inholdings and subsurface interests from willing sellers. Priority would be given to those lands that were undeveloped, or where use would pose a threat to wilderness character. These lands would be managed as wilderness when acquired.

Issue 5--Wilderness Suitability

Chain of Craters WSA

Under Alternative C, the entire WSA would be recommended as suitable for wilderness designation. The resources of the 18,300-acre Chain of Craters would be managed to maximize wilderness values, including solitude, naturalness, and opportunities for primitive and unconfined recreation.

The wilderness would be closed to unauthorized motorized and mechanized use. Approximately 47 miles of vehicular routes within the wilderness would be closed to the public. About 1,800 acres along the perimeter of the Chain of Craters would be a roaded natural area, 1,000 acres would be semi-primitive motorized, and about 15,500 acres would be semi-primitive,

nonmotorized wilderness. Authorized vehicle access routes would be established based on the "minimum tool" concept and emergency needs for maintaining livestock grazing facilities.

Grazing operations in the Chain of Craters Wilderness would continue to use the existing 2,485 AUM of forage per year, unless monitoring of forage condition and production indicated a need for change. Livestock operators would manage without using motorized equipment, except by permit for facilities maintenance identified in AMPs/CRMPs or RIM Plans.

Under the Wilderness Act, the BLM would deny permission for motorized access into the Chain of Craters for traditional American Indian cultural purposes. Such access would require specific legislation by the Congress.

As wilderness, the Chain of Craters would offer high potential for recreational use. Suitable activities would include sightseeing, day hiking, backpacking, camping, horseback riding, birdwatching, landscape and nature photography, observation of geologic phenomena, and hunting. (Note: A proposal to route approximately 9 miles of the - CDNST through the WSA has been analyzed as part of a multi-agency plan--USDA, FS 1993).

The BLM would manage the visual resources within the WSA as Class I. Any change in the basic landscape elements (form, line, color, or texture) caused by a management activity would not be evident in the characteristic landscape.

Lands Contiguous to the Cebolla Wilderness

Under Alternative C, the BLM would recommend approximately 9,340 acres of the 10,380 acres studied under Section 202 of FLPMA as an addition to the existing Cebolla Wilderness (refer to Map 27). The wilderness boundary would be amended to include the contiguous acres.

Until those lands recommended as suitable were either designated or released by the Congress, they would be managed under the Interim Management Policy except as it applies to minerals. The agency would manage the 1,040 acres recommended as non-suitable for designation under the management prescriptions identified in this alternative and applicable to this area.

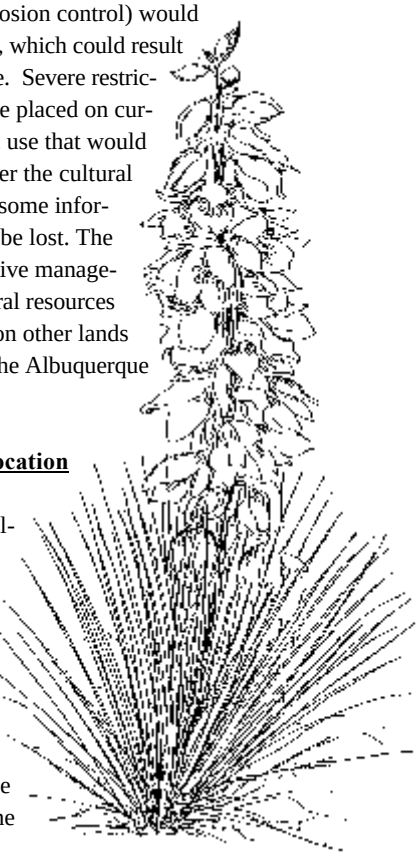
Issue 6--American Indian Uses & Traditional Cultural Practices

Under Alternative C, the BLM would take actions to resolve this issue in the same way as under Alternative A.

Issue 7--Cultural Resources

Under the Natural Processes Alternative, the BLM would seek to eliminate human impacts, as much as possible, while allowing natural processes to take their course. This philosophy is consistent with Navajo beliefs that disturbance of places associated with death can be very dangerous. It is also consistent with traditional Pueblo beliefs that recognize prehistoric sites as ancestral places that should be left alone, subject to natural processes. Therefore under Alternative C, the BLM would minimize management actions for individual cultural properties.

The scientific values inherent in the cultural resources of the Planning Area would benefit from general management practices such as reduced public access and improved grazing management. However, intrusive management practices for particular properties (such as signing, stabilization, and erosion control) would be minimized, which could result in site damage. Severe restrictions would be placed on current scientific use that would physically alter the cultural resources, so some information could be lost. The BLM's proactive management of cultural resources would focus on other lands managed by the Albuquerque Field Office.



Use Allocation

Under Alternative C, cultural resources that met the definition of "isolated manifestation" would be allocated to the

Discharged Use category if they have been adequately recorded. All other PaleoIndian, Archaic, and Pueblo sites would be managed for public value and allocated to sociocultural use. In this case, such use would imply recognizing these sites as ancestral Pueblo places and deferring to the wishes of Acoma, Zuni, and other interested pueblos for their management.

Prehistoric sites could be reallocated to scientific use or conservation for future use on a case-by-case basis, and only with the concurrence of all pueblos who recognize close ties to these properties. This would normally imply using non-intrusive measures to protect the sites from human impacts, and non-interference with natural processes.

All historical Navajo sites would also be allocated to sociocultural use and treated in a similar manner. Any reallocation would require concurrence from the Navajo Tribe and any local chapters who recognize close ties to the properties. All Anglo and/or Hispanic sites would be managed for their information potential and allocated to scientific use.

Compliance with the National Historic Preservation Act

Few BLM-authorized development projects would be anticipated under Alternative C, but if prehistoric cultural resources were found within areas of potential impact, avoidance rather than data recovery would be the strongly preferred mitigation measure. Any proposed data recovery affecting Pueblo or Navajo sites would require reallocation of the site to scientific use. Although such a reallocation would be within the scope of this alternative, it would require concurrence from the interested tribes as described above.

Inventory & Baseline Condition

No inventories to identify vulnerable sites and establish baseline condition would be undertaken.

Scientific Investigation

Under Alternative C, scientific investigation of Anglo/Hispanic historical sites, and investigations at other sites that did not physically alter them would be allowed under the conditions described above for Alternative A. However, in general, investigations that would physically alter Paleo- Indian, Archaic, Pueblo, or Navajo sites would be prohibited. If cultural resources were threatened and/or were of unusual scientific importance, exceptions would be considered, but would only be permitted with the concurrence of the concerned American Indian groups as described above. Under these conditions, intensive scientific investigations would not likely occur during the life of this plan.

No extractive activities would be permitted within wilderness. Activities that would result in long- or short-term impacts to visual resources, vegetation, or other resources would be prohibited.

Pottery Collection

Under Alternative C, the BLM would manage this activity in the same way as under Alternative A.

Signs

No antiquities signs would be posted.

Access Easements & Consolidation of Ownership

No special efforts would be made to consolidate ownership of vulnerable archeological properties, and access easements would only be sought where needed for law enforcement.

Road Closure

Vehicular access to the Planning Area would be most restricted under Alternative C, so no

special area closures would be proposed for cultural resources.

Formal Monitoring

Aside from patrols by Law Enforcement Rangers intended to prevent or prosecute violators of ARPA, the BLM would conduct no formal monitoring of cultural resources.

Stabilization

Deterioration of cultural resources is considered to be a natural process consistent with management under Alternative C. Remedial measures such as stabilization and erosion control would be proposed only if extraordinary scientific values were threatened, and would be undertaken only after gaining the concurrence of tribes who recognize close ties to the properties. Existing stabilization and erosion-control projects are intended primarily to preserve the potential of the sites for public use, and would not be maintained under this alternative.

No stabilization and erosion control measures would be allowed within wilderness.

Fire Suppression

No homesteads or other historical properties would be identified for protection from fire.

Special Designations

No National Register or other special designations would be pursued.

Boundary Modifications

Boundary modifications proposed under Alternative C (refer to Issue 10 below) would expand the NCA, adding portions of the Breaks Non-NCA and Tank Canyon SFO Units that contain highly valuable cultural resources.

Public Interpretation

No onsite interpretation of cultural resources would occur under Alternative C, nor would the public be encouraged to visit any of the cultural resources in the Planning Area. Interpretation and public education would rely almost entirely on offsite measures such as exhibits at the Ranger Station. Visitors on BLM-supervised interpretive hikes would visit cultural resources rarely, and only after close consultation with American Indian groups who were concerned about the properties.

Issue 8--Wildlife Habitat

Under Alternative C, the primary emphasis would be to let natural processes maintain the existing wildlife habitats, so the BLM would undertake no maintenance or enhancement projects. However, maintenance of existing projects and habitats needed to support special-status species would still remain a priority.

No new developments (e.g., water facilities, vegetative manipulations, fences) would be undertaken, except where necessary to support the maintenance of habitat for special-status species. Wildland fires under prescription would be used throughout the Planning Area to maintain habitats in a natural vegetative condition and support existing populations. The fire history of the Planning Area shows a broad variability in the number and size of wildfires. For evaluating impacts, it is estimated that the average number of acres that would be burned from wildland fires under prescription would be 1,000 acres annually.

The BLM would work with the NMDG&F and the FWS to conduct feasibility evaluations for reintroducing native wildlife and/or plant, special-status species within the Planning Area. Presently only one species (desert bighorn sheep) has been identified for possible reintroduction within the vicinity. No reintroduction of species other than those with special status would occur under Alternative C.

Issue 9--Vegetation

Under Alternative C, livestock grazing and fire management would be emphasized to meet vegetative objectives. No tree thinning would be permitted to meet forest or woodland vegetative objectives.

Changes in livestock grazing management would be made to ensure it was providing for the accomplishment of vegetative objectives. AMPs/ CRMPs would continue to include such objectives. The Cerro Brillante CRMP is

scheduled for completion in 1998 and the El Malpais CRMP in 1999. Existing plans for the Los Cerros, Techado Mesa and Los Pilares Allotments would be amended to include vegetative objectives, and the minimum rest periods from livestock grazing use. The minimum livestock grazing rest period would be yearlong for at least one pasture in each allotment. No new range improvements would be developed. AMPs would include objectives and prescriptions for fire, wildlife and watershed management. If monitoring studies indicated the need, existing plans would be revised, new plans developed, and/or livestock grazing use reduced.

For riparian management, no new spring exclosure would be constructed. The wet areas around springs used by livestock would receive regularly scheduled rest from livestock grazing. Springs not used by livestock would remain unfenced and undeveloped.

Prescribed fires would not be used under Alternative C, except where needed for fuel management. Wildland fires under prescription would be used to the greatest extent possible to provide accomplishment of woodland and forest vegetative objectives. Fires, ranging in size from 50 to 1,000 acres each, would be allowed to burn annually under specified conditions.

For watershed, no structures would be built. However, the treatment of noxious weeds (e.g., knapweeds, bindweed, leafy spurge, thistles) would be allowed under Alternative C by mechanical or biological means. The BLM would complete site-specific EAs before treating any noxious weeds.

Issue 10--Boundary & Land Tenure Adjustments

The Planning Area includes 24,200 acres outside the NCA boundary (non-NCA units). A total of 17,100 acres outside the NCA boundary but contiguous to it would also be considered as additions to the NCA (refer to Table 1-1 in Chapter 1 and Map 32). The BLM would recommend that the Congress amend the NCA boundary to accomplish the following.

- Exclude 960 acres of Acoma Pueblo lands currently within the NCA from the Spur Unit and Cebolla Wilderness. This would include several parcels totalling 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.

- Expand the NCA to include 41,300 acres in the Breaks Non-NCA, Brazo Non-NCA, Continental Divide-AFO, Tank Canyon-SFO, and Techado Mesa-SFO Units (38,900 acres federal and 2,400 acres private). (Refer to Chapter 1 for a more detailed description of each parcel.) These parcels are within Cibola and Catron Counties, and are contiguous to and a logical extension of the NCA. The BLM would acquire inholdings if owners were willing, with exchange being the preferred acquisition method.

- The BLM would add two acquisition recommendations: (1) a treadway for the CDNST by easement, exchange or sale in the Cerro Brillante-AFO Unit, if owners were willing; and (2) a 160-acre parcel that includes an early historical ruin with interpretive potential (portions of T. 5 N., R. 11 W., Sec. 3 and T. 6 N., R. 11 W., Sec. 34). Other acquisition recommendations in the Land Protection Plan (USDI, BLM 1989) would remain in effect.

- Modify the boundary of the Cebolla Wilderness to include portions of newly acquired lands contiguous to the current wilderness boundary (an increase of ***3,930*** acres). This change, less the 160 acres of Acoma lands excluded, would result in a net addition of ***3,770*** acres to the Cebolla Wilderness (refer to Map ***28***).

Pending decisions from the Congress, the BLM would manage the Breaks and Brazo Non-NCA Units in accordance with provisions of this plan. The Continental Divide-AFO Unit would be managed under the Rio Puerco RMP. The Techado Mesa-SFO and Tank Canyon-SFO Units would continue to be managed under the Socorro RMP. The BLM would issue a temporary withdrawal from the public land and minerals laws for all public lands within the non-NCA units.

Alternative D--Balanced Management
(Proposed Plan)

Alternative D is the BLM's ***Proposed Plan***. Under this alternative, the BLM would strike a management balance by combining actions selected from the alternatives.

Issue 1--Recreation

Under Alternative D, the emphasis for recreation would be on a combination of developed and dispersed recreational opportunities. The semi-primitive motorized and semi-primitive nonmotor-ized ROS classes would be applied to larger areas as shown on Map 9 and in Table 2-6. The BLM would reduce the density of vehicle routes in the Planning Area and limit vehicle travel to designated routes.

Within the ROS settings provided under this alternative, 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 historical and archaeological sites. Recreational activities of interest to smaller populations such as caving, climbing, skiing, shooting, trapping, photography, pack trips, enjoying wilderness solitude and road biking would continue to be offered; however, the BLM would make no formal identification of where or when these opportunities were available.

Camping would be offered at one BLM developed campground and in dispersed sites throughout the Planning Area. No camping would be allowed at The Narrows.

The BLM would establish up to 10 additional hiking trails in the Planning Area, for a total of up 15 trails with a length of approximately 57 miles. The expanded trail system would provide improved access opportunities to such sites as the Lobo Canyon Petroglyphs, one or two homesteads, Cerro Americano, La Rendija and the historical schoolhouse site in the West Malpais Wilderness. The closure of 83.4 miles of vehicle routes in the Planning Area would also create opportunities for visitors to use them as informal hiking trails without vehicle conflicts.

For the convenience of horseback riders in the Planning Area, the BLM would provide facilities. The Narrows would be one location, along with the Armijo Canyon area (for access to the Cebolla Wilderness, not the archaeological site), Hole-in-the-Wall (for access to the West Malpais Wilderness), and Cerro Brillante (for access to the Chain of Craters).

The BLM would close roads to increase the isolation in the Planning Area for animals and hunters.

The agency would continue to allow mountain bike use of the Planning Area on those lands and designated travel routes outside wilderness, especially promoting routes in the Chain of Craters, Cerritos de Jaspe and Brazo Units. Approximately 130.7 miles of designated vehicle routes would be 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 Planning Area and would provide a system of loop trails. (Note: The Chain of Craters would be promoted for such use only if the Congress released the area from wilderness review, not while it continued in WSA
status.)

Picnicking opportunities would be provided at the south end of The Narrows through facility development, and would also be encouraged as a dispersed activity. Approximately 273 miles of BLM-designated travel routes would be available for sightseeing, driving for pleasure, or back-country driving, including designated Back Country Byways.

In addition to the points of interest listed under the No Action Alternative, the following would provide opportunities for those interested in cultural or historical properties: the Cebolla Canyon Complex, Lobo Canyon Petroglyphs, and possibly the Cebolla Canyon Schoolhouse or other deserving properties.

Wildlife viewing opportunities would be identified along as many as eight stretches of road in the NCA (refer to Map 13). The BLM would provide interpretive material and signs to enhance the viewing experience.

Visual Resource Management

Under Alternative D, the BLM would manage visual resources on all public lands within the Planning Area under the assigned VRM classes shown on Map 17 and in Table 2-8. All public lands within designated wilderness would be managed under VRM Class I objectives, with most of the remaining public lands under the Class II objectives. (In Class II areas, management activities would be visible but should not attract the attention of the casual observer.) On 60 acres surrounding the Ranger Station, the BLM would assign VRM Class III, which would allow a moderate amount of visual change.

Objectives for managing visual resources on 14,050

acres within the southwest corner of the Cerro Brillante Unit and the north half of the Neck Unit would be changed from Class III to Class II. The Class I objectives within the Cerritos de Jaspe, Neck, Continental Divide, and Cerro Brillante Units would be amended to slightly less restrictive Class II objectives. This plan would amend the Rio Puerco RMP to reflect these changes in VRM classes.

For analysis purposes, the BLM assumes that the Congress would expand the Cebolla Wilderness by 3,930 acres, and not designate the 18,300-acre Chain of Craters as wilderness. The BLM would amend the RMP to apply VRM Class I objectives within the modified Cebolla Wilderness boundaries. The agency would manage the Chain of Craters Unit under VRM Class II objectives.

The recently acquired lands within the Brazo and Breaks Non-NCA Units would be assigned VRM Class II through this plan amendment. To protect the viewshed along federal, state and county roads within the Planning Area, the BLM would seek scenic or conservation easements from willing private landowners.

Issue 2--Facility Development

Under the Preferred Alternative, the BLM would provide a limited number of developed recreational facilities at a modest number of selected sites, and would seek to disperse visitors to other parts of the Planning Area. Facility development would occur after the El Malpais Plan was approved, through project-level analysis.

The agency would develop a campground within approximately 8 acres of the Spur Unit to accommodate camping on the east side of the Planning Area (refer to Map 13). The exact location would be decided after cultural surveys, T&E surveys and site investigations were completed. The campground would provide up to 20 single-family units with leveled parking spurs large enough to handle small self-contained RVs, vehicle campers or tent campers. One unit would be built for multi-family or group camping with appropriate parking. Two vault toilets, tables, and cooking facilities would be constructed within the campground and, if possible, drinking water would be provided.

At a location within a 5-minute walk of the campground, the BLM would build an amphitheater designed to hold about 50 people. Evening programs would occur regularly during the summer. To provide visitors with exercise and direct use for resource protection, the agency would build a loop trail near the campground. Vehicle access to the campground from NM 117 would be improved by upgrading the existing dirt road and surfacing it for all-weather use.

The BLM would provide approximately 57 miles of established trail to distribute visitors and provide resource protection under Alternative D, as under Alternative B (refer to Maps 11 and 13). Other trails at selected monitoring locations such as La Rendija, Cerro Rendija, and Chain of Craters would not be developed until established LAC standards for social trails were exceeded (refer to Appendix D).

With most of its length in the Cebolla Wilderness the Narrows Rim Trail would be improved using the minimum tool techniques to facilitate resource and wilderness protection and to help direct visitor use to a single pathway. The BLM would provide gravelled parking for up to 15 vehicles. Horseback access to the Cebolla Wilderness would continue to be provided at this location. (Refer to Figure 2-d for a conceptual design of these facility developments.) Up to three wayside exhibits would be located at this rustic trailhead or near the picnic area.

To serve the informal Hole-in-the-Wall Trail leading into the West Malpais Wilderness, the BLM would build horse facilities, a primitive trailhead, and a graveled parking area for up to 10 vehicles. Existing vehicle access to the trailhead would be improved. (Refer to Figure 2-e for a conceptual design of these developments.)

The agency would construct two rustic-style trailheads, one each at Cerro Americano and Cerro Brillante, for the CDNST. Each trailhead would include up to two wayside exhibits (to include watchable wildlife information at Cerro Americano), and a gravel parking area for up to 20 vehicles. At the Cerro Brillante trailhead, facilities for horse use would be provided. At Cerro Americano, facilities would accommodate mountain bike use. (Refer to Figures 2-e and 2-g for the possible design and layout of these developments.) Where feasible, the BLM would develop and identify water sources for CDNST hikers.

Mountain-biking facilities would be provided at the Cerro Americano CDNST trailhead. Trailhead facilities to accommodate mountain-bike users in the Cerritos de Jaspe and Brazo Units would be built only if mountain bike routes were established there. The travel routes available for mountain bike use would not be marked as trails until established LAC standards for social trails were exceeded.

The Narrows would be the only site developed for picnicking. It would be designated as a day-use-only site for parking and hiking in the Cebolla Wilderness. Recreational developments at the south end of The Narrows would include a picnic area with up to 10 units, parking, drinking water (if possible), graveled access, vault toilets, and up to three wayside exhibits. (Figure 2-d shows a conceptual design of these developments.)

The BLM would designate two new Byways, the NM 117-CR 42-NM 53 loop drive, and a route ***extending through*** the Brazo Unit. The agency would work with partners to purchase and install up to four signs and one or two kiosks for each byway (refer to Map 13). Signs typically measure 3 feet tall by 5 feet wide, with a total height of 6 feet including support posts. (The layout of a typical kiosk is shown in Figure 2-f.)

Primitive trailheads ***defined parking for up to eight vehicles and a trailhead kiosk*** would be developed for the following cultural/historical properties as time, staff, and budget allowed: the Lobo Canyon Petroglyphs (rather than other rock sites), the Cebolla Canyon Schoolhouse, and other deserving properties as needed to distribute visitor use. ***All-weather gravel roads would provide access to trailheads.*** For the Reservoir, the Ranger Station and parking lot would serve as the trailhead, with the approved Nature Trail for access.

One or two ***selected*** homesteads would be developed for public use. To provide for public access, the BLM would build a primitive trailhead, including a parking area for four to six vehicles ***to serve each selected homestead*** . (Figure 2-g shows a possible design of these developments.) Interpretive wayside exhibits would be developed for up to three sites and/or homesteads, along with brochures and/or trail guides keyed to markers. The BLM would conduct special hikes and programs for up to 200 people per year to these features.

When warranted by significant visitation, the agency would install visitor registration boxes at selected archaeological properties. No additional developments would be planned at these sites. Visitation would be encouraged at the Lobo Canyon Petroglyphs rather than at other sites.

Recreational and facility developments at the Dittert Site would be ***a graveled*** parking area and access road; the parking would be for up to 20 vehicles; and a rustic trailhead would be constructed for site, ***Armijo Canyon Homestead and spring house,*** and wilderness access. Horse

facilities would be built to provide access to the Cebolla Wilderness, not the Dittert Site. (Figure 2-i shows a conceptual design for these facilities.) Dittert Site interpretation would include up to two wayside exhibits, a trail guide, and guided hikes for public and school groups (50 to 200 people per year). This would also be a trailhead and access for the Cebolla Wilderness.

Entry identification signs would be maintained at up to six locations along roads into the Planning Area. Additional signs would be posted as indicated by public comment or to eliminate confusion about land status. (The dimensions of these signs would be the same as the Back Country Byway signs discussed above.)

The BLM would construct pullouts and develop interpretive kiosks at up to 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 (Sec. 16, T. 9 N., R. 10 W.) Watchable wildlife signs would be installed along CR 42, NM 53, and NM 117 to promote this recreational opportunity.

The BLM would design and build new facilities to achieve a consistent appearance throughout the Planning Area, and to blend with the surrounding landscape and local architectural styles. VRM class objectives would be set to accommodate a combination of developments, with higher levels at selected areas for user comfort and convenience, and rustic and rudimentary facilities elsewhere. Facility design and construction would conform to the assigned VRM class and be consistent with this alternative's theme of balanced management.

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

Issue 3--Access & Transportation

To enhance natural processes, motor vehicle area designations within the Planning Area would be "limited" and "closed." Except in designated wilderness, which would increase under this alternative, vehicle travel in the majority of the Planning Area (143,270 acres or 58 percent) would be limited to designated routes as shown in Table 2-10. (The "limited" designation would include lands not previously addressed in the RMP and those designated as open through the RMP.) Those lands designated as closed (42 percent of the Planning Area) would be wilderness. No lands would remain open or undesignated.

Under Alternative D, both road closures and route designations would be implemented. Approximately 273.1 miles of inventoried local and collector routes (75 percent) would be designated as open to the general public for motor vehicle use (refer to Map 21 and Table 2-11). Another 83.4 miles of routes would be closed.

A total of 76 miles of state highways, U.S. Forest Service, county and private roads within the Planning Area would remain open under this alternative, as would 18.4 miles of BLM arterial roads. Authorized vehicles could continue to use 6.3 miles of routes on public lands outside wilderness and 23.3 miles of routes inside wilderness.

Approximately 75 miles of local roads within the NCA and 9 miles outside the NCA but in the Planning Area would be closed to vehicle use. The BLM would reclaim these roads through natural and mechanical treatment to bring them back into resource production. Of the roads closed within the NCA, 14 miles would be within the Chain of Craters, 3.1 miles in the Spur, 15.3 miles in the Continental Divide, 9.2 miles in the Cerritos de Jaspe, 7.3 miles in the Breaks, 12 miles in Cerro Brillante, and 14 miles in the Brazo Unit. Of the roads outside the NCA, 5.4 miles within the Brazo Non-NCA Unit and 3.2 miles within the Breaks Non-NCA Unit would be closed. The closed routes would be those abandoned or not showing signs of regular or continuous use at the time of the most recent inventory (1996), duplicating other vehicle routes serving the area, causing resource damage, or serving no apparent need.

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

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

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

Issue 4--Wilderness Management (Cebolla & West Malpais)

If the Congress accepted the BLM's recommendation and passed appropriate legislation, the Cebolla Wilderness would be expanded to include 3,930 acres of contiguous lands. At the request of Acoma Pueblo, the BLM would also recommend to the Congress that the boundary of this wilderness be amended to exclude 160 acres of recently acquired, formerly private lands. Located in Sec. 12, T. 7 N., R. 10 W., along the boundary of the wilderness (refer to Map 28), these are aboriginal lands that are adjacent to other Acoma lands and have recurring value to their people. Any other adjustment in the amount of public lands under BLM wilderness management in either Cebolla (300 acres) or West Malpais (500 acres) would result from the acquisition of inholdings from willing sellers.

Management efforts would continue to be concentrated on signing, preventing unauthorized vehicle intrusions, patrolling and monitoring uses for compliance, and educating the public through personal contact, interpretive and educational materials. The BLM's emphasis under Alternative D would 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 BLM would continue to patrol the areas at least once a month when accessible to the public, with more frequent patrols during spring through fall when use was greater. Patrolling would 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 could continue to pursue primitive types of recreation that did not require the use of motor vehicles, motorized equipment or other forms of mechanical transport. The BLM would continue to encourage such use through publishing maps and brochures identifying the opportunities available within these areas.

Along with trail improvements for recreation users and resource protection, the existing recreational facilities on the wilderness perimeters would remain in place. La Ventana Natural Arch, The Narrows, and Armijo Canyon would continue to serve as primary access points to the Cebolla Wilderness. The BLM would 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) also would provide opportunities for users to gain access to the Cebolla Wilderness. The BLM would maintain these roads more frequently to reduce erosion and improve access opportunities. From the Narrows Recreation Site, the BLM would improve markers for the Rim Trail that extends 3.5 miles into the wilderness to direct visitor use.

For the West Malpais Wilderness, the trailhead at the end of the cherry-stemmed road from CR 42 would continue to serve as the primary access point. The BLM would improve access to the trailhead and the trailhead itself to accommodate visitors and horse use. The agency would continue to identify for users a trail that follows a vehicle route leading into the Hole-in-the-Wall, a major attraction of this wilderness.

Visitor facilities at trailheads and other entry points would be upgraded to improve access opportunities, services and information. The BLM would provide additional onsite information to better inform and educate the public. Signs would identify the boundaries, wilderness name, and some regulations governing use. Personal contact by BLM staff and volunteers would provide additional onsite information and education when users were encountered during area patrols. The BLM would also continue to supply information about the areas at the Ranger Station on NM 117 and BLM offices in Grants and Albuquerque.

Motorized vehicle access would only be allowed 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 would continue under the conditions set in BLM RIM Plans (1990) and AMPs/CRMPs for the individual allotments overlapping these two areas. Access to inholdings would continue over routes selected by the BLM to cause the least impact to the areas' wilderness character, while serving the purposes for which the land was held or used.

Traditional American Indian cultural practices would 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 would be allowed, but such use inside the wilderness would be prohibited, unless the BLM has granted prior authorization after consultation and evaluation. When the BLM authorized such use of motorized vehicles by American Indians, stipulations to control impairment of wilderness character would be met. Upon request, the BLM would temporarily close the smallest practicable area for the minimum period needed to accommodate American Indian activities.

In most instances, cultural and historical resources would be subject to the forces of nature in the same manner as other wilderness resources. Stabilization and scientific studies of selected cultural resources and historical sites within the two wildernesses would continue as required to meet protection and preservation mandates. The BLM would authorize research (under Section 501 of P.L. 100-225) if it could be carried out unobtrusively so as not to degrade wilderness character.

Except for guided trips, visitor information and education programs about selected cultural and historical sites within the wildernesses would be located outside the wilderness boundaries or dispersed at other sites. The BLM would place additional interpretive information about the Dittert Site (located within the boundaries of Cebolla Wilderness) outside the wilderness boundary, at the trailhead to the site in Armijo Canyon. Visitation of selected cultural and historical sites within the wildernesses would be encouraged through additional information provided offsite. Except for continued maintenance, monitoring and guided hikes, the BLM would provide no additional onsite interpretation.

Wildlife habitat management would continue to be guided by the BLM's Wilderness Management Policy. Hunting and trapping would be permitted under applicable state and federal laws and regulations. The BLM would continue to allow use and maintenance of the two wildlife exclosures and the water catchment, using the “minimum tool” concept.

The BLM would consider vegetation treatments on a case-by-case basis under guidance found in the BLM's Wilderness Management Policy. The agency would control fires to prevent their spread outside wilderness, the loss of human life or property. Fire suppression methods would be those that caused the minimum adverse impact on wilderness character.

The BLM would continue to seek acquisition of mineral interests and approximately 800 acres of surface inholdings from willing sellers. Priority would be given to those lands that were undeveloped or where use would pose a detrimental threat to wilderness character. The BLM would manage these lands as wilderness, when acquired.

Issue 5--Wilderness Suitability

Chain of Craters WSA

The BLM would not recommend this WSA to the Congress as suitable for wilderness designation. If released by the Congress, this 18,300-acre area would be managed according to 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.

Lands Contiguous to the Cebolla Wilderness

Under Alternative D, the BLM would recommend for wilderness designation 3,930 acres of the 10,380 acres studied under Section 202 of FLPMA. Until the Congress either designated or released these lands, the BLM would manage them under the Interim Management Policy, except as applied to minerals. The agency would manage the 6,450 acres not recommended as suitable for designation under the management prescriptions identified in this plan.

Issue 6--American Indian Uses & Traditional Cultural Practices

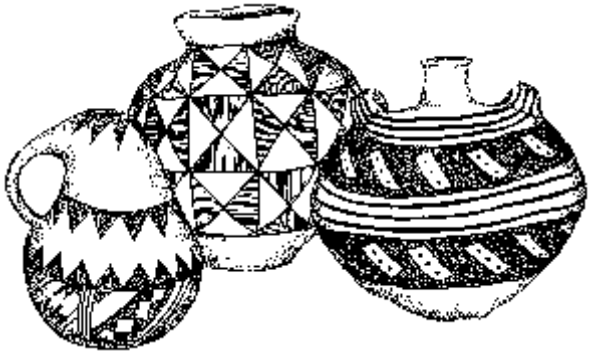
P.L. 100-225 explicitly recognizes the importance of continuing American Indian tradional cultural practices in the NCA. It is not appropriate for the BLM to develop alternative management actions specifically related to these practices. However, the agency has considered such uses as an important part of formulating proposed management actions for other issues under this plan's alternatives.

Issue 7--Cultural Resources

Under Alternative D, the BLM would allow scientific use of prehistoric cultural resources, but would place stronger emphasis on conservation for future use. This objective would reflect the principal guidance provided in P.L. 100-225.

Use Allocation

The BLM would manage the Dittert Site, the Ranger Station Reservoir, the Lobo Canyon Petro-glyphs, and outstanding homestead-era sites for public value and allocate them to public use, while taking care not to impair their information potential. As additional resource information became available, the agency could identify new areas for public use under this alternative, but only if their information potential would not be adversely affected and appropriate American Indian consultations and NHPA compliance were done. Except as provided below, the BLM would manage historical Anglo, Hispanic and Navajo cultural resources for scientific use, with required American Indian consultations. Paleo-Indian, Archaic, and Pueblo sites would be managed for their information potential and allocated to conservation for future use. Particular properties could 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 would be proposed within the Planning Area. Under Alternative D, the BLM would emphasize avoidance of cultural resources, rather than mitigation through data recovery. Secondary impacts such as unauthorized collection of surface artifacts would be more thoroughly studied and evaluated than is usual outside the NCA. Therefore, under this alternative the BLM would require an inventory over an area at least ¼-mile wide around proposed visitor use developments.

Inventory & Baseline Condition

The BLM would establish an overall goal of a 2½-percent Class III inventory. The agency would contact supplemental, reconnaissance-level surveys of critical areas and/or types of resources.

Scientific Investigation

Because P.L. 100-225 emphasizes preserving cultural resources for long-term scientific use, the BLM would restrict archeological research that could result in physical alteration of prehistoric remains, including surface collection. The agency assumes that cultural resources within the NCA are generally less threatened than resources outside the NCA, so uses that would result in the physical alteration of cultural properties would be supported outside the NCA whenever possible. Whenever possible within the NCA, the BLM would encourage research that used existing collections or non-disturbing field techniques.

If research involving the physical alteration of prehistoric sites was proposed within the NCA, a research design would be required detailing the nature of the proposed work, its purpose, and its anticipated impact on similar properties within the NCA. Researchers would have to consider the feasibility of conducting their work using cultural resources outside the NCA. They would 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 played in relation to the research design.

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

***Scientific investigations in wilderness would have to conform to the "minimum tool" standard, that is, motorized vehicles and equipment would be prohibited unless no other reasonable alternative existed. If such use was approved it would be the minimum necessary. Extractive activities such as artifact collection would be allowed, but no significant impacts to visual, vegetative or other* resources would 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 Alternative B, the BLM would consider making such a determination on a site-by-site basis, but only if such activity was found to be a traditional cultural practice within the meaning P.L. 100-225. Individuals wishing to collect potsherds from a particular location within the NCA for traditional purposes would apply to the BLM for a special-use permit. After the location had been thoroughly documented and a reference collection of the pottery taken for permanent curation, and after consultations required under NHPA, the BLM could issue the permit for collection from the surface.

Signs

Small inconspicuous antiquities signs would be placed carefully to avoid drawing unnecessary attention to sites, while still discouraging casual vandalism and to aid in prosecuting violators. (These signs are usually 9 inches by 12 inches in size and are placed at ground level.) Under Alternative A, signs would be placed at approximately 100 sites during the life of the plan.

Access Easements & Consolidation of Ownership

In areas of major archeological or historical values within or adjacent to public land, the BLM would seek legal access easements across key parcels of private land. The agency would also attempt to consolidate ownership by purchase or exchange from willing sellers in these areas.

Road Closure

The BLM would close the 2-mile, two-track road leading into the Cebolla Canyon Community.

Other access routes not identified for closure elsewhere in this plan could be closed if this was essential for resource protection.

Formal Monitoring

Formal photomonitoring 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 1 to 5 years so changes in site condition can be documented systematically. Under Alternative D, photomonitoring would continue at these sites with other sites potentially incorporated into the program as well.

Stabilization

At the Dittert Site, Oak Tree Ruin, and Arroyo Ruin, the BLM would maintain the existing stabilization and erosion-control projects.

Additional stabilization and/or erosion-control projects for prehistoric sites would be undertaken only if highly valuable resources were endangered. The BLM has assessed the stabilization and repair needs of many homesteads, and would assess additional structures as needed. The agency would monitor key sites, including all those being managed for public interpretation, to ensure timely identification of natural deterioration.

Stabilization and erosion control measures would be allowed in wilderness, but only if resources unlikely to be duplicated elsewhere were threatened, and no other reasonable alternative existed. Such activities would be subject to the "minimum tool" requirement, and would not be allowed to degrade the area's overall character.

Fire Suppression

Eight well-preserved homesteads would be singled out as high-priority fire suppression zones. Additional sites could be added to this list if significant cultural resource values were threatened.

Special Designations

The BLM would place no special priority on nominating properties in the Planning Area to the National Register of Historic Places. Possibly, four or five properties would 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 Ditter Site could be added to the World Heritage List as part of the Chaco Culture listing.

The BLM would conduct frequent interpretive hikes that included visits to cultural resource sites. In addition to completing offsite interpretive measures such as brochures, exhibits, and other media, under Alternative D the BLM would encourage visitation at the Dittert Site, Lobo Canyon Petro-glyphs, and Ranger Station Reservoir. The agency would also develop public interpretation for outstanding homestead-era sites.

During the life of this plan, no onsite interpretive development would occur at the Pinole Site, The Citadel, Cebolla Canyon Community, or Aldridge Petroglyphs, but the BLM would manage these sites to protect their potential for public use. If unsolicited visitation warranted, the BLM would install visitor registration boxes at those sites.

Issue 8--Wildlife Habitat

In addition to maintaining existing habitats ***in the proper quality and quantity necessary to support the existing population in the area,*** the BLM would increase efforts to improve the quality and quantity of wildlife habitats within the Planning Area. The agency would undertake up to eight of the following new wildlife habitat improvement projects, generally in areas where limiting factors occurred (e.g., lack of water, appropriate habitat). (Refer to Appendix P for descriptions of other typical projects that could be used, e.g., water developments, vegetative manipulation, fences.) Sikes Act funding would be used for these projects wherever appropriate.

Prescribed Fires
& Wildland Fires Under Prescription

These two types of fire would be used throughout the Planning Area to maintain and/or enhance wildlife habitat and support the variety of wildlife populations. These prescribed burns would ***generally*** range from 50 to 1,000 acres in size, with an average of 500 acres each. ***However, under the fire management plan larger fires could be called***

for to provide for greater vegetative resource enhancement.

Prairie-Dog Colony Enhancement Area

As identified in Alternative B, this project would use the south half of the North Pasture and the Head Pasture of the El Malpais Allotment (Breaks Unit) as a prairie-dog colony enhancement area of approximately 1,000 acres. This would help support two local, special-status species (the burrowing owl and mountain plover), and if the colony expanded to 200 acres in size, it would also be a potential release site for the highly endangered black-footed ferret.

Wildlife Water Catchments

As identified in Alternative B, the BLM would install three wildlife water catchments within the Cerro Brillante Unit (T. 6 N., R. 12 W., Sec. 31, SE¼; Sec. 33, NE¼; Sec. 35, NE¼). These would be funded through the Sikes Act Program.

Riparian Fencing

As identified in Alternative B, the BLM would fence approximately 1½ miles of perennial stream (T. 5 N., R. 10 W., Secs. 2 and 3) along Cebolla Canyon below Cebolla Spring to protect the area. This is one of the few perennial stream sections that occur within the Planning Area.

Reintroductions

As identified in Alternative A, the BLM would work with the NMDG&F and the FWS to conduct feasibility evaluations for reintroducing native, special-status wildlife and/or plant species within the Planning Area.

Issue 9--Vegetation

Under Alternative D, the BLM would use a full range of management techniques (forest and woodland, livestock grazing, riparian, fire and watershed) to achieve the vegetative objectives.

The agency would allow piñon-juniper thinning to meet woodland and ponderosa pine objectives. Sites selected for such rehabilitation would be those with the highest potential for success; i.e., having the best soils, elevations, slopes and exposures. A variety of tree sizes and ages would be left. The ground cover from trees left after thinning would be between 10 and ***40*** percent.

Changes in livestock grazing management would be made to ensure accomplishment of vegetative objectives. AMPs/CRMPs including such objectives would continue to be developed. The Cerro Brillante CRMP ***has been completed***. ***P***lans for the Los Cerros, Techado Mesa, and Los Pilares Allotments ***have been*** amended to include vegetative objectives and requirements for minimum rest periods from livestock grazing. The minimum livestock grazing rest period would be from April 15 to October 15 for at least one pasture or area per allotment each year. New range improvements would be developed if needed to provide this rest. AMPs/CRMPs would contain objectives and actions for forests and woodlands, wildlife, riparian, fire and watershed management. If monitoring studies indicated the need, existing plans could be revised, new plans developed, and/or livestock grazing use could be reduced.

The BLM ***has*** fence***d*** spring areas used by livestock to exclude them, and would develop livestock and wildlife waters elsewhere. Springs not used by livestock could be developed for wildlife use. The BLM would plant willows and other native riparian species as needed. To allow for fully functioning riparian condition, the BLM would remove exotic species such as saltcedar and Russian olive using mechanical, biological or chemical treatments.

Prescribed fires and wildland fires under prescription would be used to manage fuel loads, protect private property and accomplish vegetative objectives. Fires ranging in size from 50 to 1,000 acres each would be used each year, including reducing piñon-juniper in potential ponderosa pine habitat. If needed to ensure reestablishment on some locations, the BLM would plant ponderosa seedlings. In areas proposed for prescribed fires, the agency would plan pre- and post-burn rest from grazing in coordination with the affected allottee(s).

For watershed management, the BLM would consider building small structures to spread or divert water. Control of noxious weeds (e.g., knapweeds, bindweed, leafy spurge, thistles) would be allowed by mechanical, chemical or biological means. Site-specific EAs would be completed before any structures were built or noxious weeds treated. To improve watershed conditions and assist in accomplishing vegetative objectives, the BLM would provide for the use of such forms of vegetation treatment in AMPs/ CRMPs. Treatments would be considered in areas where livestock rest and prescribed fires were not effective; e.g., areas where junipers too small for fuelwood had invaded (in meadowlike openings, grasslands, or savannas), or areas where fire-tolerant species such as rubber rabbitbrush had increased or invaded (e.g., in valley bottoms, drainage, meadowlike openings).

Issue 10--Boundary & Land Tenure Adjustments

The Planning Area includes 24,200 acres outside the NCA boundary (non-NCA units). A total of 17,100 acres outside the NCA boundary but contiguous to it would also be considered as additions to the NCA (refer to Table 1-1 in Chapter 1 and Map 32). Under Alternative D, the BLM would recommend that the Congress amend the NCA boundary to accomplish the following.

- ***Exclude 960 acres of Acoma Pueblo lands currently within the NCA from the Spur Unit and Cebolla Wilderness. This would include several parcels totalling 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.***

- ***Expand the NCA to include 41,300 acres in the Breaks Non-NCA, Brazo Non-NCA, Continental Divide-AFO, Tank Canyon-SFO, and Tech-ado Mesa-SFO Units (38,900 acres federal and 2,400 acres private). (Refer to Chapter 1 for a more detailed description of each parcel.) The-se parcels are within Cibola, Catron & Socorro Counties, and are contiguous to and a logical extension of the NCA. The BLM would acquire inholdings if owners were willing, with exchange being the preferred acquisition method.***

- ***The BLM would add two acquisition recommendations: (1) a treadway for the CDNST by easement, exchange or sale in the Cerro Brillante-AFO Unit, if owners were willing; and (2) a 160-acre parcel that includes an early historical ruin with interpretive potential (portions of T. 5 N., R. 11 W., Sec. 3 and T. 6 N., R. 11 W., Sec. 34). Other acquisition recommendations in the Land Protection Plan (USDI, BLM 1989) would remain in effect.***

- ***Modify the boundary of the Cebolla Wilderness to include portions of newly acquired lands contiguous to the current wilderness boundary (an increase of 4,090 acres). This change, less the 160 acres of Acoma lands excluded, would result in a net addition of 3,930 acres to the Cebolla Wilderness (refer to Map 28).***

Pending decisions from the Congress, the BLM would manage the Breaks and Brazo Non-NCA Units in accordance with provisions of this plan. The Continental Divide-AFO Unit would be managed under the Rio Puerco RMP. The Techado Mesa-SFO and Tank Canyon-SFO Units would continue to be managed under the Socorro RMP. The BLM would issue a temporary withdrawal from the public land and minerals laws for all public lands within the non-NCA units.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Eliminate Grazing from the Planning Area

Some individuals have suggested that grazing be eliminated completely from the NCA. However, this measure is not consistent with P.L. 100-225, which specifies that within the NCA, livestock grazing ***shall be*** permitted to continue, including in wilderness.

Resource conditions within the Planning Area do not

warrant area-wide prohibition of livestock grazing. The Rio Puerco and Socorro RMPs contain the management prescriptions needed to meet resource management objectives, including the vegetative objectives established in this plan.

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, NCA designation, regulations, and existing management policies are sufficient to protect 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 is not considering the designation of the Chain of Craters as an ACEC.

Designate the Chain of Craters Area as an American Indian Wilderness

In P.L. 100-225, the Congress established the Chain of Craters as a WSA and required the BLM to review its suitability for designation as wilderness. As part of this El Malpais Plan, the BLM is recommending whether the area should or should not be managed as wilderness.

Several American Indian groups use El Malpais and the Chain of Craters for traditional cultural practices. The Acomas and Ramah Navajos have taken the strongest interest in how the Planning Area is managed; other tribes such as the Zuni, Laguna, Alamo Navajo, Cañoncito Navajo and Hopi may also have concerns.

At issue is 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.

Ramah and Acoma have requested unrestricted vehicle access to the Chain of Craters. This is contrary to uses allowable under the Wilderness Act. Unless specifically allowed in the 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). Designating the Chain of Craters as an American Indian Wilderness with unrestricted motor vehicle access as an alternative is not considered in this plan.

The Chain of Craters is evaluated in this plan as to its suitability for inclusion in the National Wilderness Preservation System (NWPS). Only the Congress can designate this area as wilderness or release it from wilderness review. Should the Congress ultimately designate the area, the BLM will make them aware of requests by local American Indians to use motor vehicles for access to these lands for traditional cultural practices. Such use would require special provisions in the designating legislation, or the area would have to be managed under the Wilderness Act, BLM policy and regulation.

Allow Unrestricted Collection of Prehistoric Pottery

As a traditional activity that should be allowed in the Planning Area, Acoma Pueblo has identified the collection of prehistoric pottery for use as temper in the manufacture of contemporary pottery. This practice dates back to at least A.D. 1000. For Acoma people, visiting ancestral places and gathering objects made by their forebears is an important means of maintaining continuity and connection with the past. As supplies of prehistoric pottery on Acoma lands are depleted, the Planning Area could become important for this activity.

Frequently, virtually all identifiable sherds collected for this purpose are removed from archeological sites; few other natural or cultural processes in the Planning Area pose a greater danger to the scientific potential of the sites. Pottery is the principal means of dating prehistoric sites and identifying their local and external connections. Scientific excavations are increasingly expensive, and in this area they are often strongly opposed by American Indians. For these reasons and under all alternatives, surface archeological investigations would be the principal means of scientific study during the life of this plan.

P.L. 100-225 directs the BLM to allow American Indians access to the NCA for traditional cultural practices. For this reason, the agency has given serious consideration to allowing unrestrict-ed collection of pottery from the surface of prehistoric sites, either within the NCA as a

whole or within particular portions.

However, collection of pottery is also explicitly prohibited by ARPA. P.L. 100-225 places a great deal of emphasis on the enforcement of ARPA, and the history of the El Malpais legislation 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 P.L. 100-225. Therefore, unrestricted collection of pottery would not be allowed under any of the plan alternatives.

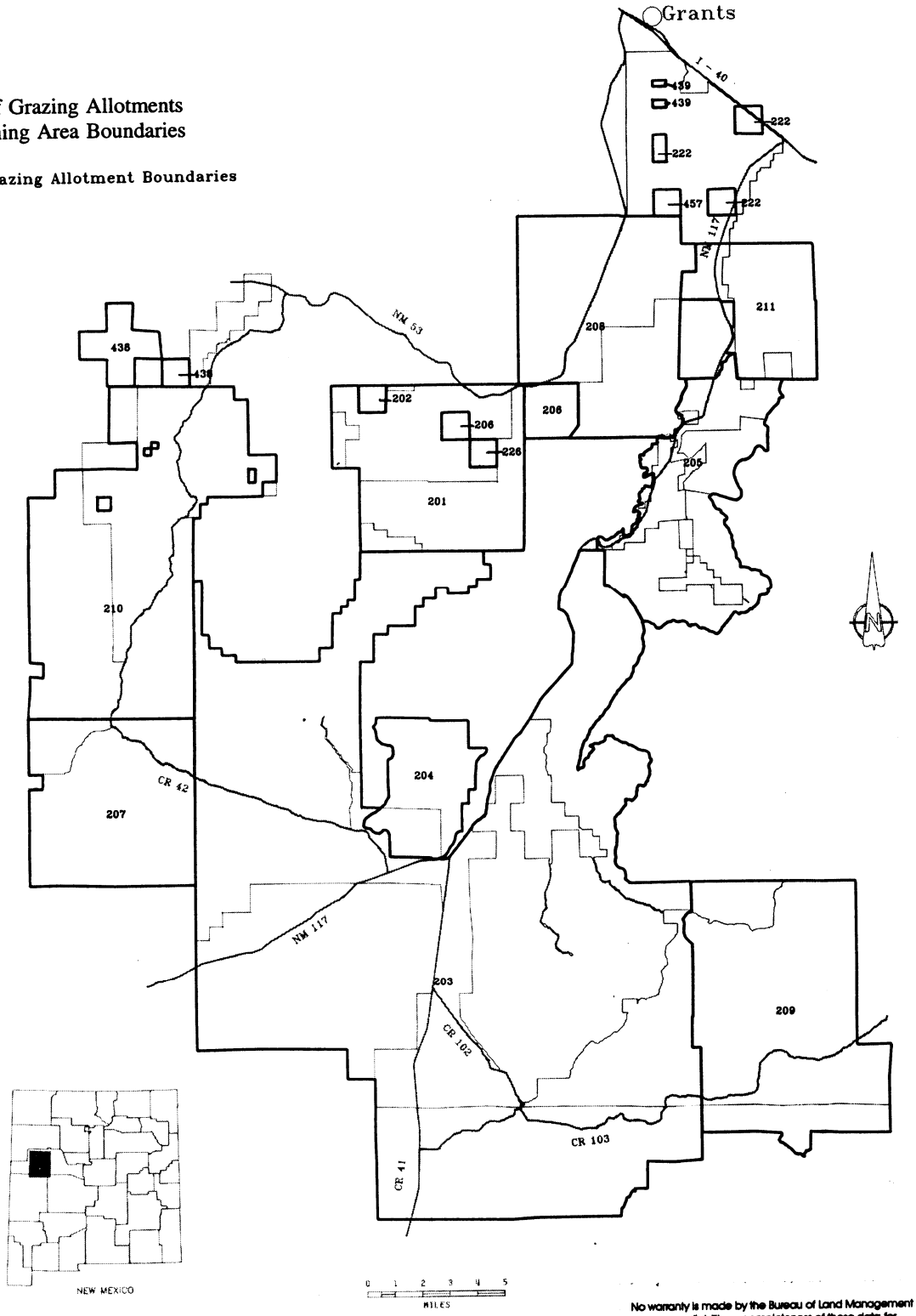
MAPS

El Malpais Planning Area

Map 4

Overlap of Grazing Allotments
with Planning Area Boundaries

Grazing Allotment Boundaries



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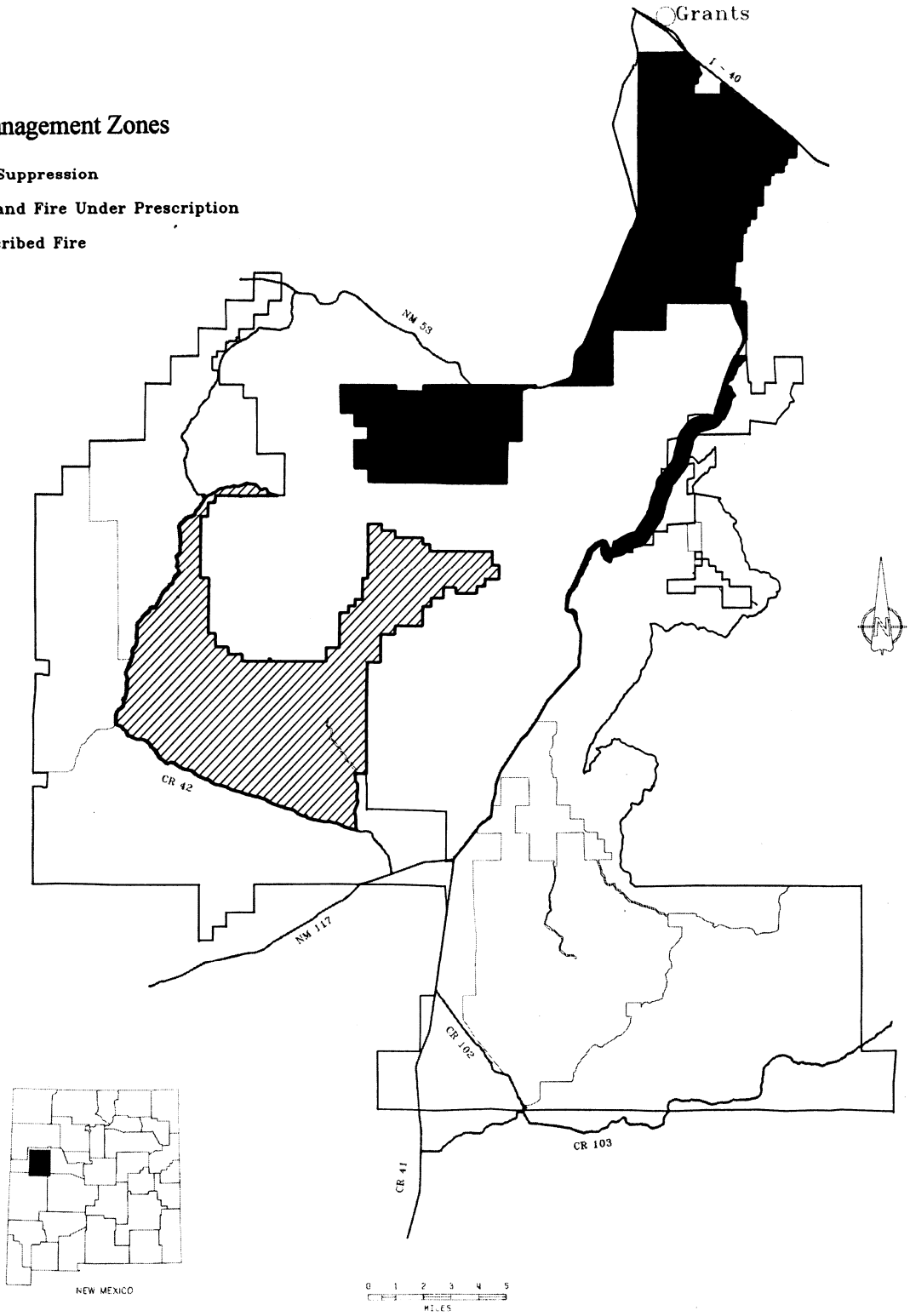
El Malpais Planning Area



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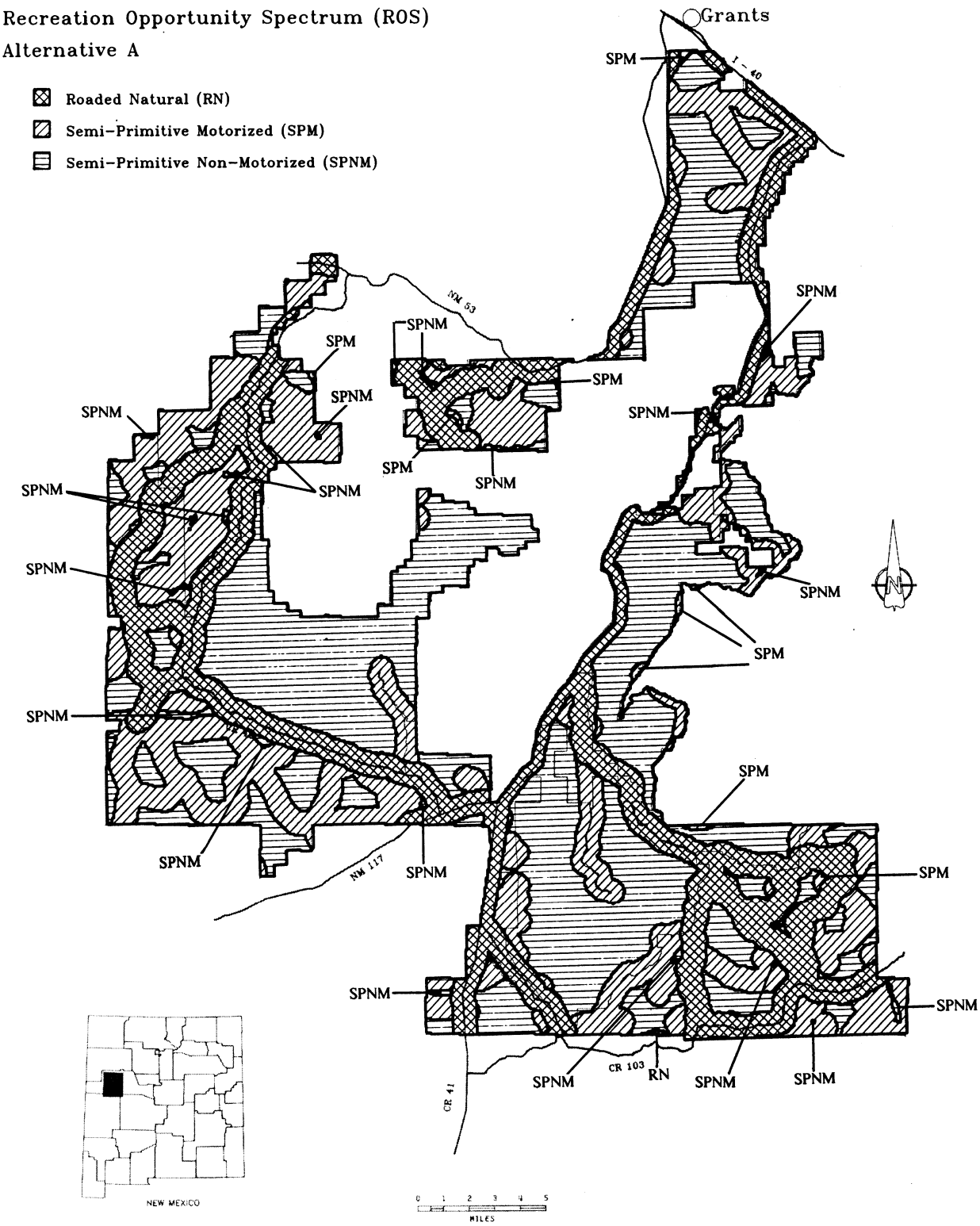
El Malpais Planning Area

Map 6

Recreation Opportunity Spectrum (ROS)

Alternative A

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



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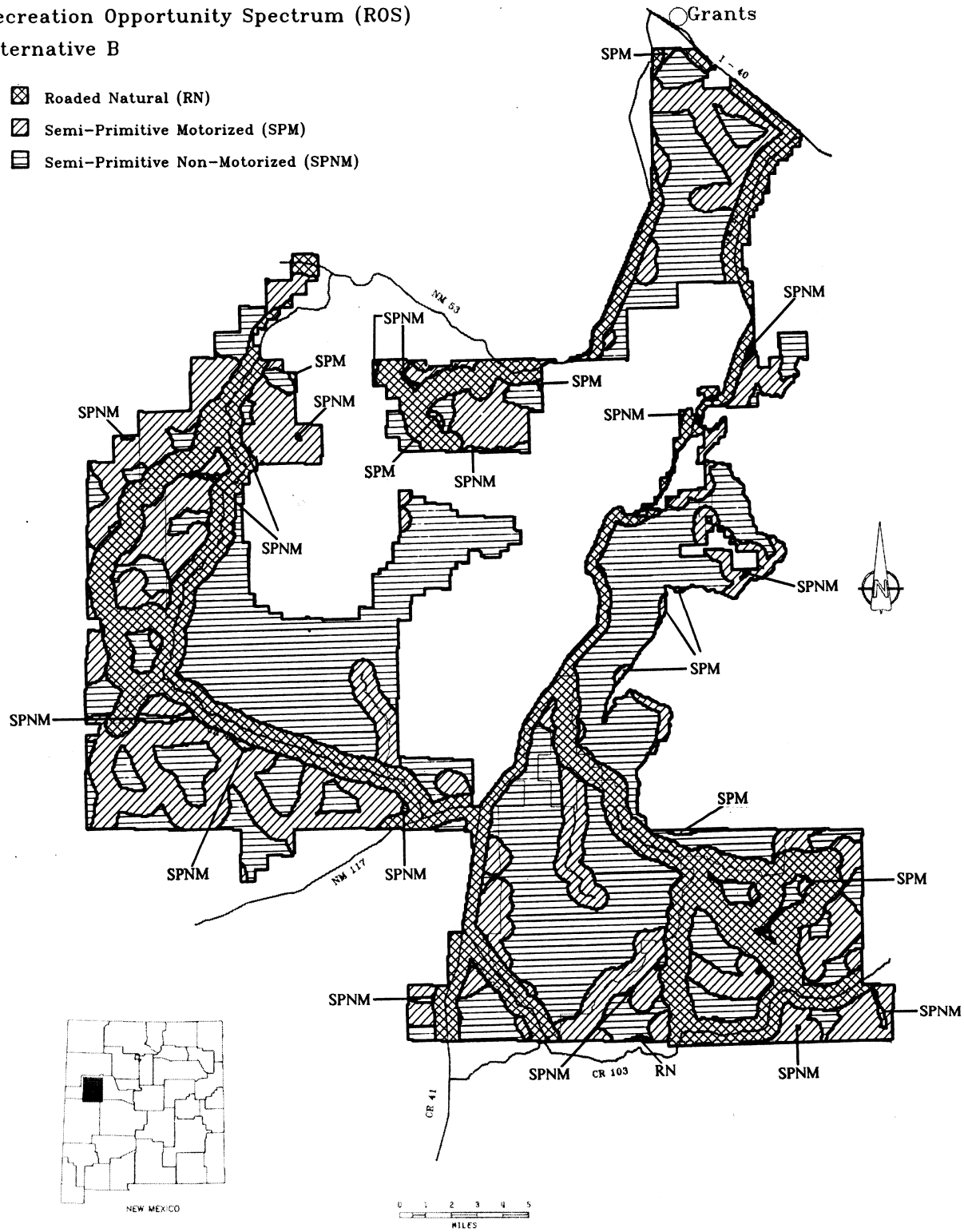
El Malpais Planning Area

Map 7

Recreation Opportunity Spectrum (ROS)

Alternative B

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



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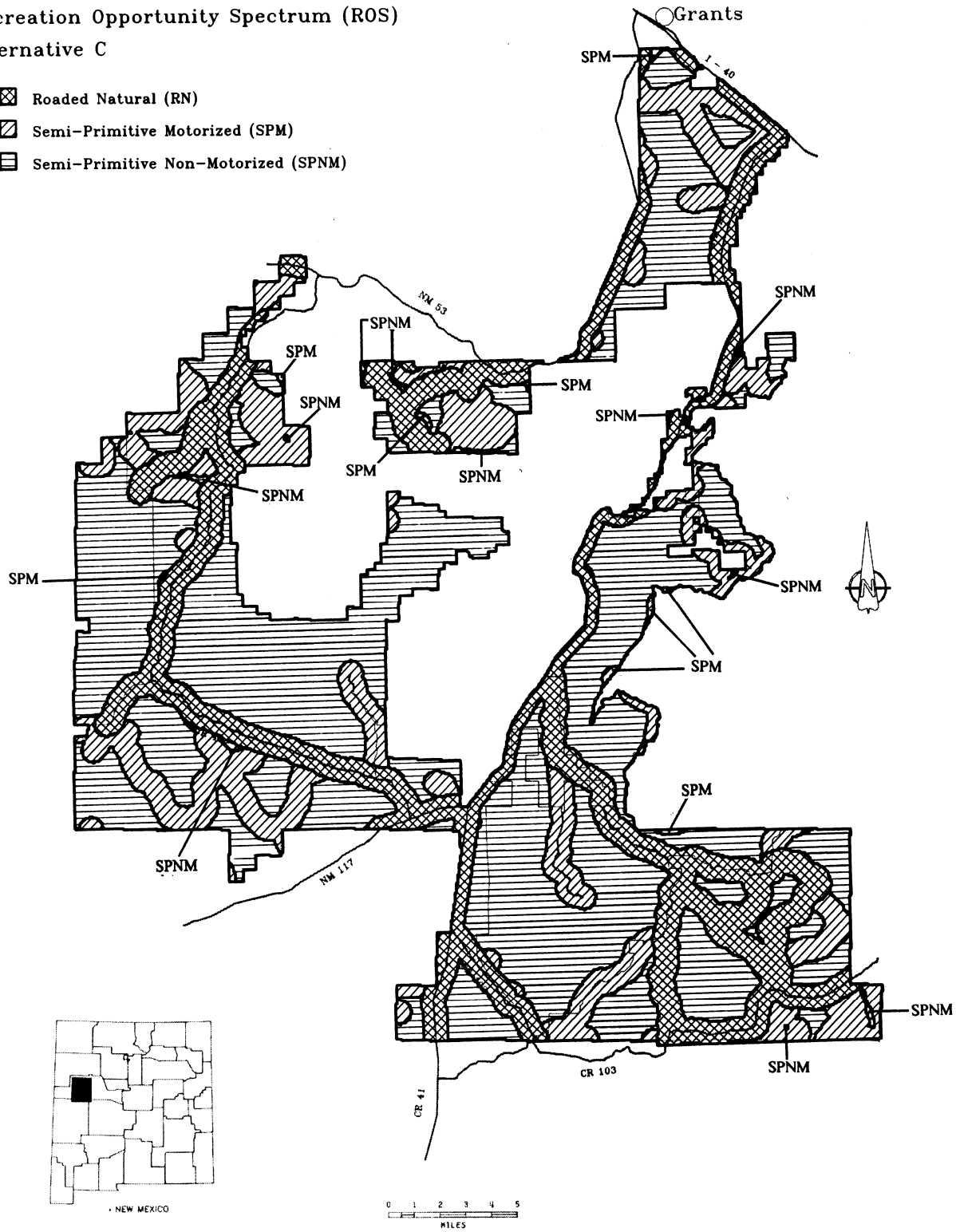
El Malpais Planning Area

Map 8

Recreation Opportunity Spectrum (ROS)

Alternative C

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



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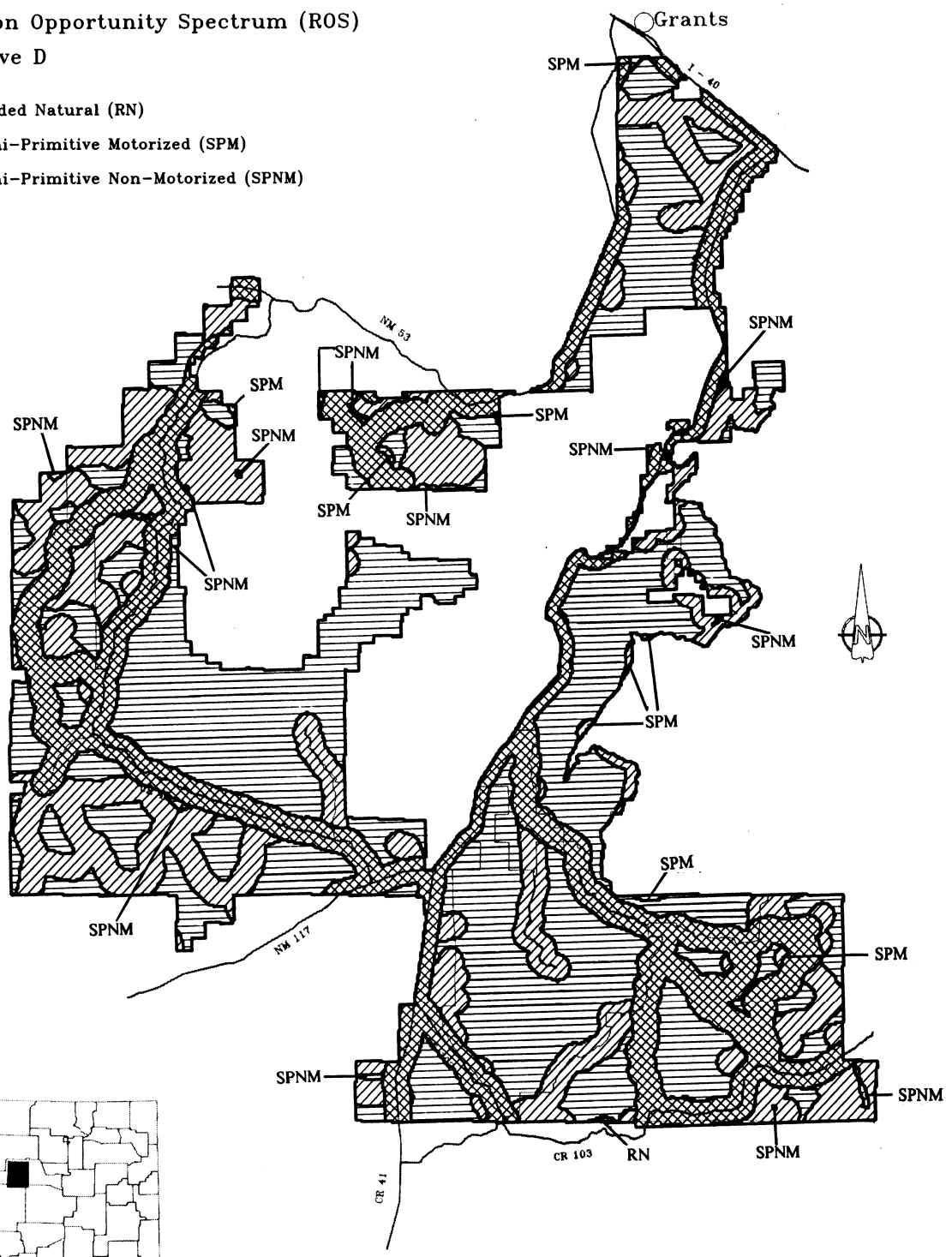
El Malpais Planning Area

Map 9

Recreation Opportunity Spectrum (ROS)

Alternative D

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



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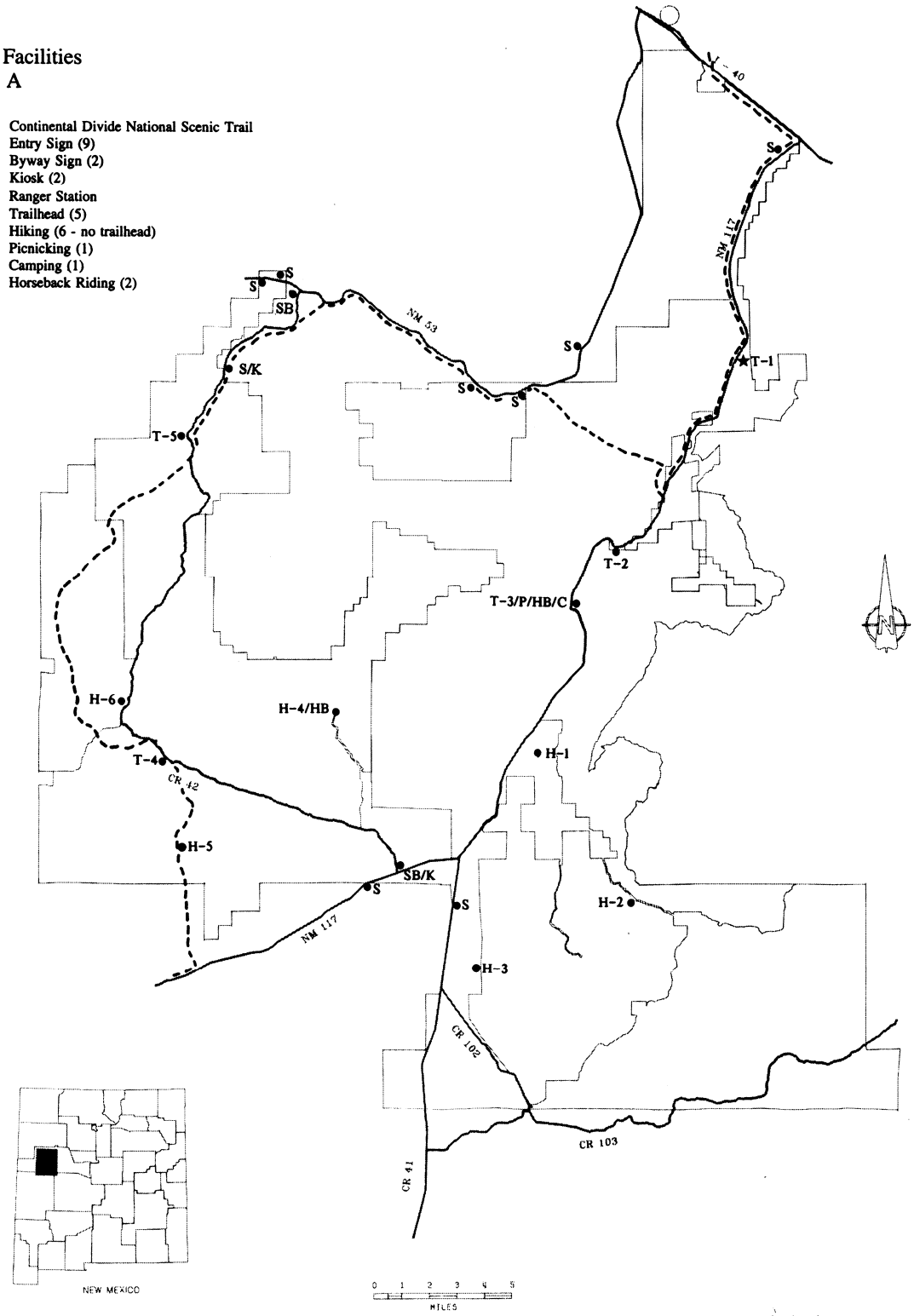
35 15' 108 22'30" 15' 108 45' 107 37'30" 35 1 35 45' 30' 34

El Malpais Planning Area

Map 10

Recreation Facilities
Alternative A

- - - -	Continental Divide National Scenic Trail
S	Entry Sign (9)
SB	Byway Sign (2)
K	Kiosk (2)
★	Ranger Station
T	Trailhead (5)
H	Hiking (6 - no trailhead)
P	Picnicking (1)
C	Camping (1)
HB	Horseback Riding (2)



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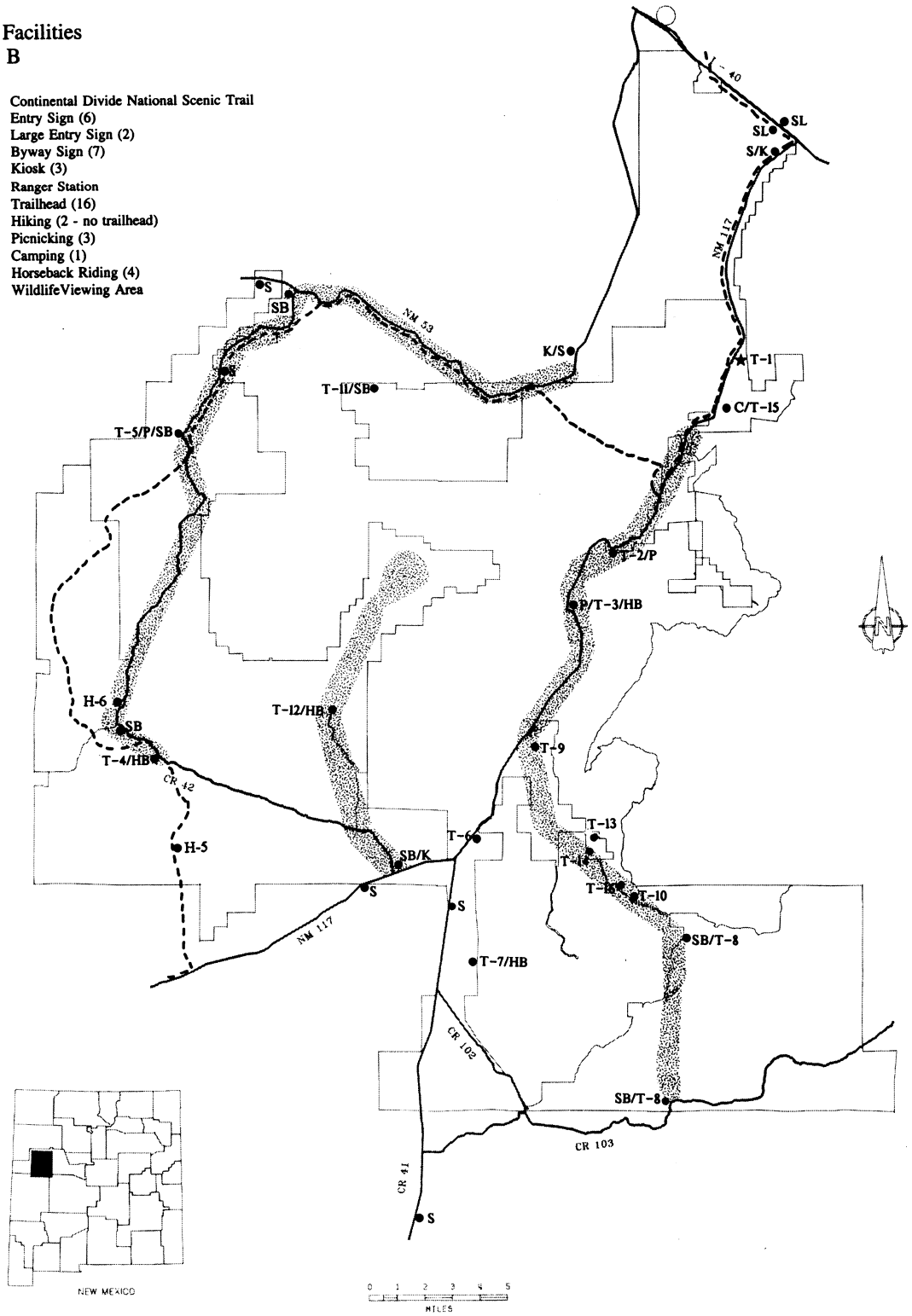
El Malpais Planning Area

Map 11

Recreation Facilities
Alternative B

----	Continental Divide National Scenic Trail
S	Entry Sign (6)
SL	Large Entry Sign (2)
SB	Byway Sign (7)
K	Kiosk (3)
★	Ranger Station
T	Trailhead (16)
H	Hiking (2 - no trailhead)
P	Picnicking (3)
C	Camping (1)
HB	Horseback Riding (4)
▒	WildlifeViewing Area



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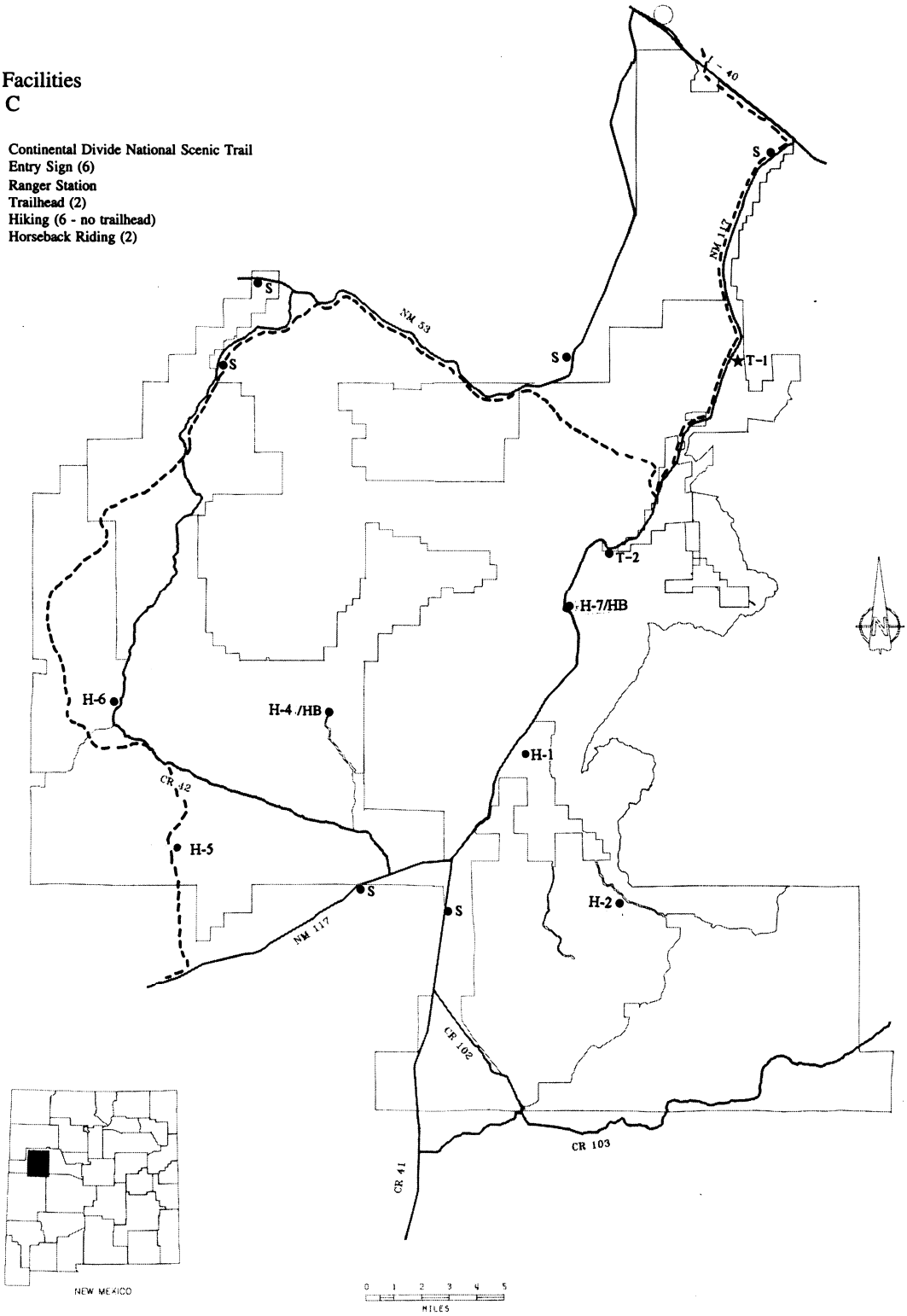
El Malpais Planning Area

Map 12

Recreation Facilities
Alternative C

----	Continental Divide National Scenic Trail
S	Entry Sign (6)
★	Ranger Station
T	Trailhead (2)
H	Hiking (6 - no trailhead)
HB	Horseback Riding (2)



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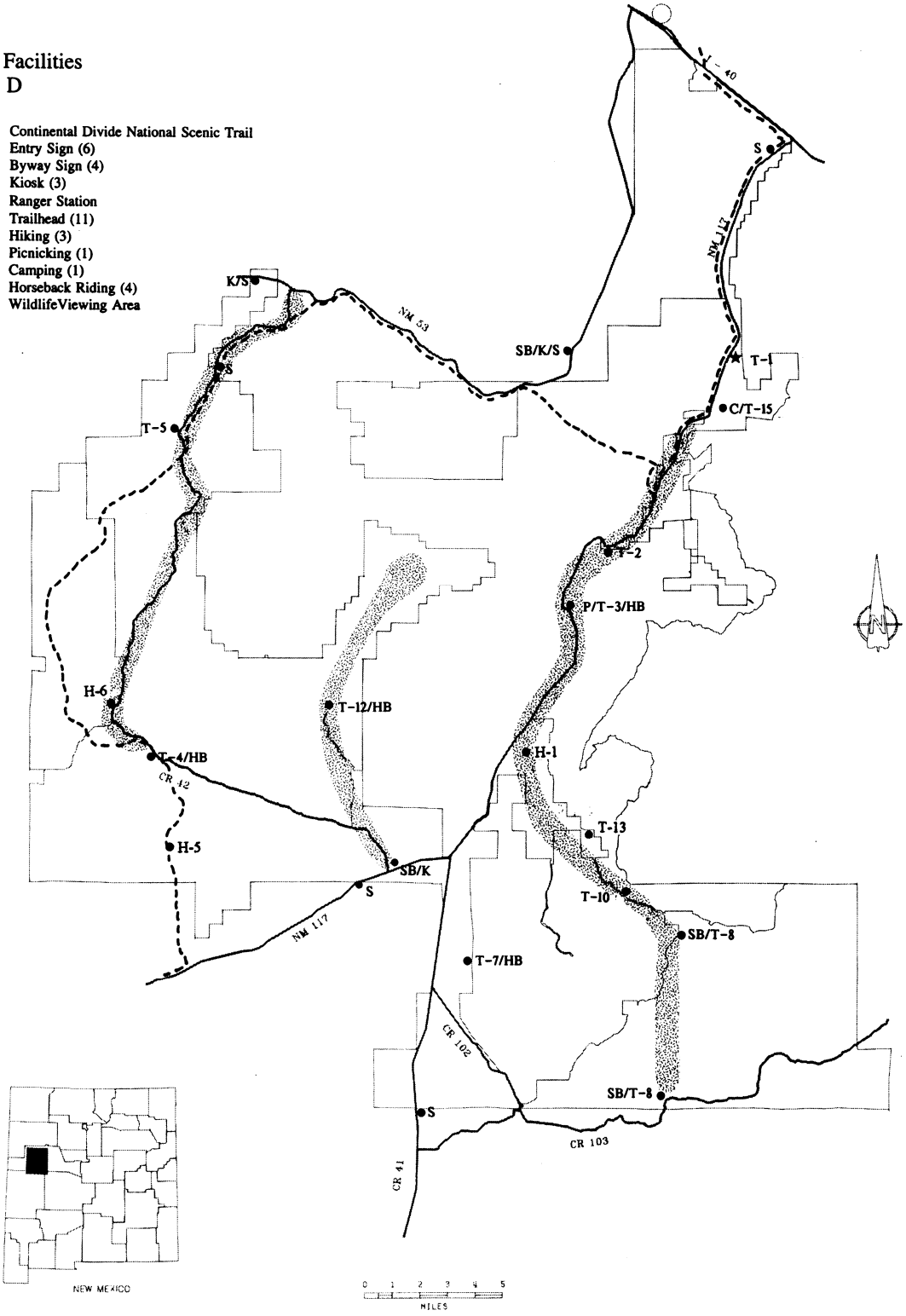
El Malpais Planning Area

Map 13

Recreation Facilities
Alternative D

- ---- Continental Divide National Scenic Trail
- 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)
- WildlifeViewing Area



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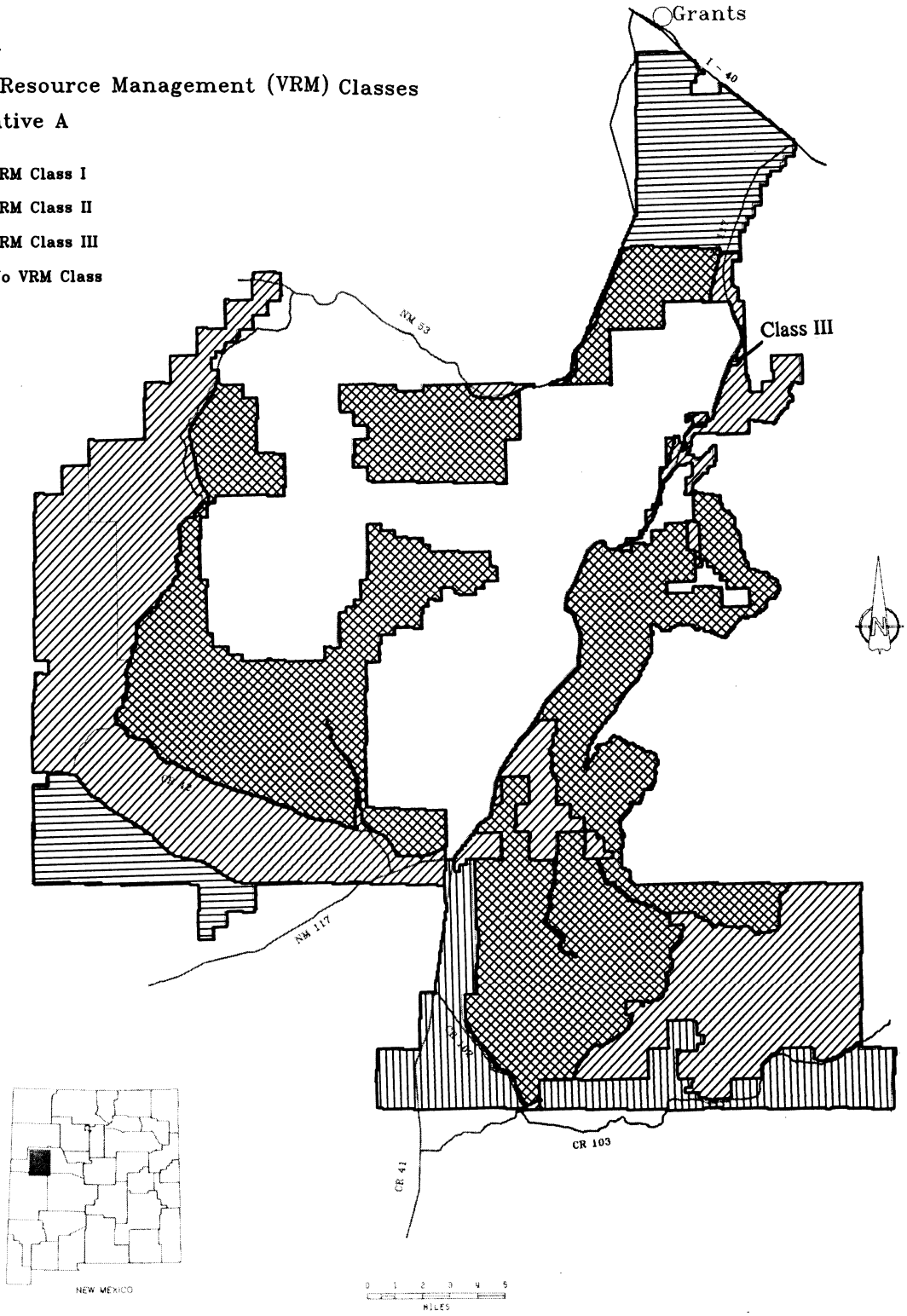
El Malpais Planning Area

Map 14

Visual Resource Management (VRM) Classes

Alternative A

- VRM Class I
- VRM Class II
- VRM Class III
- No VRM Class



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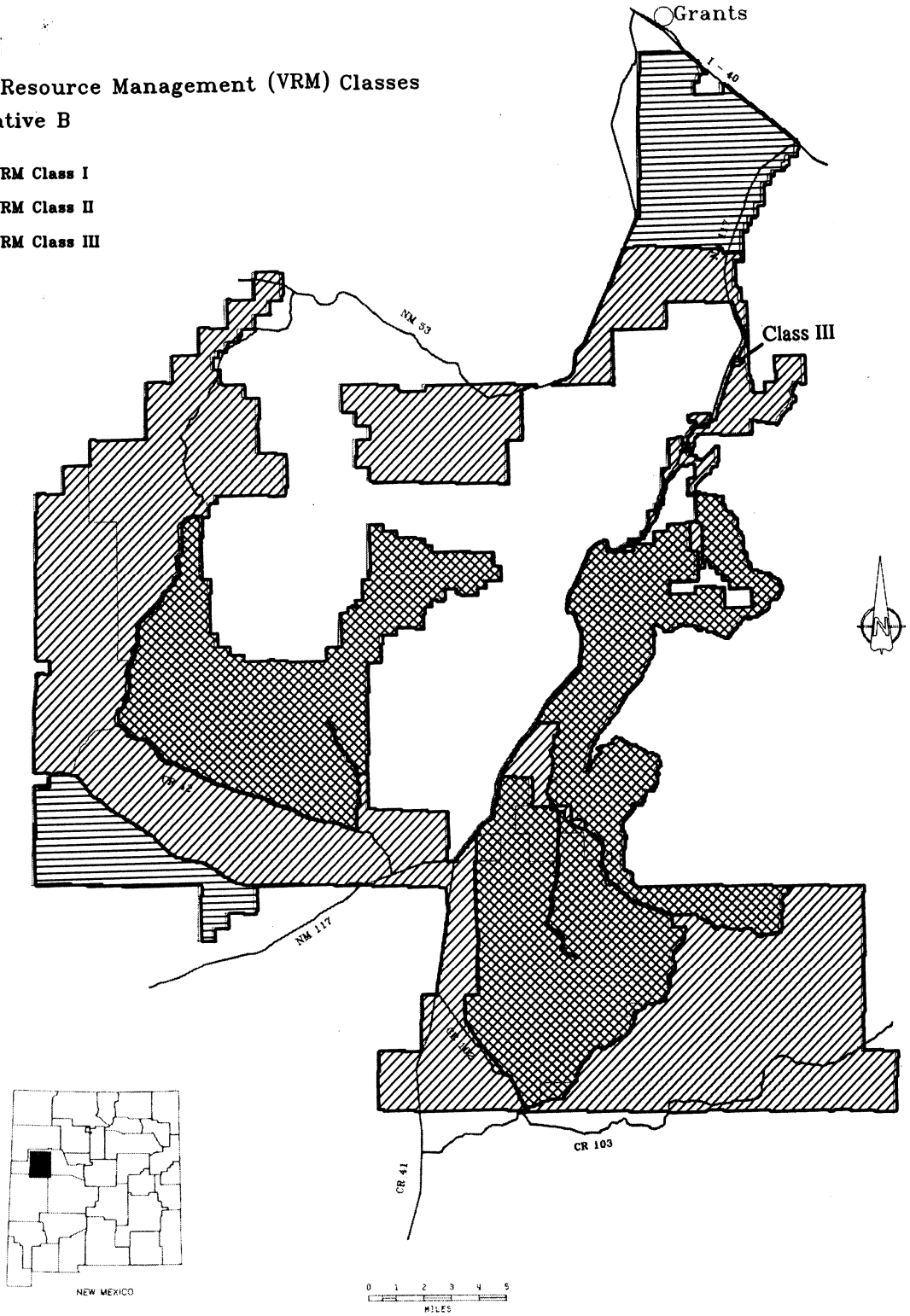
El Malpais Planning Area

Map 15

Visual Resource Management (VRM) Classes

Alternative B

- VRM Class I
- VRM Class II
- VRM Class III



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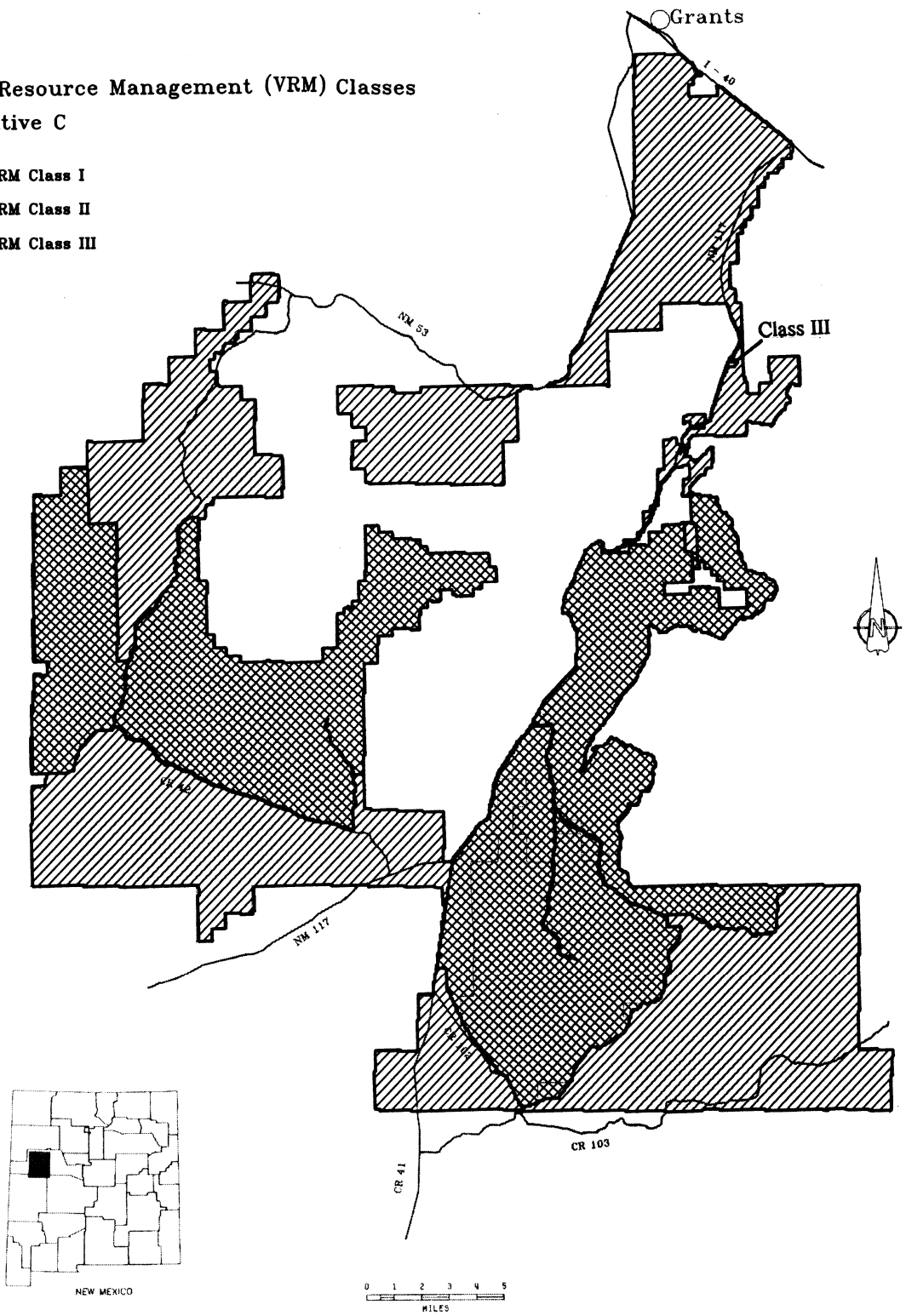
El Malpais Planning Area

Map 16

Visual Resource Management (VRM) Classes
Alternative C

- VRM Class I
- VRM Class II
- VRM Class III



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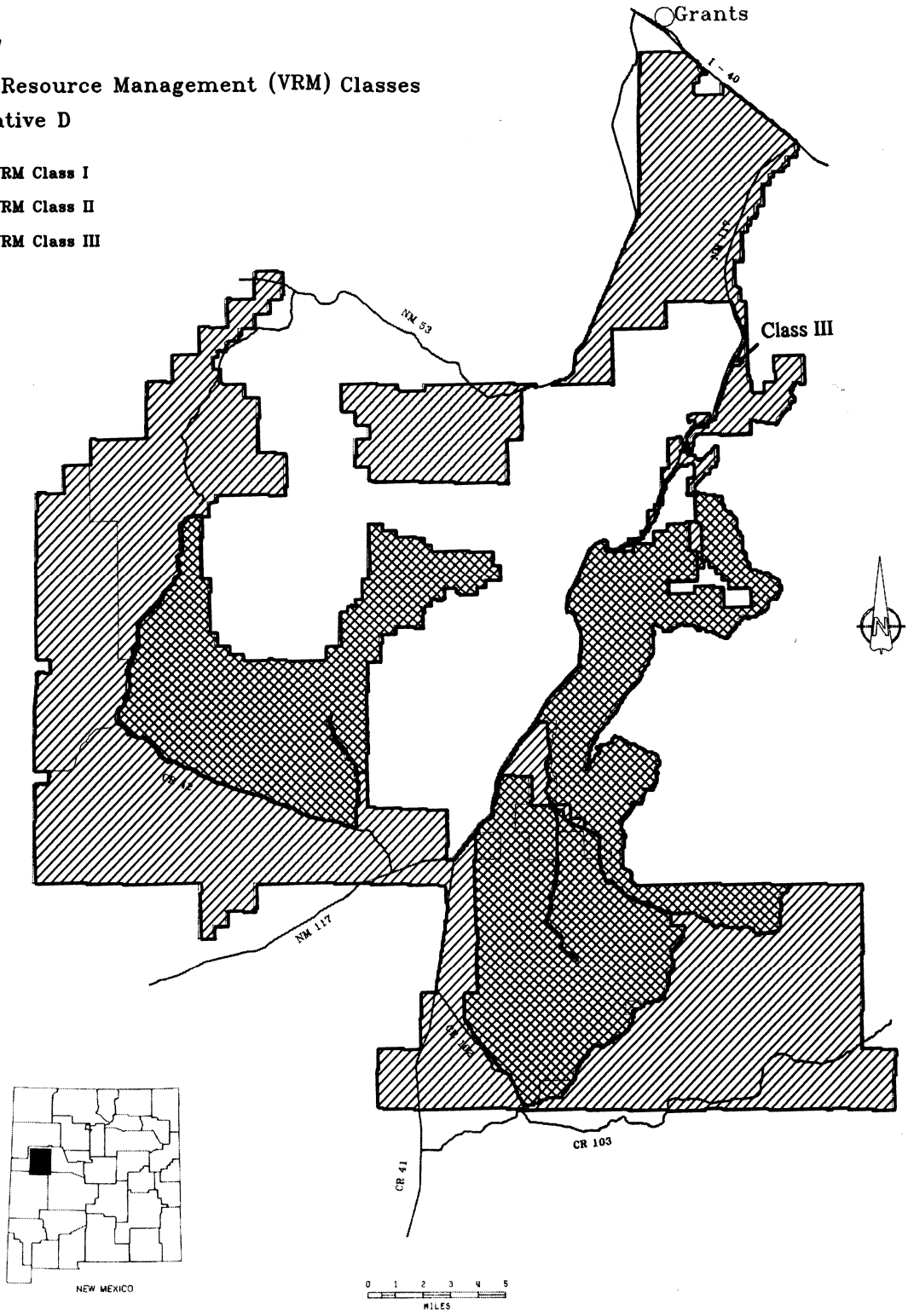
El Malpais Planning Area

Map 17

Visual Resource Management (VRM) Classes

Alternative D

- VRM Class I
- VRM Class II
- VRM Class III



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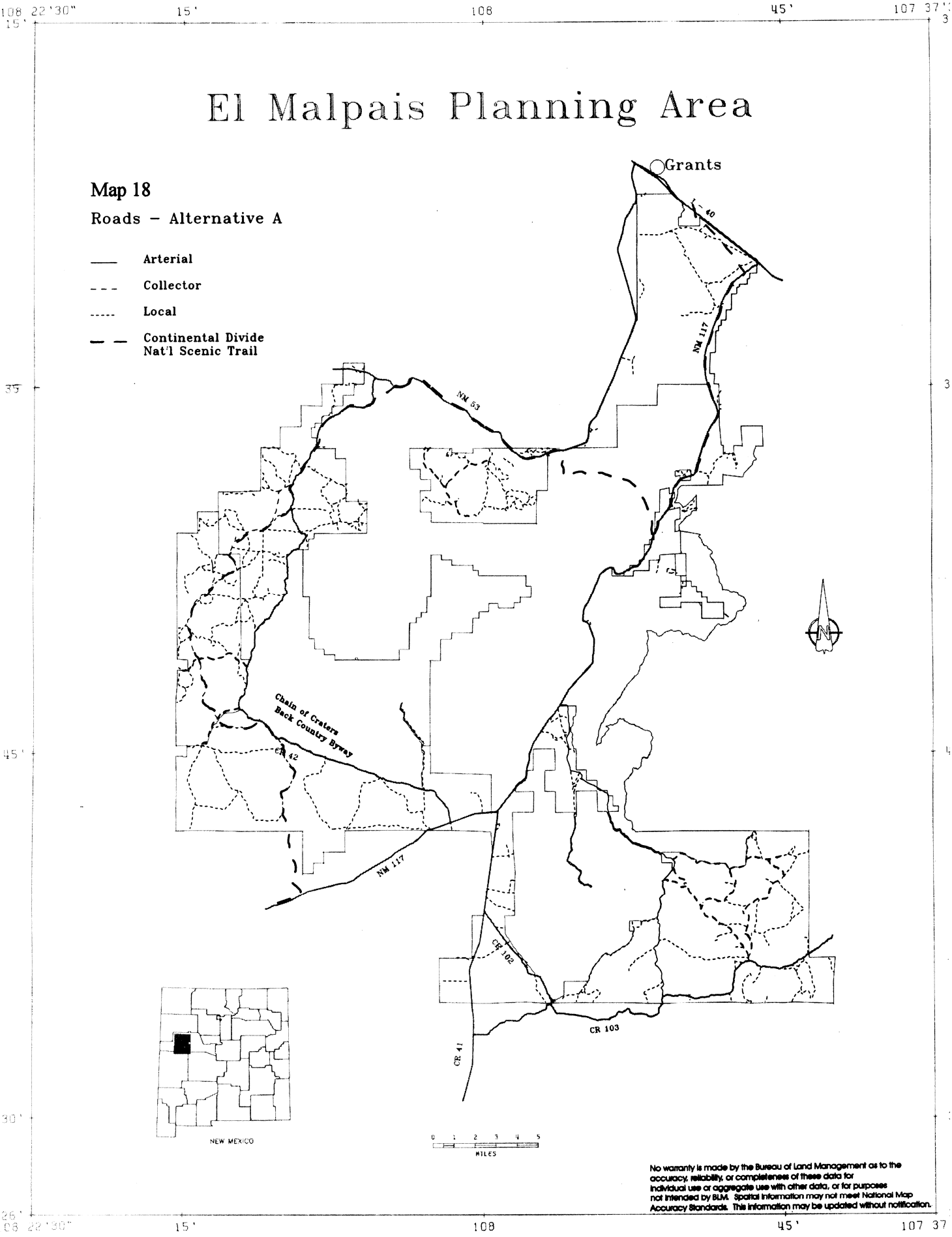
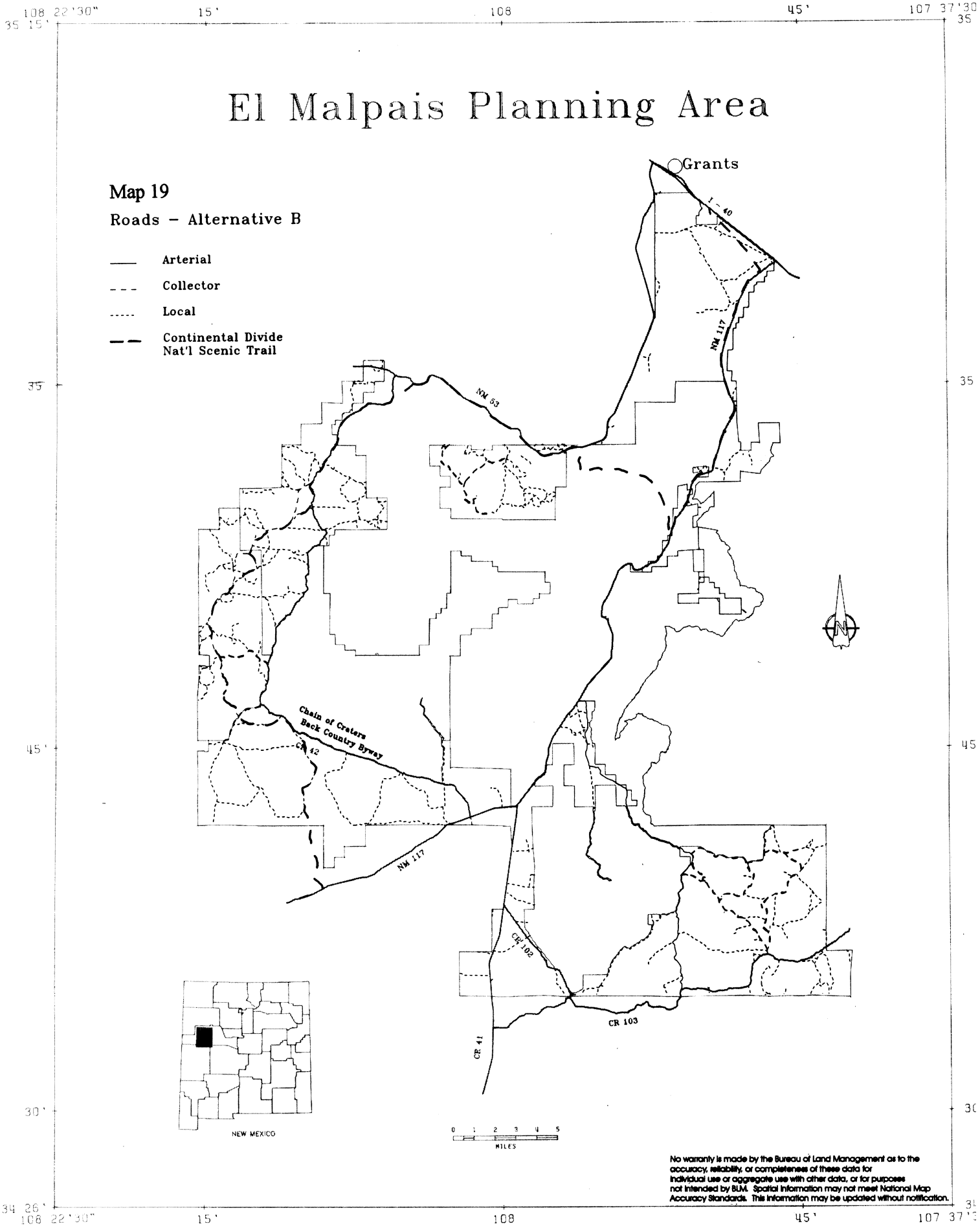
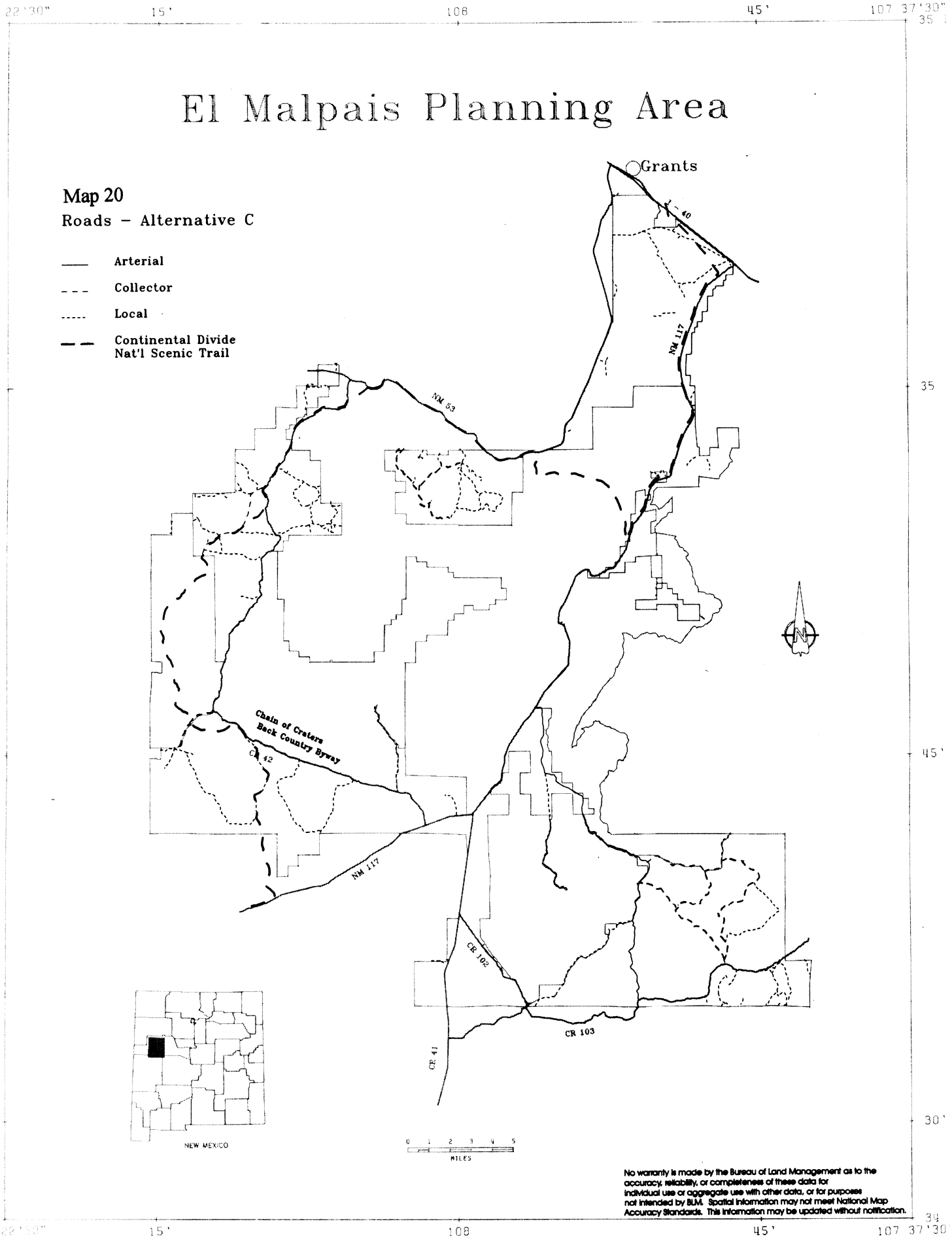
El Malpais Planning Area



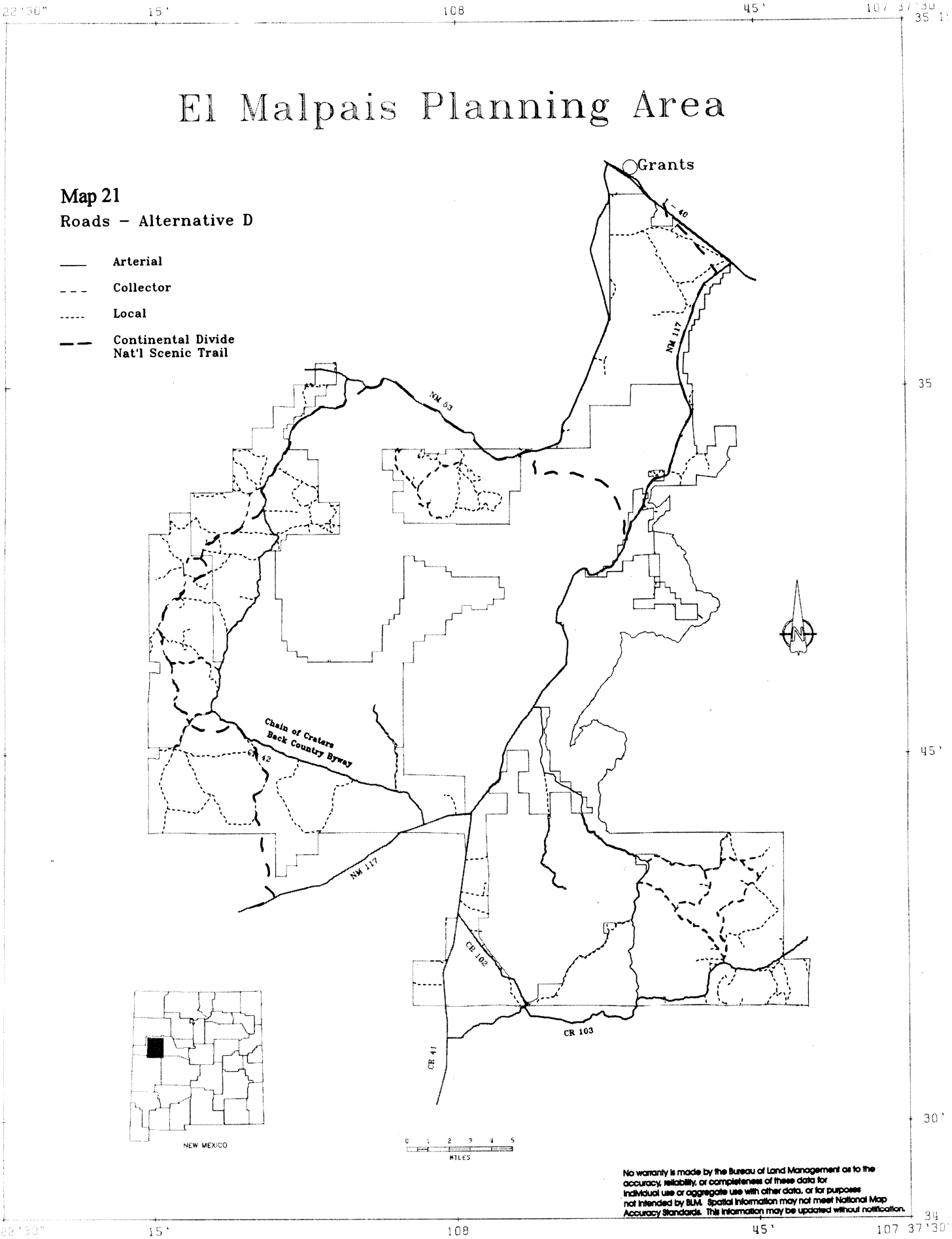
El Malpais Planning Area



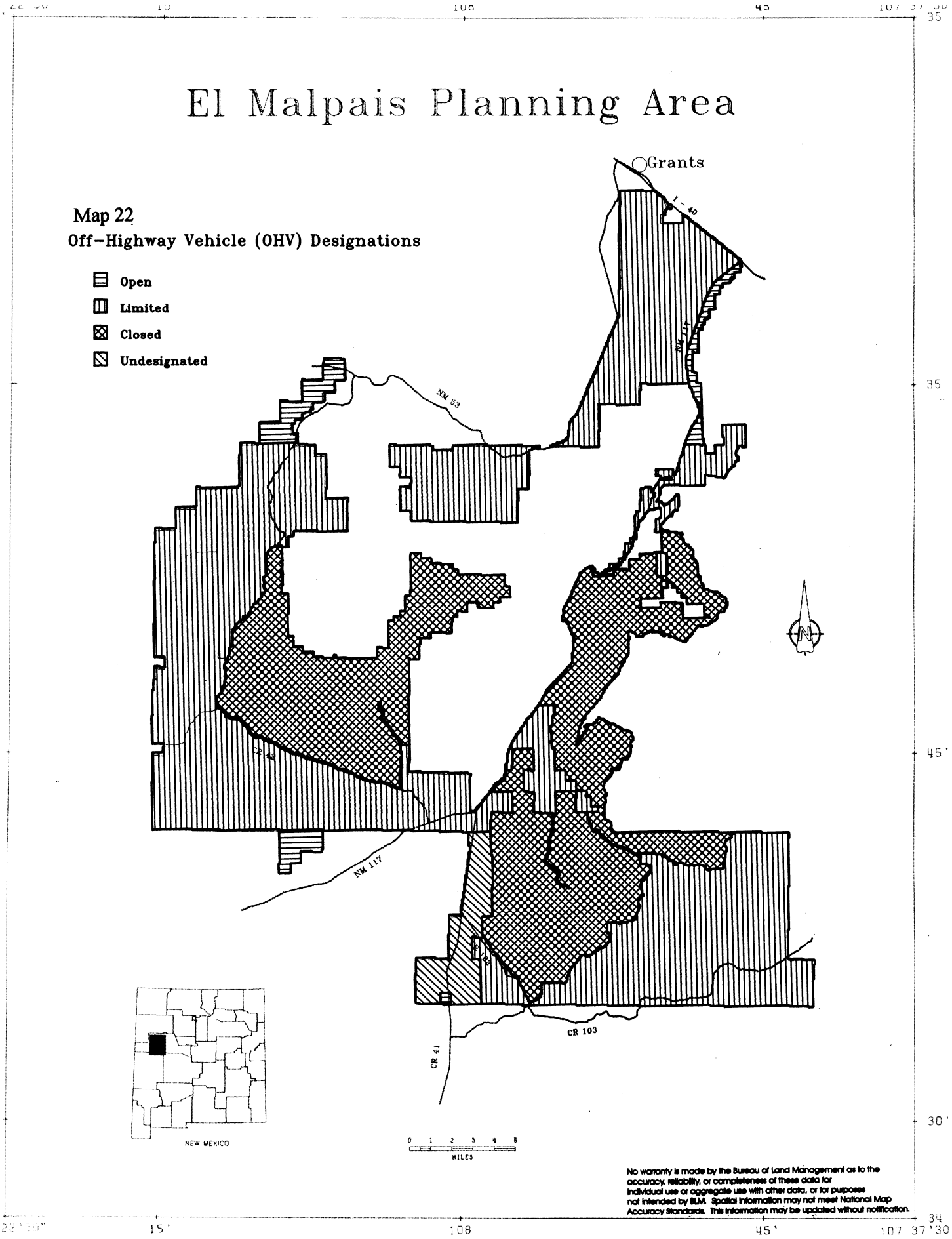
El Malpais Planning Area



El Malpais Planning Area



El Malpais Planning Area

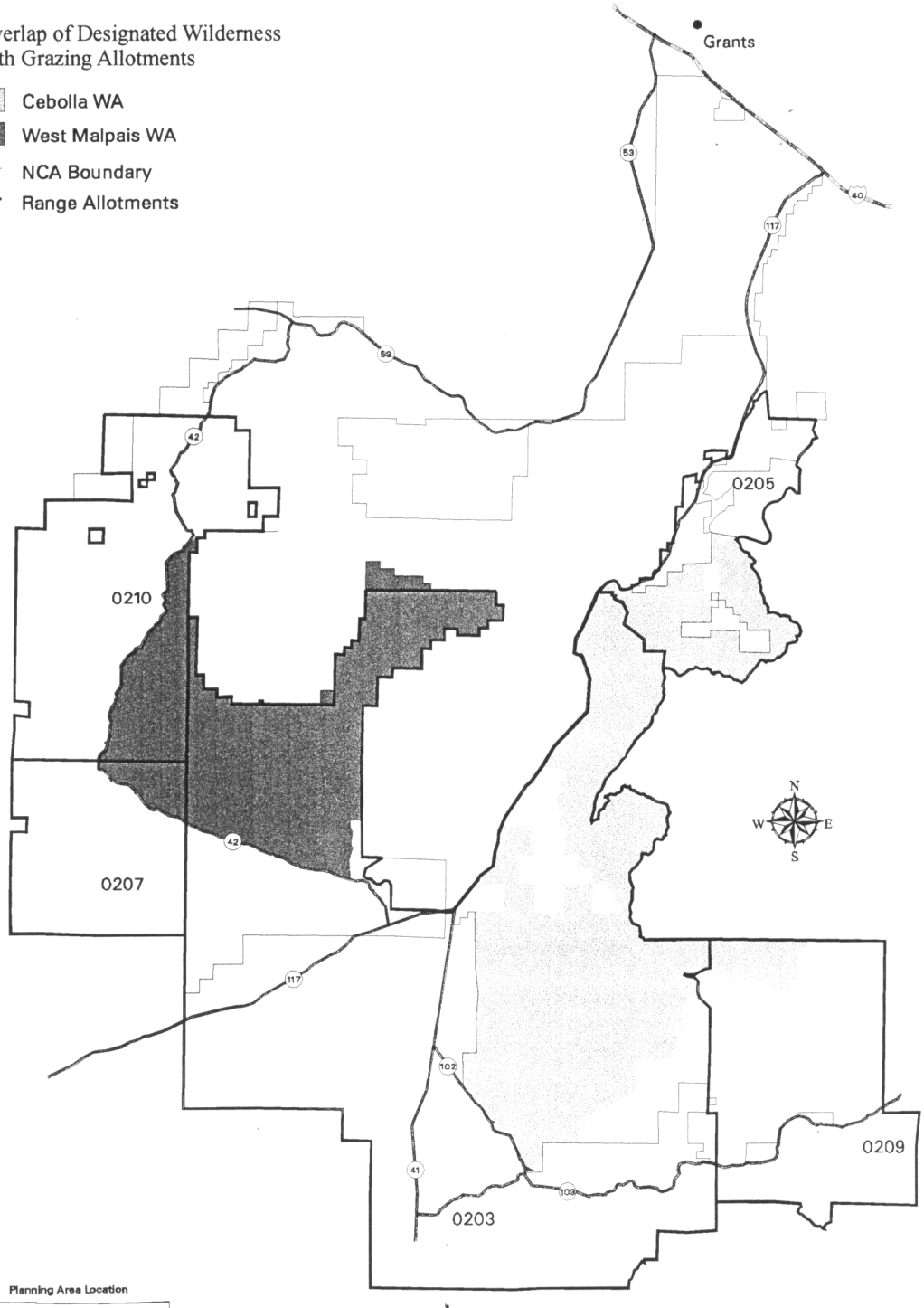


El Malpais Planning Area

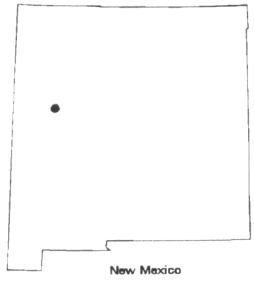
Map 23

Overlap of Designated Wilderness
with Grazing Allotments

- Cebolla WA
- West Malpais WA
- NCA Boundary
- Range Allotments



Planning Area Location



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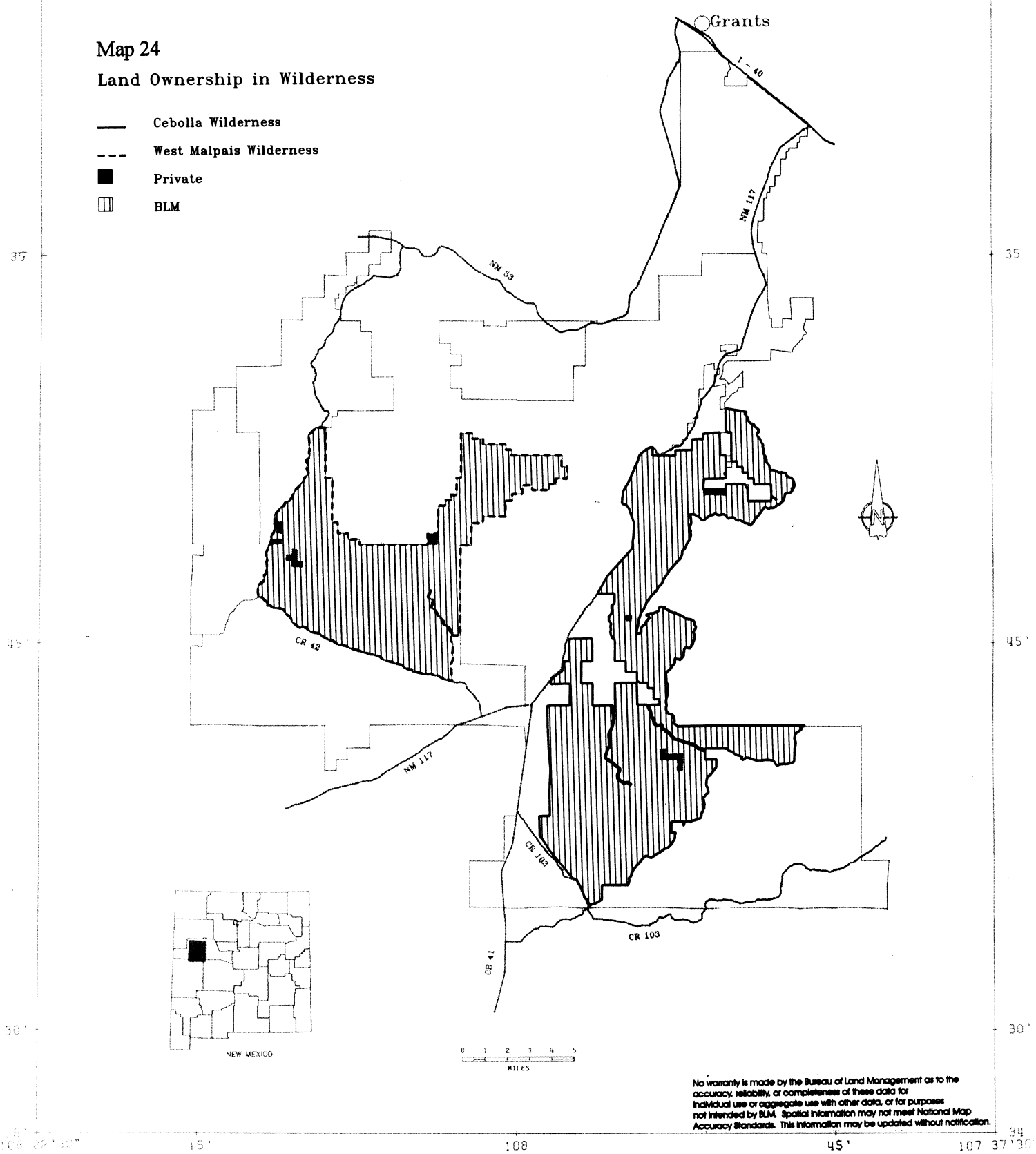
El Malpais Planning Area



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El Malpais Planning Area

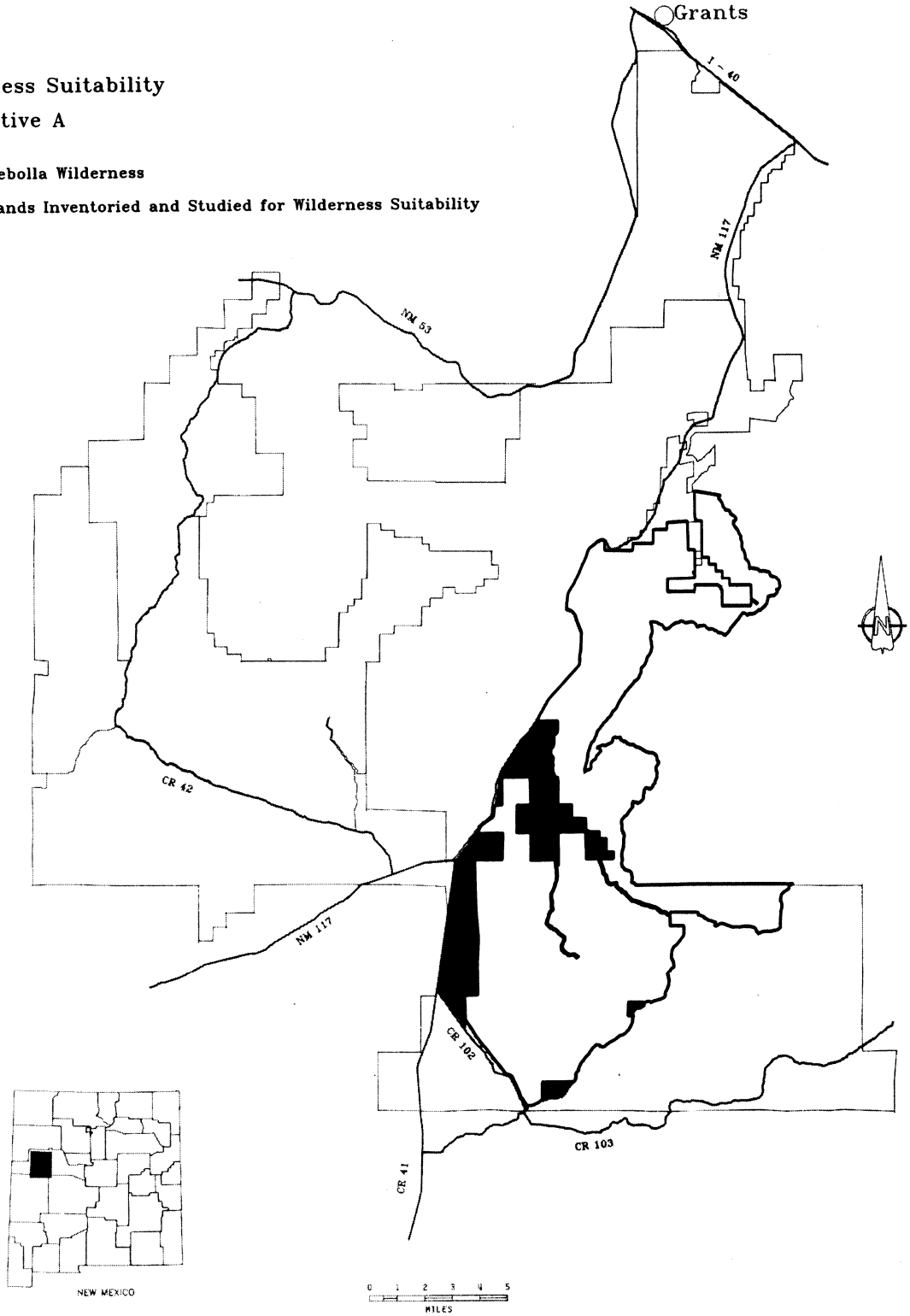
Map 25

Wilderness Suitability

Alternative A

Cebolla Wilderness

Lands Inventoried and Studied for Wilderness Suitability



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El Malpais Planning Area

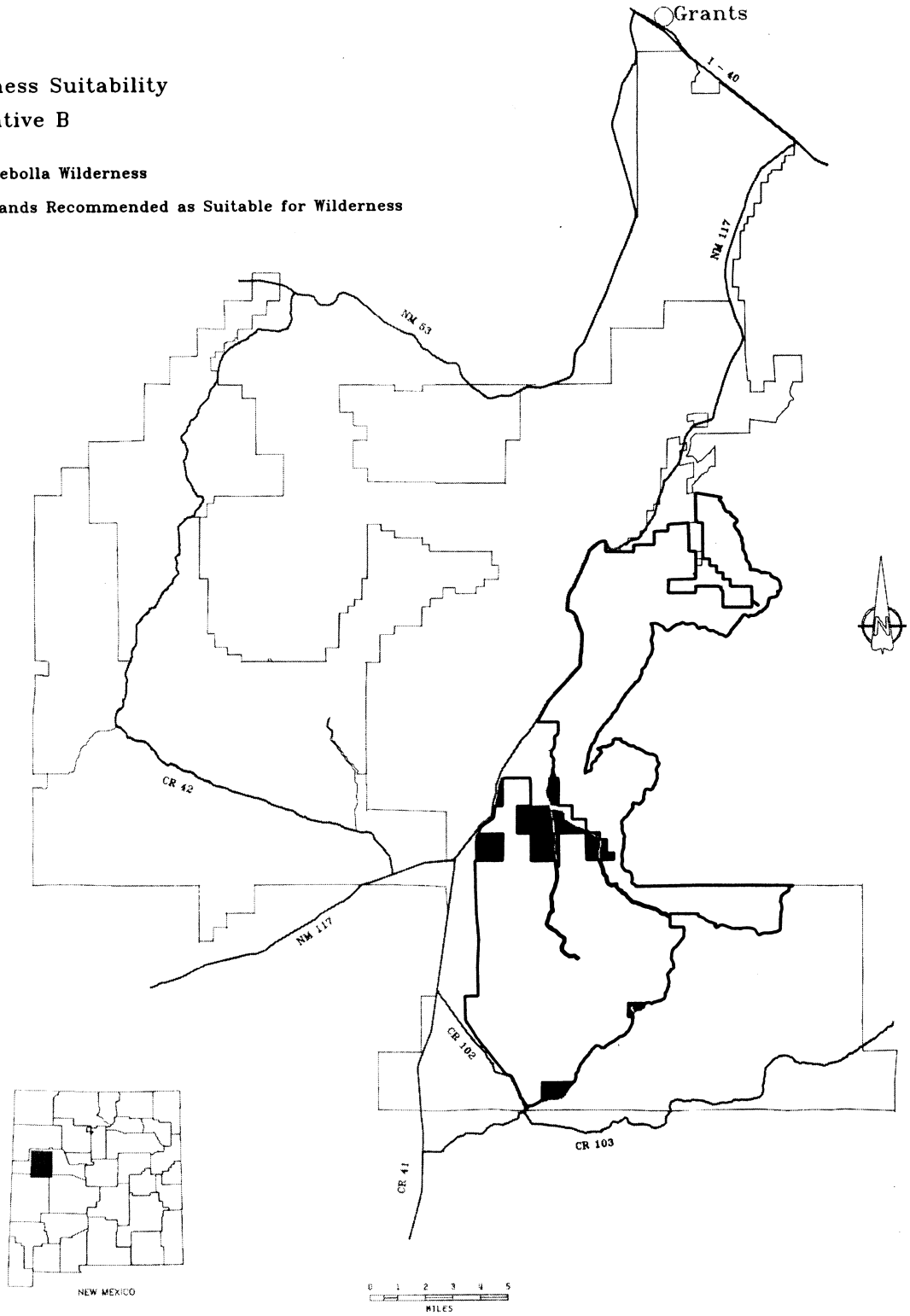
Map 26

Wilderness Suitability

Alternative B

Cebolla Wilderness

Lands Recommended as Suitable for Wilderness



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El Malpais Planning Area

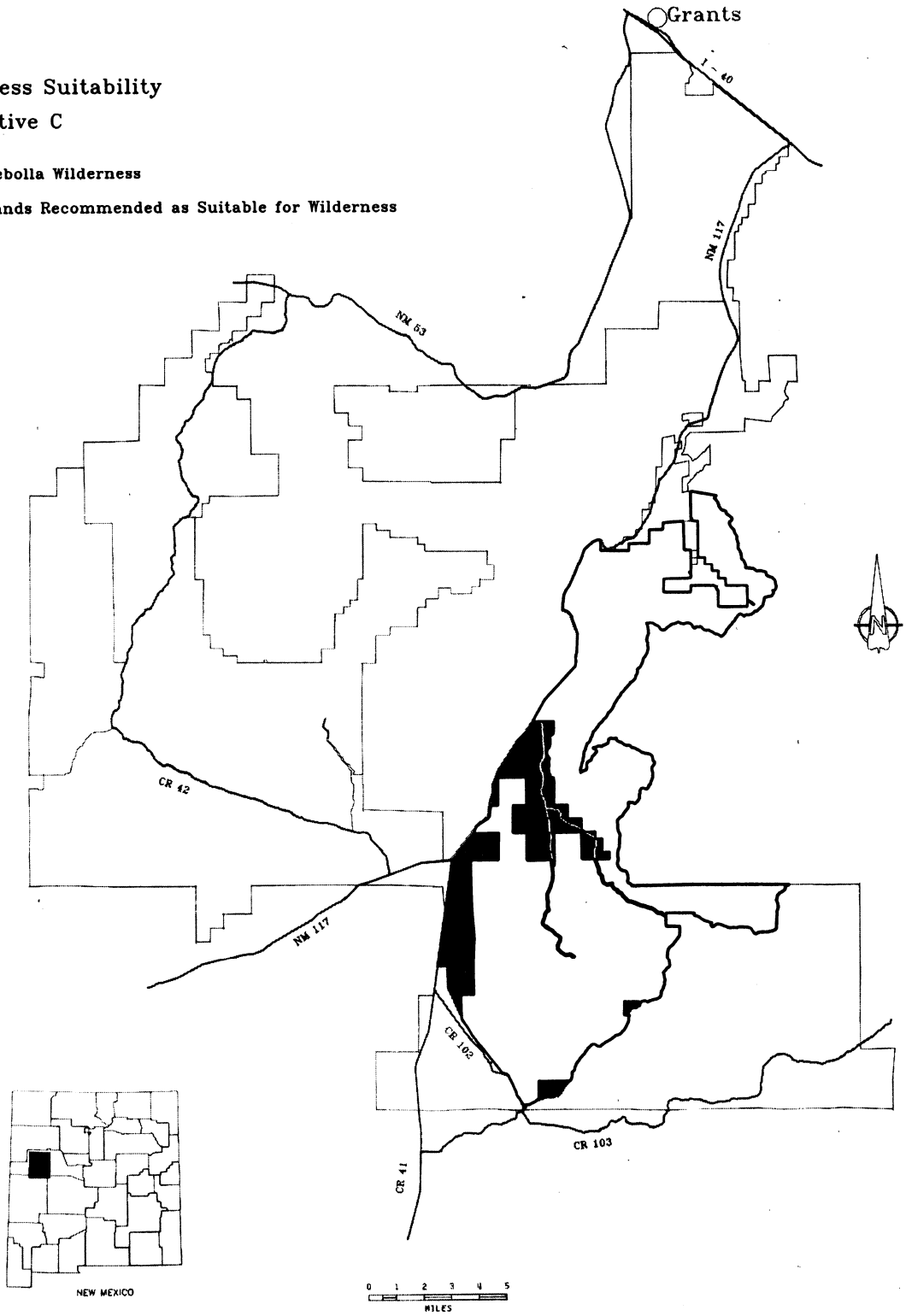
Map 27

Wilderness Suitability

Alternative C

Cebolla Wilderness

Lands Recommended as Suitable for Wilderness



El Malpais Planning Area

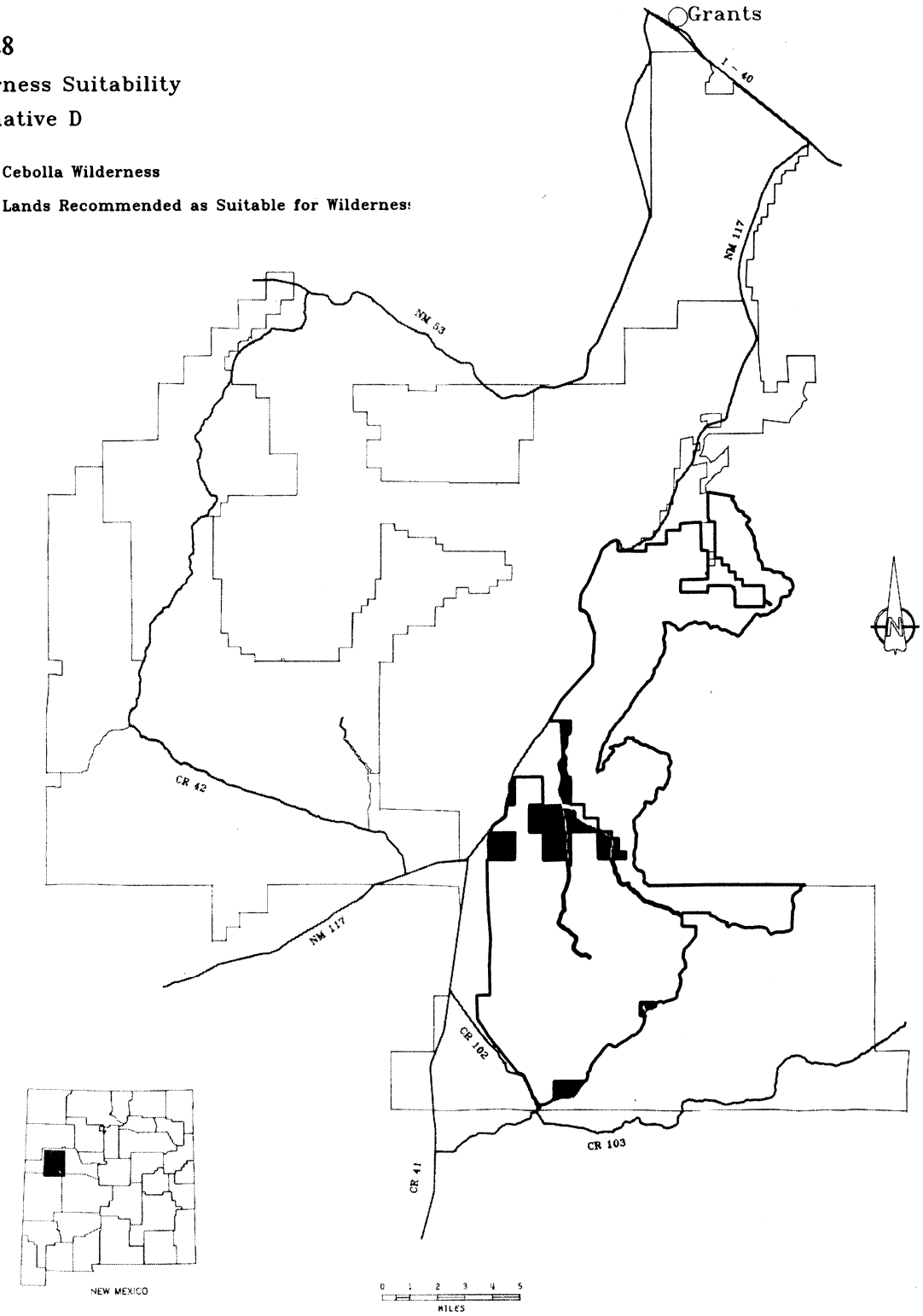
Map 28

Wilderness Suitability

Alternative D

Cebolla Wilderness

Lands Recommended as Suitable for Wilderness



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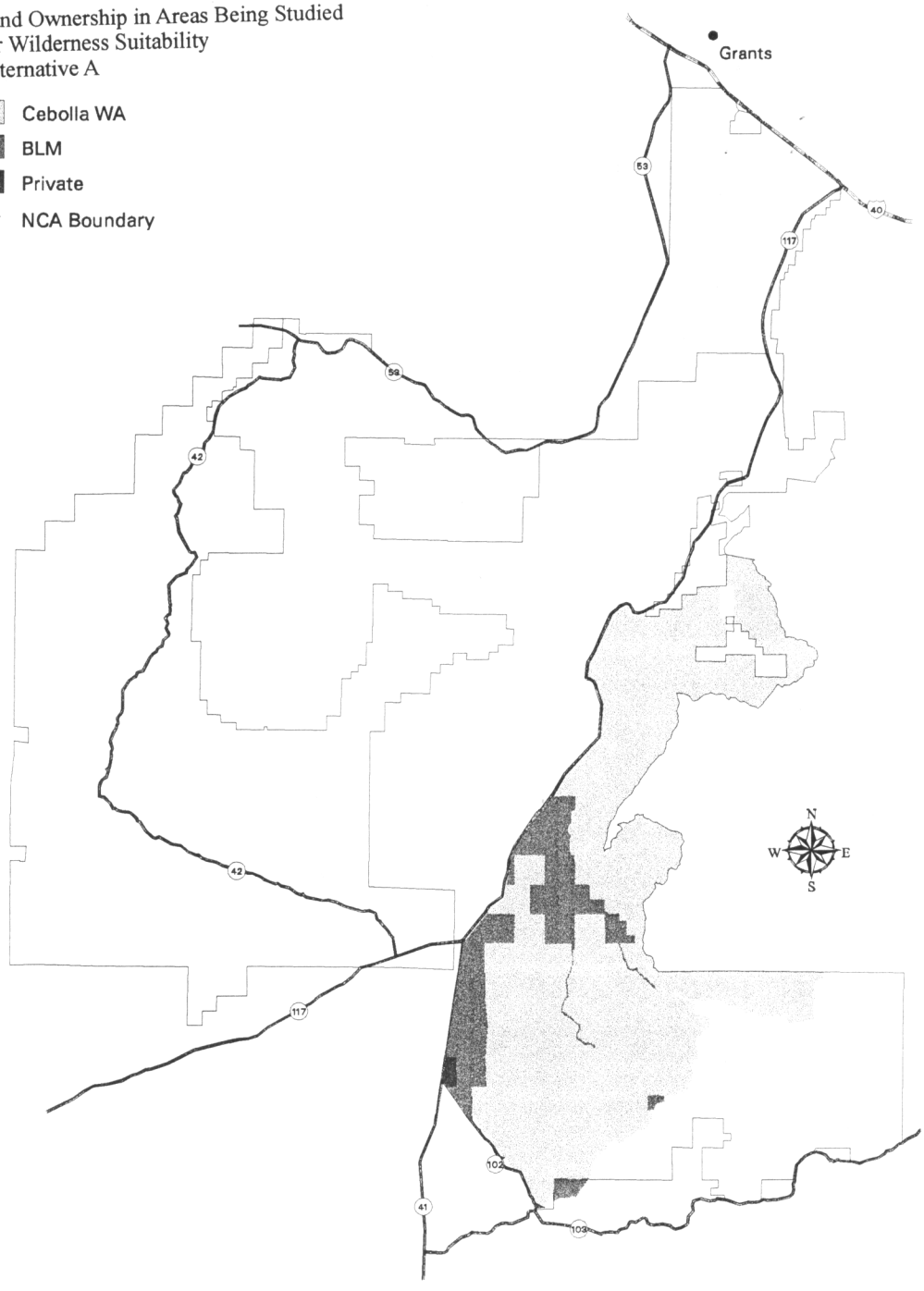
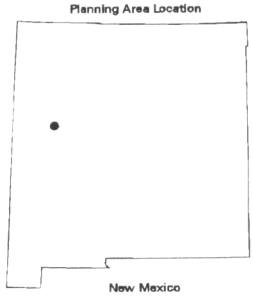
El Malpais Planning Area

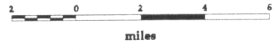
Map 29

Land Ownership in Areas Being Studied
for Wilderness Suitability
Alternative A

- Cebolla WA
- BLM
- Private
- NCA Boundary







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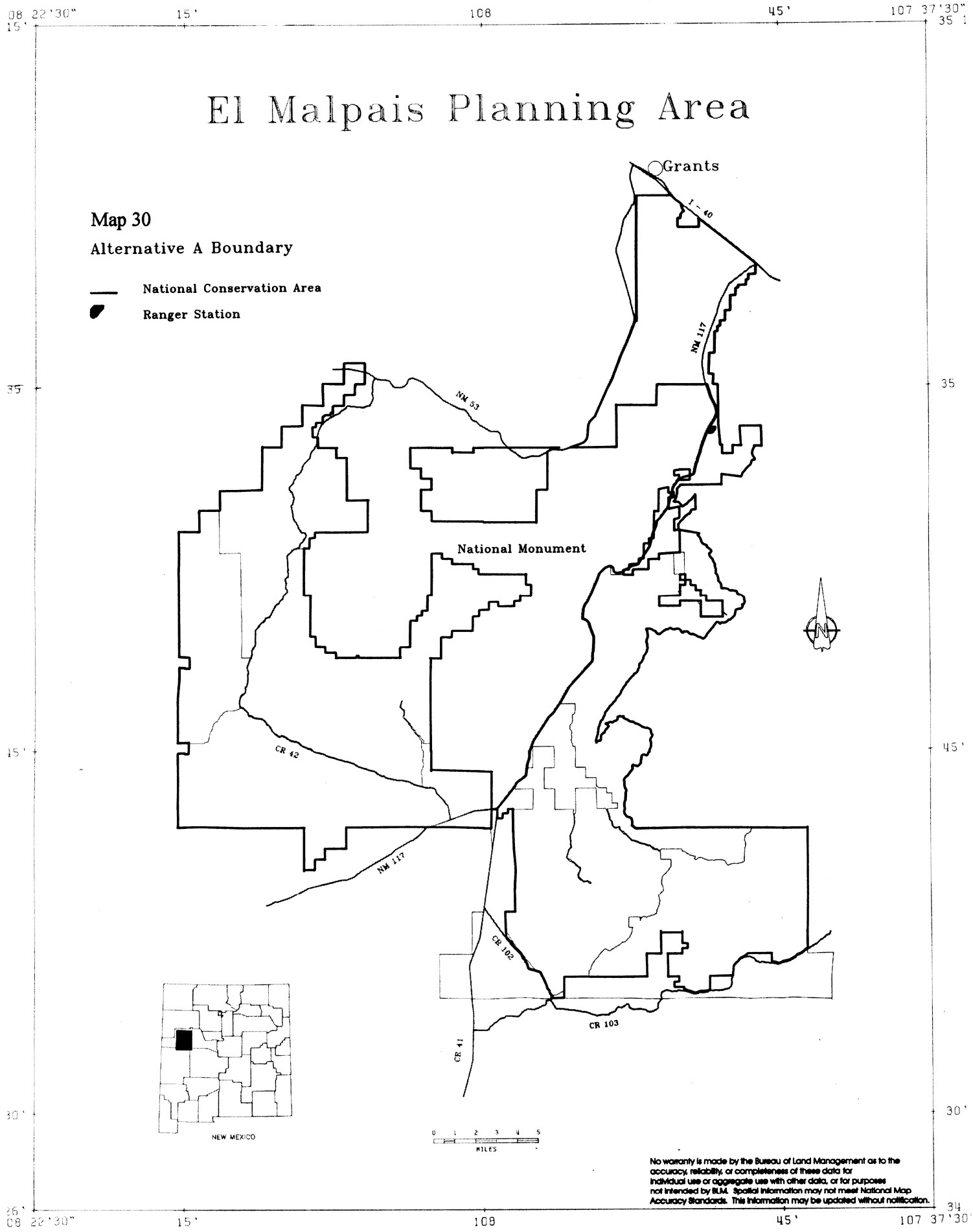
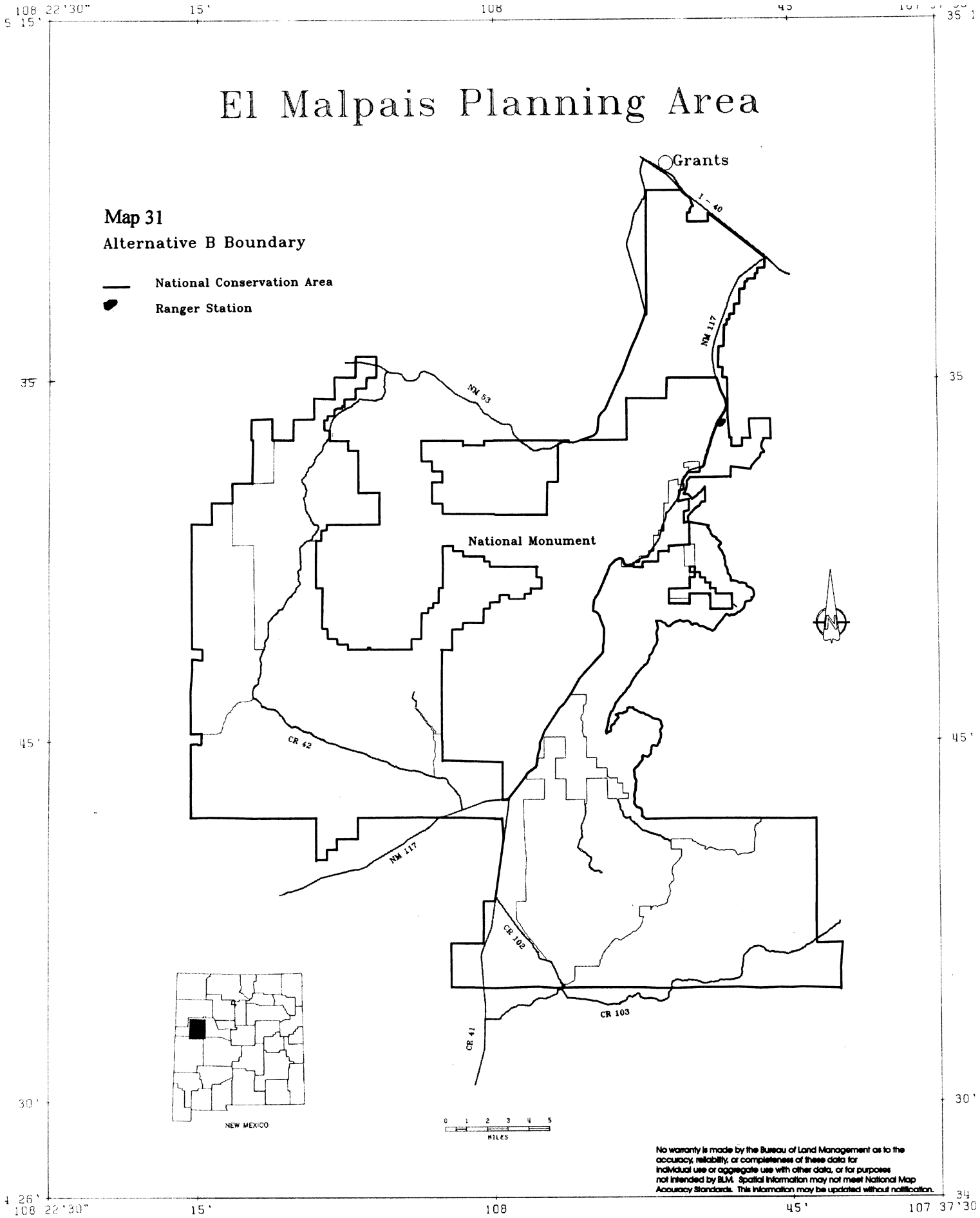
El Malpais Planning Area



El Malpais Planning Area



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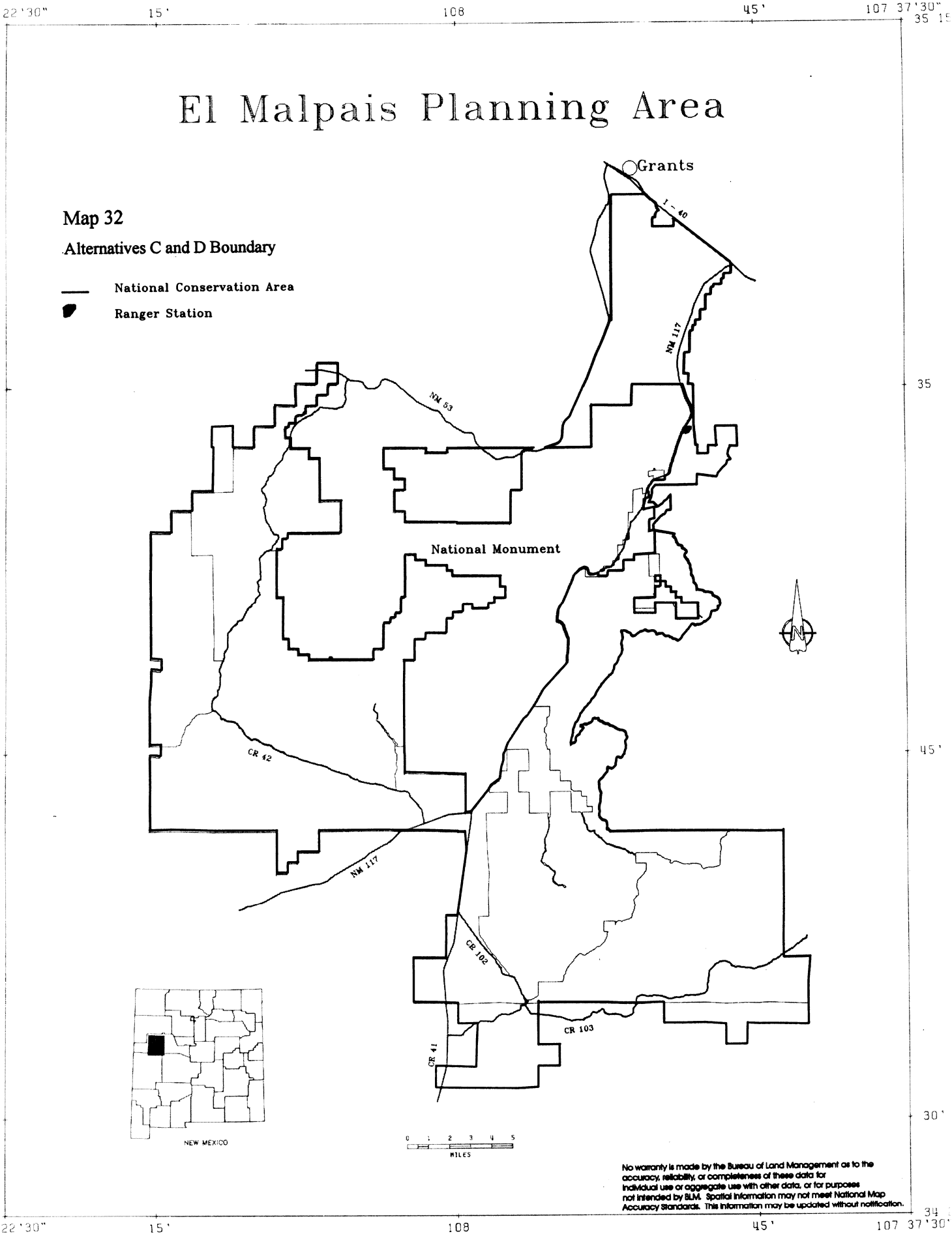
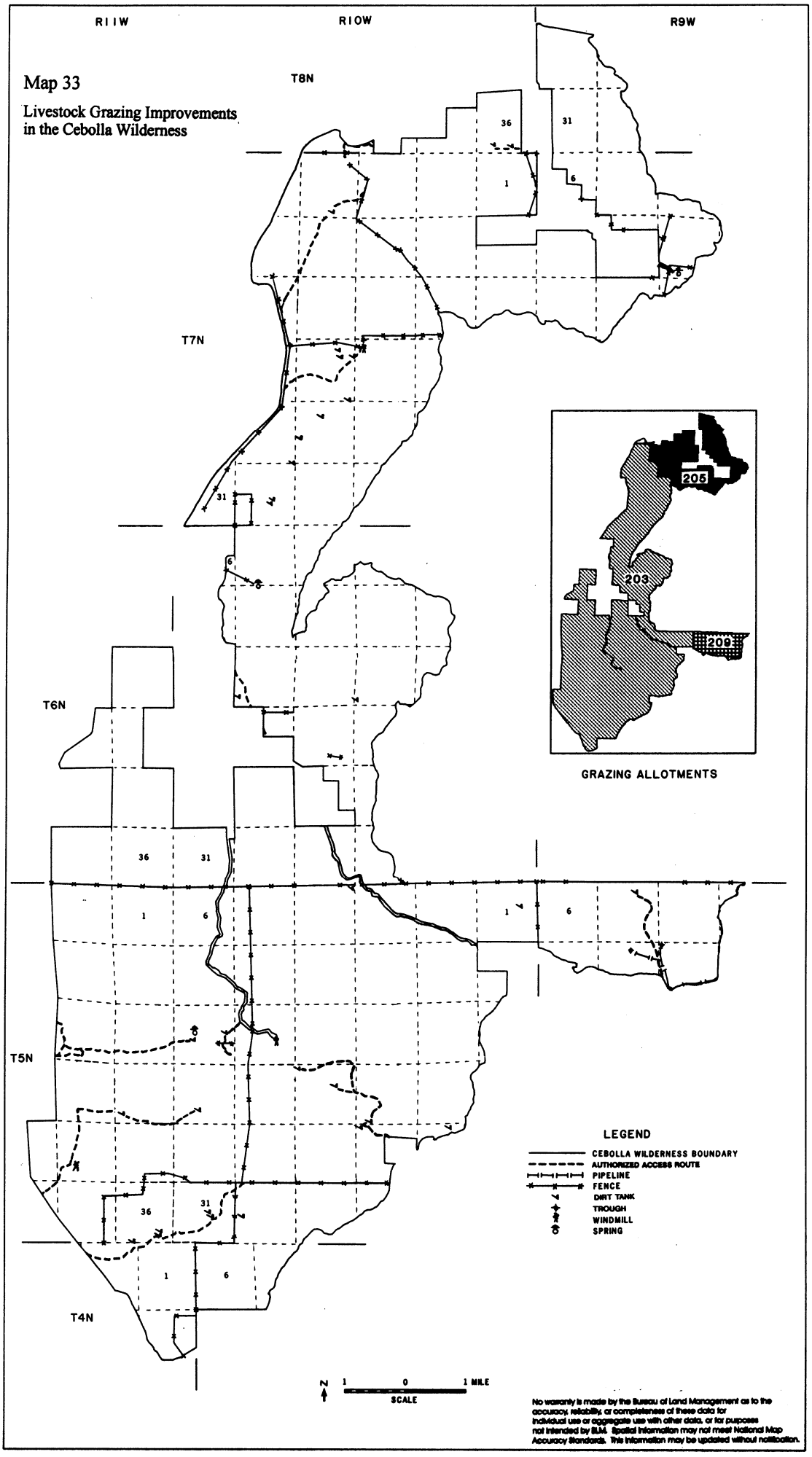
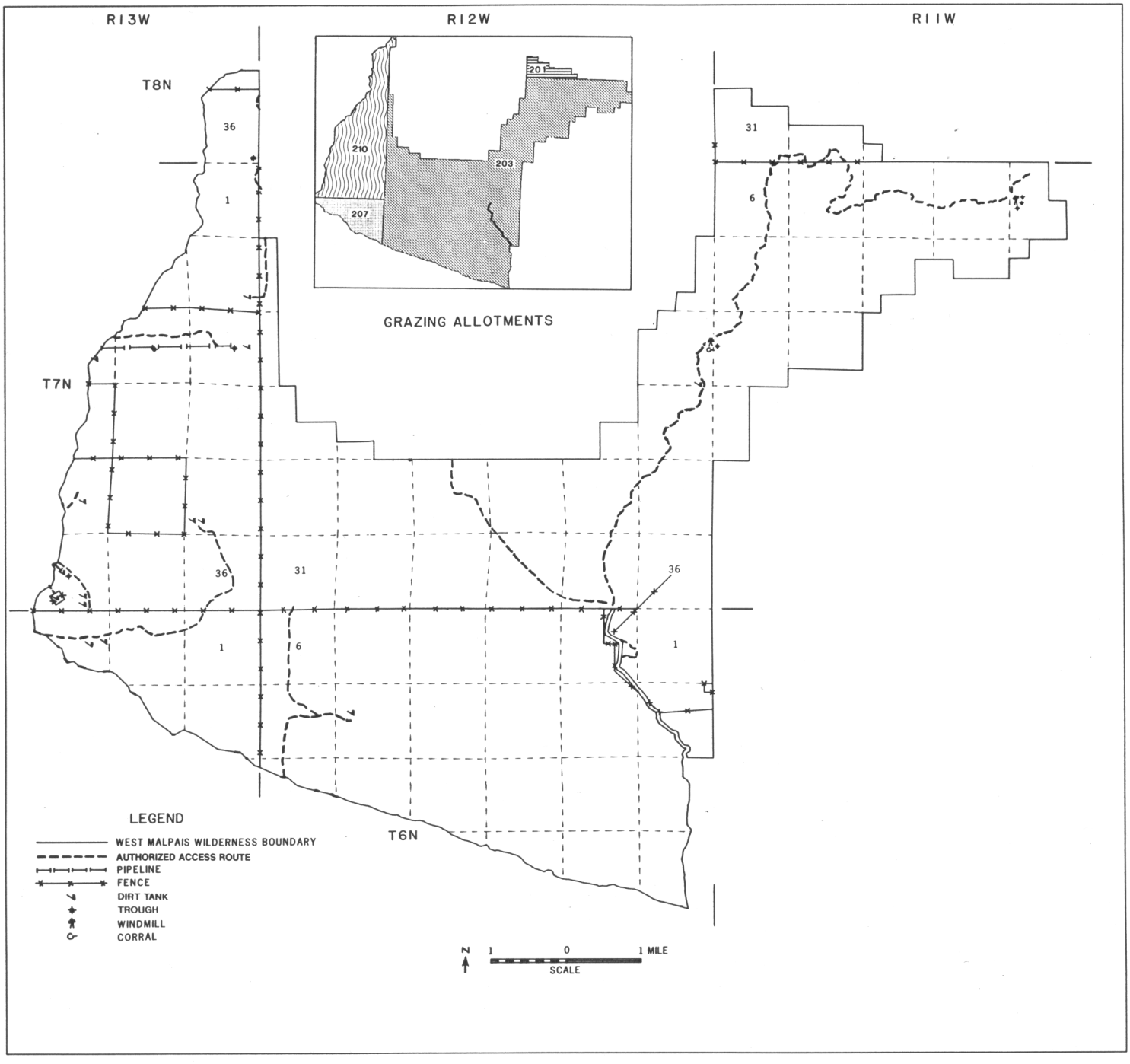




Map 33

Livestock Grazing Improvements in the Cebolla Wilderness



Map 34

Livestock Grazing Improvements in the West Malpais Wilderness

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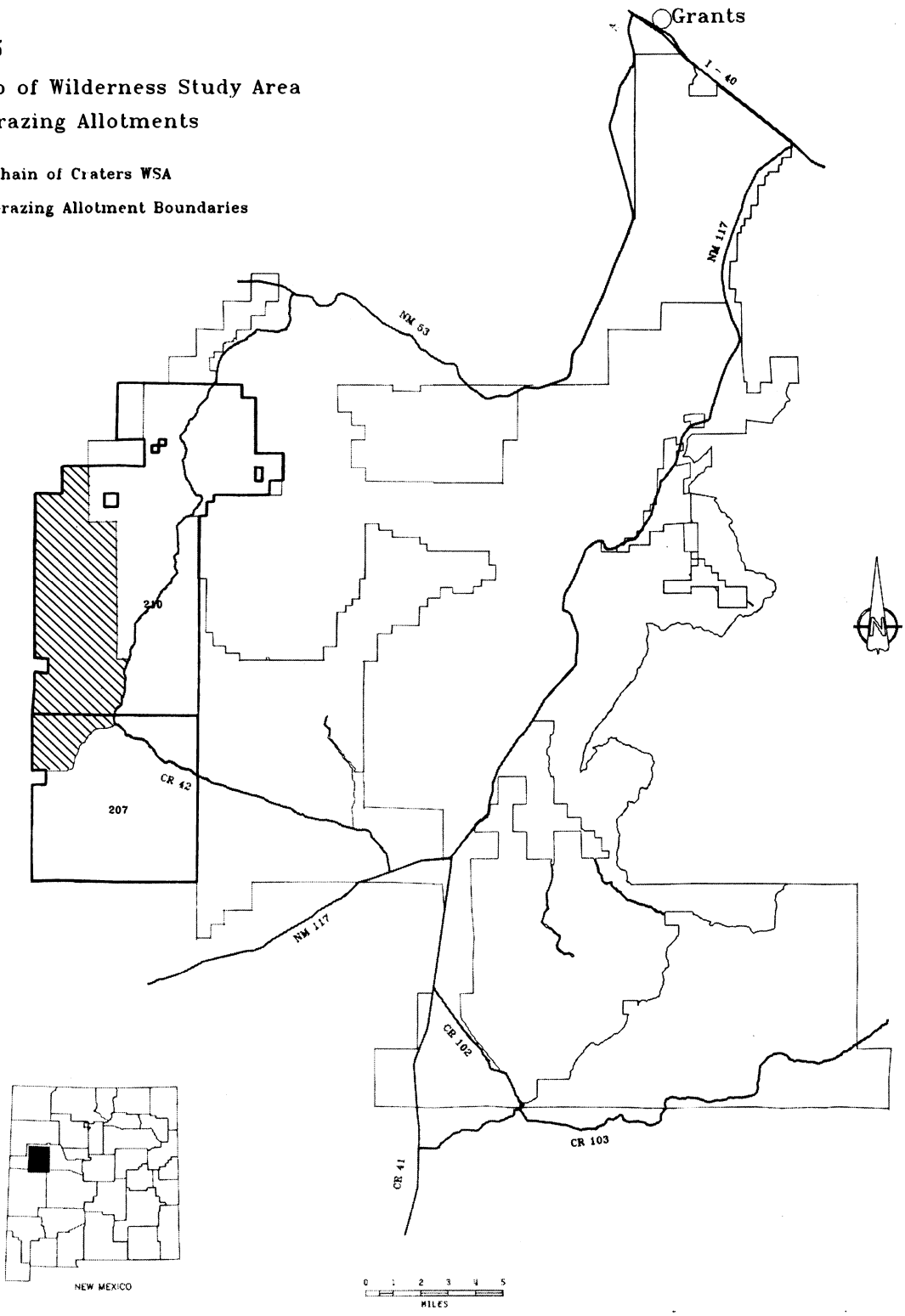
El Malpais Planning Area

Map 35

Overlap of Wilderness Study Area with Grazing Allotments

Chain of Craters WSA

Grazing Allotment Boundaries



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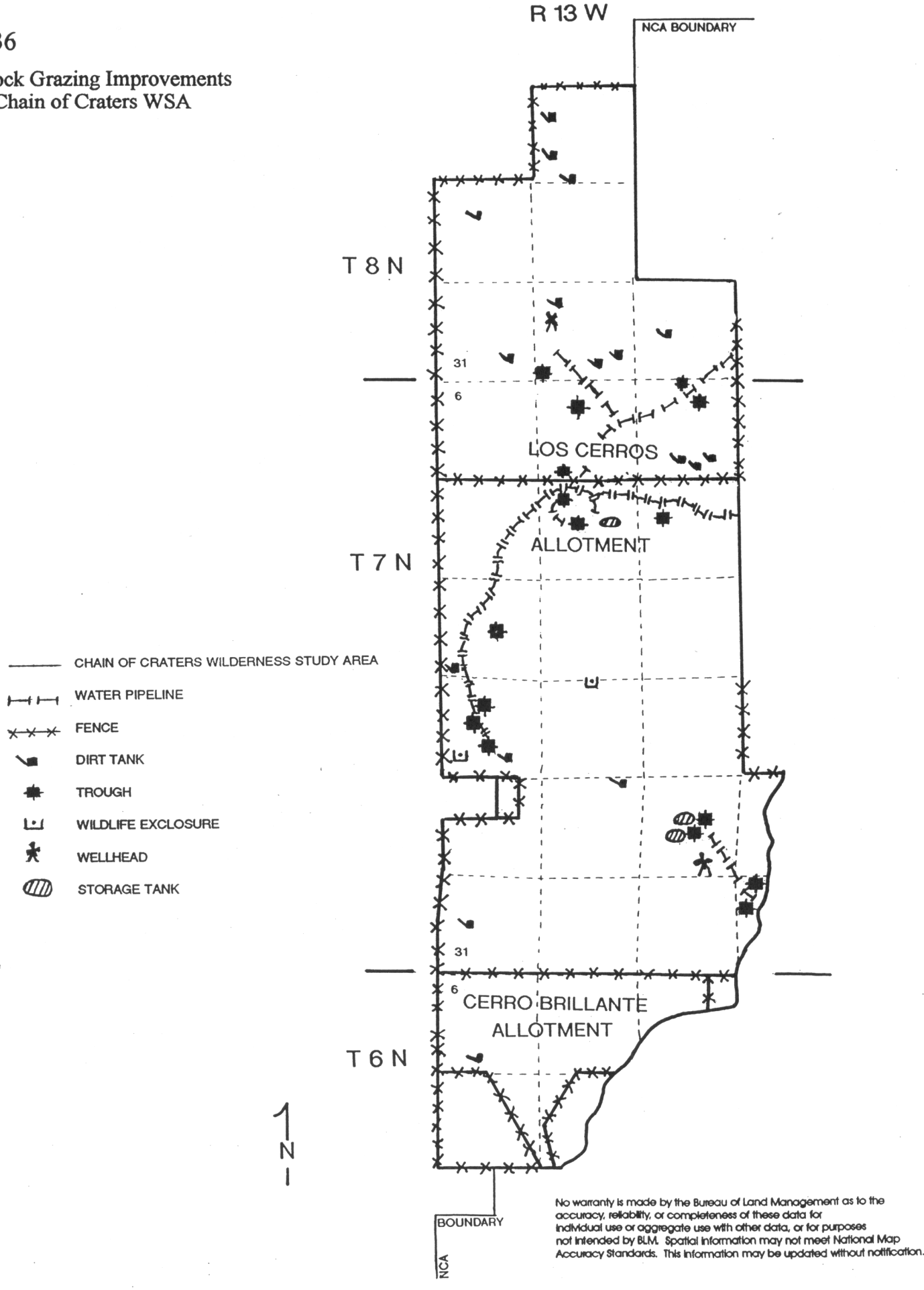
Map 36

Livestock Grazing Improvements in the Chain of Craters WSA



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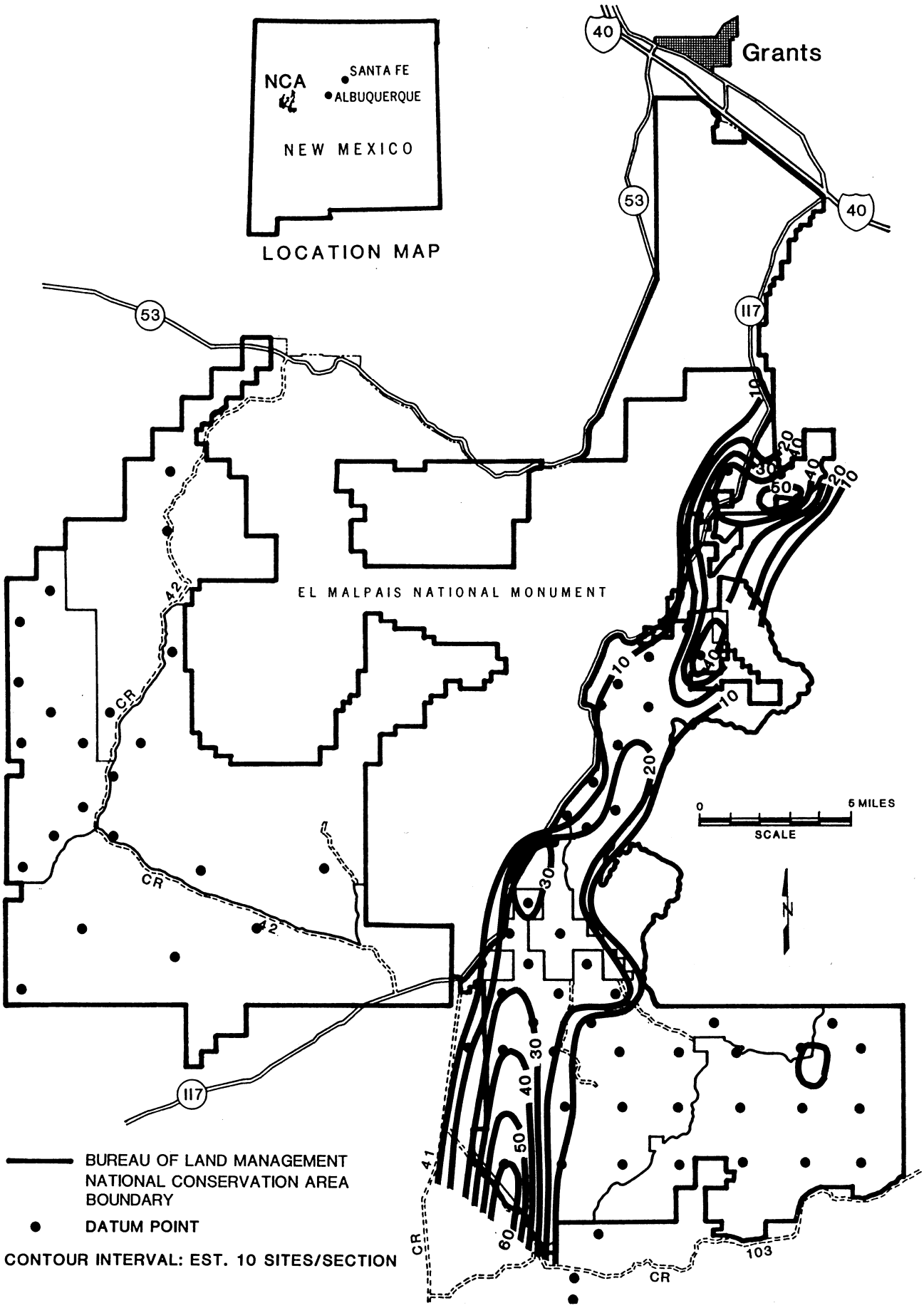


Map 37

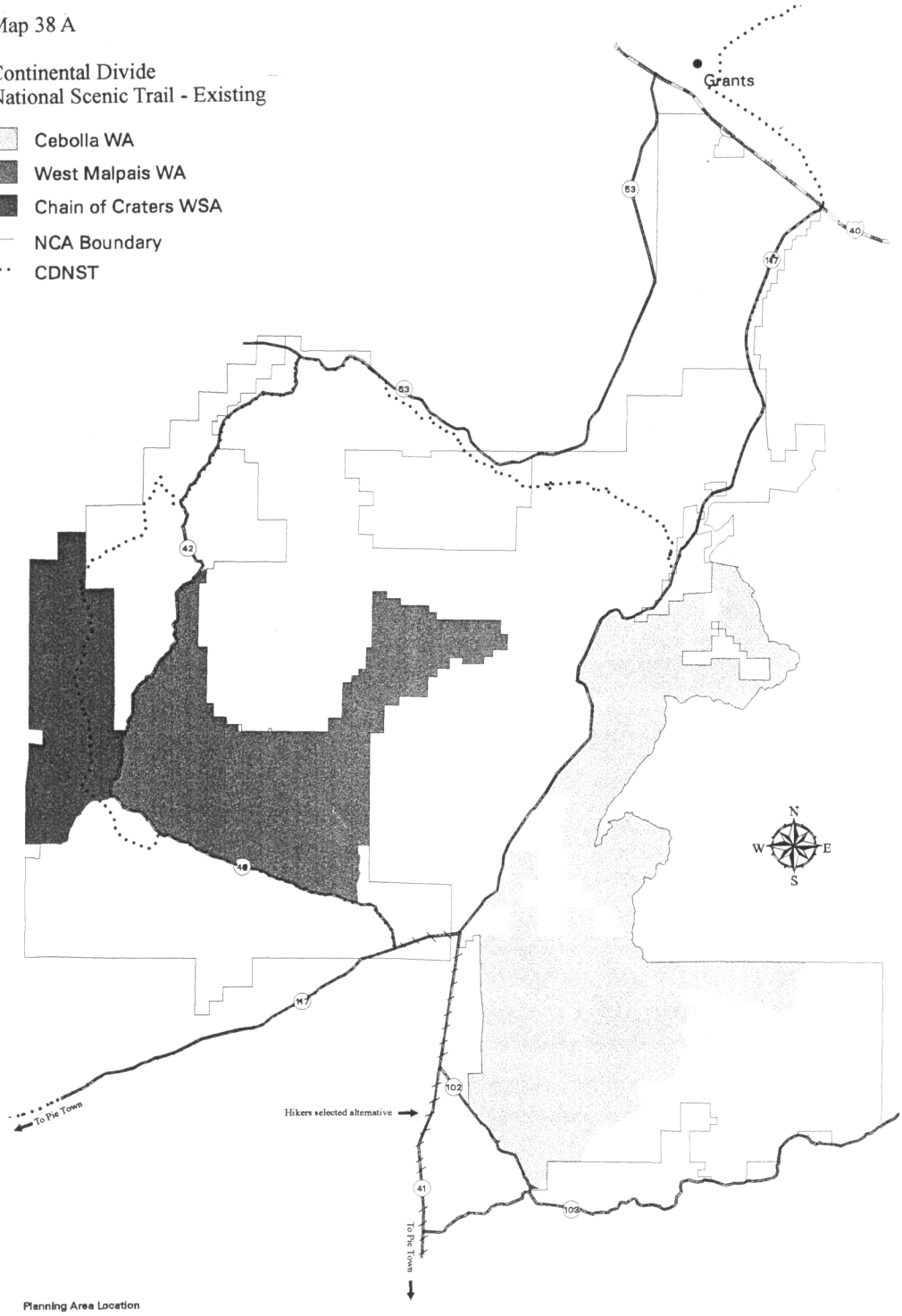
Relative Density of Anasazi Sites
Based on Class II Inventory

El Malpais Planning Area

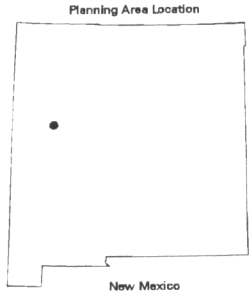
Map 38 A

Continental Divide
National Scenic Trail - Existing

- Cebolla WA
- West Malpais WA
- Chain of Craters WSA
- NCA Boundary
- CDNST



Planning Area Location



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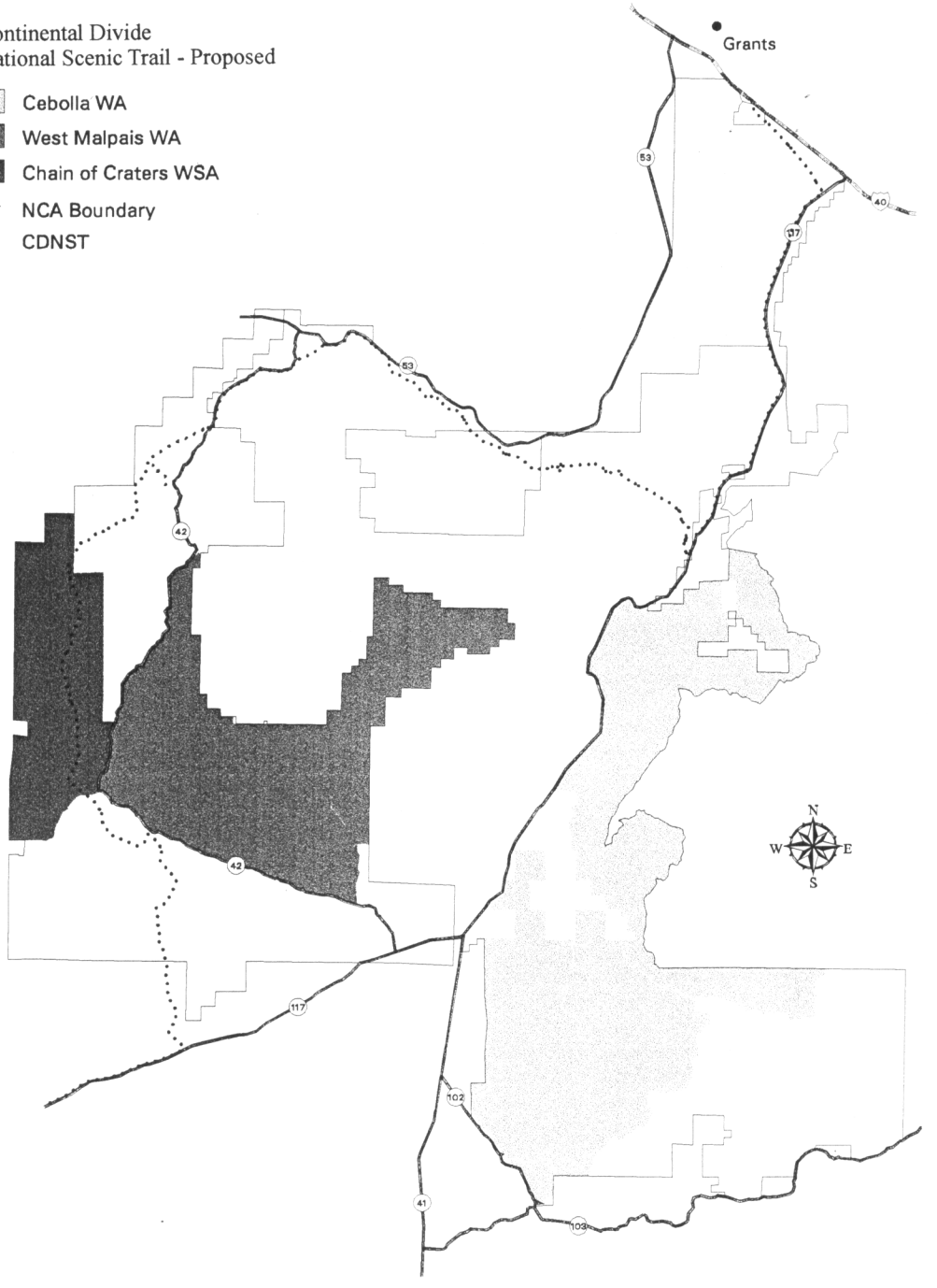
El Malpais Planning Area

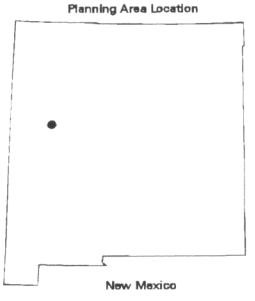
Map 38 B

Continental Divide
National Scenic Trail - Proposed

- Cebolla WA
- West Malpais WA
- Chain of Craters WSA
- NCA Boundary
- CDNST



Planning Area Location



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CHAPTER 3

CHAPTER 3

AFFECTED ENVIRONMENT

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CHAPTER 3

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter describes the physical, biological, social and economic characteristics of the El Malpais Planning Area that may be affected by the actions proposed under the alternatives identified in Chapter 2. Much of the information in this chapter summarizes more detailed materials contained in the *Rio Puerco Resource Area Management Plan* (RMP--USDI, BLM 1986). These materials are available for review at the Albuquerque Field Office.

General Physical Setting

Climate in the Planning Area is typically temperate, hot in the summer and cool in the winter. Precipitation averages 12 inches annually, with August being the wettest month (average 2.5 inches) and April or May the driest (0.35 to 0.42 inches). Daily temperatures can vary by 50 degrees or more. The highest daily average temperatures occur in July at 70 degrees Fahrenheit (◦F), while the lowest daily averages occur in January at 32◦F (Roybal, et al. 1984).

The Planning Area contains a wide assortment of geological formations that are important for scenic enjoyment, recreation, education and scientific study. The Cebolla Wilderness, Spur and Breaks Units on the eastern side of the Planning Area (refer to Map 3 in Chapter 1) are dominated by sandstone mesas, canyons, and vertical sandstone escarpments. On the western side, the West Malpais Wilderness, Continental Divide Unit and Chain of Craters WSA are dominated by volcanic landscapes, including numerous cinder cones.

RECREATION & FACILITIES

Recreation

The NCA and Planning Area provide many diverse opportunities for recreation, both developed and dispersed. Some information on existing visitor use levels and patterns in the NCA has been collected at the El Malpais Information Center in Grants (no longer open), at the BLM Ranger Station, and at La Ventana Natural Arch. Records indicate that visitors come from a variety of places--all over the U.S., Albuquerque and Grants, Europe and other foreign countries. They include commercial truckers passing through on State Highway (NM) 117, vehicle campers, American Indians, cattle operators, mountain bikers, wilderness users and individuals engaging in other recreational pursuits. Developed recreation is dependent on managed recreation sites such as campgrounds, trailheads, and picnic areas, while dispersed recreation occurs over most of the Planning Area, independent of maintained facilities.

The cities of Grants and Milan are actively seeking economic benefits from the tourism industry to diversify local economies, and are supplying some developed recreational facilities. The Planning Area also provides recreational opportunities for citizens of two of the largest metropolitan areas in New Mexico, Albuquerque and Santa Fe. Population increases in these two cities are resulting in increased demand for recreation opportunities in the Planning Area.

Recreation visitation to the Planning Area and National Monument is projected to grow to about 207,600 people annually by the year 2000 (Madell 1988), although ***fiscal year 1999*** visitation is about ***81***,000 people per year at the BLM's most heavily used sites ***(refer to Table 3-1). Visitor use at El Malpais National Monument during calendar year 1999 is estimated to be about 109,000 visitors (Vallo, 2000).*** The expanding population in the southwestern United States, increased disposable income, more leisure time, and increased recreational vehicle ownership (especially of four-wheel-drive vehicles and mountain bikes) is increasing visitor use of the area (in both frequency and duration). Travel to and within the Planning Area continues to be primarily by private vehicle, but tour bus use is expected to increase. Most visitors stay on paved or well- graded roads, but some reach the less-traveled areas by primitive road, and a few hike into the back-country areas.

The types of recreation available on public lands in the Planning Area include but are not limited to camping, hiking, backpacking, picnicking, sightseeing of natural and cultural resources, photography, driving off-highway vehicles (OHVs), road and mountain bicycling, horseback riding, caving, climbing, cross-country skiing, hunting, pack-animal trips, trapping, target practice, and enjoying wilderness solitude.

Table 3-1

Estimated Recreational Site Use of the El Malpais NCA By Fiscal Year

Site	***No. of Visitors[1] (hundreds) by Fiscal Year (FY)[2]***				
	FY 95	***FY96***	***FY97***	***FY98***	***FY99***
Ranger Station	***15,900***	***17,800***	***17,600***	***16,500***	***14,600***
La Ventana Natural Arch	***61,800***	***68,500***	***66,600***	***60,300***	***66,300***
Narrows	***400***	***400***	***400***	***500***	***200***
Total Site Visitors	***78,100***	***86,700***	***84,600***	***77,300***	***81,100***

Recreational opportunities depend on an area's setting and the kinds of activities that could take place. The existing network of roads determines how accessible different recreational opportunities are to the visitor. To evaluate the effect of access on these opportunities, the BLM uses a system referred to as the Recreation Opportunity Spectrum (ROS--refer to Appendix C for a summary). The ROS system provides a framework for classifying and defining types of outdoor recreation environments, activities, and experience opportunities. The Planning Area contains three of the six classes of opportunities, semi-primitive non-motorized, semi-primitive motorized, and roaded natural (refer to Table 3-2 and Map 6 in the map section before this chapter).

Of all the known and potential opportunities for recreation in the Planning Area, some of the most common are discussed below. The ROS classes and units in which the activity can or does occur are also included.

Camping opportunities in the Planning Area are generally at dispersed sites in all three ROS classes. Vehicle campers who want to have access to tables for meals are allowed to camp along the old roadbed of NM 117 at the southern end of The Narrows (also used as a picnic area). No camping is allowed at the Ranger Station or La Ventana Natural Arch. Camping is also discouraged in units with restricted access such as the Neck and Spur. Periods of heavier camping use occur in the back country during hunting and piñon-picking seasons.

Hiking is also a dispersed activity in the Planning Area that occurs in all ROS classes and units. However, some concentrated use is taking place; trails developed from high-use foot traffic now exist along the Narrows Rim Trail and on some old vehicle routes that extend into the West Malpais Wilderness and Cebolla Wilderness.

The diverse, broken terrain, variety of wildlife, dramatic vistas, and prehistoric and historical resources provide excellent viewing opportunities and destinations for hikers in the Cebolla Wilderness. Three key access points to this wilderness are located at La Ventana Natural Arch, The Narrows and the Dittert Site. The Hole-in-the-Wall of the West Malpais Wilderness is a 6,000-acre kipuka (refer to the Glossary) that offers hikers and backpackers a rugged experience in lava terrain with watchable wildlife and remoteness.

The Continental Divide National Scenic Trail (CDNST) corridor crosses through the Planning Area. Approximately 25 miles pass through the Cerro Brillante, Chain of Craters, Continental Divide, Cerritos de Jaspe and Neck Units. Another 24 miles of the corridor cross private and National Monument lands. The BLM and volunteers have built rock cairns and posted signs to mark the public land portion of this trail. In the northern portion of the Chain of Craters WSA, ***approximately 8*** miles of the trail have been marked. ***In the Continental Divide Unit, approximately 7 miles of trail, extending***

northerly from the Chain of Craters WSA, have been marked. In the

TABLE 3-2

RECREATIONAL OPPORTUNITY CLASSES WITHIN THE PLANNING AREA (PA)

Area/Recreation Opportunity Spectrum (ROS) Class	**Acreage [a]**	**% of PA/Unit**
Planning Area Roaded natural	79,200	28
Semi-primitive motorized	85,000	30
Semi-primitive non-motorized	122,100	42
Totals	286,300	100
Cebolla Wilderness Roaded natural	9,000	15
Semi-primitive motorized	10,000	16
Semi-primitive non-motorized	43,000	69
Totals	62,000	100
West Malpais Wilderness Roaded natural	4,900	12
Semi-primitive motorized	2,400	6
Semi-primitive non-motorized	32,600	82
Totals	39,800	100
Chain of Craters WSA Roaded natural	7,800	43
Semi-primitive motorized	7,500	41
Semi-primitive non-motorized	3,000	16
Totals	18,300	100

Note: [a]Rounded to nearest hundred acres, including both public & private land.

Cerro Brillante Unit, 4.5 miles have been marked (from the southern boundary of the Chain of Craters WSA around Cerro Brillante, and connecting with CR 42). ***Approximately 2*** miles of marked treadway exist in the Cerritos de Jaspe Unit, and connect with the National Monument treadway at both ends.

La Rendija, a large crack in the old basalt flows, bisects the Cerro Brillante Unit and is a recreational/

interpretational opportunity, especially for hiking. When the CDNST is completed, its southern portion will pass near La Rendija (if the BLM can acquire an easement across private land in the Cerro Brillante-AFO Unit). Hiking and backpacking opportunities also exist in the Chain of Craters WSA, where scenic vistas and volcanic features are the main draw.

Opportunities for picnicking occur in areas of two ROS classes, the semi-primitive motorized and the roaded natural. Although picnicking can take place almost anywhere in the Planning Area, it usually occurs at the southern end of The Narrows, at La Ventana Natural Arch or along the roaded natural areas.

Sightseeing or driving for pleasure are activities in which most, if not all, visitors participate. Many visitors are on their way to another destination and stop by the Planning Area just to see what is there. Most known visitor use consists of sightseeing from vehicles on NM 117, and short walks into portions of the wilderness by day hikers and photographers, many of whom plan return trips. The units most used for these activities are the Neck, Cebolla Wilderness, Spur, Chain of Craters WSA, and Cerro Brillante. The ROS classes involved are roaded natural and (possibly) semi-primitive motorized.

The variety of vegetation and terrain exhibited by the various units of the Planning Area provides a unique visual experience for NCA travelers. Particularly outstanding are the contrasts between dramatic variegated buff and pink sandstone cliffs with ponderosa pines clinging to crevices, open grass-land meadows interspersed with piñon-juniper woodlands, and expansive black lava flows covered with stunted conifers. A series of volcanic cinder cones in the Chain of Craters Unit offers vantage points to view vast lava flows and distant sandstone cliffs to the east. County Road (CR) 42 runs from a high elevation where mixed conifer and piñon-juniper woodlands occur into a vast plain of gently rolling, grass-covered hills and swales formed by ancient lava flows. Occasional pronghorn antelope and seasonal, migrating waterfowl can be viewed from CR 42. Seasonal ponds attract waterfowl and shore birds to areas near the road and on public land.

Visitors who spend more than a few hours within the Planning Area usually drive along the back-country roads such as CR 42 and the Cebolla Canyon road. The Brazo, Cebolla Wilderness, Chain of Craters WSA, Continental Divide, Cerritos de Jaspe and Cerro Brillante are the units of choice for most back-country users. Two ROS classes, semi-primitive motorized and roaded natural, follow these back-country roads. The Planning Area's system of dirt roads offers the opportunity for mountain biking, horseback riding, and touring with high-ground-clearance vehicles. Access by these dirt roads may be limited due to impassable road conditions when the roads are wet. Another aspect that may limit access is land ownership; when access is limited, recreation potential is also limited. The number of visitors who reach remote locations in the Planning Area is unknown.

Hunting can occur on all public lands in the Planning Area, except where it is restricted by the BLM's Supplementary Rules for Recreation (USDI, BLM 1996) or New Mexico Department of Game & Fish (NMDG&F) regulations. Units where hunting most often occurs are the Cebolla Wilderness, West Malpais Wilderness, Chain of Craters WSA, Cerro Brillante, Brazo, Continental Divide and Cerritos de Jaspe. The isolation of the back-country units offers greater opportunities for hunting success.

Mountain biking opportunities occur along roads in two ROS areas, semi-primitive motorized and roaded natural. Most mountain bike activity has occurred in the Cerritos de Jaspe, Brazo, Continental Divide and Cerro Brillante Units, and the Chain of Craters WSA. Because of the design of the equipment, road biking usually occurs along paved roads (NM 117 and NM 53), but is limited by the narrow travel corridor of portions of these two roads. Roads open to vehicle traffic provide the best opportunities for biking, as no mountain bike trails have been designated.

Opportunities for horseback riding are plentiful within the Planning Area, although the BLM does not know how much use is occurring. Units such as the Cebolla Wilderness, West Malpais Wilderness, Chain of Craters WSA, Brazo, Cerro Brillante and Cerritos de Jaspe are most conducive to horseback travel, which can occur in any ROS class. The rugged terrain of the Chain of Craters WSA and the West Malpais Wilderness sometimes makes travel by horseback much more comfortable than travel by vehicle.

Very few caves are known to exist in the Planning Area. These occur in the Cerritos de Jaspe, Continental Divide and Cerro Brillante Units, and the Chain of Craters WSA.

Climbing is an infrequent use that occurs along The Narrows. Other climbing opportunities may exist

in the Cebolla Wilderness and Brazo Units. Climbing could occur in any of the three ROS classes.

The 35-mile long, Chain of Craters Back Country Byway follows CR 42 through the western portion of the Planning Area and was designated to encourage recreational travel to this area. Volcanic landscapes dominate this zone. The west side of the Planning Area is likely to be attractive to those interested in long day trips, with proper vehicles and overnight or more extended visits. (Note: CR 42 can be rough under dry conditions and impassable when wet. This situation affects access to the west side of the Planning Area and is reflected in the overall figures for annual visitation.)

Public lands within the Planning Area that are outside the NCA were previously privately owned, so no information about current recreational use is available. The recreational potential for and opportunities on these lands are similar to those on adjacent NCA lands.

Two recreational outfitters use the Planning Area, their use being stipulated in Special Recreation Permits issued to each. Both permittees also exercise their permits in other portions of Albuquerque Field Office lands for which planning has already been completed (USDI, BLM 1986).

Facilities

Multiple ownership of the Planning Area and surrounding lands affects facility development. BLM and U.S. Forest Service lands surround the National Monument, so no single agency provides for all types of recreational use in the area, and joint facilities can be used.

As required by P.L. 100-225, the BLM has constructed a Ranger Station for visitor services and resource protection in Section 32, T. 9 N., R. 9 W. (refer to Map 10). [An Environmental Assessment (EA) was prepared for the facility in 1990 under the Rio Puerco RMP.] The Ranger Station offers visitors a location in which to learn about the Planning Area through interpretive exhibits, a short video presentation and personal contact with BLM staff. The building also provides restroom facilities and access to drinking water. The facility is complete, except for construction of a short interpretive trail, and is universally accessible to all visitors (including those with disabilities).

One of the largest natural arches in New Mexico, La Ventana, is located in the Cebolla Wilderness along NM 117 and is highly accessible to visitors to the Planning Area. Annual visitor numbers for this site are estimated to be as high as 65,000 people. To stop resource damage and block illegal vehicle access to the Cebolla Wilderness, the BLM has built a parking lot at the arch with a capacity of 32 cars and 3 buses or recreational vehicles. The agency and volunteers have built a trail from the parking lot to the arch, two vault toilets, and interpretive wayside exhibits.

The Narrows, along NM 117, is being used for picnicking, camping, and parking for access to the Cebolla Wilderness, as no facilities can be constructed inside wilderness. The site is the old roadbed of what is now NM 117. Safety must be improved, because entering and exiting the site onto the existing highway is dangerous.

The site offers an opportunity for day use of the Cebolla Wilderness, which encompasses the sandstone bluffs and lava features, and contains appealing vegetation such as stunted ponderosa pines and a small prehistoric site. All these features are within a short walk from the highway and accessible at most visitors' skill level. The Narrows Rim Trail into the wilderness has a small sign and rock cairns at a few points along the treadway. Recurring use of the trail has created the treadway, while the BLM and volunteers have built the cairns.

Two gates have been installed within the Planning Area for horseback access. One gate is located near the Narrows Rim trailhead and provides access into the Cebolla Wilderness. The second gate is located at the northern end of the West Malpais cherry-stemmed road and provides access into the West Malpais Wilderness and Hole-in-the-Wall.

A variety of developed campgrounds, recreational vehicle camping areas, and motel accommodations exists within the region north of the Planning Area. Within 80 miles of Grants are 1,150 campsites, including federal, state and private facilities. The National Park Service (NPS) is

proposing to develop a primitive camping area on the west side of the

National Monument and the NCA (USDI, NPS 1990b). Primitive camping is permitted on most Planning Area lands. The areas near La Ventana Natural Arch and the Ranger Station are closed to camping.

INTERPRETATION

Interpretation is a resource management tool that connects visitors with resources, promotes understanding of ecosystems and cultures, reinforces visitor safety, and promotes resource management decisions. When managers wish to modify visitor attitudes and/or behaviors to protect or improve resources, they often use interpretive methods.

As the Planning Area becomes better known, increased use is expected. Future users will likely come from a great diversity of cultural, social, and economic backgrounds. This increased use will challenge the BLM effectively to provide interpretive and education services to a wider variety and greater numbers of the public.

The BLM educates and informs the public about the Planning Area mainly through brochures distributed throughout the community and the country, newspaper notices published in the region, highway signs posted on I-40, and word of mouth. The BLM also does public outreach by developing and maintaining contacts and cooperative agreements with teaching and research institutions, non-profit organizations, other state and federal agencies, and American Indian groups.

The BLM provides personal services at the Ranger Station. Some guided interpretive activities, walks, and caravans begin there, with topics ranging from American Indian uses of the land to wilderness ethics and geology. BLM staff lead hikes to petroglyphs, former habitation sites of American Indians and homesteaders, and along the Narrows Rim Trail. The EA for the Ranger Station calls for an interpretive orientation trail (the Ranger Station Nature Trail) up the mesa behind the building, but this has not yet been constructed.

ACCESS & TRANSPORTATION

About 76 miles of federal, state and county roads provide access to and within the Planning Area. I-40 (which forms the Planning Area's northern boundary) and two state highways passing through the area serve as the primary transportation access routes (refer to Map 18 in the section before this chapter). Vehicle access to the central, western, and southern portions of the Planning Area is gained from county roads. Public access along the eastern and portions of the western boundaries is restricted through two Indian reservations.

From I-40, NM 53 skirts the north-northwest edge of the Planning Area. Forest Roads 50 and 447, which serve the Zuni Mountains of the Cibola National Forest, traverse short distances of the Planning Area before connecting with NM 53. NM 117 runs in a southwesterly direction from I-40 through the Planning Area's eastern side. CR 42, part of the BLM's National Back Country Byway program, links NM 53 and NM 117 as it passes through the southern and western portions of the Planning Area. CR 42 is classified as a Type II Back Country Byway, which is a road where travel by high-clearance vehicle is recommended. CRs 41, 102, and 103 provide access to the southern and southeastern edge of the Planning Area.

Tables 3-3 and 3-4 show the amount of traffic (in vehicles per day) that travels through the Planning Area on NM 117 (east side) and NM 53 (west side). In general, area traffic increased between 1986 and 1994 on both highways, with the heaviest traffic occurring on NM 53 near Grants. CR 42, which connects NM 117 and NM 53, receives a low volume of daily traffic and is often impassable during wet weather.

TABLE 3-3

ADJUSTED AVERAGE DAILY TRAFFIC (AADT)
ON NEW MEXICO HIGHWAY 117 AT & NEAR INTERSTATE 40, 1986 & 1994
(vehicles/day)

Location (on NM 117)	AADT	
	1986 [a]	1994 [b]
At I-40	206	2,090
York Ranch (near junction, NM 117 & CR41)	84	
At junction w/CR 42 (35 mi. south of I-40)		2,090

Notes: [a] Source of data: USDI, NPS 1990a & 1990b.
[b] Source of data: NMSH&TD 1996.

TABLE 3-4

ADJUSTED AVERAGE DAILY TRAFFIC (AADT)
ON NEW MEXICO HIGHWAY 53 NEAR GRANTS, 1986 & 1994
(vehicles/day)

Location (on NM 53)	AADT	
	1986 [a]	1994 [b]
Grants city limits	3,452	
Just south of Grants city limits		4,263
South of Grants (24 mi.)	409	
South of Grants (28 mi.)		1,740

Notes: [a] Source of data: USDI, NPS 1990a.
[b] Source of data: NMSH&TD 1996.

Connecting with the highways and county roads within the Planning Area are BLM-administered arterial, collector and local roads (refer to the Glossary). Roads inventoried include 356.5 miles open to public use (USDI, BLM 1996). Some of these also serve as access to private lands within the Planning Area. Though some routes receive intermittent maintenance, many are unimproved, requiring the use of a high-clearance vehicle when dry and becoming impassable when wet. Some off-highway vehicle users seek such challenges.

Off-highway vehicle uses are limited to existing roads and trails on 135,200 acres of the Planning Area's public land. Use of motor vehicles, mechanized equipment and other forms of transport are prohibited in the 100,800 acres of public land designated as wilderness, while such use is unrestricted on the remaining 12,000 acres. Of this 12,000 acres, 3,600 acres are designated as open to OHV use and the other 8,400 acres are undesignated through the land use planning process. BLM Socorro Field Office lands adjacent to the southeastern portion of the Planning Area are designated as open to OHV use, except for approximately 40 acres on which use is limited to existing roads and trails (USDI, BLM 1989d).

Within the Planning Area are 6.3 miles of designated vehicle routes outside wilderness that exist only for authorized users. Within the wilderness areas, 23.3 miles of routes are authorized for use by the BLM under the Wilderness Act and P.L. 100-225. These routes are available only for periodic access by those who maintain grazing management facilities, personnel needing access in emergencies, and property owners needing to reach private inholdings.

The Planning Area is open to horseback use with no restrictions. Bicyclists also can access the Planning Area using the existing vehicle road and trail network, except in the two designated wildernesses. No bike trails have been designated. Cross-country cycling is prohibited only in wilderness, but the Planning Area's rugged terrain and lava flows limit this activity elsewhere.

Access to the entire Planning Area also can be gained by hiking, although the rugged terrain in parts and the lack of water make this activity more difficult. No extensive trail system exists within the Planning Area. One constructed trail about ½ mile long leads from the parking lot to La Ventana Natural Arch. A short segment of this trail up to a viewpoint is paved to make it universally accessible (including to disabled visitors). The BLM Ranger Station, located 9 miles south of I-40 on NM 117, is also constructed to be universally accessible.

Another area popular for hiking is along the sandstone rim above The Narrows. At this area's south end, approximately 21 miles south of I-40 on NM 117, a hiker easily can scramble to the top of the rim. Following the Narrows Rim Trail (about 3 miles long) in a northerly direction leads to magnificent views of the lava and surrounding countryside, including La Ventana Natural Arch. The Narrows Recreation Site, which is located just outside the wilderness boundary, and the Narrows Rim Trail provide access for hiking and other primitive recreation activities in the Cebolla Wilderness.

Another way to access the Planning Area will be from the CDNST (refer to Map 18). The decision on CDNST location through this portion of central New Mexico was published in 1993 (USDA, FS). Within the Planning Area, three short trail segments have been marked in the Cerritos de Jaspe Unit (2 miles), the Chain of Craters WSA (6 miles), and the Cerro Brillante Unit (4.5 miles). No treadway or trail facilities have been constructed, although rock cairns have been built and signs posted on public land to mark the trail.

Under P.L. 100-225, the Secretary of the Interior must provide nonexclusive access to the NCA by American Indians for traditional cultural and religious practices, including the harvest of pine nuts. This access is to be consistent with the purposes and intent of the American Indian Religious Freedom Act and the Wilderness Act.

WILDERNESS

Introduction

The Planning Area contains two designated wildernesses and a WSA (refer to Map 2 in Chapter 1). The Cebolla Wilderness and the West Malpais Wilderness were established by the Congress through P.L. 100-225. This law also requires that the BLM review the Chain of Craters WSA and submit a

recommendation to the Congress on its suitability or nonsuitability for preservation as wilderness.

Since the initial wilderness inventory and study conducted under Section 603 of the Federal Land Policy and Management Act (FLPMA), the BLM has acquired several thousand acres within the Planning Area. The agency's policy is to maintain an inventory of all public lands that may possess wilderness characteristics, including those lands acquired through exchange, donation or other means. If they are roadless areas possessing wilderness characteristics, these lands are evaluated and studied for wilderness suitability. In the Planning Area, the lands being considered for wilderness designation are contiguous to the Cebolla Wilderness and have not been previously inventoried or studied.

Wilderness Management

Cebolla Wilderness

This wilderness, located on the east side of the Planning Area, consists of approximately 62,000 acres. The Cebolla Wilderness is comprised of four former WSAs (Piñon, Rimrock, Little Rimrock and Sand Canyon).

Since the area was designated, the BLM has acquired approximately 800 acres of surface estate within its boundaries. The wilderness still contains three small inholdings (two private, one Indian) amounting to slightly over 500 acres. About 10,500 acres of private mineral subsurface estate also exist as part of the Cebolla Wilderness. These inholdings, surface and subsurface, are high priorities for acquisition identified in the *El Malpais Land Protection Plan* (USDI, BLM 1989b).

The exterior boundary of the Cebolla Wilderness is defined by formerly private lands, roads and the boundary of the Acoma Indian Reservation (refer to Map 2 in Chapter 1). The western boundary parallels NM 117 until the highway turns southwest. The boundary then proceeds southeasterly along utility line rights of way and the Tank Canyon Road. Roads and intermittent streams define the southeastern margin of the wilderness. The eastern boundary is generally defined by the top of Cebollita Mesa, which marks the edge of the Acoma Reservation, and the northern boundary is formed by a block of Acoma lands. BLM Road 2003 divides the northern and southern portions of the Cebolla Wilderness. The wilderness boundary is set back 100 feet from the apparent centerline of this graded road.

The Cebolla Wilderness contains a diversity of resource values that are manifested in unique visual qualities and a rich and varied wildlife habitat. Visitors have opportunities to view varied wildlife within several closely located scenic areas. Broken terrain, wildlife, vistas, and prehistoric and historical resources provide outstanding opportunities for recrea-tional experiences including hiking, photography, backpacking, and primitive camping.

All 62,000 acres of the Cebolla Wilderness have been classified according to the ROS inventory and classification system (refer to Appendix C). About 43,000 acres (69 percent) of the wilderness are classified as semi-primitive non-motorized (refer to Table 3-2). The roaded natural and semi-primitive motorized classifications apply to wilderness lands near roads along the boundary.

The numbers and distribution of visitors in the wilderness are not yet completely documented. The majority of the known visitor use, as observed during BLM patrols, consists of sightseeing from vehicles on NM 117 and short walks into the northern portion of the wilderness by day hikers and photographers. Some use occurs in the southern end, mainly by hunters and visitors to the Dittert Site, but this portion of the wilderness is not as readily accessible. Key access points to the Cebolla Wilderness are La Ventana Natural Arch, The Narrows, Cebolla Canyon, Armijo Canyon and the Sand Canyon cherry-stemmed road.

The numerous canyons, mesas, ridges, and broad valleys that characterize the unit support a complicated pattern of open areas, ponderosa forests, piñon- juniper woodlands and grasslands. The high mesas provide vistas of volcanic fields extending for long distances. Sandstone bluffs and ridges rise above broad grassy valleys and alluvial fans. Visitors can find isolation from the sights and sounds of others in the broken and rugged terrain of the area.

La Ventana, one of the largest natural sandstone arches in New Mexico, is located in the Cebolla Wilderness just east of NM 117. The arch, which is visible from the highway, attracts people driving by and is within a short walk from the highway pullout

and parking area. Along The Narrows, NM 117 is pinched between vertical sandstone cliffs and the surreal landscape of the lava flows, providing a spectacular drive for visitors traveling through the area. Southwest of The Narrows, the landscape broadens out into a flat meadow formed by the mouth of Cebolla Canyon. Here, seasonal clusters of gold and pink wildflowers provide appealing visual displays for highway travelers.

Wildlife species have benefitted from the varied habitats available within the wilderness. The mixed landscapes of the unit have created habitat edges where ecotypes have mixed and supported many wildlife species. The rimrock country and vertical sandstone escarpments are prime raptor nesting habitat. Birds of prey in the area include golden eagles, red- tailed hawks, prairie falcons and great horned owls, with peregrine falcons migrating through. Large mammals include mule deer, bears, coyotes, bobcats, foxes, and occasional mountain lions. The broad valleys support reptiles and many small mammals such as prairie dogs and badgers.

However, many vegetative communities in the wilderness are becoming stagnant or deteriorated. Human use and climate changes have altered the mix of plant species as well as their location. The more open grasslands have changed to grass-shrub communities and piñon-juniper woodlands. Additionally, woody species (primarily piñon and juniper trees) have increased in the ponderosa pine communities, decreasing the open parkland acreage. As the vegetative health of these crowded areas declines, the likelihood of disease, pestilence and fire increases.

The practice of suppressing natural fires has played a part in this change in vegetative communities, also resulting in increased fuel loads, increased soil erosion, and a loss of ecosystem and biological diversity. Before the 1800s, natural fires would occur about every 2 to 3 years, burning with a lower intensity in smaller patches. Now such fires have the potential to burn with a higher intensity, making them more difficult to control.

The Cebolla Wilderness contains nationally significant archeological sites in extremely high densities. Most of them belong to the prehistoric Pueblo Chacoan system or the related but more recent Acoma Cultural Province, but range in age from PaleoIndian (10,000 years ago) to historical. In addition, this area was an interface between the prehistoric Anasazi (Pueblo) culture to the north and the prehistoric Mogollon culture to the south.

The Dittert Site is a prehistoric community center with a Chacoan building, great kiva, and prehistoric roads located just inside the wilderness boundary at the mouth of Armijo Canyon. This site is listed on the National Register of Historical Places. Other key cultural resource properties that are wholly or partially within the Cebolla Wilderness are the Pinole Site and the Cebolla Canyon Community, which includes The Citadel. These are both large, fortified, Late Pueblo III aggregated villages. Petroglyphs and pictographs dating to Anasazi times also occur within the area.

The entire Cebolla Wilderness lies within areas claimed by Acoma Pueblo, the Hopi Tribe and the Navajo Tribe on the basis of traditional land use. In addition, portions of the area are claimed by the pueblos of Zuni and Laguna (Akins 1993).

The Acomas continue to maintain shrines within the area, and use it for other traditional cultural practices such as gathering herbs and hunting. The occurrence of several sweatlodges in the unit indicates Navajo use, which also includes hunting and piñon harvesting. Ongoing Laguna and Zuni uses of the Cebolla Wilderness have not been documented.

A number of well-preserved historical homestead sites are also found in this wilderness. These structures, which were generally used between 1920 and 1960, offer glimpses into a rural, self-sufficient way of life.

The Cebolla Wilderness overlaps three grazing allotments, El Malpais (#203), Los Pilares (#205), and Techado Mesa (#209--refer to Table 3-5 and Map 23 in the map section). A total of 7,530 Animal Unit Months (AUMs) are permitted in the wilderness.

Range improvements in the wilderness include fences, dirt tanks, pipelines, troughs, a windmill, and a spring development (refer to Map 33). Portions of

TABLE 3-5

GRAZING ALLOTMENTS OVERLAPPING THE CEBOLLA WILDERNESS

Allotment Name	No.	Total Acres (public land)	Acres in Wilderness (public land)	%Acres Within Wilderness	Total AUMs	AUMs in Wilderness	%AUMs Within Wilderness
El Malpais	203	136,200	49,200	30	16,906	6,365	38
Los Pilares	205	15,700	9,400	60	1,761	1,060	60
Techado Mesa	209	35,100	2,900	8	4,765	426	9
Totals		187,000	61,500	33	23,690	7,530	32

one pipeline system are located in the southeastern portion, while the other improvements are scattered throughout the wilderness.

P.L. 100-225 allows livestock grazing to continue within the Cebolla Wilderness in accordance with House Report 96-617 (Section 5, "Grazing in National Forest Wilderness Areas"). Range allottees within this wilderness are operating under a Range Improvement Maintenance (RIM) Plan and EA No. NM-017-89-31 (USDI, BLM 1990a; on file at the Albuquerque Field Office). The RIM Plan is the basis (through pre-authorization) for how, where, when, and by what methods range improvement maintenance using motorized equipment, motor vehicles, or other forms of mechanical transport is permitted within the wilderness. The plan also identifies authorized vehicle routes the allottees may use to access improvements.

BLM staff conduct on-the-ground patrols of the wilderness on a regular basis. These patrols provide opportunities for contacting and educating visitors about wilderness, as well as deterring use violations. Staff members record incidents of unauthorized use and visitor numbers, and monitor authorized uses. Signs have been placed around the wilderness to mark its boundary, and at previously used vehicle access points to inform visitors that the area is closed to motor vehicles, motorized equipment, bicycles and mechanical transport.

West Malpais Wilderness

This wilderness is located in the central portion of the Planning Area, as shown on Map 3 in Chapter 1. It consists of about 39,800 acres.

The West Malpais Wilderness is predominantly natural and exhibits outstanding opportunities for primitive and unconfined recreation. Human impacts consist of temporary disturbances of soil and vegetation in camp areas, and longer-term effects from livestock grazing improvements and access routes. Wilderness supplemental values include ecological complexity (where older basalt flows meet with more recent flows), scenic values, a variety of reptiles, antelope habitat, many species of birds, diverse lichens with research potential, and playa lakes.

This wilderness contains both federal and private surface and subsurface. When designated as wilderness in 1987, the area contained approximately 25,600 acres of private subsurface. By the end of 1995, the BLM had acquired all of this, except for about 500 acres in four parcels. The private surface inholdings (T. 7 N., R. 13 W., Sections 22 and 26) have been subdivided for cabin sites, and access crosses approximately 3/4 mile of Section 27, T. 7 N., R. 13 W. Several of the landowners have expressed interest in selling or exchanging their property.

For most of its length, the wilderness boundary either parallels roads or adjoins the National Monument boundary. Most of the National Monument has been found to possess wilderness characteristics and values; 86,267 acres have been identified as suitable for wilderness (USDI, NPS 1990a). Therefore, activities within the monument are not likely to degrade the quality of the wilderness experience for visitors to the West Malpais. Where the wilderness is bounded by CR 42 and a graded road, the boundary setback is 100 feet from the apparent centerline of the roads.

A graded road is "cherry-stemmed" out of the southeastern portion of the wilderness. This road travels in a northwesterly direction through Sections 2, 11, and 12 (T. 6 N., R. 12 W.) for approximately 2 miles to the intersection with the northern boundary of Section 2 (T. 6 N., R. 12 W.), where the wilderness boundary crosses the cherry-stemmed road.

The West Malpais Wilderness contains diverse resource values, including visual resources, various plant and animal species. Varied viewscapes are available to those visiting the wilderness. Volcanic plains form a low rolling terrain that offers broad, distant panoramas of volcanic fields, sandstone bluffs and ridges, and cinder cones.

The open panoramas without evidence of human imprint give the user a sense of isolation and solitude. Flowing, rolling, gently sloping lines dominate the near terrain and contrast with the broken lines of the more recent lava flows. This rolling terrain provides topographic screening that can buffer different user groups from each other.

Where older basalt flows meet with more recent flows, an ecological "edge effect" can be seen in the vegetation. This particular characteristic in the West Malpais Wilderness consists of a border of tall ponderosa pine undergrown with grasses, shrubs and piñon trees. This species combination or ecosystem does not occur elsewhere in this wilderness and supports wildlife diversity, particularly of birds and reptiles.

The lava soils and outcrops support at least 70 species of lichens of varied colors and textures. The diversity of these lichens is potentially interesting for research as well as being attractive to visitors. Lichen not yet classified may be present. A wide variety of cacti also exists.

The rolling, open prairie of grasses and shrubs supports antelope, which can often be sighted along CR 42. Wilderness designation provides some additional protection for these animals because motor vehicle use is not allowed. The prairie is also home to coyotes, jackrabbits, a variety of reptiles, and many species of birds not found in other types of habitats. These include open grassland birds such as sage sparrows, savannah sparrows, horned larks, grasshopper sparrows, harrier hawks, quail and burrowing owls. During rainy seasons, the old lava flows create numerous playa lakes that provide breeding grounds for invertebrates and amphibians, and make attractive loafing areas for a wide variety of birds, including migratory waterfowl.

An arm of the West Malpais Wilderness is Hole-in-the-Wall, an island ("kipuka") of ancient vegetated basalt flows surrounded by more recent flows (refer to Map 10). This area has figured both in legends and in western literature and probably will continue to attract hikers and overnight campers. Elk, deer, and antelope have been sighted in Hole-in-the-Wall. Abert's squirrels and many kinds of birds are also found there.

However, many vegetative communities in the wilderness are becoming stagnant or deteriorated. Human use and climate changes have altered the mix of plant species as well as their location. The more open grasslands have changed to grass-shrub communities and piñon-juniper woodlands. Additionally, woody species (primarily piñon and juniper trees) have increased in the ponderosa pine communities, decreasing the open parkland acreage. As the vegetative health of these crowded areas declines, the likelihood of disease, pestilence and fire increases.

The practice of suppressing natural fires has played a part in this change in vegetative communities, also resulting in increased fuel loads, increased soil erosion, and a loss of ecosystem and biological diversity. Before the 1800s, natural fires would occur about every 2 to 3 years, burning with a lower intensity in smaller patches. Now such fires have the potential to burn with a higher intensity, making them more difficult to control.

The ROS class for about 32,600 acres (82 percent) of the West Malpais Wilderness is semi-primitive non-motorized (refer to Table 3-2, Maps 3 and 6). The area offers opportunities for hiking, photography, backpacking, wildlife viewing and primitive camping. Opportunities for motorized use exist on non-wilderness lands adjacent to boundary roads.

The wilderness is overlapped by portions of ***three*** grazing allotments, El Malpais (#203), Cerro Brillante (#207) and Los Cerros (#210--refer to Map 23). Of the total ***25,417*** AUMs permitted for use on these allotments, ***4,892*** AUMs are within the ***38,900*** acres of public land in the wilderness (refer to Table 3-6).

Range improvements in the wilderness include fences, dirt tanks, pipelines, troughs, windmills, corrals, and a line camp that includes a bunkhouse and corrals (refer to Map 34). The pipeline systems are buried in the western portion of the wilderness. The line camp is located in the southeastern corner, while the other improvements are located throughout the wilderness.

P.L. 100-225 allows livestock grazing to continue within the West Malpais Wilderness in accordance with House Report 96-617 (Section 5, "Grazing in National Forest Wilderness Areas"). Range allottees within this wilderness are operating under a RIM Plan and EA No. NM-017-89-25 (USDI, BLM 1990c--on file at the Albuquerque Field Office). The RIM Plan serves as the basis (through pre-authorization) for how, where, when, and by what methods range improvement maintenance using motorized equipment is allowed within this wilderness. The plan also identifies authorized vehicle access routes the allottees may use to access improvements.

Regular on-the-ground patrols of the wilderness are conducted by BLM staff, who record incidents of unauthorized use, number of visitors, and monitor authorized uses. These patrols provide opportunities for contacting and educating visitors about wilderness, as well as deterring use violations.

No trailheads, parking areas or trails have been constructed for accessing the West Malpais Wilderness. Vehicle access routes used before wilderness designation are being used to a limited extent for hiking and horseback riding. One primary access point is near the end of the cherry-stemmed road in the southeastern corner, where visitors park and enter the wilderness using an old vehicle route through the lava. Hole-in-the-Wall is their primary destination.

TABLE 3-6

GRAZING ALLOTMENTS
OVERLAPPING THE WEST MALPAIS WILDERNESS

Allotment Name	No.	Total Acres (public land)	Acres in Wilderness (public land)	% Acres Within Wilderness	Total AUMs	AUMs in Wilderness	%AUMs Within Wilderness
El Malpais	203	136,200	28,700	21	16,906	3,567	21
Cerro Brillante	207	21,800	***2,400***	11	3,087	336	11
Los Cerros	210	40,100	***7,300***	20	5,424	989	18
Totals		***198,100***	***38,900***	18	***25,417***	***4,892***	19

Wilderness Suitability

Chain of Craters WSA

The Chain of Craters WSA is located within the western portion of the Planning Area (refer to Map 3 in Chapter 1). This WSA contains approximately 18,300 acres of publicly owned surface administered by the BLM, and no private surface. [Note: The acreage discrepancy between this figure and the 17,468 acres referred to in P.L. 100-225 results from more accurate compilations through the use of computerized Geographic Information Systems.]

The Chain of Craters wilderness suitability study is required by P.L. 100-225. The results of the study are included in a *Wilderness Analysis Report* (refer to Appendix I) and summarized below. The final wilderness recommendation coming from this study will be made through the Secretary of the Interior to the President followed by Congressional action. Only the Congress can designate the area as wilderness or release it from the wilderness review process. In the meantime, the BLM is managing the Chain of Craters WSA under the *Interim Management Policy for Lands Under Wilderness Review* (USDI, BLM 1995).

Existing Resources & Environment

The Chain of Craters gets its name from a series of volcanic cones and craters aligned along a large-scale zone of structural strain adjacent to the Continental Divide in the western portion of the Planning Area. The cones formed as volcanic debris was ejected from vents and built up steep-sided slopes. Many of the cones have collapsed along one side.

No perennial streams flow within the Chain of Craters. Unnamed ephemeral streams drain east and south away from the cinder cones into low-lying basins near the boundaries of the WSA. Most streamflow results from infrequent but intense storms and snowmelt. The WSA is part of a closed basin with no outflow of surface water.

The Chain of Craters contains three vegetative types, according to the Bailey-Kuchler classification system, ponderosa pine, piñon-juniper woodland, and grama-galleta steppe. (Note: The BLM has selected this U.S. land classification system because it assists in planning at a national level and combines current knowledge about the ecosystem geography of the country. It also serves as an overview of ecosystem and landform representation in the National Wilderness Preservation System.)

Existing & Potential Uses

The primary uses occurring in the WSA are livestock grazing, recreational activities, and traditional cultural practices by American Indian tribes. The WSA is also valued for its scenery, which is influenced by local landform and vegetative features.

At least three American Indian tribes (Acoma, Zuni, and Navajo) have close ties to the Chain of Craters. The WSA is part of a cultural landscape used by these groups to define and continue their culture and traditions.

Little specific information on Pueblo use of this area is available. Knowledge of many important places may be held by only a handful of people in a pueblo or tribe. Therefore, many specific places and practices pertaining to the Chain of Craters are unknown to the BLM, and continued consultation and coordination with the concerned American Indian groups is imperative.

The Ramah Navajos have expressed strong concerns about the Chain of Craters. Many Navajo shrines are believed to be present in the area. These places used for prayer may be important to the entire Navajo people or used only by an individual family. The Chain of Craters also includes specific areas where plants, birds, minerals and other natural substances are gathered for use in ceremonies, and more generalized areas where Navajos hunt, gather dye materials and pick nuts. The accessibility of these resources and places for prayer and other traditional uses is a concern to the Ramah Navajos, as it is to the Pueblos.

Recognizing that these groups have used the NCA in the past, the Congress through P.L. 100-225 guarantees them access for traditional cultural and religious purposes (consistent with the American Indian Religious Freedom Act and the Wilderness Act). P.L. 100-225 further provides that specific portions of the NCA can be temporarily closed to protect privacy for traditional activities.

Surveys conducted during the summer of 1989 indicate that prehistoric cultural remains are very sparse in the Chain of Craters WSA. However, homesteads and logging sites exist from the 1930s and 1940s; the BLM has fenced the Worley Homestead to protect it.

No mineral resources have been developed within the Chain of Craters WSA, and no mining claims or federal leases exist. With passage of P.L. 100-225, all federal minerals in the NCA were withdrawn from entry and development.

Portions of two BLM grazing allotments (Cerro Brillante, #207, and Los Cerros, #210) lie within the boundaries of the WSA (refer to Map 35). Each of these allotments contains range improvements (refer to Map 36). The current grazing use levels for these allotments are displayed in Table 3-7. The season of use for Cerro Brillante is yearlong and for Los Cerros it is 6 months.

Range improvements within both allotments include approximately 21.5 miles of wire fenceline, 17 dirt tanks, 16 troughs, 9 miles of buried water pipeline, two wellheads, and three 10,000-gallon, aboveground storage tanks. A water well was drilled on public land in 1981 (T. 7 N., R. 13 W., NW¼ Section 34) within ¼ mile of CR 42 on the east side of the WSA. During 1994 and 1995, all the buried pipeline was replaced so livestock would have a reliable water distribution system.

Records of logging in the Chain of Craters date from 1948 through 1975 (with the majority of cutting occurring before 1959), during which 22 contracts were awarded for the harvest of 6,353 million board feet of timber. However, designation of the WSA as part of the NCA in 1987 retired commercial timber production as a potential use. P.L. 100-225 prohibits timber harvest and the collection of green or deadwood products for sale or other commercial purposes.

Under the most current recreation (ROS) inventory, the BLM has classified the Chain of Craters WSA as roaded natural, semi-primitive motorized, and semi- primitive non-motorized (refer to Map 6 and Table 3-2). The portion of the study area that borders CR 42 is considered roaded natural because the road is maintained by the county. (Note: The condition of CR 42 limits accessibility during wet weather.)

The amount of recreation use in the Chain of Craters has not been quantified. Hunting is known to take place; in recent years BLM employees have encountered deer hunters during patrols. The WSA offers opportunities for recreational uses including sightseeing, day hiking, mountain biking along old vehicle routes, backpacking, camping, semi-primitive motorized touring, and horseback riding. Opportunities also exist for birdwatching, landscape and nature photography, and observation of geologic features.

In the Rio Puerco RMP (USDI, BLM 1986), the BLM limited motorized vehicle use in the Chain of Craters to existing vehicle ways. Approximately 46.5 miles of inventoried vehicle travel routes exist within the WSA (refer to Map 18). A selected route for the CDNST also passes through the Chain of Craters.

Two wildlife exclosures are located within the Chain of Craters, both in T. 7 N., R. 13 W. One exclosure in Section 17 is located in ponderosa parkland between two cinder cones. This exclosure contains an inverted umbrella (a water collection device for wildlife). The other exclosure is located in Section 19 in a rabbitbrush flat. Water is available from a dirt tank located just south of this exclosure.

Wilderness Criteria

The quality of mandatory wilderness characteristics of the Chain of Craters WSA (size, naturalness, and opportunities for solitude or primitive and unconfined recreation) is documented in the *Wilderness Analysis and Suitability Report* (refer to Appendix I). The area meets the size requirement of the Wilderness Act (having at least 5,000 acres). The WSA contains livestock grazing use and improvements, an extensive vehicle route network, and past logging activities. This human work, which is widespread throughout the WSA, noticeably decreases its naturalness.

Manageability

Land ownership along the margins of the WSA (Ramah Navajo on the western border, and other private owners on the northern and eastern borders) may present management problems. The potential for trespass onto private or tribal land by wilderness users

TABLE 3-7

GRAZING ALLOTMENTS
OVERLAPPING THE CHAIN OF CRATERS WSA

Allotment Name	No.	Total Acres (public land)	Acres in WSA (public land)	% Acres Within WSA	Total AUMs	AUMs in WSA	% AUMs Within WSA
Cerro Brillante	207	21,800	2,600	12	3,087	370	12
Los Cerros	210	40,100	15,700	39	5,424	2,115	39
Totals		61,900	18,300	30	8,511	2,485	29

exists, although trespass could occur regardless of wilderness designation. The proximity of the subdivided quarter-section to the north of the WSA could intrude on the area's visual qualities if development took place.

Because of historical ties, uses of the area by local Pueblo and Navajo Indians, and the nature of Navajo traditional cultural practices, the BLM cannot effectively administer the Chain of Craters as wilderness without serious conflicts. Prohibition of access by motorized vehicle would cause significant hardships in carrying out traditional cultural practices, which are not confined to specific localities, times of year, or designated individuals. P.L. 100-225 allows for nonexclusive access by American Indian people for traditional and religious purposes as long as it is consistent with the intent of the Wilderness Act. However, the act also generally prohibits the use of motor vehicles and motorized equipment. Under these circumstances, it would be extremely difficult to establish an administrative procedure to allow vehicular access into wilderness or define when vehicle use is appropriate for cultural and religious purposes without being in violation of the Wilderness Act. Special provisions for this area in wilderness legislation would be required.

Lands Contiguous to the Cebolla Wilderness

These lands are located contiguous to the boundaries of the southern portion of the Cebolla Wilderness (refer to Map 25). Since the designation of this wilderness in 1987, the BLM has acquired approximately 8,200 acres of contiguous private land. The agency is now inventorying this public land with other parcels (2,180 acres, for a total of 10,380 acres) and studying it for wilderness suitability. (Without the acquired land, the isolated public land parcels were not contiguous to an existing wilderness nor of sufficient size to meet the wilderness criteria.)

Existing Resources & Environment

These contiguous lands are an extension of the characteristic landscape of the Cebolla Wilderness, including mesas, canyons, ridges and broad valleys covered with conifer forests, piñon-juniper woodlands, and grasslands. The contiguous lands in the North Pasture area at the mouth of Cebolla Canyon and along the western edge of the wilderness are characterized as open terrain with gentle grassland slopes. Those lands in the Sand Canyon drainage, and on the north end of the mesas at the mouth of Sand Canyon, are broken terrain (steep slopes with rock outcrops) with conifers, grasses and shrubs. The mesas and ridges rising above the grassy valleys and alluvial fans offer a variety of scenic vistas.

The mixed character of the area provides varied habitats for wildlife. Birds of prey include golden eagles, red-tailed hawks, prairie falcons and great horned owls, with peregrine falcons migrating through. Large mammals include mule deer, bears, coyotes, bobcats, foxes, and mountain lions. The broad valleys support reptiles and many small mammals such as prairie dogs and badgers. No threatened or endangered animal or plant species are known to exist on the contiguous lands. If any of these species were located here, the BLM would protect them by complying with appropriate laws and regulations.

This area contains nationally significant archaeological sites in extremely high densities. The Dittert Site, which lies just inside the western boundary of the Cebolla Wilderness and is listed on the National Register of Historical Places, is a prehistoric community with a Chacoan building, great kiva and two prehistoric roads. Vehicle access to the wilderness boundary near this site is through the contiguous lands.

Geologically the contiguous lands are located between the structural high of the ancestral Zuni Highlands on the west and the structural low of the Acoma Sag to the east. A few northwest-trending faults exist. Sedimentary rocks of the Cretaceous Age crop out within the area and dip at low angles to the east. These rocks represent the uppermost units of a sedimentary section that ranges from Pennsylvanian to Cretaceous in age.

Deposition in the area began when the Pennsylvanian marine environment encroached upon the granitic/metamorphic Zuni Highlands. The highlands served as a sediment source, so the Pennsylvanian rocks include sandstones, shales, and marine carbonates. Permian Age rocks consist of both continental and marine deposits. Continental environments (floodplains, rivers, lakes and dune fields) existed through most of the Triassic and Jurassic periods. Transitional marine environments alternated with the open marine deposition through Cretaceous time, resulting in the intertongued Dakota Sandstone and Mancos Shale. With the Crevasse Canyon Formation, this sandstone and shale form the cliffs and valleys of the contiguous lands.

The Pennsylvanian section, which underlies the contiguous lands, has petroleum potential because both source rocks and reservoir rocks were deposited during Pennsylvanian time (Broadhead 1986). The contiguous lands lie within an area that has been classified as having moderate potential for oil and gas development (McLemore *et al*. 1986), but has no proven reservoirs. The possibility of both stratigraphic and structural hydrocarbon traps exists.

The Upper Cretaceous Crevasse Canyon Formation crops out over much of the contiguous lands and contains carbonaceous shales and thin coal beds. Coal potential is considered low because the beds are thin (Bigsby and Maxwell 1981). The area also has a low resource potential for undiscovered metals, oil and gas, and geothermal energy.

Geologic conditions that could produce carbon dioxide gas exist in the area, but no exploration has occurred. The gas may form when the igneous rocks intrude into carbonate rocks, causing gas to be released by heating. If stratigraphic or structural traps exist, the gas may exist in quantity, although its economic value depends on nearby developed oil fields or a pipeline for shipment.

Existing & Potential Uses

The contiguous lands are being used primarily for grazing, recreation and wildlife habitat. Scattered evidence exists of human imprints on the contiguous lands from existing and past uses (refer to Appendix J for inventory findings). The 62,000-acre Cebolla Wilderness is considered predominantly natural, with opportunities both for solitude and primitive and unconfined recreation, so its presence would add to the wilderness suitability of the contiguous lands.

The diverse broken terrain, variety of wildlife habitat, dramatic vistas, and prehistoric and historical resources extending from the Cebolla Wilderness into the contiguous study lands support non-motorized and dispersed types of recreation. The area offers opportunities for uses such as hiking, primitive camping, backpacking, hunting and photography, all of which are ongoing (based on BLM staff observation and personal contact made with visitors during areal patrols). The amount of recreation use occurring on the contiguous lands and within the adjacent wilderness is unknown. However, because people are becoming more aware of the area and its closeness to Albuquerque, recreational use of the area is expected to increase.

The contiguous lands are within one grazing allotment (El Malpais, #203) whose season of use is yearlong. This grazing allotment has 51,200 acres of public land in the Cebolla Wilderness and 28,700 public acres in the West Malpais Wilderness or 59 percent of its total acreage within wilderness boundaries. Range facilities on the contiguous lands consist of fencelines, windmills, dirt tanks and troughs (refer to Appendix J).

No mineral resources have been developed within the contiguous lands. If oil and gas exploration and

development were to take place, any carbon dioxide present would become more valuable because of its use in the secondary recovery of oil. No mining claims or potential for locatables exists. The BLM is attempting to acquire the subsurface mineral estate in this area in accordance with the Land Protection Plan (USDI, BLM 1989b). If acquired, this estate would be withdrawn from mineral leasing and development in accordance with P.L. 100-225.

The Cebolla Canyon Road (designated as BLM Road 2003), which separates the northern portion of the Cebolla Wilderness from the southern portion, is used by ranchers, recreationists and the BLM. This graded road is receiving periodic maintenance, but is subject to erosion because it parallels the drainage in Cebolla Canyon. Consideration has been given to rebuilding part of the road to prevent additional resource damage from erosion and vehicle use.

Wilderness Criteria

The most noticeable imprint of humans on the contiguous lands comes from graded roads and routes that have developed through continued use, including 31 miles used to access livestock grazing facilities, and from the grazing facilities themselves. A majority of these facilities are located within Cebolla Canyon on terrain of low rolling hills with a vegetative cover of shrubs and grasses. Other facilities are located between CR 41 and the western wilderness boundary on the formerly private lands. Many fences are extensions of allotment and pasture fences already existing in the wilderness, and some routes serve as wilderness boundaries. Overall, these human imprints are scattered throughout the contiguous lands, and some are screened by landforms and vegetation, so they do not significantly detract from the area's naturalness.

In the western and northern portions of these lands, the open terrain and low-growing vegetation provide very little visual screening and few opportunities to find isolated locations for solitude. However, elsewhere screening and isolation can be found in broken terrain (steep canyons and mesas) with conifers, grasses and shrubs. Such areas include the Sand Canyon drainage, the north end of the mesa at the mouth of Sand Canyon on the west side, the southern end of the contiguous lands, and the land along Cebolla Canyon.

As on the adjoining Cebolla Wilderness, many special features are present. They include scenic and cultural values, elements of scientific and educational value, and a diversity of wildlife.

The contiguous lands have opportunities for a diversity of primitive and unconfined recreation. When combined with the existing Cebolla Wilderness, the contiguous lands would provide a larger area in which visitors could pursue such activities.

Manageability

Some of the contiguous lands reviewed in this plan are not considered manageable for wilderness because they are subject to outside sights and sounds from traf-fic and uses of county and state roads. Some lands do not possess scenic, scientific, and recreational values that supplement or complement those of the Cebolla Wilderness.

AMERICAN INDIAN USES & TRADITIONAL CULTURAL PRACTICES

Introduction

A diversity of deeply rooted cultural traditions is one of the special characteristics New Mexico offers to both local citizens and visitors. In P.L. 100-225, the Congress made it clear that the NCA, including the wilderness areas, is to be managed in ways that accommodate the needs of traditional American Indian peoples and allow the continuance of traditional cultural practices.

Navajo Uses of the Planning Area

The Ramah Navajo Indians have expressed strong interest in the Planning Area. Past Navajo uses of the area include plant gathering, hunting and probable livestock herding. Numerous sweatlodges of presumed Navajo origin occur throughout the Planning Area. Portions of the lava that have mythological importance are also found. For example, the recent lava flow known as the "black rock area" is important because it is mentioned in the Navajo curing ceremony, Monsterway. These lava flows are the hardened blood of Yeitso, the chief of the enemy Yei, who was killed by the Hero Twins near Mount Taylor. In addition to places of mythological importance, it is likely that prayer locations and other places of religious importance to the Navajos occur here as well.

Pueblo Indian Uses of the Planning Area

The Planning Area is believed to contain numerous places important in the Acoma and Laguna religions, including lava flows, shrines, high points, water sources, caves, and pilgrimage routes. Both Acoma and Laguna people maintain shrines in the Planning Area. The majority of tribal members may not visit or even know of these places, but they are important to the entire pueblo.

The numerous Anasazi habitation sites within the Planning Area are recognized by Acoma people as ancestral villages. Burials associated with these sites are regarded as the remains of ancestors. It is important to Acoma people that these sites remain undisturbed by human activity. The Acomas collect plant materials such as herbs, Douglas fir boughs, piñon nuts, and Rocky Mountain beeweed in the Planning Area. Acoma potters also collect sherds from prehistoric pots to be crushed and added to pottery clay as tempering material, a practice dating back at least a thousand years.

In accordance with the wishes of these groups, the BLM does not actively manage any sites or areas for traditional American Indian uses. Instead, the agency seeks to keep these groups informed about major activities proposed within the Planning Area, giving them time to respond if traditional uses are likely to be affected.

CULTURAL RESOURCES

Introduction

The Planning Area includes a wealth of archeological and historical remains. Not only are these sites important from a scientific point of view, but some are well preserved and could be of considerable interest to the general public. Prehistoric remains in the Planning Area are also very important to American Indians who recognize them as ancestral places.

Inventory

Archeological remains have been reported in the Planning Area since the middle and late 1800s, but intensive study of this area did not begin until the late 1940s and early 1950s. During this time, Reynold Ruppe and Alfred Dittert directed reconnaissance and excavation along the western flanks of Cebollita Mesa. Most of what is known about the prehistory of this area comes directly from these studies.

Additional archeological survey has been completed in conjunction with proposed land-disturbing projects, and in the course of BLM-sponsored inventories to obtain baseline information about the Planning Area's cultural resources. To date, intensive (Class III) cultural resources inventory information is available for about 2 percent of the Planning Area and adjacent units (5,636 acres). The inventories are summarized in Table 3-8.

PaleoIndian Period

The earliest human use of the Planning Area's region may have been as long as 12,000 years ago, near the end of the last major Ice Age. This occupation, known as the PaleoIndian period, was based in part on the hunting of animals that are now extinct. Archeological sites of this age usually consist of low-density scatters of stone artifacts; the sites are recognized as PaleoIndian only if projectile points or certain other diagnostic stone tools are found. Although Paleo-Indian sites have been recorded on lands east and west of the Planning Area, very little evidence of such occupation has been found in the area itself.

Archaic Period

By about 7,500 years ago, the Ice Age had ended and the climate was becoming warmer and dryer. With shifts in climate came new economic and social strategies that were based on gathering a wide range of plants and hunting a variety of game animals.

This period is known as the Archaic Period, which is characterized by a well-organized and complex round of migrations based on seasonal availability of a broad spectrum of plant and animal resources. The Archaic Period lasted until about A.D. 400 and is divided into five successive phases distinguished on the basis of projectile points.

Sites of the Archaic Period usually consist of scattered stone chips and tools. Occasionally, careful excavation yields evidence of pithouses or brush structures. Artifacts from Archaic Period sites include projectile points, scrapers and grinding stones.

This period is not well represented in the Planning Area, where only 20 Archaic components have been recognized.

TABLE 3-8

CLASS III CULTURAL RESOURCE SURVEYS WITHIN & ADJACENT TO THE EL MALPAIS PLANNING AREA

Unit [a]	Acres Surveyed	% Surveyed
Cebolla Wilderness	2,192	3.5
West Malpais Wilderness	331	.8
Chain of Craters WSA	617	3.4
Brazo	608	2.1
Breaks	415	6.4
Cerritos de Jaspe	416	3.3
Cerro Brillante	321	.9
Continental Divide	214	.9
Neck	137	.5
Spur	109	1.9
Brazo Non-NCA	64	.01
Breaks Non-NCA	64	.01
Techado Mesa-SFO	66	.6
Tank Canyon-SFO	82	.7

Note: [a] No Class III surveys have been done in the Cerro Brillante-AFO and Continental Divide-AFO Units.

Pueblo Period

Late Archaic peoples had some knowledge of agriculture, but relied only casually on crops for their livelihood. By about A.D. 700, settlements of people who relied heavily on agriculture were common. These groups raised corn, beans and squash, and supplemented their diets by hunting and gathering wild plants. They are known as the Pueblo or Anasazi, and their development can be traced through time to the present-day Pueblo Indians. Sites of the Pueblo Period include rock art, pithouses, remains of masonry and jacal (brush) buildings and simple artifact scatters.

The Pueblo Period can be divided into eight successive phases based upon changes in pottery styles and other characteristics. Earlier phases are characterized by ceramic (pottery sherd) and lithic (stone and flake) scatters and occasionally by pit-houses. By about A.D. 850, small surface houses were predominant, sometimes grouped around a great kiva. Later, around A.D. 1050, these communities sometimes included a large building with certain Chacoan characteristics such as massive masonry, extremely large rooms, blocked-in kivas and prehistoric "roads."

After A.D. 1150, a shift occurred from small individual family residences to larger multifamily dwellings. This trend culminated in a handful of large pueblos with 100 to 400 rooms. By around A.D. 1400, most of the Planning Area had been abandoned as an area of primary residence. Undoubtedly it continued to be used by American Indian peoples for hunting, gathering, and other traditional purposes.

Two very striking patterns are apparent for the Pueblo Period. First, the overwhelming majority of sites date to the late Pueblo II and early Pueblo III periods (between A.D. 1050 and 1200). There can be little doubt that the major period of Anasazi occupation in the Planning Area occurred during these times.

The second striking pattern is the strong concentration of Anasazi sites along the NM 117 corridor. This is shown dramatically in Map 37, which shows estimated site densities.

The Anasazi sites are of concern to local American Indian groups, especially the Acomas. These sites are recognized as the past homes of Acoma ancestors and can be sources of spiritual power and rejuvenation. The Acomas also collect potsherds from these sites to be crushed and used as temper by contemporary Acoma potters.

Traditional American Indian attitudes toward excavation of the Anasazi ruins are diverse. The Acomas feel strong ties to these sites and prefer that they not be disturbed. Disturbance directly related to the ongoing history of the Acoma people is accepted with some reluctance, but excavations that result from other construction, pothunting, or scientific investigation are strongly opposed.

The Navajos view prehistoric ruins (and other abandoned habitations) as places of spiritual danger. They are concerned that disturbance of these places can cause misfortune, both to individuals and to whole peoples.

Historical Times

Anglo-European use of the Planning Area's region began with the entry of Francisco Vasquez de Coronado in 1540. However, it was not until the construction of the Atchison, Topeka and Santa Fe Railroad through the Malpais in 1881 that intensive Anglo-European use of the region began in earnest. Homesteading may have begun as early as 1916, but the development of the logging industry in the late 1920s really stimulated rural settlement in the Planning Area. Most historical sites in the Planning Area are sawmills, logging camps and homesteads dating between the 1930s and the 1960s.

Management Actions

Certain cultural resource properties are frequently referred to by name in this document. These particular places have been the focus of management attention or figure prominently in management actions proposed under one or more alternatives in this plan. These sites are described briefly in Table 3-9.

The BLM has an active program of cultural resource management in the Planning Area. Several major inventory projects have been undertaken to document the location and baseline condition of archeological sites in critical or poorly known areas. These projects include Class III inventories in Cebolla Canyon and Armijo Canyon, and major Class II

inventories in the Cerritos de Jaspe area and other parts of the

TABLE 3-9

MAJOR CULTURAL RESOURCE SITES IN THE PLANNING AREA

Site Name	Unit	Description
Aldridge Petroglyphs	Cebolla Wilderness	Extensive rock art panel
Armijo Canyon Homestead	"	Stabilized homestead-era residence
Armijo Canyon Springhouse	"	Stabilized homestead-era springhouse associated w/ Armijo Canyon Homestead
Cebolla Canyon Community-- includes:	Breaks & Cebolla Wilderness	Major prehistoric Anasazi community w/principal occupation A.D. 800-1325. Over 50 buildings.
• Arroyo Ruin	Breaks	Buried 20-room Anasazi pueblo occupied A.D. 1125-1175. Focus of erosion control measures.
• The Citadel	Cebolla Wilderness	60-room Anasazi pueblo occupied A.D. 1250-1325
• Oak Tree Ruin	Breaks	Stabilized 40-room Anasazi pueblo occupied A.D. 1250-1325
Cebolla Canyon Schoolhouse	Cebolla Wilderness	Homestead-era schoolhouse & community center
Cerritos de Jaspe Community	Cerritos de Jaspe	Dispersed prehistoric Anasazi community primarily occupied A.D. 950-1125. Includes 30-45 individual pueblos, each having up to 20 rooms.
Dittert Site	Cebolla Wilderness	Stabilized Anasazi masonry pueblo built as Chacoan Outlier, occupied ca. A.D. 1150-1300. In Armijo Canyon Community.
Lobo Canyon Petroglyphs	"	Extensive rock art panel
Newton Site	Tank Canyon	165-room Anasazi pueblo occupied A.D. 1200-1325
Pinole Site	Cebolla Wilderness	100-room, fortified Anasazi pueblo occupied A.D. 1100-1325
Ranger Station Reservoir	Spur	Prehistoric Anasazi reservoir used A.D. 1200-1325
Rowe Homestead	Breaks	Homestead-era residential site
Stone House	Cebolla Wilderness	Homestead-era residential site
West Malpais Schoolhouse	West Malpais Wilderness	Homestead-era schoolhouse

Worley Homestead	Chain of Craters WSA	Homestead-era residential site

Planning Area. Inventories have documented a number of the historical homesteads, and anongoing volunteer project will record all the Planning Area's known rock art. Finally, the BLM and the NPS have interviewed a number of long-time residents, recording approximately 26 hours of oral histories.

Formal monitoring programs have been implemented for three prehistoric ruins: the Dittert Site, Arroyo Ruin, and Oak Tree Ruin. This activity consists of taking a series of standardized photographs each year so that any changes in site condition can be detected and corrective action taken. Since 1988, Park Rangers on the NCA staff have actively patrolled the area. In recent years the BLM has been involved in two investigations of violations of the Archeological Resources Protection Act, and has successfully prosecuted a case involving theft of building stone from a historical homestead.

Physical protection measures implemented in the Planning Area include erosion control, stabilization and fencing. The BLM has installed erosion control structures to retard erosion of the Arroyo Ruin in Cebolla Canyon, and stabilized two prehistoric, masonry structural ruins, the Oak Tree Ruin and the Dittert Site. The agency has also completed a stabilization assessment for eight historical homesteads in the Planning Area, and major historical stabilization projects at the Armijo Canyon Homestead and Spring-house. To prevent livestock damage and theft of materials, fences have been built around five historical homesteads.

The BLM has also begun to interpret cultural resources in the Planning Area. Many of the exhibits in the Ranger Station highlight cultural resources, and each year BLM employees lead half a dozen or so guided hikes to archeological and historical sites. Cultural resources are also incorporated into an ongoing environmental education program in the Grants public schools.

WILDLIFE HABITAT

Introduction

The Planning Area provides a wide variety of habitats that support diverse populations of wildlife, including over 30 species of mammals, more than 60 species of birds for at least part of the year, and many species of reptiles, amphibians and invertebrates. The diversity of slope and terrain, vegetation, and sandstone and lava formations provides these important wildlife habitats. A list of vertebrate species likely to occur within the region of the Planning Area is found in Appendix F.

Water availability for wildlife is limited throughout the Planning Area, making all waters of special concern. Several wildlife waters and exclosures have been completed in various areas to benefit wildlife, as shown in Table 3-10. Waters developed primarily for livestock also provide an important water supply for wildlife, especially in the wilderness units. Dirt tanks scattered throughout the Planning Area provide water on an intermittent basis.

Habitats in the Planning Area are dispersed over the landscape in a patchwork pattern that provides large areas of "edge," where one habitat blends into another. The large number and size of these edge areas adds to habitat complexity and increases wildlife species
diversity.

Species Management

The BLM supports state management plans for those game species that state law defines to be of economic or public value. Species emphasized in the Planning Area because of interest by the NMDG&F include pronghorn antelope, mule deer, elk, turkey, Abert's squirrel, quail, mourning dove and waterfowl. Management objectives for these species are found in the *Operations Plan for Terrestrial Wildlife* (NMDG&F 1987). Other vertebrate species of high federal, state, or public interest include the special-status species (refer to the "Threatened and Endangered Species" section below), prairie dogs, raptors, neotropical migratory birds, black bears, cougars and coyotes. The wildlife program for the Planning Area focuses on these key species and their habitats.

Hunting and trapping continue within the Planning Area, where the NMDG&F manages the hunting seasons for elk, mule deer, pronghorn antelope, black bear, mountain lion, turkey, mourning dove, waterfowl and Abert's squirrel. Mule deer can be found throughout, generally associated with the piñon-juniper woodlands and forest habitats. Rocky Mountain elk reside mainly in the ponderosa pine forest habitats

located in the Cebolla Wilderness, Chain of Craters WSA, Continental Divide and Brazo Units.

TABLE 3-10

PROJECTS COMPLETED UNDER THE EL MALPAIS WILDLIFE HABITAT MANAGEMENT PLAN

Project Name	Unit	Location	Year Completed	Purpose
York Wildlife Seeding Exclosures	Brazo	T. 4, 5 & 6 N., R. 10, 11 W.	1967	Protect seedings for wildlife use
Bighole Inverted Umbrella #3	West Malpais Wilderness	T. 7 N., R. 11 W. Sec. 8, SE¼SE¼	1982	"
York Inverted Umbrella & Exclosure	Cerro Brillante	T. 6 N., R. 12 W. Sec. 30, SW¼NW¼	1982	"
La Rendija Inverted Umbrella	Continental Divide	T. 8 N., R. 12 W. Sec. 5, NE¼SW¼	1982	"
Malpais Swale Exclosure	West Malpais Wilderness	T. 7 N., R. 12 W. Sec. 29, NW¼NW¼	1982	Reduce livestock use of spring forbs to improve antelope habitat
Laguna Brillante Exclosure	Cerro Brillante	T. 6 N., R 13 W. Sec. 3, NE¼SE¼	1982	"
Laguna Americana Exclosure	Continental Divide	T. 8 N., R. 13 W. Sec. 13, NW¼NE¼	1982	Protect riparian habitat by excluding livestock
Cerro Chato Exclosure & Wildlife Water	Chain of Craters WSA	T. 7 N., R. 13 W. Sec. 17, SW¼NE¼ Sec. 19, SW¼SE¼	1982-83	Improve mule deer habitat & protect water from livestock use
Cerro Americano Parabolic Guzzler & Exclosure	Continental Divide	T. 8 N., R. 13 W. Sec. 11, NW¼SE¼	1984-85	Improve mule deer habitat
Cebolla Spring Exclosure	Brazo	T. 5 N., R. 10 W. Sec. 12, NW¼NW¼	1995	Protect riparian habitat & spring source from livestock use

Pronghorns occur predominantly in the shrub-grasslands of the Cerro Brillante Unit. Access into the wilderness areas for hunting or trapping is limited to foot or horseback.

The most common predator found in the Planning Area is the coyote, which is considered to be abundant throughout. Other predators include bobcats, grey foxes, and a limited number of mountain lions.

Birds of prey (raptors) vary in abundance depending on the availability of a prey base. The numerous bluffs within the Spur Unit and Cebolla Wilderness provide nesting habitat for the golden eagle, red-tailed hawk, kestrel, great-horned owl, prairie falcon and an occasional peregrine falcon. Upland gamebirds include the mourning dove (wide-spread throughout the Planning Area), quail (occurring in the shrub-grassland community) and Merriam's turkey (mainly found in the ponderosa pine forest habitat).

The only habitats considered to be wetlands within the Planning Area are playa lakes, which are ephemeral (temporary) and dependent on annual precipitation, and small marshy areas associated with natural springs. Waterfowl (e.g., mallards, pintails) and shorebirds (e.g., killdeer, spotted sandpiper) use natural springs, stock tanks and ephemeral water sources for resting and feeding during migration. Along the northern portion of NM 53 adjacent to the Neck Unit, a pond fed by Ojo del Gallo (a spring) attracts waterfowl and shorebirds to the area. Although the majority of the land covered by the pond is private, it provides unique wildlife habitat not found over most of the Planning Area. Limited nesting occurs in areas where sufficient water and cover exist.

Vegetative/Habitat Communities

Each animal species requires three elements for its existence--food, water and cover. Food and water are required to sustain the basic functions of growth, maintenance, and reproduction. Cover is vegetation, space, or landforms used by wildlife for protection from predators or the extremes of weather.

A habitat is a place where an animal finds the required arrangement of food, water and cover to meet its biological needs. Different species of animals require different combinations of these three elements. Certain habitats are especially important to wildlife because they are in limited supply, provide essential combinations of habitat factors during critical portions of a life cycle, or allow protected access to preferred habitats during seasonal migrations. Within the Planning Area, lack of certain habitat attributes may limit wildlife species occurrence in what otherwise appears to be suitable habitat.

Regardless of where it is located in the Planning Area, a particular vegetative community can support similar wildlife species diversity, and responds to management actions in a similar manner. Therefore, vegetative communities are reviewed when deciding where and how wildlife habitat enhancement, maintenance and protection measures should be implemented. Using satellite-gathered data, the BLM has classified the NCA's vegetation into three broad communities (Grass-Shrub, Piñon-Juniper and Ponderosa Pine).

Grass-Shrub Community

This vegetation is found in large blocks of the Neck, Cerro Brillante, and southern portion of the West Malpais Wilderness. It is also found in smaller scattered parcels throughout the Cebolla Wilderness, Breaks and Spur Units, where it blends with piñon-juniper. In the rolling hills of the Cerro Brillante Unit are found pronghorn antelope, jackrabbits, cottontails, and a variety of birds, including quail. An occasional glimpse of pronghorn antelope is available along CR 42.

The uneven topography of the old lava flows within this grass-shrub vegetation creates numerous playa lakes during the rainy season, which offer an ephemeral water supply that supplements developed waters. These lakes provide breeding grounds for invertebrates and amphibians, and make attractive resting areas for a wide variety of birds, including migratory waterfowl. Soils in parts of these areas are deep enough to support small burrowing mammals such as prairie dogs, which are a food supply for raptors. Such holes also provide habitat for burrowing owls.

Piñon-Juniper Community

This vegetation covers large portions of the Continental Divide, Chain of Craters, Cerro Brillante, Cerritos de Jaspe, Spur, Cebolla Wilderness and Brazo Units. Large, uniform stands of piñon-juniper

characterize these areas, as well as smaller clumps of the trees scattered through grassy meadows. This mixture of habitats is attractive to mule deer, turkey and many species of birds, and provides cover for wildlife during severe weather.

Along the western edge of these areas in the Spur Unit and the Cebolla Wilderness, large sandstone buttes rise above the grassy valleys and lava flows. The cliffs provide nesting sites for golden eagles, prairie falcons and peregrine falcons, and on occasion, cougars, elk, and bears have been spotted. The area is especially rich in winter resident and migrating birds, and its piñon pine trees often produce heavy crops of nuts valued by visitors as well as wildlife.

Ponderosa Pine Community

This vegetation occurs throughout the Planning Area on sites where the appropriate conditions exist. These sites are dominated by ponderosa pine with understories of shrubs (e.g., currant, oak, mountain mahogany, raspberries), grasses, forbs, quaking aspen and rock outcrops. The vegetation covers large portions of Hole-in-the-Wall, the northern portion of the Chain of Craters WSA, and the higher elevations within the Cebolla Wilderness and Brazo Unit. It is attractive and important habitat for mule deer, turkeys, Abert's squirrels, tree- and hole-nesting wildlife, coyotes, and many species of birds. Elk also are seen occasionally.

In some areas scattered Douglas fir occurs with the ponderosa pine. Landform characteristics such as mixed lava and sandstone formations give some areas the ability to trap and hold water, which allows for the two large trees to occur at elevations much lower than they usually are found. Small areas of classic ponderosa parkland exist at higher elevations in the Planning Area, characterized by widely spaced, large adult (300+ year-old) trees in grassy meadows with few shrubs.

Special-Feature Habitats

In addition to the three broad vegetative communities, numerous unique, special-feature habitats exist within the Planning Area (e.g., volcanic plains, cinder cones, caves, riparian wetlands). Except for the lava flows, these special habitats are generally confined to small areas scattered throughout the three larger communities.

The cinder cones and volcanic plains of the Continental Divide Unit, Chain of Craters WSA and West Malpais Wilderness create a complicated pattern of vegetation and terrain. This combination provides habitat for mule deer, coyotes, bears, many species of reptiles, and game birds such as turkeys and doves. Caves and riparian-wetland habitats offer small but very important microhabitats for numerous wildlife species including bats, waterfowl, shore birds, reptiles, amphibians and migratory songbirds.

THREATENED, ENDANGERED & OTHER SPECIAL-STATUS SPECIES

Introduction

Six federally listed threatened or endangered, 1 proposed ***threatened***, and ***25*** species of concern (BLM sensitive) are known or potentially could occur on public lands within the Planning Area (USDI, FWS ***2000***). In addition, ***7*** species listed by the State of New Mexico as threatened or endangered also are known or potentially could occur. Appendices F (wildlife) and G (plants) provide lists of these species.

Informal consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act ***has been completed (Refer to Appendix Q).***

Species Management

Listed and federal candidate species that are known to occur within the Planning Area include the bald eagle, peregrine falcon and mountain plover. The Planning Area is outside the bald eagle's normal range (along the Rio Grande corridor), but the birds have been observed migrating through the area. The American peregrine falcon is known to nest within the Planning Area. In 1994, a pair of adults were observed at a nest site on several occasions, but the

available information indicates the nesting attempt failed. In 1995 and 1996, additional sightings of adult birds were made by NMDG&F employees near the 1994 nest site, but no nesting attempts were confirmed. The mountain plover was identified in a 1995 survey by the NMDG&F as using the southern portion of the Planning Area (Williams 1995).

Listed and federal candidate species that potentially occur within the Planning Area but have not been specifically identified include the black-footed ferret, Arctic peregrine falcon, Southwestern willow flycatcher, Mexican spotted owl, Zuni fleabane and puzzle sunflower. The black-footed ferret is considered to be extirpated from New Mexico (NMDG&F 1996), so it is not likely to be found within the Planning Area. The Arctic subspecies of the peregrine falcon would migrate through the area only during the spring and fall. Because suitable riparian and old-growth forest habitats are lacking, neither the Southwestern willow flycatcher nor the Mexican spotted owl are likely to be found within the Planning Area. Both the Zuni fleabane and the puzzle sunflower have been identified as occupying habitats only outside the Planning Area.

Species of concern that are known to occur within the Planning Area include the Western burrowing owl, loggerhead shrike, ferruginous hawk, cinder cone scorpionweed (*phacelia*), Acoma fleabane and grama grass cactus. All these species occur throughout the Planning Area wherever their particular habitat sites are found (e.g., prairie dog towns, open piñon-juniper savanna, cinder cones). No specific surveys have been conducted for these species, but they all have been randomly observed.

Vegetative/Habitat Communities

The following discussion is only an example of the general vegetative/habitat communities of the Planning Area, and the potential listed, candidate and BLM sensitive species (species of concern) that could occupy them. Many of the more mobile species (i.e., birds and bats) can use several different communities throughout the year.

Grass-Shrub Community

The threatened or endangered species in the grass-shrub community include the bald eagle, American peregrine falcon, and Arctic peregrine falcon. Other candidates and species of concern include the mountain plover, Western burrowing owl, ferruginous hawk, loggerhead shrike, Cebolleta southern pocket gopher, Texas horned lizard and grama grass cactus.

Piñon-Juniper Community

None of the threatened, endangered or other special-status species appear to be limited to or especially dependent upon the piñon-juniper vegetative community. However, Acoma fleabane is commonly found within this habitat, and many species of bats are known to use woodlands edges in association with special-feature (e.g., riparian) habitats for feeding.

Ponderosa Pine Community

This community is limited within the Planning Area. However, some listed species and species of concern that have the potential to occur in this habitat include the Northern goshawk and Mexican spotted owl.

Special-Feature Habitats

Several species are able to survive only in areas with specific habitat features (e.g., caves, cinder cones, riparian-wetlands) and are not found except where the features exist. These species include bats (occult little brown, spotted, big free-tailed, Yuma Myotis, fringed Myotis, long-legged, long-eared, and small-footed) and cinder cone scorpionweed (*phacelia).*

Riparian-wetland habitats are limited in numbers and size within the Planning Area, but are scattered throughout all of the vegetative communities. The species that use this habitat include the bald eagle, Southwestern willow flycatcher, American peregrine falcon, Arctic peregrine falcon and puzzle sunflower.

VEGETATION

As described in Chapter 2, the BLM's goal for the Planning Area is to manage the existing vegetation to allow the Potential Natural Communities (PNCs) to be maintained or reestablished. According to data for Cibola County published by the Natural Resources Conservation Service, the environment in the Planning Area is capable of supporting four different PNCs, Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex (NRCS; formerly the Soil Conservation Service, SCS, 1993). These PNCs were determined

based on soils, other physical features and climate. They are the ideal vegetative communities that would become established if natural processes were allowed to be completed (refer to Appendix K for further detail). (Note: 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 where the flows are older and soils have formed.)

Each community usually occurs on a distinct area of the landscape. The range or limit of occurrence for each community will vary depending on soils, climate, topography, aspect, slope, elevation and use of an area. Within each community, vegetation from other communities will naturally occur in some varying but relatively small amounts. Communities compete with each other for space, sunlight, moisture and nutrients, and are therefore changing over time. Climate changes and human uses alter the mix of species, as well as their size and location. Human use has significantly contributed to shifts in the vegetative communities found in the Planning Area.

To allow comparison with the PNCs, the BLM has determined what vegetative classes now exist in the Planning Area. The agency acquired satellite remote sensing data gathered in 1994. Using Geographic Information Systems (GIS) computer capabilities, data on the area's existing soils, vegetation, landform and drainage patterns were compared and grouped to map distinct and unique areas referred to as Biophysical Land Units (BLUs). Four vegetative classes, Grass-Shrub, Piñon-Juniper, Ponderosa Pine, and Lava Complex were derived from the BLU data (refer to Appendix N for more information).

The BLM also used GIS to compare the NRCS potential communities with the existing BLU vegetative classes. The results of the comparison are shown in Table 3-11. The table displays the number of acres of existing vegetative classes found within the PNCs. From these comparisons, areas of concern or interest can be 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, added to periodic droughts.

These GIS comparisons provide a picture of the current mix of vegetation within each PNC. Consistent with PNC community goals, specific objectives for various vegetative species are discussed in the vegetation section of Chapter 2.

Rangeland Resources

Sixteen livestock grazing allotments overlap the Planning Area (refer to Map 4). The BLM has placed each allotment 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 in which changes in grazing management may be needed. The criteria for grazing allotment categorization are displayed in Table 3-12, with the specific category for each allotment found in Table 3-13.

The "I" category allotments are managed to improve their ecological condition and resolve resource conflicts. These are the allotments on which the BLM can apply vegetative management techniques, where the NRCS data indicate the potential is good for change. The "M" category allotments are managed to maintain current satisfactory resource conditions. The "C" category allotments typically contain small amounts of unconsolidated public lands, have no resource conflicts, and/or have a low potential for improved resource condition. These allotments are managed custodially (i.e., with grazing fees collected, but without large investments of time or money).

Monitoring studies are done on all allotments, with the intensity and frequency based on allotment category. "C" allotments are field checked upon permit/ lease renewal. For the "M" allotments, vegetative trend data is collected and reviewed before permit renewal. Trend and forage utilization studies are done and evaluated every 5 years on the "I" allotments. If evaluations indicate, changes in livestock grazing management are implemented. Categories are changed based on new resource information.

In the Planning Area, monitoring studies have been done on the "I" category allotments, followed by a review of grazing preference. These studies and reviews are part of the agency's ongoing rangeland management effort. For example, in 1992 the BLM

issued decisions to establish new grazing preferences, which

TABLE 3-11

POTENTIAL NATURAL COMMUNITIES COMPARED WITH EXISTING VEGETATION IN THE EL MALPAIS NCA (rounded to nearest hundred acres)

Potential Natural Communities [a]	Totals	Existing Vegetative Classes [b]			
		Grass-Shrub	Piñon-Juniper	Ponderosa Pine	Lava Complex
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 BLM satellite remote sensing data (1994) and Geographic Information Systems analysis.

included sufficient forage to provide for wildlife needs. Table L-1 in Appendix L displays the grazing preferences before and after the monitoring studies and ***1992*** decisions. In addition to these adjustments, other changes in grazing management have been implemented (refer to Table L-2). ***Table L-3 shows the 1999/2000 allotment numbers and additional improvements.***

On-the-ground monitoring studies will continue to be done. To enhance these monitoring methods and increase the success of vegetative management practices, the BLM will also continue to use satellite data and GIS computer capabilities. Based on the comparison and evaluation of these two types of data, the agency will continue to make adjustments in grazing use (including reduced livestock numbers). Vegetative treatments will be applied in specific areas where they are likely to succeed to encourage the formation of PNCs. As resource conditions change, the selective management categories can also be changed.

Areas Unusable for Livestock Grazing

Because of their slope and rockiness, many acres in the Planning Area are not usable by cattle for

grazing. As a result of vegetative inventory, these acres have remained unallocated for grazing. Table 3-14 displays the unusable acres and AUMs.

Livestock Grazing in Planning Area Wilderness

P.L. 100-225 provides that livestock grazing ***shall*** continue in the NCA, including in the West Malpais and Cebolla Wildernesses. The Department of the Interior's Wilderness Management Policy allows motorized and mechanized equipment to be used to maintain range improvements in wilderness when it is considered to be the minimum tool needed.

To provide guidance and procedures for this type of maintenance, the BLM in 1990 developed Range Improvement Maintenance (RIM) Plans. As stated in the plans, allottees may use motorized vehicles on preapproved routes to access improvements when the weather and ground are dry. In general (except in emergencies), the maintenance schedule is as follows: windmills annually (minimum), fences every 5 years, and dirt tanks every 10 years.

TABLE 3-12

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 of 51 or higher and a static or improving vegetative trend.		
Other Considerations Contains 30% or more public land or more than 1,540 public land acres.	Other Considerations Contains 30% or more public land or more than 1,540 public land acres.	Other Considerations 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 this category.

Livestock Grazing in the National Monument

In establishing the El Malpais National Monument, the Congress transferred to the National Park Service over 100,000 acres of public land formerly administered by the BLM as multiple use lands. P.L. 100-225 provided that livestock grazing in the monument could continue until December 31, 1997, under BLM administration. Now that such use has been discontinued in the monument, the BLM has adjusted all affected grazing permits to reduce livestock numbers. Appendix M shows the allotments on which this grazing has been discontinued.

Riparian/Wetland Habitats

These habitats are areas of land directly influenced by permanent water, such as spring areas or stream-banks. They have visible vegetation or physical characteristics that reflect this influence. Excluded from this definition are ephemeral (temporary) streams or washes that do not have vegetation that depends on free water in the soil.

TABLE 3-13

SELECTIVE MANAGEMENT CATEGORIES FOR GRAZING ALLOTMENTS OVERLAPPING THE PLANNING 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	275,516 [a]

Notes: [a] Includes allotment acres that are outside the Planning Area.
[b] Combined allotment created in 1995 to include the former Cerro Chato (#200).
[c] Allotments created by the BLM as the result of a land exchange with the State of New Mexico in 1987.

TABLE 3-14

ACRES AND AUMS IN THE PLANNING AREA UNUSABLE FOR LIVESTOCK GRAZING

Allotment Number	Allotment Name	Unusable Acres	Unusable AUMs
201	Cerritos de Jaspe	10,235	1,821
203	El Malpais	45,429	2,949
204	Raney	7,912	-- [a]
205	Los Pilares	3,003	287
207	Cerro Brillante	346	15
208	Loma Montosa	7,476	284
209	Techado Mesa	9,335	958
210	Los Cerros [b]	11,431	492
211	Ventana Ridge	1,484	193
	Totals	96,651	6,999

Notes: [a] AUMs not calculated.
[b] Includes information for the former Cerro Chato Allotment (#200).

Riparian areas are extremely limited in size and extent throughout the Planning Area. As such they are unique and extremely important, not only for many species of wildlife that are dependent on them, but also for maintenance of water quality, spring and stream-flow, and forage production.

A few small riparian/wetland marshy areas occur around natural springs in the Planning Area. Cebollita and Cebolla are the best known springs; each provides enough water to form a small (less than 10-acre) riparian/wetland area with a small (less than 1½-mile-long) intermittent stream below it. In addition playa lakes, which are ephemeral (temporary) and dependent on annual precipitation, can resemble wetlands after large summer rainstorms.

Except for the small streams below Cebollita and Cebolla Springs, no perennial streams exist within the Planning Area. Runoff occurs only from high-intensity summer storms and occasional snowmelt. The majority of the area is a closed basin with no external water sources.

FIRE MANAGEMENT

Fire has played an integral role in the development of the Planning Area, which is made up of numerous plant communities that have developed as part of a fire-dependent ecosystem. Periodic burning of these plant communities allows their natural composition, structure and function to continue.

Historically, natural fires have occurred every 2 to 3 years or less within these ecosystems, burning an average of 500 to 2,000 acres per occurrence. In combination with other factors, recent, aggressive fire suppression has significantly changed the plant communities from more open grasslands to shrub-grasslands and piñon-juniper woodlands. These shrub and woodland communities do not produce the fine fuels necessary to carry natural fires, so the natural cycle of vegetative change has been suppressed. This shift has also resulted in increased fuel loads, soil erosion, and a loss of ecosystem and biological diversity.

The BLM has an ongoing program of using prescribed fires throughout the lands managed by the

Albuquerque Field Office, including the Planning Area. This prescribed fire program is used to enhance vegetative habitats for both wildlife and domestic livestock. It is also being used to help blend fire back into the natural process of a functioning ecosystem.

The agency prepares individual burn plans before using prescribed fires or wildland fires (under prescription) to improve the vegetative habitats of the Planning Area. (Otherwise, BLM policy requires that all wildfires be fully suppressed.) A state burn permit, including a smoke management plan, is also required to conduct prescribed fires in the New Mexico.

After this Plan Amendment/EIS is approved, the BLM will prepare a Fire Management Plan for the Planning Area to identify how fire will be used to protect, maintain and enhance resources and meet vegetative objectives. The fire plan will incorporate the management restrictions identified in this Plan Amendment/EIS that could stop unacceptable resource damage (e.g., no bulldozers in riparian areas).

LANDS & REALTY (INCLUDING BOUNDARY ADJUSTMENTS)

Land Ownership

The NCA makes up the majority of the Planning Area. In addition to the NCA land, the Planning Area includes lands acquired by the BLM since 1987 that are adjacent to the NCA, and lands needed to develop the CDNST. Acreages within the NCA and Planning Area are shown in Table 3-15.

P.L. 100-225 authorizes the acquisition of private lands and minerals within the NCA. The Congress intended that when the BLM seeks to acquire this private land, the consent of the property owner should be obtained. This consent requirement applies unless an imminent threat exists that the land is to be developed in a manner contrary to the purposes for which the NCA was established.

A combination of land protection methods is used to protect NCA resources on private land. As authorized by Sections 502 through 506 of P.L. 100-225, the BLM can acquire land or interests in land (i.e., mineral estate and conservation or scenic easements) by donation, purchase with donated or appropriated funds, exchange, and transfer from any other federal agency. Cooperative agreements can also be used to protect privately owned resources. As historical properties become available in the NCA, they are being evaluated for their historical, architectural, cultural and interpretive value.

Since 1987, the BLM has acquired about 193,700 acres of mineral rights in the NCA and the National Monument, 13,400 surface acres within the NCA, and 14,000 acres contiguous to the NCA. The National Park Service (NPS) has acquired approximately 7,000 acres within the National Monument. Acoma Pueblo has acquired approximately 320 acres within the NCA Neck Unit and 6,560 acres adjacent to the NCA.

Acquisition Priorities

The priorities and rationale for BLM acquisition of properties within the boundary of the NCA, as defined in the Land Protection Plan (USDI, BLM 1989b), are summarized below.

The first priority for acquisition, preferably by exchange, is all private subsurface interests within the NCA. Mineral development anywhere within the boundaries of the NCA is incompatible with the Congressionally mandated goals and purposes of the NCA. Federal minerals have been withdrawn, and acquisition of private minerals would provide the same protection to the non-federal parcels. The BLM has completed mineral exchanges and fee acquisitions with the principal subsurface landowners, the New Mexico and Arizona Land Company, the Cerrillos Land Company, and the State of New Mexico. About 39,600 acres of private minerals remain within the NCA, but clear title information has been difficult to obtain for these in-holdings. The remaining subsurface inholdings are located primarily in the Cebolla Wilderness, Neck, Brazo and Breaks Units.

The second priority for acquisition, preferably by exchange, includes all private inholdings and edge-holdings within and adjacent to the Cebolla Wilderness and West Malpais Wilderness. The Chain of Craters WSA contains no private surface, so no acquisition is needed.

TABLE 3-15

LAND OWNERSHIP WITHIN THE NCA AND PLANNING AREA [a]

	NCA		Planning Area	
Ownership	**Acres**	**Percent**	**Acres**	**Percent**
BLM	226,000	86.2	248,000	86.6
Private	34,300	13.2	36,500	12.8
Indian	1,800	.6	1,800	.6
Totals	262,100	100	286,300	100

Note: [a] As of January 1997.

Increased use on private lands within wilderness is incompatible with the goals and purposes for which the Congress designated them. Acquisition of private inholdings prevents any change in land use and improves the area's manageability, while acquisition of edgeholdings provides access.

Acquisition of the remainder of Cebolla Spring in T. 5 N., R. 10 W., Section 12 and associated riparian area in the Brazo Unit would ensure protection of a critical riparian area. The "Old Hughes Place," a historical homestead in the Brazo Unit, may merit preservation and is included in this priority. The BLM recently acquired all but four private edgeholdings and three inholdings in the Cebolla Wilderness, including a portion of Cebolla Spring and the private portion of the Pinole Site, and all but three inholdings in the West Malpais Wilderness. Two of the West Malpais inholdings (Sections 22 and 26, T. 7 N., R. 12 W.) are subdivided into 40-acre parcels, some of which have been sold to different landowners. The BLM is working to acquire both of these sections.

The third priority is acquisition of scenic and/or conservation easements along the federal, state, and county highways passing through the NCA. Commercial development and visual intrusions along the roadways (e.g., billboards) are incompatible with the goals and purposes of the NCA. Protection of the viewshed along NM 117 in the Neck Unit, the scenic gateway to the NCA, is most important. Also to be protected are the viewsheds along I-40 and NM 53 in the Neck Unit, and along portions of CR 42 in the Continental Divide Unit.

The fourth priority is the Acoma Exchange, if initiated by the Pueblo of Acoma. This exchange is mandated by P.L. 100-225 if requested by the pueblo, but to date, the Acomas have chosen not to pursue this option.

The fifth priority for acquisition is lands containing natural and/or cultural resources that require management or protection, and/or lands needed for visitor access and facility development. 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 is the preferred method of acquisition.

All private inholdings in the Brazo and Breaks Units should be acquired. The remaining portion of the Cebolla Spring riparian area and the Old Hughes Place are included above under Priority 2.

In the Cerritos de Jaspe Unit, important prehistoric cultural resources are threatened by uncontrolled excavation. The BLM would acquire these lands under Priority 5 if they were offered for sale or exchange by their owners.

Under this priority, the BLM would also acquire some private surface inholdings in the Continental Divide Unit from willing sellers. However, this does not include land in the heavily subdivided areas of the unit.

The sixth priority is protection of private land and resources within the NCA to benefit resources within the National Monument. Any development visible from CR 42 in the Continental Divide Unit would intrude on the natural scenic quality of the monument. Acquisition of scenic or conservation easements along CR 42 would protect the monument's viewshed.

An increase in the number of access roads into the subdivided areas within and west of the Continental Divide Unit of the NCA would also intrude on the natural scenic quality of the monument. The BLM and the NPS will work with Cibola County and local landowners to limit the number of access roads across the monument and the NCA, while still providing access from outside these protected areas.

The seventh priority is land on which no immediate threat to natural or cultural resources exists. As land becomes available in these other areas, they will be evaluated for their suitability for acquisition. Only exchange and sale 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.

Potential NCA Boundary Adjustment Areas

The Acoma Tribe has requested that the boundary of the NCA be modified to exclude 800 acres owned by the pueblo before the NCA was established. This acreage is west of NM 117, between the highway and the monument boundary. The Congress' original intent was to encourage the tribe to exchange this land, then to include the 800 acres within the monument boundary. However, the Acomas have chosen to retain the land because it is part of their aboriginal claim area and has recurring value to them.

The Planning Area includes two parcels of public and private land that could be recommended for inclusion within the NCA adjacent to the Breaks and Brazo Units. An additional four parcels of public and private land located outside the Planning Area boundary could also be recommended for inclusion within the NCA (Continental Divide-AFO, Cerro Brillante-AFO, Techado Mesa-SFO, and Tank Canyon SFO). Table 3-16 summarizes the land ownership status within these proposed expansion areas, and Map 3 in Chapter 1 shows their boundaries.

Five of these parcels would add contiguous, predominantly public land containing key cultural and natural values. They are a logical extension of the NCA, and would enhance the manageability of the area. The sixth parcel would secure a treadway for the proposed CDNST route. A description of these six parcels follows. (Note: Any adjustment in the boundary of the NCA would require that the Congress amend P.L. 100-225.)

The first parcel, the Breaks Non-NCA Unit, includes 11,630 acres of formerly private land (acquired as part of the King Exchange), with 500 acres of private land remaining. This area is characterized by open grasslands with blue grama in sod-bound form, and shrubs such as fringed sage predominant. Part of this area is classified as having the sparse to bare vegetation type, which is extremely sensitive to climatic variation and surface disturbance. Historically and at present, these lands have been used for grazing.

Cultural resources on this parcel are extremely important. It contains a major portion of the prehistoric community associated with the Dittert Chacoan Archeological Protection Site (P. L. 96-550, as amend-ed). In addition, a brief reconnaissance survey of a single section in the southern portion of this parcel yielded evidence of 12 masonry pueblos, suggesting the area contains one of the highest densities of pueblo sites in the region. These ruins are an extension of a prehistoric community that lies partially within the NCA to the north. As part of the NCA, this land would also provide a staging area for wilderness-based recreation activities, serve as a buffer between the Ceb-olla Wilderness and adjacent private land, and provide access into the Dittert Site and Homestead Canyon.

The second parcel, the Brazo Non-NCA Unit, contains about 10,400 acres of recently acquired private land, with 1,690 acres of private land remaining. This land has the same resources and values as the adjacent Brazo Unit of the NCA and can be most easily managed as a part of the NCA. Primary uses are grazing, hunting, piñon-nut picking, and ac-

cess to the Cebolla Wilderness and other parts of the NCA

The third parcel, the Cerro Brillante-AFO Unit, contains 3 to 4 miles of treadway for the CDNST. All of this parcel (2,030 acres) is privately owned land. Acquisition of either an easement or the land is required before the BLM could construct this segment of the trail or encourage its use.

The fourth parcel, the Continental Divide-AFO Unit, contains 1,960 acres of federal land but no private land. This land has the same resources and values as the adjacent Continental Divide Unit of the NCA and could be most easily managed as part of the NCA.

The fifth parcel, the Techado Mesa-SFO Unit, includes approximately 5,000 acres of public land managed by the BLM Socorro Field Office and 40 acres of private land that adjoin the Brazo Non-NCA Unit identified above. This scenic area contains rolling topography and a high, steep-sided mesa capped by lava flows. Vegetation is dominated by a ponderosa pine-oak mixed forest and piñon-juniper woodlands. Small playa lakes form seasonally on the mesa top. Visually and ecologically, the area is similar to the Brazo Unit of the NCA. Primary uses are grazing, watershed, wildlife, hunting, piñon-nut picking and scenic enjoyment.

Within this parcel are seven sections (4,350 acres federal and 40 acres private) in northeast Catron County and one section (640 acres federal) in northwest Socorro County managed by the BLM Socorro Field Office. The *Socorro Resource Management Plan* (USDI, BLM 1989d) classified these lands for retention "as needed in support of the El Malpais General Management Plan." The Techado Mesa parcel, if managed as part of the NCA, would enhance opportunities for semi-primitive motorized recreation and augment both wildlife and watershed management. It would also improve management by the BLM because Albuquerque Field Office personnel are frequently in the area because of its proximity to the NCA, whereas it is far removed from the BLM Socorro Field Office. The BLM Albuquerque Field Office already manages grazing allotments on this parcel under a cooperative agreement with the Socorro office.

TABLE 3-16

LAND OWNERSHIP
OF PROPOSED NCA BOUNDARY ADJUSTMENT AREAS [a]
(acres)

Unit	BLM	Private	Total
Brazo Non-NCA	10,400	1,690	12,100
Breaks Non-NCA	11,630	500	12,130
Cerro Brillante-AFO [b]	0	2,030	2,030
Continental Divide-AFO	1,960	0	1,960
Tank Canyon-SFO	9,870	200	10,070
Techado Mesa-SFO	5,000	40	5,040
Totals	38,860	4,460	43,330

Notes: [a] As of January 1997.
[b] The BLM would seek to acquire an easement for the Continental Divide National Scenic Trail across this land.

The sixth parcel, the Tank Canyon-SFO Unit contains 9,870 acres of federal land and 200 acres of private land. It lies southwest of the Cebolla Wilderness and adjoins the recently acquired Breaks Non-NCA parcel described above. The Tank Canyon parcel is in Catron County and the federal lands are currently managed by the BLM Socorro Field Office. This parcel is slated for disposal in the Socorro RMP because the lands are isolated from other BLM-administered land.

The Tank Canyon parcel includes high densities of archeological sites that warrant intensive management. Among these is the Newton Site, a large, late masonry pueblo that is among the most important cultural resources in the region. The Tank Canyon area also includes well-preserved historical homesteads that were once part of a large, loose-knit community in the El Malpais region.

Most of the headwaters of Tank Canyon are contained in a scenic area of rolling topography. Vegetation is dominated by piñon-juniper woodlands, while wildlife values are similar to those in the Cebolla Wilderness.

Addition of the Tank Canyon area to the NCA would facilitate management of cultural resources, wildlife and watershed. It would also contribute more opportunities for semi-primitive, non-motorized recreation in the NCA.

Rights-of-Way & Land Use Permits

Within the Planning Area are portions of five state or county roads, NM 117, NM 53, CR 41, CR 42 and CR 103. Numerous unpaved roads and routes are used by the general public, grazing allottees, and private landowners. The BLM has issued several rights-of-way within the Planning Area for roads, telephone and powerlines. Along I-40, adjacent to the Planning Area for approximately 5 miles, is a major right-of-way/ utility corridor identified in the Rio Puerco RMP. No designated utility corridors exist within the NCA or Planning Area.

Although no temporary land use permits are currently authorized within the Planning Area, they could be in the future as long as they did not conflict with the goals for which the NCA was established. An example is a permit for commercial filming.

MINERALS & PALEONTOLOGY

Minerals

P.L. 100-225 withdrew public lands in the NCA from the mining, mineral leasing and geothermal leasing laws, subject to existing rights. No grandfathered mining claims, mineral or geothermal leases exist in the NCA. The law authorizes the BLM to acquire the mineral interests for public lands in the NCA and the National Monument. It also specifies that as private lands are acquired within the NCA, the mineral rights are also acquired, and these lands are automatically withdrawn from mineral entry. Since establishment of the NCA, the BLM has acquired 62,221 acres of mineral rights there. Approximately 40,000 acres of privately owned minerals remain in the NCA. Additional Planning Area lands have been acquired outside the NCA boundary; these are presently open to mineral development.

Paleontology

Although the Planning Area has not been surveyed for paleontological resources, reports of vertebrate fossils in the northernmost section have been confirmed. In addition to the Jurassic Age Morrison Formation, potential for paleontological resources exists in certain other geologic formations within the Planning Area. Formations such as the Todilto, Dakota, Mancos Shale, and Crevasse Canyon are known elsewhere to contain fossils ranging from fish to dinosaurs, certain marine invertebrates and plants. In other parts of the Planning Area, features and fissures within the older lava flows as well as certain sedimentary rocks may contain animal and plant material that have accumulated over thousands of years. This zoological and paleontological material could provide information about the area's past climatic conditions, plants and animals.

SOCIAL & ECONOMIC CONDITIONS

For purposes of economic and social analysis, the primary influence of the Planning Area is within Cibola County, which is the focus of this section. (Use of the Planning Area's resources and facilities,

however, has broader influences. People from Albuquerque pursue outdoor recreation and hobby interests there, and tourists from many parts of the U.S. as well as foreign countries visit La Ventana Arch and other natural resources.)

Cibola County was created by a division of Valencia County in 1981, so data for the new county before 1981 are estimated. In 1970, the county's population was 20,125, rising to 30,109 in 1980 and falling to 23,794 in 1990. These population changes were mainly related to uranium mining activity in the area.

The multiethnic nature of the population creates diversity in the community and its values. The figures in Table 3-17 show the ethnic distribution of the population.

Employment and income figures for the county are shown in Tables 3-18 and 3-19. While figures for total employment showed an increase between 1985 and 1994, little change occurred in the portion of private-industry employment as compared to government employment. Farm employment numbers (expressed as a percentage of the area's total jobs) decreased slightly, while private industry showed a reduction in mining jobs and increases in retail trade and services. (These latter two sectors include jobs in the recreation and tourism industries.) The 1994 Cibola County civilian labor force was reported at 9,658, of which 8,766 were employed and 892 were unemploy-ed, for an unemployment rate of 9.2 percent. (New Mexico's overall unemployment rate is 6.3 percent.)

TABLE 3-17

CIBOLA COUNTY POPULATION BY RACE AND PARTIAL ETHNIC ORIGIN, 1980, 1990 & 1998 (Estimate)[b]

	1980		1990		*1998*	
Population Category	**Number**	**Percent**	**Number**	**Percent**	***Number***	***Percent***
Female	15,184	49.94	12,140	51.02	***13,479***	***51.3***
Male	15,218	50.06	11,654	48.98	***12,771***	***48.7***
Total	30,402	100	23,794	100	***26,250***	***100.0***
Race/Ethnic Origin American Indian, Eskimo, Aleut	7,852	25.83	9,155	38.48	***10,176***	***38.8***
Asian or Pacific Islander	64	.21	81	.34	***131***	***0.5***
Black	165	.54	191	.8	***222***	***0.8***
Other Race	3,847	12.65	468	1.97		
White	18,474	60.77	13,899	58.41	***15,721***	***59.9***
Hispanic Origin	11,249	37	8,109	34.08	***9,024***	***34.4***
Non-Hispanic White	7,212	23.72	6,491	27.28	***7,026***	***26.8***

Source: ***[a]U.S. Department of Commerce, 1990 Census of Population.***
[b]Bureau of Business and Economic Research, University of New Mexico.

TABLE 3-18

CIBOLA COUNTY EMPLOYMENT BY INDUSTRY, 1985, 1994& *1997*

Industry	1985		1994		*1997*	
	No. of Jobs	**Percent of Total Jobs**	**No. of Jobs**	**Percent of Total Jobs**	***No. of Jobs***	***Percent of Total Jobs***
Farm	254	4.86	282	3.88	***210***	***2.76***
Non-Farm [a]	4,971	95.14	6,978	96.12	***7,390***	***97.24***
Private (Total)	3,471	66.43	4,878	67.19	***5,233***	***68.86***
Agricultural Services, Forestry, Fisheries & Other	37	0.71	48	0.66	***52***	***.68***
Mining	241	4.61	320	4.41	***(D)***	***na***
Construction	193	3.69	283	3.9	***330***	***4.34***
Manufacturing	233	4.46	388	5.34	***651***	***8.57***
Transportation & Public Utilities	329	6.3	317	4.37	***337***	***4.43***
Wholesale Trade	103	1.97	190	2.62	***168***	***2.21***
Retail Trade	1,070	20.48	1,525	21.01	***1,469***	***14.08***
Finance, Insurance & Real Estate	303	5.8	352	4.85	***227***	***2.99***
Services	962	18.41	1,455	20.04	***(D)***	***na***
Government & Government Enterprises (Total)	1,500	28.71	2,100	28.93	***2,157***	***28.38***
Federal--Civilian	176	3.37	438	6.03	***383***	***5.04***
Federal--Military	124	2.37	105	1.45	***99***	***1.30***
State & Local	1,200	22.97	1,557	21.45	***1,675***	***22.04***
Totals [b]	5,225	100	7,260	100	***7,600***	***100.00***

Source: U.S. Department of Commerce, Regional Economic Information System, Regional Economic Information, New Mexico Home Page.

Notes: [a] Sum of the Private (Total) and Government/Government Enterprises (Total) categories.
[b] Sum of the Farm, Private (Total) and Government/Government Enterprises (Total) categories.
[na] Not applicable.
[(D)] Not shown to avoid disclosure of confidential information.

Total personal income in the county increased by approximately 50 percent between 1985 and 1994. Per-capita income increased from $6,856 in 1985 to $10,793 in 1994. Earnings from mining (as a percentage of personal income) increased slightly, and were also higher in retail trade and services. During the period, earnings from government employment increased by 115 percent.

Cibola County residents are interested in the creation of a higher standard of living through the development of jobs and income. American Indian use of the Planning Area's resources for traditional cultural purposes is another important social factor. The rural setting and ranching lifestyle are also highly valued by a portion of the population.

SOIL, WATER & AIR RESOURCES

Soils

The Planning Area is within the Cibola County Soil Survey area (USDA, SCS 1993). Most of the soils in the area are moderate to fine textured. Soils on the older basalt flows and steep mesa sideslopes are very stony or cobbly. Rock outcrops, including those with minor amounts of soil, form large portions of the landscape along the mesa fronts and basalt flows. Except on the steep mesa slopes, most soils in the Planning Area have a low to moderate runoff and erosion potential.

Gully erosion in valley bottoms such as Cebolla and Sand Canyons follows the historical pattern found throughout the west, where a changing climate and expanding settlement helped to initiate another arroyo cut-and-fill cycle. (In these cycles, arroyos develop and then fill back in over several hundred years.) Surface runoff and sediment flows are contained in small closed basins against the lava fields.

Water

Several areas within the Planning Area have small springs. Cebollita and Cebolla Springs provide enough water to create small riparian/wetland areas. These springs are used by livestock and wildlife.

No perennial streams exist in the Planning Area, except for the 1 to 1½ miles of flow below Cebolla and Cebollita Springs. Overland flow only occurs as runoff from high-intensity summer storms and occasional snowmelt. For the most part, the Planning Area is a closed basin, with precipitation remaining in the area until it soaks into the ground or evaporates.

The San Andres-Glorieta Formation is the major subsurface source of water. Aquifer yield is extremely variable. Depth to groundwater ranges from 200 feet or less in the valleys and plains to more than 500 feet in other areas. Areas in which igneous rocks predominate do not transmit significant amounts of water and are not considered to be aquifers.

The quality of groundwater in the region is usually good enough for livestock and domestic use. Additional water sources for livestock include stock tanks and windmills. Most windmills are drawing from shallow alluvial aquifers that provide enough water to meet livestock demands.

The Ranger Station is the only site in the Planning Area with a public water supply, which is tested according to New Mexico Water Quality Control Commission regulations. The right to use water is established by state and federal laws. The BLM is a participant in a water rights adjudication that includes most of the Planning Area.

Air

The Planning Area is designated a Class II airshed under the 1977 Clean Air Act (refer to the Glossary). This airshed meets all New Mexico and federal air quality standards.

The open landscape in the Planning Area makes alteration of its airshed very apparent. Wildfires are the most common source of air-quality deterioration. The lava flows of El Malpais have the highest occurrence of lightning-started fires in the region. Fires are usually less than 100 acres in size, and their smoke briefly impacts air quality.

TABLE 3-19

CIBOLA COUNTY PERSONAL INCOME BY MAJOR SOURCE, AND EARNINGS BY INDUSTRY

Category	1985			1994			1997		
	Number	% of Personal Income	% of Earnings by Industry	Number	% of Personal Income	% of Earnings by Industry	Number	% of Personal Income	% if Earnings by Industry
Total Personal Income [a]	174,376	100	na[b]	264,448	100	na	***315,218***	***100***	***na***
Non-Farm Income	172,475	98.91	na	262,639	99.31	na	***315,899***	***100.21***	***na***
Farm Income	1,901	1.09	na	1,809	.68	na	***681***	***-.21***	***na***
Population (thousands)	25.4	na	na	24.5	na	na	***25,860***	***8.20***	***na***
Per-Capita Personal Income (dollars)	6,856	na	na	10,793	na	na	***12,189***	***3.87***	***na***
Derivation of Total Personal Income Earnings by Place of Work	72,267	41.44	100	147,804	55.89	100	***156.036***	***49.50***	***100***
Less: Personal Contribution for Social Insurance	4,610	2.64	na	9,273	3.51	na	***12,175***	***3.86***	***na***
Plus: Adjustment for Residence	54,797	31.42	na	39,008	14.75	na	***54,090***	***17.16***	***na***
Equal: Net Earnings by Place of Residence	122,454	70.22	na	177,539	67.14	na	***197,951***	***62.80***	***na***
Plus: Dividends, Interest & Rent	15,375	8.82	na	16,556	6.26	na	***22,343***	***7.09***	***na***
Plus: Transfer Payments	36,547	20.96	na	70,353	26.6	na	***94,924***	***30.11***	***na***
Components of Earnings [b] Wages & Salaries	55,329	31.73	76.56	111,415	42.13	75.38	***125,457***	***39.80***	***80.40***
Other Labor Income	6,117	3.51	8.46	18,007	6.81	12.18	***15,724***	***4.99***	***10.08***
Proprietor's Income	10,821	6.21	14.97	18,382	6.95	12.44	***14,855***	***3.43***	***9.52***
Farm	1,237	.71	1.71	410	.16	.28	***-1,511***	***-.48***	***-.97***
Non-Farm	9,584	5.5	13.26	17,972	6.8	12.16	***16,366***	***5.19***	***10.49***
Earnings by Industry Farm	1,901	1.09	2.63	1,809	.68	1.22	***-681***	***-.22***	***-.44***
Non-Farm	70,366	40.35	97.37	145,995	55.21	98.78	***156,717***	***4972***	***100.44***
Private	48,462	27.79	67.06	98,740	37.34	66.8	***104,608***	***33.19***	***67.04***
Agricultural Services, Forestry, Fisheries, & Other	152	.09	.21	437	.17	.3	***408***	***.13***	***.26***
Mining	9,385	5.38	12.99	19,204	7.26	12.99	***(D)***	***na***	***na***
Construction	2,467	1.41	3.41	6,603	2.5	4.47	***7,080***	***2.25***	***4..54***
Manufacturing	3,706	2.13	5.13	9,896	3.74	6.7	***13,534***	***4.29***	***8.67***
Nondurable Goods	662	.38	.92	654	.25	.44	***468***	***.15***	***.30***
Durable Goods	3,044	1.75	4.21	9,242	3.49	6.25	***13,066***	***4.15***	***8.37***
Transportation & Public Utilities	7,288	4.18	10.08	10,048	3.8	6.8	***9,986***	***3.17***	***6.40***
Wholesale Trade	1,488	.85	2.06	4,661	1.76	3.15	***4,894***	***1.55***	***3.14***
Retail Trade	11,664	6.69	16.14	21,180	8.01	14.33	***19,840***	***6.29***	***12.72***
Finance, Insurance & Real Estate	1,713	.98	2.37	2,649	1	1.79	***3,105***	***.99***	***1.99***
Services	10,599	6.08	14.67	24,062	9.1	16.28	***23,580+***	***7.48***	***15.11***
Government & Government Enterprises	21,904	12.56	30.31	47,255	17.87	31.97	***52,109***	***16.53***	***33.40***
Federal--Civilian	3,632	2.08	5.03	15,064	5.7	10.19	***14,130***	***4.48***	***9.06***
Federal--Military	631	.36	.87	811	.31	.55	***812***	***.26***	***.52***
State & Local Government	17,641	10.12	24.41	31,380	11.87	21.23	***37,167***	***11.79***	***23.82***

Source: U.S. Dept of Commerce, Regional Economic Information System.

Notes: [a] Income by place of residence.

[b] na–Not applicable.

[c] Earnings by place of work.

[d] Not shown to avoid disclosure of confidential information.

[l] Less than $50,000.

VISUAL RESOURCE MANAGEMENT

The landscape composition of the Planning Area is quite diverse. The area has a wide variety of landforms; the steepness of slopes varies radically and frequently within short distances. The Planning Area includes interesting and distinctive geologic features that vary from volcanic plugs and cinder cones to cliffs and mesas formed of sandstone, to wide valleys and low, broken and rolling hills. Vegetation in the Planning Area is as variable, ranging from grass, shrubs and piñon-juniper woodlands to ponderosa parklands and deciduous groves of oak and aspen. Natural features such as the dramatic La Ventana Natural Arch, the colorful sandstone bluffs, cinder cones and lava flows are dominant features in the landscape. The contrasts in the basic elements of form, color, and texture in these landform and vegetation features provide a pleasing visual variety that contributes to the area's high-quality scenic value.

Views in the Planning Area are of broad panoramas of open forests, volcanic fields, the sandstone bluffs rising above the flows on the eastern side, and cinder cones on the western side. Past management activities and human uses of the area have not created dominant modifications to the landscape. Visitors have views from the cinder cones and bluffs overlooking the Planning Area, as well as from paved roads NM 117 and NM 53. Other portions of the Planning Area can be seen from county and local roads that provide access. When marked, a segment of the CDNST will also cross the Planning Area.

Table 3-20 displays the amount of public land acreage in the Planning Area in each Visual Resource Management (VRM) Class. The VRM class for the two wildernesses is Class I. The Chain of Craters WSA is being managed under VRM Class II objectives. The remaining lands, except for those acquired within the Planning Area since the completion of the Rio Puerco RMP (1986), lie within VRM Class I, II or III, as shown on Map 14. (Note: Unless these recently acquired lands within the Planning Area fall within the boundary of the NCA, they are not assigned a VRM Class.)

Visual resources on the BLM lands that adjoin the southeast corner of the Planning Area are managed by the Socorro Field Office as VRM Classes III and IV (USDI, BLM 1989c). They will continue to be managed according to the prescriptions for these classes in the Socorro RMP. (Appendix E explains the BLM's VRM system and management objectives for each class.)

TABLE 3-20

VISUAL RESOURCE MANAGEMENT CLASSES IN THE EL MALPAIS PLANNING AREA [a] (public land acres)

Area	Class I	Class II	Class III	Unassigned	Totals
NCA	125,130	86,760	14,110	0	226,000
Planning Area (outside NCA)	0	0	0	22,000	22,000
Totals	125,130	86,760	14,110	22,000	248,000

Note: [a] No Class IV areas exist in the Planning Area.

[1]Visitors to NCA engage in multiple activities during their visit and are likely to visit more than one site during their visit to the NCA.

[2] ***Based on data from El Malpais National Conservation Area Monthly Public Use and Contact Reports 1995-1999, form NM-017-8360.7 (USDI, BLM 1995c-1999).***

CHAPTER 4

CHAPTER 4

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CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter presents the environmental consequences of the management actions proposed under the four alternatives described in Chapter 2. These management actions were developed as alternative ways of resolving the ten issues that pertain to Planning Area management and allocation of public land resources, their use and protection. BLM decisions about resource use and management in the Planning Area will be based on this impact analysis.

The alternatives include Alternative A (No Action), which represents the continuation of existing management practices defined in the *Rio Puerco Resource Management Plan* (RMP), with minimal modifications to meet the requirements of Public Law (P.L.) 100-225; Alternative B, the Resource Use Alternative, which would emphasize direct human actions; Alternative C, the Natural Processes Alternative, which would minimize human activities within the Planning Area; and Alternative D, the Balanced Management or Preferred Alternative, which would protect important environmental values and sensitive resources while allowing the development of recreational facilities and other human uses.

Impacts are discussed by alternative for each specific resource or program. For the analysis, BLM staff have used existing data, current methodologies, professional judgements, and projected actions and levels of use. The analysis takes into account the mitigation measures and stipulations described in Chapter 2. If impacts are not discussed, the analysis has indicated that none would occur, or their magnitude would be negligible. No impacts have been identified for climate, topography, prime and unique farmlands, floodplains, and hazardous materials.

Also analyzed are direct and indirect impacts, short-term uses versus long-term productivity, and irreversible and irretrievable commitments of resources. Cumulative impacts are summarized at the end of each alternative discussion. These impacts would occur as the result of past, present, and reasonably foreseeable future actions by federal, state, and local governments, private individuals and entities in or near the Planning Area.

Impacts from actions to be carried out under more than one alternative are discussed under the first applicable alternative. This discussion then is referenced under the other pertinent alternatives.

The emphasis of this chapter is general resource allocation and environmental analysis at the activity plan level. Site-specific environmental analyses, as required, would be conducted as project proposals were implemented.

GENERAL ASSUMPTIONS

The following are the general assumptions used for impact assessment under all alternatives. Assumptions associated with a single issue (e.g., wildlife habitat) are included within the alternative discussion for that issue.

- Short-term impacts are those that would last for fewer than 5 years.
- Long-term impacts are those that would last for 5 years or more.
- Demand for both dispersed and concentrated recreation in the Planning Area will continue to exist and increase.
- State highways and county roads through the Planning Area will remain open for access.
- Staff and budget will be available to implement the actions.
- No mineral development will occur on acquired lands (no potential is known within the Planning Area).
- The life of this El Malpais Plan is 15 to 20 years.

ALTERNATIVE A--NO ACTION

Recreation & Facilities

Under Alternative A, actions proposed to resolve the issues listed below would have no impacts on recreation or facility development, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

Increases in the numbers of visitors may decrease enjoyment for some people. Increased recreational use would create short-term impacts such as crushing of vegetation, localized soil compaction and erosion as people used the same locations over and over again.

In the long term, however, monitoring and the low numbers of developed facilities would help to disperse recreation and improve recreational opportunities. As monitoring showed impacts that exceeded the standards for Limits of Acceptable Change (LAC), the BLM would build hiking and mountain biking trails, trailheads, and other appropriate recreation facilities. This additional development would keep impacts low at existing sites and accommodate more dispersed use as the number of visitors increased.

Maintaining the Chain of Craters Back Country Byway would continue to provide recreational opportunities for visitors interested in driving and sightseeing along back roads. Visitors interested in cultural or historical properties would find up to nine different opportunities for exploration.

Under Alternative A, interpretive evening programs would increase visitor knowledge and recreational opportunities. Guided hikes would increase the opportunities for hiking and sightseeing.

Assigning Visual Resource Management (VRM) classes to all lands in the Planning Area would improve and maintain its scenic quality and increase the opportunities for sightseeing.

Issue 2--Facility Development

The limited facility development in the Planning Area would make some visitors feel unwelcome and uncomfortable about using the area for recreational activities. Others would enjoy the unconfined recreation and solitude. Twenty-two acres (less than 1 percent of the Planning Area) would be disturbed as the result facility development under Alternative A.

Opportunities for camping would be limited to the semi-developed Narrows site. Two developed trailheads would provide recreational opportunities for hikers along the Continental Divide National Scenic Trail (CDNST) and other visitors. The visitor registration boxes installed at the Dittert Site and four selected homesteads would provide the BLM with recreation and visitor use data, enabling more informed decisionmaking about managing the Planning Area.

Issue 3--Access & Transportation

Working with county, state and federal agencies to maintain or improve some roads in the Planning Area would increase two recreational opportunities, driving for pleasure and sightseeing. However, by increasing travel and access along some roads, this action may negatively impact those who wished to experience solitude. To accommodate American Indian traditional activities, temporary closures of small areas would limit access for recreation users during brief periods of time (no more than a few days).

Visitors would have access on 354.5 miles of roads designated as open. This would maintain opportunities for recreationists who were interested in driving for pleasure, back-country driving, or sightseeing. Cross-country access by nonmotorized means would remain as is, providing opportunities for activities such as hiking, mountain biking, and horseback riding.

Issue 5--Wilderness Suitability

Management of existing wilderness and additions would improve recreational opportunities for those wishing to experience solitude. However, those visitors seeking more motor vehicle or mountain bike access to areas for recreation would find diminished opportunities.

Not recommending lands in the Chain of Craters WSA for wilderness designation would open them for

more types of recreation. Driving for pleasure, hiking, and mountain biking opportunities would not be limited by a wilderness designation.

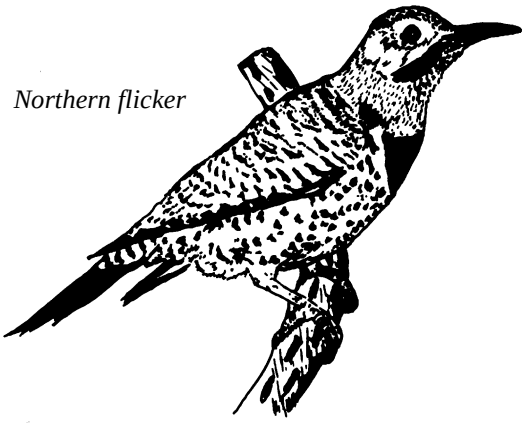
Issue 7--Cultural Resources

Surveys for cultural resources would identify sites and increase the potential for recreational opportunities for those visitors interested in cultural or historical properties for sightseeing. If recreational use began to impact cultural resources, such opportunities would have to be modified and/or limited to protect the resources. If cultural resources were found during a survey, recreational developments could be located to avoid impacts.

Five scientific investigations would increase the sightseeing opportunities for those visitors interested in cultural and/or historical properties. Stabilization of historical and cultural properties would mean that more of these sites would be preserved for viewing. Some recreationists would be attracted to sites with antiquities signs, while others would find the signs visually intrusive.

Issue 8--Wildlife Habitat

The quality of hunting and non-consumptive wildlife-related recreation, such as birdwatching, wildlife viewing and photography would improve as wildlife habitat was improved. This improvement would take place through implementation of the Habitat Management Plan and other maintenance and improvement projects designed for wildlife, including threatened, endangered, and special-status species. BLM cooperation with state and federal agencies to reintroduce native wildlife/plant species would also increase wildlife viewing potential.



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If recreational use began to impact or conflict with wildlife habitat maintenance or improvement, such use would have to be modified and/or limited. Habitat management could cause recreational developments to be relocated to avoid affecting wildlife. Some parts of the Planning Area would be seasonally closed to protect wildlife species, limiting viewing opportunities for 2 to 6 months each year.

Issue 9--Vegetation

Continued livestock grazing in the Planning Area could have both beneficial and detrimental effects on recreation. Most vehicle access routes to or across public land would involve ranch roads, and many recreationists such as hikers or hunters would use livestock facilities for orientation when they were in the field. Cattle trails are often good starting points for hikers. Livestock grazing could benefit wildlife-based recreation by dispersing water sources and allowing for increased habitat diversity. Some recrea-tionists would prefer to not have cattle disturb their solitude, viewing cattle as a hindrance to their appreciation of the natural world, while others would enjoy seeing the animals.

Prescribed fires and wildland fires under prescription would create a short-term visual impact and smoke for recreation users, having a negative impact on recreational opportunities. During the burn period, the BLM would limit access to areas covered under the burn plan to protect visitors. This short-term access limitation would negatively affect recreational opportunities. After a burn, recreational use would be monitored closely so visitors did not impact soil stability, and modified if erosion began to occur.

The long-term benefit of the fires would be a more diverse vegetative and wildlife community, which would increase recreational opportunities such as wildlife viewing, hiking, sightseeing and hunting. Some long-term visual impacts would occur if large trees were killed as a result of the fires.

Other vegetative manipulations or actions called for to change the vegetative environment would produce short-term impacts to recreation. During the course of the action, visitor use to the area would be restricted to protect health and safety. Immediately after the treatment some scenic disturbance would be noticeable.

Issue 10--Boundary

& Land Ownership Adjustments

Acquisition of lands by the BLM would enhance recreational opportunities and management in the Planning Area by reducing potential conflicts between recreationists and private landowners. Public acquisition of non-federal lands would also provide more locations for dispersed recreational use and facility development. Right-of-way management would limit locations where these scenic intrusions could impact recreational opportunities and facilities.

Summary

Recreational activities dependent on a predominantly unmodified natural setting (where motorized use was not allowed unless permitted) could occur in 43 percent of the Planning Area available as designated wilderness. The remaining 57 percent of the Planning Area would support numerous other forms of dispersed recreational activities, including vehicle use, which would be allowed on 354.5 miles of BLM-administered travel routes. Public acquisition of non-federal lands within the Planning Area would also provide more locations for dispersed recreational use.

Recreational developments would be limited to the Ranger Station and the approved Nature Trail, the facilities and trail at La Ventana Natural Arch. The Narrows would provide informal opportunities for picnicking and camping at four semi-developed units, as well as access to the Cebolla Wilderness and the Narrows Rim Trail. Marking this trail and the CDNST would provide additional opportunities for trail hiking and other associated activities. An authorized access route into Hole-in-the-Wall would provide additional hiking opportunities into this rugged area.

Management of the resources in the Planning Area under Alternative A would contribute to maintaining and enhancing the quality of the users' recreational experiences by preventing the degradation of the surrounding physical setting. Improvements in the health of the vegetation and wildlife would increase the recreational opportunities. The quality of consumptive and non-consumptive wildlife-related recreational activities such as wildlife viewing, photography and hunting would be improved through projects proposed to improve habitat and limit vehicle travel within the Planning Area. Up to nine stabilized historical and cultural properties would provide opportunities for those with an interest in viewing them. The use of VRM classes to maintain and improve the scenic quality of the Planning Area would also benefit recreation users.

Public knowledge of the range of recreational opportunities would be provided through interpretive efforts. Programs, guided hikes, brochures, and informal personal contact would be used to provide interpretive messages.

<u>Access & Transportation</u>

Under Alternative A, actions proposed to resolve the issues listed below would have negligible impacts on access and transportation. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Access to public lands to participate in motorized or nonmotorized recreational activities would be controlled through enforcement of regulations; designation of areas as open, closed, or limited to motor vehicle use; and directing certain types of use to specific facilities and routes. Opportunities for developed and dispersed recreational use would continue to be provided at various levels within the Planning Area.

Depending on user preference, the level and type of access and transportation opportunities would have either a positive or negative impact on the recreational experience. Providing travel routes for motorized use would benefit those whose preference was for this means of access. For those whose preference was for more remoteness and the freedom to explore on their own, other areas would be available to enjoy as the result of controlled access. Through the BLM Special Recreation Permit system, commercial outfitter and guide services would continue to provide the opportunity for visitors who otherwise would not be able to enjoy the Planning Area's resources.

Motorized recreational vehicle use of the Planning Area would benefit from 354.5 miles of avail-

able routes. The density of routes would favor recreationists with a preference for participating in motor-vehicle-dependent recreational activities. Continued use and occasional maintenance of these routes would keep them open. A variety of experiences would be possible due to the conditions of the travel routes. For those who liked the freedom of driving cross-country, the opportunity would be available on 5 per-cent (or 12,000 acres) of the Planning Area's public lands.

Those who preferred to access the public lands by trail would have limited opportunity, with only five established trails in the Planning Area totalling 36.5 miles in length. Nonmotorized access would be available throughout, except on 100,800 acres of wilderness closed to mechanical forms of transport.

Issue 2--Facility Development

Established trails would benefit users by providing a more comfortable means of reaching public land and by directing them to features of interest. The 25 miles of the CDNST and the short trail at La Ventana Natural Arch (less than a mile long) would continue to provide access opportunities.

The existing facilities (parking lots and trailheads) at La Ventana Natural Arch, the Ranger Station, and The Narrows would continue to provide user access to public lands in the Planning Area. The construction of two primitive trailheads along the CDNST would benefit trail users as convenient points to access that trail or other parts of the western portion of the Planning Area.

Issue 3--Access & Transportation

Motorized vehicles and mechanical forms of transport would be prohibited from using 100,800 acres of public lands designated as wilderness (41 percent of the Planning Area). These lands would be accessible for those who did not depend on these types of transport for use and enjoyment of the public lands.

In the Chain of Craters WSA and lands contiguous to the Cebolla Wilderness, vehicle use would be restricted to existing travel routes. No cross-country access in these areas would be allowed unless authorized by the BLM. However, on 12,000 acres outside wilderness and the study lands, unrestricted vehicle access (including cross-country) would continue to be available. Access to the other 135,200 acres would be restricted to 354.5 miles of existing inventoried, BLM-administered travel routes.

Issue 6--American Indian Uses & Traditional Cultural Practices

Because of the importance of the Planning Area to several local Indian tribes and pueblos, the demand for access would continue. Closure of land to public access during traditional ceremonies would benefit American Indians by ensuring their privacy. Although closure would inconvenience other users, it is not expected to occur frequently, and the BLM would work with Indian groups to restrict it to the smallest amount of land necessary for the shortest time. The number of acres and length of time for closure would be determined with each request under any alternative.

Issue 7--Cultural Resources

The scientific and cultural values found in selected sites, along with their sensitivity to disturbance, have resulted in the restriction of both motorized and nonmotorized access. The identification of some stabilized cultural sites for public use would create a demand for public access to them. Parking areas and trails would be provided to benefit users and protect the resources.

Issue 8--Wildlife Habitat

Continued use and maintenance of established wildlife projects would require periodic administrative access using travel routes and short distances of cross-country travel. Therefore, to some extent, wildlife habitat would benefit from these access routes. Wildlife exclosures that were fenced would obstruct access to those lands within the exclosure and create an inconvenience for those who must travel around the fence. If threatened, endangered or other special-status plant or animal species were found in the area surrounding a project, closure or restriction of access through this area could also inconvenience users.

Issue 9--Vegetation

The continuation of livestock grazing in the Planning Area would require that access to range improvements for the allottee be permitted. Restricted access into wilderness has created inconvenience for permittees. The existing pasture and allotment fences would impede nonmotorized, cross-country travel through the Planning Area.

For public safety and health, closures or restrictions might be needed when prescribed and wildland fire treatments were being used. The public would be notified in advanced of all prescribed and wildland fires. Periodic closures would impact public access for short periods of time.

Summary

The direct impacts of actions implemented under Alternative A on access opportunities would depend on the users' preferred or required method of travel. For those who preferred nonmotorized methods of travel, the entire Planning Area would be available. On 41 percent of the Planning Area (wilderness), nonmotorized access opportunities would be enhanced.

For those who preferred or were limited to motorized or mechanical means of transport, access for use would be provided on 59 percent of the public land in the Planning Area (135,200 acres) on existing travel routes (135,200 acres) or cross country (12,000 acres). Opportunities to access public lands and features within the Planning Area would also continue to be enhanced by BLM facilities and trails.

Wilderness Management

Under Alternative A, it is assumed that no additional lands within the Planning Area would be designated as wilderness by the Congress.

Actions proposed to resolve the issues listed below would have negligible impacts on wilderness management. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability

Issue 1--Recreation

The 100,800 acres of public lands in wilderness would continue to benefit visitors who wished to experience this type of setting. Existing primitive and unconfined recreational use of these areas would be consistent with the preservation of wilderness. The assignment of VRM Class I would help maintain the naturalness of the 100,800 acres of public land under wilderness designation.

Issue 2--Facility Development

Existing facilities located around the perimeter of the two wildernesses would continue to benefit recreational use of wilderness by providing access points for visitors.

Issue 3--Access & Transportation

Approximately 6 miles in the Cebolla Wilderness and 18 miles of access routes in the West Malpais Wilderness have been identified for authorized use by livestock permittees and property owners of private inholdings. Access for the development of non-federal mineral interests would be dealt with on a case-by-case basis. No undue or unnecessary impacts on wilderness would be anticipated from mineral development.

Issue 6--American Indian Uses & Traditional Cultural Practices

Closing of lands for short periods of time for privacy when traditional ceremonies were being conducted by American Indian groups would displace primitive recreational use. Infrequent motor vehicle use, i.e., once every 2 to 3 years, for no more than a day by American Indians whose mobility depended on such use for traditional cultural practices would be considered non-impairing to wilderness values. Consultation between the BLM and American Indians would be conducted before the agency initiated a formal closure and authorized the use of motorized vehicles or equipment.

Issue 7--Cultural Resources

Wilderness designation does not relieve the BLM of its cultural resource management responsibilities. Within wilderness the survey, collection, excavation, and monitoring of cultural sites would be done in a manner that was compatible with the preservation of wilderness. Therefore, localized impacts from these

activities would not be anticipated to exceed the levels permitted under the BLM's Wilderness Management Policy. Generally, cultural resources would be left to the forces of nature; however, should additional stabilization or erosion control be needed because of the threat of losing an extraordinary resource, it would be accomplished using the "minimum tool."

Issue 8--Wildlife Habitat

Wildlife projects existing at the time of designation would be allowed to remain in place. Use of motor vehicles and motorized equipment to maintain these projects would be restricted. Continued management of existing wildlife habitat exclosures would enhance the natural character of wilderness within the fenced areas.

Issue 9--Vegetation

The development of Allotment Management Plans (AMPs) and the management of livestock to improve forage conditions would benefit wilderness through enhancing the natural character of the area. Where range improvements were placed to increase rest, not use, vegetation could be improved for the benefit of wilderness character.

Action to suppress wildfire in wilderness would have the potential to alter the natural landscape and disrupt the opportunities for solitude and primitive recreation. The severity of impacts is not measurable, but suppression actions would be executed to minimize surface disturbance and disruption of wilderness resources and uses. In the long term, the short-term adverse impacts from fire could have a positive effect on wilderness character through improved plant diversity and the return of natural ecological processes.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of non-federal surface (1,000 acres) and subsurface mineral interests within the boundary of the two wildernesses would enhance wilderness management and values. The potential for surface disturbance and development of structures that would be detrimental to wilderness character would be eliminated.

Summary

Under Alternative A, the wilderness resource would continue to benefit from the designation of 100,800 acres of public land by the Congress through P.L. 100-225. The existing uses of the Cebolla Wilderness and West Malpais Wilderness for livestock grazing, traditional and cultural practices by American Indians, wildlife habitat, and primitive and unconfined recreational activities would continue to the extent allowable under the BLM's Wilderness Management Policy and the Wilderness Act (WA). The existence of BLM facilities, state highways, county roads and BLM travel routes adjacent to these areas would continue to provide convenient user access.

The opportunities for primitive and unconfined recreational use would continue as 41 percent of the Planning Area would be available for this type of use. Wilderness designation would help to continue to maintain the existing natural character of these lands, and would provide opportunities for solitude through the application of closures and restrictions. The quality of the wilderness experience would continue to benefit from the supplemental values within these areas, including visual, cultural and historical. Acquisition of private surface and subsurface inholdings would benefit the manageability of these areas, eliminate the need for access, and reduce the potential for activities that would degrade naturalness.

Wilderness Suitability

Activities within the Chain of Craters WSA would be constrained by the Interim Management Policy. These constraints would prevent the impairment of the wilderness values of naturalness, solitude, and opportunities for primitive and unconfined recreation. The assignment of VRM Class II objectives to the WSA would help maintain the existing landscape character, preventing future unacceptable changes to the landscape elements from management actions that would be visually dominant.

Since no public lands under Alternative A would be recommended as suitable for wilderness designation, actions proposed to resolve the issues

would have no impact and are not listed below.

American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

Alternative A emphasizes dispersed recreation, which the BLM assumes would increase throughout the life of this plan, regardless of the alternative selected. Dispersed recreation would include activities such as hunting and trapping, outfitted and guided trips, management of existing recreational facilities, and trail developments. These activities would conflict with traditional American Indian uses if visitors intruded during ceremonies or took items left as offerings. Under Alternative A the probability of such incidents would continue to increase.

Visitor use would continue to be concentrated at the Ranger Station and La Ventana Natural Arch. No conflicts would be anticipated with American Indian traditional practices at these two locations.

Other sites and areas emphasized in this alternative include The Narrows and the Narrows Rim Trail, Stone House (two widely separated historical structures), Rowe Homestead, Dittert Site, Armijo Canyon Homestead, Armijo Canyon Springhouse, other homestead sites, Aldridge Petroglyphs, Hole-in-the-Wall, CDNST, Chain of Craters, and Worley Homestead. The Ramah Navajos and other groups have identified the Chain of Craters, including portions of the CDNST, as a sensitive area. Otherwise, no specific conflicts between uses at these locations would be expected. However, archeological sites and springs are sometimes important in American Indian traditional beliefs and practices.

An inventory of the area's lava tubes could also result in intrusions into American Indian practices, although no specific conflicts have been identified. Under the Federal Cave Resources Protection Act, the BLM will keep locations of significant caves confidential.

Issue 2--Facility Development

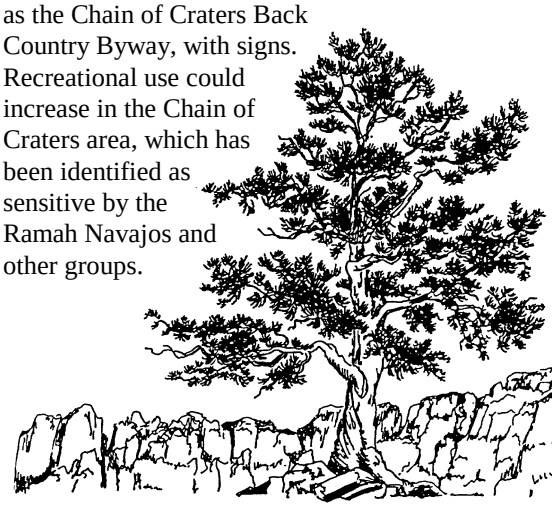
No formal campgrounds would be established. However, camping would be encouraged at The Narrows. No conflicts would be anticipated with traditional American Indian uses at this location.

Use of four trailheads proposed would not conflict with any specifically identified American Indian uses under Alternative A (at The Narrows, for the Cebolla Wilderness; in the West Malpais Wilderness; and at Cerros Brillante and Americano for the CDNST--refer to Map 10). However, mountain peaks are sometimes used for traditional American Indian practices.

If increasing mountain bike use began to result in resource damage, up to 100 miles of formal biking trails would be established in the Chain of Craters, Cerritos de Jaspe, or Brazo Units. This proposal would not result in any specific conflict with American Indian uses, but the Chain of Craters area in general has been identified as sensitive by the Ramah Navajos. Increased recreational use in this area could disrupt traditional use.

An interpretive trail would be established near the BLM Ranger Station, including a stop at the Ranger Station Reservoir. Visitor registration boxes would be established at the Dittert Site and at up to four historical homesteads. These proposals would not conflict with any known American Indian uses, but archeological sites are often sensitive.

A part of County Road 42 would be maintained as the Chain of Craters Back Country Byway, with signs. Recreational use could increase in the Chain of Craters area, which has been identified as sensitive by the Ramah Navajos and other groups.



Issue 3--Access & Transportation

Under Alternative A, all existing roads and trails (354.5 miles) on non-wilderness Planning Area lands would remain open. However, motorized cross-country travel (e.g., for piñon nut and plant gathering) would be allowed only on 12,000 acres. Vehicle use would continue to be prohibited in the wildernesses, and limited to existing roads and trails elsewhere. This alternative would provide the maximum amount of vehicle access for traditional practices and uses, which would reduce privacy but increase accessibility.

Private parties, state and county agencies are responsible for road construction and maintenance within the Planning Area. BLM approval is often required before these activities begin. Such approval would only be given after close consultation with American Indian groups who have close ties to this area.

Issue 4--Wilderness Management

No special provisions would be made for American Indian use of the two wildernesses. Access would be by foot or horseback only. This would enhance privacy, but could also preclude activities needed to continue certain traditions of American Indian groups with close ties to El Malpais.

Issue 5--Wilderness Suitability

The BLM would recommend that the Chain of Craters WSA be managed as a part of the Planning Area, rather than as wilderness. Pending a Congressional decision, access and management would remain as they are now. Release of the area from WSA status would facilitate access and use of the area by allowing vehicle travel along designated roads and trails. Such travel would also continue to be allowed along existing roads and trails on lands contiguous to the Cebolla Wilderness. This would facilitate some traditional uses such as gathering plants and piñon nuts.

Issue 7--Cultural Resources

Under the No Action Alternative, applications would be expected for three to five scientific investigations involving collection or excavation at prehistoric sites. The Pueblo of Acoma recognizes all prehistoric sites in the Planning Area as ancestral places, and in their traditional belief considers any excavation or collection to be an adverse effect. By law the BLM is required to consult with American Indians before undertaking such a project, but is not absolutely bound to conform to their wishes. If permits for these activities were granted, adverse impacts would result.

Many Pueblo people also regard active management of prehistoric archeological sites as intrusive. Under this alternative the BLM would undertake 1,192 acres of cultural resources inventory, post 100 antiquities signs, maintain stabilization projects at three prehistoric sites, and install erosion control measures at up to a dozen other sites. Some or all of these actions could constitute an adverse effect.

Under the No Action Alternative, the BLM would prohibit collection of prehistoric pottery, including sherds for use as temper in contemporary pottery. Collection of sherds is one traditional way by which Acoma people maintain ties to their ancestral past in the National Conservation Area (NCA). This prohibition would also be offensive because it would be an assertion of control by non-Acoma people over Acoma ancestral places.

Patrol and surveillance activities, which would take place under all alternatives, would help prevent vandalism at prehistoric sites. Prevention of vandalism is desirable under traditional American Indian belief.

Issue 8--Wildlife Habitat

Prescribed fires and wildland fires under prescription would increase vegetative diversity, but their effect on specific plants or areas used by American Indians in El Malpais is not known. Application of herbicides would be of concern to American Indians gathering wild plants, and any such activity would have to be closely coordinated with groups using the area for this purpose.

Issue 9--Vegetation

Springs are sometimes important places in traditional American Indian belief, and special consultations would be made with these groups when springs were fenced to improve riparian areas. No

provision would be made for fuelwood cutting under Alternative A. Many traditional Indian people rely heavily upon wood for heating and cooking. If alternative sources of wood were not available on U.S. Forest Service or tribal lands, Planning Area restrictions on fuelwood cutting would have a negative impact.

Issue 10--Boundary & Land Ownership Adjustments

No boundary changes are proposed under Alternative A, including the Acoma request that 960 acres of tribal lands be excluded from the NCA. The proposed acquisition of lands and mineral rights under Alternative A would improve access for traditional uses and forestall conflicting uses such as mineral development.

Summary

Increasing recreational use would have the most serious impacts on traditional American Indian practices in the Planning Area. It would create long-term consequences by reducing privacy for traditional activities and increasing the likelihood of non-Indian intrusions into them. Dispersed recreational use would probably continue to increase, although at a slower rate than under Alternative B. Several proposals under Alternative A would result in increased recreational use, including some interpretation, maintenance and signing of the Chain of Craters Back Country Byway. Fewer recreational facilities are proposed under this alternative than under Alternative B (Resource Use), but more than under the Alternative C (Natural Processes). Several facilities would accommodate increased use in the Chain of Craters WSA, which has been identified as sensitive for the Ramah Navajos and other groups.

More vehicle access would be allowed under Alternative A than under any other alternative. This would increase the ease of access for traditional activities, but reduce privacy. Vehicle access into wilderness for traditional American Indian practices would not be allowed.

Other activities and decisions proposed under Alternative A could have negative impacts. Archeological research involving excavation, signing, ruin stabilization, and erosion control intended to protect ruins would be considered intrusive by some traditional people. Prohibitions on collection of prehistoric pottery for use as temper in contemporary pottery would also constitute an adverse effect. Certain management actions such as a lava tube inventory, authorization of road realignments, and scientific study of geological and other natural phenomena could also result in intrusions or damage to places important in traditional practices.

Chemical treatment of vegetation could adversely affect American Indian people who were gathering herbs and other plant products. Depending on the availability of alternative sources, prohibitions on fuelwood gathering may also have an adverse impact. Continued inclusion of certain Acoma tribal lands in the Planning Area may encourage trespass and thereby increase the likelihood of intrusion into traditional practices. Acquisition of lands and mineral interests under Alternative A would help to exclude uses incompatible with traditional American Indian uses, and would therefore have a positive impact.

Cultural Resources

Under Alternative A, actions proposed to resolve the issues listed below would have no impact on cultural resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 2--Facility Development
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 1--Recreation

Proposals that would lead to increased visitation would result in more illegal surface collection and casual excavation of prehistoric sites, although the extent of these impacts cannot be quantified. When recreational use was dispersed as it would be under Alternative A, adverse impacts would be more difficult to control than if use was concentrated in defined areas or corridors, as under Alternative B. (Use in defined areas can be developed to draw the focus away from sensitive areas.) This use would include camping, hiking, hunting and picnicking.

Designation of the Chain of Craters Back Country Byway, and development of several

trailheads and designated hiking areas on the west side of the Planning Area would help distribute recreational use away from sensitive areas. On the east side of the Planning Area, where cultural resources are much more dense, most developments would be located at La Ventana Natural Arch and The Narrows, both which are outside areas of major site concentrations.

Under Alternative A, the BLM would encourage public visitation at the Dittert Site, the Aldridge Petroglyphs, the Ranger Station Reservoir, and up to six historical homesteads. Documentation is sufficient to protect scientific values at the Dittert Site and the homesteads, although the physical structures at all of these sites would require increased maintenance. Systematic documentation would be needed at the Aldridge Petroglyphs to prevent loss of resource values, and data recovery through systematic collection of surface materials would be needed at the Ranger Station Reservoir. Numerous undocumented archeological sites near the Aldridge Petroglyphs would be subject to impacts such as surface collection if public visitation increased.

Issue 3--Access & Transportation

Limiting motor vehicles to existing roads would protect prehistoric and historical cultural resources by making it more difficult for scavengers and looters to bring in excavation gear or transport away materials such as building stone or weathered wood. At the same time, patrol by BLM specialists and law enforcement personnel would be more difficult.

However, under Alternative A, a maximum number of roads would remain open (354.5 miles). In addition, approximately 5 percent of the Planning Area (12,000 acres) would be available for un-restricted cross-country vehicle use, including the Breaks Non-NCA Unit, which has areas of high site density. In addition to increased vandalism, unrestricted cross-country vehicle use could result in direct damage as vehicles ran over archeological sites. Increased erosion, another negative impact, could also occur in the unrestricted areas.

Issue 4--Wilderness Management

Resource deterioration due to natural decay and erosion would be allowed to continue unless unusual resources were threatened, and even then remedial actions would be restricted by wilderness considerations. However, wilderness is generally patrolled more intensively than other BLM land, so Archeological Resource Protection Act (ARPA) violations would more likely be discovered and reported.

Issue 5--Wilderness Suitability

Current information suggests that few cultural resources exist in the Chain of Craters area, so its continued management as a WSA would have little effect on cultural resources. Under Alternative A, no contiguous lands would be added to the Cebolla Wilderness, so future excavation and scientific study of any inventoried sites on those lands would not be limited by either the Wilderness Management or Interim Management Policy.

Issue 7--Cultural Resources

Under Alternative A, the BLM would emphasize conservation of cultural resources while still making reasonable allowances for archeological investigation. Provisions under this alternative for National Historic Preservation Act (NHPA) compliance, inventory, signing, access easements and consolidation of ownership, road closure, monitoring, stabilization, and fire suppression would have slightly positive, long-term impacts on scientific and public values.

Scientific investigations would provide current information, but in some cases, would destroy portions of the affected sites, leaving them unavailable for research using future technologies and approaches. This would be a negative long-term impact to particular properties but, at the levels anticipated under this alternative (fewer than five projects), would not affect the long-term scientific potential of the Planning Area as a whole.

Proposals under this alternative would be limited primarily by the level of funding available to address problems of cultural resource management. Measures described for this alternative such as patrolling, monitoring and signing would be effective on a limited scale in reducing damage due to erosion, vandalism and casual artifact collection associated with visitors.

Issue 9--Vegetation

Livestock grazing can adversely affect cultural resources by reducing vegetation, thereby contributing to erosion. Trampling can break artifacts on the ground surface, and livestock sometimes rub against historical structures, contributing to their deterioration. Erosion affecting cultural resources would undoubtedly continue, but would be reduced by improved grazing management under the No Action Alternative. Eight historical homesteads in the Planning Area have been fenced to exclude livestock, and under this alternative additional fencing would be installed if warranted.

Range improvements, spring developments, and watershed structures proposed under the No Action Alternative would be subject to environmental analysis, and their potential adverse effects could be mitigated through avoidance or data recovery. Similarly, chemical, mechanical, and biological vegetative treatments under Alternative A would be on a small scale and would be evaluated on a case-by-case basis through separate Environmental Assessments (EAs).

Fires, including prescribed fires and wildland fires under prescription, could destroy historical sites with flammable elements and damage the scientific potential of surface and near-surface archeological materials. Activities associated with fire suppression such as establishment of fire camps and construction of fire lines could also result in adverse impacts to cultural resources. Under Alternative A, eight to twelve historical sites have been identified for protection from fire, and other newly discovered sites could be added to this list. Reconnaissance-level surveys for sites with flammable materials would be conducted in areas where prescribed fires were proposed. Inventories would not be to Class III standards if fires were proposed in areas of low site density (refer to Map 37). Class III inventory would be considered in zones of high site density, and a cultural resources advisor would be required during fire suppression activities, regardless of the source of ignition. To ensure site protection, fire would not be used in some areas.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition proposals could benefit cultural resources by eliminating mineral entry and inadvertent disturbance. Important cultural resources in the Breaks Non-NCA Unit would receive more intensive management if it was acquired.

Summary

NCA designation and the provisions of this plan would be effective in protecting cultural resources from damage as a result of deliberate, planned actions. However, natural and human factors would continue to degrade cultural resources. Natural deterioration would continue to affect historical homesteads, while gully and sheet erosion would affect archeological sites. Both types of sites would continue to be vulnerable to illegal collection, looting and vandalism.

Illegal surface collection would be primarily an unintended effect of recreational uses. This impact could be partly mitigated by positive interpretive messages, and by building recreational developments that encouraged use in non-sensitive areas. Documentation of archeological sites before they were seriously affected by surface collection could also partly offset the adverse effect of this activity.

Recreational developments and designated use locations would generally be in non-sensitive areas under Alternative A, although additional systematic documentation would be needed in several areas proposed for cultural resource interpretation. Access would remain essentially as it is now, with no additional impact on cultural resources. (Note: Survey provisions would be more stringent under the other alternatives.)

Cultural resource management activities intended to have a positive effect such as stabilization, erosion control, patrolling and monitoring would be limited to the most important sites and restricted in wilderness areas. Policies regarding archeological research that involved collection and/or excavation would be relatively liberal under this alternative.

Most developments, vegetative treatments, wildlife habitat projects and other similar proposals would be small in scale. With appropriate survey and mitigation, these proposals should have no effect on cultural resources.

Wildlife Habitat

Direct impacts associated with trails and parking areas would generally be long term, while those from vegetative treatments using fire would be short term. The following are the estimated acres of habitat disturbed by facilities in the Planning Area.

- Trails: a acre for each mile of trail (3 feet wide).
- Parking: for 30 vehicles--1½ acre, 20 vehicles--1 acre, 10 vehicles--½ acre, and 4 to 6 vehicles--¼ acre.
- Kiosks/Pullouts/Signs: 5 to 10 square feet (not including parking).

For the purpose of this analysis. Prescribed fires would average 500 acres each in size under Alternatives A and D, and 750 acres under Alternative B. Wildland fires under prescription would average 1,000 acres each under any alternative.

In addition to direct impacts to habitats, a zone of disturbance (acres potentially disturbed by human activities) would result from each type of facility as identified below.

- Established Trails: 80 acres (c mile wide) for each mile of trail.
- High-Intensity Use Areas (campgrounds, Ranger Station, La Ventana Arch): 640 acres (1 square mile) around each area.
- Moderate Use Areas (trailheads, pullouts, picnic areas): 160 acres (¼ square mile) around each area.
- Low-Use Areas (kiosks, interpretive tours): 40 acres (1/16 square mile) around each area.

Water catchment devices come in many types and sizes, but most measure about 20 feet by 20 feet (400 square feet). In addition, a square area measuring 100 feet on each side is generally fenced to protect each water catchment.

Fences would generally disturb an area of vegetation measuring approximately 50 to 100 square feet for each mile built. Where a fence is constructed through closed woodlands, a loss of approximately ¼ to ½ acre of trees per mile of fence would also occur.

For a more complete description of typical wildlife projects (water developments, fences, vegetative manipulation), refer to Appendix P.

Under Alternative A, actions proposed to resolve the issues listed below would have no impacts on wildlife habitat, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources

Issue 1--Recreation

Hunting and trapping would continue within the Planning Area under any alternative under NMDG&F regulations. In the short term, individual animals would be lost to these activities. However, because the State of New Mexico's main goal is to maintain stable and productive populations for future generations, other animals would be born to take their place.

Issuance of Special Recreation Permits (for hunting guides, mountain bike events, pack-animal trekking) under the BLM's existing process (which includes a site-specific EA) could continue to impact wildlife by disturbance within the immediate vicinity of the actions under any alternative. However, these would be considered dispersed and intermittent activities; no concentrated use or impact in any specific area is anticipated.

Within the Planning Area, three existing recreation areas (the Ranger Station, La Ventana Natural Arch, and The Narrows) would continue to be used for various activities under any alternative. Concentrating visitor use into these specific areas would cause a greater impact on the animals in or near them, but in the long term would reduce the number and size of impacts on wildlife and their habitats throughout the overall Planning Area. These areas have already created a direct loss of approximately 7 acres of habitat (2 at the Ranger Station, 2 at La Ventana Natural Arch, and 3 at The Narrows) from camping, picnicking, parking and

structures. An additional zone of disturbance to wildlife species in conjunction with these areas (e.g., noise) is estimated at approximately 640 acres (1 square mile) for each area, for a total of 1,920 additional acres (refer to Table 4-1).

The continuation of camping (at four sites), the addition of one portable toilet, and the maintenance of a horse gate at The Narrows are not anticipated to create any additional loss of wildlife habitat. Most usable space for camping, picnicking, and parking within The Narrows has already been disturbed by past recreational use. (Note: EAs were completed for La Ventana Natural Arch and Ranger Station in 1989 and 1990.)

Four trails (the CDNST, Ranger Station Reservoir, La Ventana Natural Arch, and Narrows Rim) would be emphasized for hiking activities under Alternative A. In addition, the Hole-in-the-Wall Trail would be used regularly because of its location. A cumulative loss of approximately 4 acres of habitat and a wildlife disturbance zone of approximately 960 acres would occur from continued use of these trails (refer to Table 4-1). (Except for about half of the CDNST, these treadways already exist.)

Portions of the CDNST treadway through the Planning Area totalling ***20*** miles have now been ***marked***. The treadway is anticipated to cross about 25 miles of the Planning Area under any alternative, which would create a direct loss of about 8 acres of habitat. An additional zone of wildlife disturbance is estimated at approximately 2,000 acres. (Note: Impacts of the CDNST have already been addressed in another plan--USDA, FS 1993.)

Conducting a ***half-mile*** long interpretive hike on the Nature Trail at the Ranger Station would cause direct surface disturbance. Less than half an acre of habitat would be lost because of the treadway, with an additional zone of disturbance of 80 acres.

The trail at La Ventana Natural Arch is the most popular within the Planning Area, used by thousands of hikers annually. It is ¼-mile long and lies entirely within the recreation site. Impacts associated with this site have already been evaluated in an Environmental Assessment (USDI, BLM 1989).

The Narrows Rim Trail, approximately 3.5 miles in length, is used for access into the Cebolla Wilderness. Continued use of this trail would perpetuate a direct loss of about an acre of habitat from the treadway, with an additional zone of disturbance of approximately 320 acres.

The Hole-in-the-Wall Trail is approximately 7 miles long, with 2 acres of habitat lost from the treadway, and an additional zone of disturbance of approximately 560 acres.

Interpretive programs and activities (e.g., hikes, walks, lectures and tours) would occur at established recreation and homestead sites and dispersed locations throughout the Planning Area during the summer months. The anticipated impacts would include disturbance of approximately 3 acres of habitat from foot traffic (¼ acre per site at 12 sites) and a wildlife disturbance zone of approximately 480 acres (40 acres per site) within the immediate vicinity.

Dispersed camping, hiking, picnicking, horseback riding, and mountain biking outside established recreation sites and trails would occur infrequently in any one given area. These activities would create temporary disturbances for wildlife species in the immediate vicinity of the activity (e.g., birds flushed from trees and rabbits from bushes), but would not be anticipated to cause any long-term impacts. It is estimated that wildlife would be disturbed on 640 acres per year from these dispersed activities under Alternative A (refer to Table 4-1).

Educating visitors about wildlife-related concerns could benefit wildlife habitat and/ or individual species by alleviating some impacts. Topics covered could include the importance of low-impact, Tread Lightly and Leave No Trace recreation; wildlife use of dead and down trees and logs, and wetlands; disturbances caused by human-wildlife interactions; and the role of fire, fire management and fuelwood harvesting for wildlife conservation.

TABLE 4-1

ESTIMATED ACRES OF WILDLIFE HABITAT DISTURBANCE

Type of Action/ Impact	Alternatives			
	A	B	C	D
Short-Term Impacts [a] Prescribed Fire	500 [b]	3,000	0	2,000
Wildland Fire Under Prescription	1,000	1,000	1,000	1,000
Woodland Thinning	0	100	0	100
Totals	1,500	4,100	1,000	3,100
Long-Term Impacts [c] The Narrows	3/640 [d]	3/640	3/640	3/640
La Ventana Arch	2/640	2/640	2/640	2/640
Ranger Station	2/640	2/640	2/640	2/640
New Campground	0	10/640	0	8/640
CDNST Treadway	8/2,000	8/2,000	8/2,000	8/2,000
CDNST Trailheads	1/320	3/320	0	2/320
Misc. Trailheads	4/960	24/6,720	4/960	15/3,540
Interpretive Hikes/ Tours	3/480	4/560	0	2/280
Signs, Kiosks	1/160	4/640	0	1/160
Dispersed Recreational Activities	0/640	0/1,280	0/320	0/960
Wildlife Developments	20/0	60/0	3/0	40/0
Totals	44/6,480	120/14,080	22/5,200	83/9,820

Notes: [a] Short-term impacts would occur annually.
[b] Acres of direct disturbance from vegetative treatments to wildlife habitat.
[c] Long-term impacts would last for the life of the plan (15 to 20 years).
[d] Shows 3 acres of direct disturbance to wildlife habitat (e.g., from treadway, parking) and 640 acres of intermittent species disturbance from human presence and noise.

Issue 2--Facility Development

Under Alternative A, new facilities would be limited to those associated with the establishment of the treadway for the CDNST, one additional portable toilet at The Narrows, and those facilities needed to mitigate any resource damage. These few facilities would have limited additional impacts on wildlife within the Planning Area.

In addition to developing the treadway for the CDNST, the BLM would build two primitive trailheads near Cerro Americano and Cerro Brillante, with graded parking for 10 vehicles at each location. These parking areas would cause long-term loss of an acre of habitat (approximately ½ acre for each site). In addition, wildlife disturbance near the trailheads would be expected over approximately 320 acres (160 acres for each site--refer to Table 4-1).

New signs and kiosks (up to four each) would be installed and maintained along CR 42 (the Chain of Craters Back Country Byway). All these developments would have direct impacts on habitat; however, most would be installed along established roads and create very little additional disturbance. The four kiosks would directly disturb approximately an acre of habitat (¼ acre each for parking), with an additional disturbance zone of 160 acres total.

Maintaining CR 42 as a Back Country Byway and allowing sightseeing and driving for pleasure on 354.5 miles of roads throughout the Planning Area would continue to directly disturb wildlife species near the road with noise and harassment. Increased use of this byway and other existing roads would be expected in the future; this would also increase the disturbances to wildlife.

Issue 3--Access & Transportation

Under Alternative A, 354.5 miles of roads outside wilderness would be open to motor vehicle use (refer to Table 2-7). The impacts of continued use of these roads on wildlife habitat are discussed above under Issue 2, Facility Development.

Issue 4--Wilderness Management

Continued management of 100,800 acres of public land as wilderness would benefit wildlife and their habitats because human activities in these areas would be limited in scope and extent. However, wilderness management restrictions could also preclude or modify certain wildlife habitat improvement projects within these areas, if proposed.

Issue 5--Wilderness Suitability

The recommendation not to designate the Chain of Craters WSA as wilderness would not change any wildlife protection or benefits. If the Congress dropped the Chain of Craters from wilderness study, the BLM would use appropriate protective measures under P.L. 100-225 to protect and enhance wildlife habitat within the area. If the Congress designated the area as wilderness, it would be managed in accordance with the Wilderness Act.

The 10,380 acres contiguous to the Cebolla Wilderness would not be recommended as wilderness and would continued to be managed in accordance with the RMP. Wildlife would not gain the benefits of protection from wilderness designation, but any habitat improvement projects proposed would not be limited by wilderness management restrictions.

Issue 8--Wildlife Habitat

Under Alternative A, ***it is anticpated that*** three wildlife habitat maintenance projects per year would be undertaken to meet existing wildlife needs throughout the Planning Area. The maximum anticipated development annually would include one prescribed fire and two facility project (e.g., fences, water catchments). Each prescribed fire would average approximately 500 acres in size, which could be lost as wildlife habitat for the short term. The facility projects would disturb approximately ½ acre per project (1 acre/year), for a total of 20 acres over the life of this plan (refer to Table 4-1 and Appendix P).

Under any alternative, implementing habitat management projects would produce short-term negative impacts and short- and long-term benefits. Projects such as prescribed fire would cause a temporary loss of vegetation and habitat, but would improve vegetative habitat productivity over the long term. The overall loss of forage would be minimized within any one wildlife habitat area, and different areas would be burned at different times to create habitat in various stages of development.

Issue 9--Vegetation

Vegetative manipulation under Alternative A would be limited to livestock grazing and riparian management practices. Managing allotments according to existing AMPs/ CRMPs generally would increase vegetative composition, production and cover, and improve vegetative condition and the quality of wildlife habitat. In the long term, improving ecological condition through grazing management practices would reduce competition between livestock and wildlife for forage, cover, and space.

Because of the limited use of vegetative treatment methods under Alternative A, however, benefits to wildlife habitats would be limited in the short term. No planting of riparian species or removal of exotic species (e.g., saltcedar, Russian olive) would be undertaken under this alternative. Therefore, achieving properly functioning condition for the riparian areas within the Planning Area would require a longer period of time.

Issue 10--Boundary & Land Ownership Adjustments

Acquiring private land identified in the Land Protection Plan (1989) would benefit wildlife through improved manageability. The ability to maintain and improve wildlife habitats through the use of prescribed fire is dependent on having large blocks of contiguous public lands. The unpredictability of fire, even under controlled conditions, generally precludes its use in areas with intermingled state and/or private lands. Blocking up lands through out the Planning Area would enhance the ability of the BLM to use wildland and prescribed fires to maintain and improve wildlife habitat.

Summary

Under Alternative A, activities associated with recreation, interpretation, and facility development would result in the loss of 24 acres of wildlife habitat over the life of the plan. In addition, disturbance to species would occur on approximately 6,480 acres, mainly near areas of high human use or developed facilities. Dispersed activities (e.g., hiking, sightseeing, guided tours) would generally create intermittent impacts (a few hours or days) to wildlife, depending on the specific duration of the activity. Activities associated with wilderness and WSAs would generally provide short- and long-term benefits to wildlife and their habitats because of increased protective measures. Habitat maintenance projects and vegetative treatments would cause the short-term habitat loss of 1 acre per year for facilities, and 1,500 acres per year for prescribed and wildland fires. However, these wildlife and vegetation treatments are anticipated to improve the long-term productivity of the area.

Threatened, Endangered & Other Special-Status Species

Alternative A:

The BLM has completed informal consultation with the FWS under Section 7 of the Endangered Species Act (ESA). As part of the informal consultation process, a Biological Assessment was prepared for all Threatened and Endangered and other Special-Status Species (Refer to Appendix Q) The FWS concurred with the BLM determination of "May Affect-Not Likely to Adversely Affect" and no formal consultation was initiated.

Vegetation

Under Alternative A, actions proposed to resolve the issues listed below would have no impact on accomplishing the vegetative objectives discussed in Chapter 2. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Under Alternative A, more dispersed types of recreational opportunities would be encouraged. This management preference would minimize the destruction of vegetation by physical means such as trampling and cutting of trees. Interpretative themes

in the Planning Area would promote a land use ethic that encouraged coexistence with natural ecological processes. As a result, the impacts to vegetation associated with human use would be fewer than if no interpretation was done.

Issue 2--Facility Development

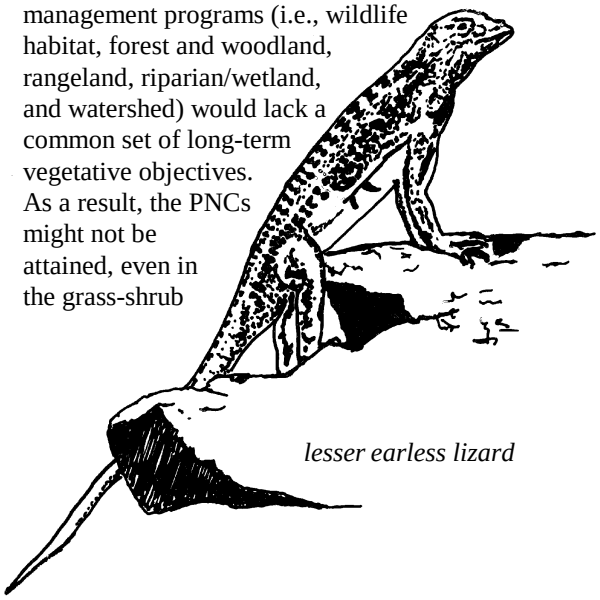
Construction of existing facilities such as buildings, parking lots, and picnic areas has caused vegetation to be destroyed. For the most part, the vegetation around existing facilities would be adversely affected by increased and concentrated visitor use. However, directing use to specific areas would result in fewer overall impacts to vegetation than random, unmanaged use. Site-specific assessments would continue to be made for developed facilities.

Issue 3--Access & Transportation

Designating public lands as limited or closed to off-road vehicle use would reduce the amount of destruction to vegetation. Providing reasonable access, while attempting to reduce conflicts between users and prevent damage to the natural resources, would reduce the incidences of willful violations and subsequent destruction of vegetation.

Issue 9--Vegetation

Achieving the Potential Natural Communities (PNCs) would not be the vegetative goal for the Planning Area under Alternative A. The vegetative management programs (i.e., wildlife habitat, forest and woodland, rangeland, riparian/wetland, and watershed) would lack a common set of long-term vegetative objectives. As a result, the PNCs might not be attained, even in the grass-shrub communities where the greatest likelihood of accomplishment during the life of the plan would exist.



lesser earless lizard

Management of the soil, air and water resources would benefit watershed and vegetation, as would changes in livestock practices and the use of fire. Management for stabilizing watersheds would reduce overland water flow and promote water infiltration. As result, plant productivity would be expected to increase, allowing for progress in accomplishing vegetative objectives.

<u>Vegetation--Forest & Woodland Resources</u>

Under Alternative A, actions proposed to resolve the issues listed below would have no impacts on accomplishing the vegetative objectives for forest and woodland resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 3--Access & Transportation

Signing and enforcement of the off-road vehicle designations governing access would deter the unauthorized removal of wood products.

Issue 4--Wilderness Management

As a result of the “minimum tool” requirements, the cost of vegetative improvement projects such as fire would be higher in wilderness than in areas not subject to the same restrictions. The cost might not be prohibitive, but areas with fewer restrictions could receive higher priority for improvement.

Issue 5--Wilderness Suitability

Fire would be the only management action allowed to improve vegetation until after a Congressional decision on wilderness designation of the Chain of Craters WSA.

Issue 7--Cultural Resources

When planning and designing forest and woodland improvement treatments, the BLM would make provisions to protect cultural resources. Use of fire could be prohibited in some areas.

Issue 9--Vegetation

For ponderosa pine to be reestablished in its natural habitat, the quantity of piñon-juniper trees would have to be reduced. However, under Alternative A, no forest and woodland management actions such as thinning would be proposed. The opportunity to restore ponderosa pine communities would be dependent on fire or disease. Prescribed fires and wildland fires under prescription would be used to prevent catastrophic fire and protect property. Resource enhancement would be a secondary benefit. Interpretation could increase public acceptance of fire as a vegetative management tool. However, overall the ponderosa pine community would continue to decline and the piñon-juniper woodland community would continue to expand in the open woodland/ savanna locations.

Achieving the objectives for forests and woodlands would rely on wildland fires under prescription. Fire may not come within the life of the plan, but if it did, it could be cataclysmic because of the large fuel load that exists.

Vegetation--Rangeland Resources

Under Alternative A, actions proposed to resolve the issues listed below would not impact rangeland resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 2--Facility Development
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Construction of rangeland improvement projects (e.g., fences, pipelines, water wells) could be affected by recreational use. To protect visual resources, projects could be relocated, redesigned or not allowed.

Issue 3--Access & Transportation

Limiting vehicles to existing roads would have positive effects on livestock grazing management. Fewer acres of vegetation would be disturbed by vehicular use, preventing loss of forage. Increased forage from preventing road expansion would provide more ground cover to slow surface runoff and soil erosion.

Issue 4--Wilderness Management & Issue 5--Wilderness Suitability

Wilderness and WSA management would restrict vegetative management tools, making accomplishment of rangeland management objectives more difficult. Where range improvements were placed to increase rest, not use, vegetation could be improved for the benefit of wilderness character.

Issue 9--Vegetation

To ensure accomplishment of vegetative objectives, planned rest from livestock grazing management would be increased. As objectives were attained, increased quality as well as quantity of forage species would be expected. The abundance of grasses and desirable shrubs would improve. As these forage resources improved, livestock grazing rest periods could be better managed to ensure long-term vegetative improvements.

Rangeland improvements would continue to be built to allow improved patterns of livestock grazing use. However, the vegetative objectives would not be considered in AMPs/CRMPs. Minimum rest periods from livestock grazing use would continue to favor warm-season grasses. Cool-season grasses and desirable shrubs would continue to be under represented. As a result, vegetation would remain in the mid to high development stages and very few acres would reach the PNCs.

Grazing improvements including fences, wells, storage tanks, and dirt tanks create a long-term vegetative disturbance on 530 acres. Planned pipeline development and fence construction would create short-term disturbance on an additional 65 acres.

Management of fire and the soil, water, air, forest and woodland resources could produce some short-term inconvenience to livestock grazing management. For example, an area proposed for burning could require additional rest from livestock grazing use. To minimize the effect on ranching operations and benefit rangeland management in the long term, objectives and actions from these other programs must be proposed in AMPs.

Social & Economic Conditions

Under Alternative A, actions proposed to resolve the issues listed below would not have direct economic or social impacts. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

As measured in visitor use, recreational activity is based on traffic counts and an assumed average occupancy of 2.8 persons per vehicle. The BLM's traffic counts for the Planning Area are taken at La Ventana Natural Arch. Based on these figures, visitor use has grown by an average of nearly ***11*** percent per year between 1990 and 1996. The first three years showed rapid growth rates. In the last three years, growth rates have decreased, and it is expected that visitor numbers will continue to increase at a lower rate.

In 199***9***, a total of ***81,000*** visitors used the Planning Area. To calculate the economic impact of this visitation, an expenditure of $65 per visit has been used. Based on these figures, visitors to the area expend approximately $***5,265.000*** per year. It is assumed that this money turns over one additional time in the local economy before it leaves the county. Therefore, Cibola County receives nearly $***10.5*** million per year as a result of Planning Area visitor expenditures (direct and indirect). This is approximately 3.***3*** percent of the total personal income reported for Cibola County in 199***7***.

It is estimated that visitor expenditures would increase at about 5 percent per year for the next 10 years. The resultant income would increase at about the same rate (approximately $***16,000,000*** in 199***7*** dollars in 20***10***).

Recreation-related employment figures were estimated using the 5-year economic census series (U.S. Department of Commerce, 1992a & b, 1994b). Expenditures by Planning Area visitors contribute substantially to the employment of approximately 200 people in Cibola County. This employment figure is expected to reach 300 by the year 20***10***.

Issue 6--American Indian Uses & Traditional Cultural Practices

Social impacts related to American Indian concerns are not expected to be measurable under any of the alternatives. Sociocultural impacts would occur to the American Indian people who have used the area for religious and cultural purposes over the years and would not have the same level of access and use because of proposed development.

Issue 9--Vegetation

Livestock grazing can create direct economic impacts. The Planning Area includes 305,400 acres, 67 percent of which (205,000 acres) is useable for livestock grazing. At 12.6 acres per Animal Unit Month (AUM), these 205,000 acres would support 16,288 AUMs or the forage required to maintain 1,357 cows for a year. The New Mexico Agricultural Statistics (U.S. Department of Agriculture 1994) show receipts for nondairy cattle on farms as of January 1, 1994, in Cibola County at an average of $627 per head. Using these figures, receipts from Planning Area livestock production would be approximately $851,000 per year, or 11.3 percent of the cow and calf receipts in 1994 for Cibola County.

Summary

Few social or economic impacts would occur from implementation of Alternative A. Impacts to minority and low-income populations and communities have been considered, with no significant impact anticipated.

Soil, Water & Air Resources

Under Alternative A, actions proposed to resolve the issues listed below would have no impacts on the soil, water and air resources of the Planning Area. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation
& Issue 2--Facility Development

Management of the Planning Area for dispersed recreational use would result in less overall surface disturbance, soil erosion, and impacts to water and air than if the area was being managed for intensive, concentrated recreational use (as under Alternative B). Limited increases in surface runoff and erosion could be expected around existing facilities such as the Ranger Station, parking lots and picnic areas because of continued increases in visitor use.

Issue 3--Access & Transportation

Designating public lands in the Planning Area as limited or closed to off-road vehicle use would reduce surface disturbance and erosion. Providing reasonable access while attempting to reduce conflicts between users and prevent damage to the natural resources would reduce the incidence of willful violations and subsequent soil erosion.

Issue 9--Vegetation

Managing to reach the vegetative objectives discussed in Chapter 2 would have a positive impact on the Planning Area's watersheds. The amount of ground covered by vegetation is expected to increase, which would reduce the amount of soil surface area exposed to the forces of wind and water erosion.

To attain the vegetative objectives, forests and woodlands would be managed to contain trees of various ages. Changing the age structure would increase the number of openings between clumps of trees, allowing for increases of herbaceous growth under the trees and providing more developed, complex vegetative layers. As a result, surface runoff would be reduced and erosion decreased.

Changes in livestock grazing management would continue to be made where vegetative utilization and trend needed to be improved. AMPs/CRMPs containing specific watershed objectives would be developed for these areas. As a result of the changes in livestock grazing management, perennial herbaceous ground cover would increase, reducing erosion potential. Small erosion-control structures could also be developed to further reduce soil loss.

Wildland fires under prescription would be used as tool to help attain vegetative objectives. Immediately following burning, more ground surface could be exposed to the forces of wind and water, and thus to increased soil erosion. Following the burns, increased herbaceous vegetative ground cover would be expect-ed. As a result, the opportunity for erosion would decrease. Smoke would impact air quality during burning, but no long-term impacts are expected.

Visual Resource Management

Under Alternative A, actions proposed to resolve the issues listed below would have negligible short-term or long-term impacts that would exceed the objectives of the VRM classes assigned to public lands within the Planning Area. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources

Issue 1--Recreation

Dispersed recreational activities spread out over the Planning Area should have little noticeable impact on overall visual resources. Localized visual impacts from the destruction of vegetation, exposure of soil, and erosion would generally be associated with social trails, campsites, and vehicle pullouts where frequent and continuous recreational use occurred (usually away from key viewing points).

Visual resources on 211,800 acres of public lands would benefit through the assignment of VRM Class I and II management objectives. Application of these two classes would prevent activities that would create noticeable changes in the elements of form, line, color and texture found in the landscape.

The visual resources on 14,110 acres of VRM Class III lands would be subject to a greater degree of change. However, lands assigned Class III usually do not rank as high scenically, so change is usually not a sensitive issue. Impacts to visual resources on the remaining 22,000 acres of non-NCA public lands would be handled on a case-by-case basis. Mitigation would be applied to minimize potential impacts should a project be authorized there. Interpretation of the natural features through brochures and guided hikes would improve visitor appreciation of the scenic quality of the Planning Area and thus contribute to more careful visitation.

Issue 2--Facility Development

Existing recreational facilities would continue to be part of the landscape. The developed facilities and concentration of recreational use there would continue to create minor localized impacts to visual resources. However, when these facilities were built, the location, materials, colors and construction methods were considered. This helped to minimize visual contrasts and lessened the impacts.

Issue 3--Access & Transportation

The 354.5 miles of BLM-administered travel routes, along with state highways and county roads, would continue to provide visitors an opportunity to enjoy the quality of the visual resources in the landscape. The alteration of the landform and the disturbance to vegetation from these linear routes has created visual contrasts that would continue under Alternative A.

Issue 4--Wilderness Management

A total of 100,800 acres of designated wilderness or 41 percent of the public land in the Planning Area would be managed under the most restrictive VRM Class I. Management under this class would benefit the area's visual resources through restricting activities that would create visual contrasts evident to the casual observer.

Issue 8--Wildlife Habitat

The maintenance of wildlife exclosures to prevent disturbance of vegetative cover would benefit the visual resources of the Planning Area.

Issue 9--Vegetation

Use of the Planning Area by livestock has resulted in the presence of range improvements and trampling around them. Visual impacts from these developments would normally be very localized and would initially have greater impact in the short term than over the long term. The existing facilities would be acceptable under VRM Class II objectives. As forage conditions improved over the long term under management to meet vegetative objectives, visual resources would be enhanced.

Fire suppression over the years has created a buildup of natural fuels and the potential for a high-intensity wildland fire that would create a more obvious landscape change. The seriousness of this potentially negative impact on visual resources would depend on many variables, including fire intensity, size, fuels and location.

Issue 10--Boundary & Land Ownership Adjustments

The acquisition of non-federal lands and mineral interests within the Planning Area would prevent developments that could be detrimental to visual resources. This would be in addition to the acquisition of scenic or conservation easements along approximately 76 miles of state and county highways and roads in the Planning Area, which would benefit visual resources by preventing development of structures or alteration of the landscape that would degrade the area's natural beauty.

Cumulative Impacts

Social & Economic Conditions

P.L. 100-225 provided for protection of traditional cultural uses and allowed a 10-year period for adjustments in livestock operations before grazing was excluded from the National Monument. No one is believed to have been forced out of the ranching lifestyle because of this exclusion.

Economically, 10 livestock operators have had their borrowing capacity reduced by approximately $850,000 (total) because of the reduction of forage capacity in the National Monument portion of their ranching operation. The 10-year notice of loss of these AUMs has allowed for this change to be made in a manageable way.

Under Alternative A, visitors are expected to continue to spend an estimated $6,630,000 annually (102,000 visits at $65 per day) in the Grants area. These dollars are expected to turn over one additional time (the multiplier effect) in Cibola County, adding a total of $13,260,000 to the local economy annually. This would amount to approximately 5 percent of the total personal income reported for Cibola County for 1994 (U.S. Department of Commerce, Bureau of Economic Analysis 1994a). A few employment opportunities have been created by NCA and National Monument designation, raising the standard of living for as many as 300 families.

Recreation

Visitors to the NCA have increased in the past few years, according to numbers from a counter installed at La Ventana Natural Arch. Between 1990 and 1996, visitor numbers increased substantially (37,572 to 63,252; up nearly 83 percent), but the rate of growth has been slowing from near 50 percent in 1991 to 11 percent in 1996. NPS figures for National Monument visitation show a similar trend. Visits are expected to total 102,000 per year under Alternative A.

Vegetation--Rangeland Resources

Based on vegetative monitoring results, some short-term AUM adjustments would be implemented, most likely in the form of changes in management practices. It is expected that the adjustments would bring ecological changes that would result in the current Planning Area allotment preferences becoming sustainable in the long term.

A cumulative effect would result from earlier BLM adjustments being added to the National Monument adjustments completed in January 1998. In 1992 the BLM reduced the preference on one group of allotments from 33,067 to 31,372 AUMs (a decrease of 1,695 AUMs). As of January 1998, 6,476 AUMs in the National Monument were ***not*** available for grazing use. The total reduction was 8,171 AUMs, equal to the forage required by 681 cattle yearlong. Considered on a county-wide basis, this reduction affected less than 3.5 percent of the total cattle grazed in Cibola County.

Long-term vegetative disturbance would occur on 574 acres as a result of grazing improvements and recreation facilities development. Short-term vegetative disturbance would occur on 65 acres on a one time basis as a result pipeline installation and fence construction. Rehabilitation should be complete on these projects in two to three years. Fire is to be used as a vegetative improvement tool on approximately 1500 acres per year. This will have a short-term negative effect but after two to three years is expected to increase both the quality and quantity of vegetation on these acres. This acreage of improved vegetation would continue to grow as long as the treatment continues. The cumulative vegetative disturbance acreage would reach approximately 3640 acres (both short and long term). The increased quality and quantity acreage would reach several thousand acres because the improvements are expected to be effective for many years.

ALTERNATIVE B--RESOURCE USE

Recreation & Facilities

Under Alternative B, actions proposed to resolve the issues listed below would have no impacts on recreation or facility development, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management
- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

In general, opportunities would be more developed and better defined for those recreationists who enjoyed concentrated recreation (i.e., at specific, designated locations). Opportunities for visitors to experience solitude would remain as at present. Developed camping and picnicking opportunities would increase, as would hiking opportunities on up to 25 trails. Opportunities for horseback riding would remain similar to those at present, but access for horses would increase. Hunting opportunities would remain the same. Mountain biking opportunities would increase. Driving for pleasure and back-country driving opportunities would decrease slightly because an increase would occur in semi-primitive nonmotorized acreage. Numbers of back-country byway users could increase as the areas were improved and marketed. Visitors interested in cultural and/or historical properties would find up to 14 different opportunities for exploration. Watchable wildlife opportunities would be more clearly marked.

Issue 2--Facility Development

The facilities called for under Alternative B would directly affect how visitors perceived the recreational opportunities in the Planning Area. Some visitors would like the increased facility development and see it as improving the opportunities for recreation. Other visitors would have the opposite viewpoint. Many opportunities for dispersed recreation would still exist because only 58 acres (less than 1 percent of the Planning Area) would be disturbed directly by recreational developments. Developed facilities for camping would likely draw more recreation users. The development of hiking trails would increase opportunities, from the approximately 36 miles under the No Action Alternative up to nearly 77 miles under Alternative B. Trailhead facilities would increase the opportunities for hikers, horseback riders, and mountain bike riders to enjoy the variety of trails or old roads available.

Opportunities for picnicking at developed areas would increase by 150 percent, as would those for driving into the back country for pleasure (with the designation of three additional back country byways). Under Alternative B, visitors with an interest in cultural or historical properties would find increased opportunities for learning about the past. More wildlife enthusiasts might be drawn to the Planning Area because opportunities for watchable wildlife would be identified. Entry identification signs would also likely increase the levels of recreation in the Planning Area.

Interpretation and public education would impact recreation and facilities by marketing the Planning Area and NCA through brochures, signs, kiosks and programs at the amphitheater, possibly increasing the numbers of recreationists who came to the area. Interpretation could assist in dispersing visitor use and changing visitor behavior so the impacts of many recreationists would not negatively impact the resources. In some cases, interpretation would help to influence public land users to be good land stewards.

Issue 3--Access & Transportation

Visitors would have access to recreational opportunities on 337.5 miles of road designated as open. This would decrease opportunities for recreationists who were interested in driving for pleasure or back-country driving. Signs and other interpretive information would clarify for visitors which roads were accessible and useable. Closing 5 percent of the Planning Area's roads to vehicle use (in addition to the roads closed by wilderness legislation) would decrease visitor access slightly. Access management under Alternative B would also increase the solitude for those wishing to participate in activities such as backpack camping, hiking, horseback riding and hunting because less acreage would be disturbed by vehicle
intrusions.

Issue 5--Wilderness Suitability

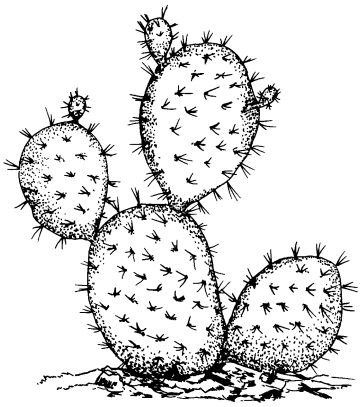
Not recommending the Chain of Craters WSA as suitable for wilderness designation would open it to recreational developments and increase opportunities for visitors interested in such developments. Driving for pleasure, hiking, and mountain biking opportunities would not be limited by a wilderness designation in this unit. Those recreationists who desired wilderness experiences would have more than 100,000 acres of Planning Area wilderness. Under Alternative B, the BLM would also recommend a net 3,490-acre addition to the Cebolla Wilderness, increasing the wilderness recreational opportunities to 105,290 acres.

Issue 7--Cultural Resources

Under Alternative B, the BLM would allocate up to 14 sites for public use, providing an increase in sightseeing opportunities for visitors interested in cultural or historical properties. Scientific investigations could occur at these sites and/or others, also increasing recreational opportunities. Stabilization and erosion-control projects would increase the likelihood that visitors would have opportunities to see historical and/or cultural properties in the future. Some recreationists would be attracted to sites with antiquities signs, while others would dislike this visual intrusion.

Issue 8--Wildlife Habitat

Increasing the quality and quantity of wildlife habitats would increase the opportunities for recreation. Working with state and federal agencies to reintroduce native wildlife and/or plant species would also increase viewing potential.



Issue 9--Vegetation

Under Alternative B, the BLM would increase the acreage of prescribed fires, decreasing the recreational opportunities for the short term (during the burn period and rehabilitation). (The impact would be greater than under the No Action Alternative, because more acreage would be burned.) Other actions to change the vegetative environment would likewise produce short-term impacts to recreation by restricting use to protect health and safety. Immediately after any treatment, some scenic disturbance would be noticeable by visitors and users. In the long term, recreationists would see increased vegetative diversity throughout the Planning Area. Long term improvements in vegetative health would increase recreational opportunities.

Issue 10--Boundary & Land Ownership Adjustments

If the Congress followed the BLM's recommendations for boundary changes, the total land acreage in the NCA (including non-public land) would increase by 9 percent to 288,300 acres, and in wilderness by 3.4 percent to 105,290 acres. This larger area would provide increased recreational potential.

Access & Transportation

Under Alternative B, actions to resolve the issues listed below would have negligible impacts on access and transportation. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Motorized access opportunities would be available on 143,560 acres through the use of 337.5 miles of designated travel routes. For those who preferred areas away from such use, 104,450 acres of public land would be available.

Access by up to 25 trails would be enhanced for those who preferred such use, although many of these trails would have specific cultural sites as their destination point. Users would also benefit from the construction of trailhead facilities, including some for horseback use and mountain biking. Trails designated for mountain bike use would enhance this experience and reduce conflicts among users.

Issue 2--Facility Development

Providing parking areas and improving existing motor vehicle access to the new campground in the Spur Unit and the trailhead for the Dittert Site would improve access to services and features in the Planning Area, as would parking facilities and trails to about 14 cultural and historical sites. Facilities to accommodate horseback use at the Armijo Canyon, Narrows, Hole-in-the-Wall, and Cerro Brillante CDNST trailheads would also improve access.

Issue 3--Access & Transportation

Motorized access opportunities would be diminished by increasing the amount of land closed to motor vehicle access (about 104,450 acres). Cross-country travel by motor vehicle would be lost on 12,000 acres as a result of the BLM restricting travel to designated routes.

Issue 4--Wilderness Management

An additional 3,650 acres would be closed to motor vehicle use through expansion of the Cebolla Wilderness.

Issue 5--Wilderness Suitability

If the Chain of Craters WSA was not designated as wilderness and was released from further wilderness review, motorized access opportunities would continue but be diminished through limiting use to designated travel routes. Closure of 2.3 miles of travel routes, or 5 percent of those inventoried within the WSA, would also decrease access.

Of the lands contiguous to Cebolla Wilderness, 3,650 acres recommended for wilderness would eventually be closed to motorized and mechanical forms of transport, if the Congress designated them. Pending Congressional designation, motor vehicle access would be limited to designated routes. The BLM would manage the remaining contiguous lands under the vehicle designation of "limited." Motor vehicle use would be restricted to designated travel routes.

Issue 7--Cultural Resources

Development of parking and trails at additional cultural sites would enhance visitor access opportunities there.

Issue 9--Vegetation

For user and visitor safety, access would be prohibited for short periods of time when prescribed fires were conducted.

Summary

The direct impacts of actions taken under Alternative B on access opportunities would depend on the user's preferred or required method of travel. For those who preferred nonmotorized methods of travel, the entire Planning Area would be available. However, nonmotorized access opportunities would be enhanced on 42 percent of the Planning Area as a result of wilderness designation, because motorized vehicles and mechanical forms of transport would be prohibited. For people who preferred or were limited to motorized or mechanical means of transport, access on 337.5 miles of BLM-administered, designated travel routes would be provided to 58 percent of the public lands in the Planning Area.

An increase in BLM-provided campgrounds, parking lots, trailheads and trails would enhance the opportunity to access public lands and features within the Planning Area. However, certain areas of public lands could be closed for a few days for vegetative treatments or the practice of traditional American Indian activities.

<u>Wilderness Management</u>

Under Alternative B it is assumed that an additional 3,650 acres of public land in the Planning Area suitable for wilderness would be designated by the Congress.

Actions proposed to resolve the issue listed below would have negligible impacts on wilderness

management. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management

Issue 1--Recreation

The additional 3,650 acres of public land in wilderness would benefit visitors who wished to experience this type of setting for primitive and unconfined recreational use.

Issue 2--Facility Development

Additional trailhead facilities located adjacent to the two wildernesses would improve accessibility and encourage use by providing a convenient place for visitors to begin their trip. The existence of several trailhead facilities to access wilderness would improve the opportunity for users to be dispersed, decreasing the potential for encountering other users and maintaining opportunities for solitude.

Issue 3--Access & Transportation

Approximately 6 miles of authorized access routes in the Cebolla Wilderness and 18 miles in West Malpais would continue to serve livestock permittees and owners of private inholdings. Access for development of non-federal mineral interests would be dealt with on a case-by-case basis. No undue or unnecessary impacts would be anticipated from mineral development.

Issue 5--Wilderness Suitability

The manageability and recreational use of the Cebolla Wilderness would benefit from the designation of an additional 3,650 acres of suitable public land.

Issue 6--American Indian Uses & Traditional Cultural Practices

Closure of lands for privacy in conducting traditional practices would displace the primitive recreational use of that area during the closure period (expected to be no more than a few days per year). Infrequent use of a motor vehicle (i.e., once every 2 to 3 years, for no more than a day) by American Indians whose mobility depended on such use to carry out traditional cultural practices would be considered non-impairing and the "minimum tool." Consultation between the BLM and American Indians would be needed before formal closure and authorized use of a motorized vehicle.

Issue 7--Cultural Resources

Should new stabilization or erosion-control projects be needed because of the threat of losing cultural resources of high value, they would be accomplished using the "minimum tool."

Issue 8--Wildlife Habitat

The use of motor vehicles and motorized equipment to maintain existing wildlife projects would be restricted. Any noise and view of vehicles in wilderness would have a negative impact on the user's experience.

Construction of wildlife facilities would be inconsistent with the free operation of natural processes, but could be needed for the continued existence or welfare of wildlife living in the wilderness. With consideration of their design, placement, duration, and use, certain permanent installations would be permitted to maintain conditions for wildlife. These would be allowed only if the resulting change was compatible with the preservation of wilderness character and the installation was the "minimum tool" needed.

Issue 9--Vegetation

The development of AMPs/CRMPs and the management of livestock to improve forage conditions would benefit wilderness through enhancing its natural character.

Actions to suppress wildland fires in wilderness could alter the natural landscape and disrupt the opportunities for solitude and primitive recreation. The severity of impacts is not measurable, but suppression actions would be done to minimize surface disturbance and disruption of wilderness resources and uses. In the long term, any short-term disturbance from fires could benefit vegetation through improved plant

diversity and the return of natural ecological processes.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of non-federal surface (800 acres) and subsurface mineral interests within the boundary of the two wildernesses would enhance wilderness management and values through eliminating detrimental development. Excluding approximately 200 acres of land on the Cebolla Wilderness perimeter owned by the Acoma Pueblo would enhance wilderness management by excluding non-federal lands.

Summary

Under Alternative B, the wilderness resource would benefit from the addition of 3,650 acres of public land designated by the Congress. Designation would benefit opportunities for primitive and unconfined recreation by increasing the amount of public land in the Planning Area available for this type of use to 42 percent. Acquisition of private surface and subsurface inholdings would benefit the manageability of these areas, eliminating the need to provide access and the potential for activities that would degrade the area's naturalness.

Wilderness Suitability

It is assumed that the Congress would accept the BLM's recommendation and release the entire 18,300 acres within the Chain of Craters WSA from further wilderness review. It is also assumed that the Congress would designate 3,650 acres contiguous to the Cebolla Wilderness. The 6,730 acres of public land found to be unsuitable would be released from interim management (by the BLM State Director under Section 202 of FLPMA, 30 days after the decision record is issued for this El Malpais Plan).

Under Alternative B, actions proposed to resolve the issues listed below would have negligible impacts on wilderness suitability. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 2--Facility Development
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Through continued use of travel routes and vehicle noise, motorized recreational use of the Chain of Craters WSA would impair the naturalness, opportunities for solitude and primitive and unconfined types of recreation.

Issue 3--Access & Transportation

Use of 44.2 miles of vehicle routes in the Chain of Craters WSA by motorized equipment and vehicles would have a negative influence on the opportunities to experience solitude and maintain a natural environment. To prevent resource damage and deterioration of these designated routes, periodic maintenance would be required, which would impact the naturalness of the area and disqualify it as roadless.

Issue 9--Vegetation

The installation of any new range improvements for livestock management would adversely impact wilderness values if frequent motorized access was required. If done by mechanical means, vegetative treatments and periodic maintenance would also impact wilderness values, especially naturalness.

American Indian Uses & Traditional Cultural Practices

Under Alternative B, actions proposed to resolve the issues would have the following impacts on the uses and traditional cultural practices of American Indians in the Planning Area.

Issue 1--Recreation

As discussed under Alternative A above, dispersed recreation would continue to increase over the life of the plan. Under Alternative B, such use would likely increase more because recreation would be encouraged. Dispersed recreation would conflict with traditional American Indian uses if visitors intruded into these activities or took items left as offerings. In particular, horseback riding, mountain biking and picnicking could conflict with American

Indian uses. Under Alternative B the probability of such incidents would continue to increase.

The Ramah Navajos have identified the Chain of Craters, including portions of the CDNST, as sensitive. No specific conflicts with other recreational locations emphasized under Alternative B would be expected. However, lava tubes, mountain peaks, archeological sites, and springs are sometimes important in American Indian traditional belief and practices.

Issue 2--Facility Development

No conflicts from establishment of recreational facilities would be expected with traditional American Indian uses in the Spur Unit, nor from the construction of five major trailheads at Cerro Brillante, Cerro Americano, The Narrows, West Malpais, and Armijo Canyon. Primitive trailheads would provide access to the Pinole Site, the Cebolla Canyon Community (including The Citadel), Lobo Canyon Petroglyphs, Aldridge Petroglyphs, Stone House, West Malpais Schoolhouse (from the Cerro Brillante Trailhead), and other properties (refer to Table 2-9). These facilities would concentrate recreational use, resulting in increased visitation nearby. Although no specific conflicts with American Indian uses are known, archeological sites, mountain peaks, and springs are often important to Indian people.

A total of 40.5 miles of new trails (from the trail-heads discussed above) and 19 miles of closed roads would be available for hiking and horseback riding. Construction of specific routes would be preceded by site-specific EAs, and closely coordinated with American Indian groups who have close ties to El Malpais. Routes could be designed to direct recreational users away from sensitive locations.

Most routes outside wilderness could also be used for mountain biking. If such use began to result in environmental damage, specific bike trails would be established in the Chain of Craters, Cerritos de Jaspe, and Brazo Units. Of these, the Chain of Craters has been identified as sensitive by the Ramah Navajos.

Issue 3--Access & Transportation

It is common for vehicles to be driven off established roads during piñon gathering and other traditional activities. Under Alternative B, no off-road vehicle use would be allowed, all vehicle use generally would be prohibited in wilderness, and vehicle use would be limited to designated roads and trails on 144,000 acres of the Planning Area. About 19 miles of existing roads and trails would be closed under this alternative, with the remaining 337.5 miles remaining open. Limitation of vehicle use to existing roads and trails would increase privacy but decrease accessibility.

Most of the roads to be closed are short segments that duplicate existing access. The closures would affect areas to the east of Cerro Negro, where some areas currently accessible by vehicle would be a mile or so from an open road. The closure would also affect access to Navajo Cave, an ice cave in the National Monument that would no longer be accessible from the east (Cerritos de Jaspe area). Neither of these locations are known to be important in traditional American Indian practice, so these closures would have no effect.

Issue 4--Wilderness Management

Under the Resource Use Alternative, American Indians would be allowed to access specific places within the Cebolla and West Malpais Wildernesses by vehicle under certain circumstances. It would have to be shown that, because of the physical condition of mandatory participants or other factors, vehicle use would be the "minimum tool" required for access. Other factors such as frequency and duration of visits would have to be taken into account to ensure that vehicular use would not result in degradation of wilderness qualities.

Issue 5--Wilderness Suitability

Release of the Chain of Craters from WSA status would facilitate access for American Indians by allowing continued vehicle use along designated roads and trails. Addition of 3,650 acres to the Cebolla Wilderness would limit vehicle use there, and increase the amount of walking needed for activities such as gathering piñon nuts.

Issue 7--Cultural Resources

Under Alternative B, applications for five to eight scientific investigations involving collection or

excavation at prehistoric sites would be expected. This is a higher level of activity than would be anticipated under any other alternative. The Pueblo of Acoma recognizes all prehistoric sites in the Planning Area as ancestral places, and in their traditional belief considers that any excavation or collection would have a negative effect. By law the BLM is required to consult with American Indians before undertaking such a project, but is not absolutely bound to conform to their wishes. If permits for these activities were granted, adverse impacts to traditional practices would result.

Some traditional American Indian people also regard active management of prehistoric archeological sites as intrusive. Under Alternative B, the BLM would undertake 7,745 acres of cultural resource inventory, post 200 antiquities signs, maintain stabilization projects at three prehistoric sites, undertake erosion control measures at up to 25 other sites, and consider additional stabilization of prehistoric ruins. Some or all of these actions could constitute an adverse effect under traditional belief.

Provisions would be made for permitting collection of prehistoric pottery shards for use in traditional ceramic manufacture. This would allow members of Acoma Pueblo to maintain this connection with their ancestral past. However, the permitting process itself would be considered intrusive, so it would be likely that this activity would decrease under Alternative B.

Issue 8--Wildlife Habitat & 9--Vegetation

Prescribed fires and wildland fires under prescription would increase long-term vegetative diversity, but the effect of this activity on specific plants used by American Indians in El Malpais is not known. Chemical treatments of noxious weeds would be of concern to American Indians gathering wild plants, and so would have to be closely coordinated with any group using the area for this purpose. Springs are sometimes important places in traditional American Indian belief, so special attention would be given to American Indian consultations when springs were fenced to improve riparian areas.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of the CDNST treadway would increase recreational use around the Chain of Craters, which is a sensitive area for the Ramah Navajos. Addition of 3,650 acres to the Cebolla Wilderness would restrict vehicle use there, including for traditional practices.

Summary

As under any alternative, increasing recreational use would be one of the most serious and pervasive impacts on traditional American Indian practices in the Planning Area. It would create long-term negative impacts by reducing privacy for traditional activities and increasing the likelihood of non-Indian intrusions into them. Dispersed recreational use would probably increase more rapidly under this alternative than under the other alternatives, because more recreational emphasis is proposed (e.g., increased interpretation, maintenance and signing of the Chain of Craters Back Country Byway, and development of recreational facilities--refer to Map 11). More recreational facilities are proposed under Alternative B than exist under Alternative A (Existing Management) or are proposed under Alternatives C or D. Several proposed facilities would accommodate increased use in the Chain of Craters WSA, which has been identified as sensitive.

More vehicle access would be allowed under Alternative B than under any other except Alternative A. This would increase the ease of access for traditional activities, but reduce privacy. Vehicular access into wilderness for traditional American Indian practices generally would not be allowed.

Some activities and decisions proposed under Alternative B could have other negative impacts. Archeological research involving excavation, signing, ruin stabilization, and erosion control intended to protect ruins could be considered intrusive by some traditional people. Collection of prehistoric pottery for use as temper would be allowed, but only through a formal permitting process. Chemical treatment to alter the Planning Area's vegetative communities could adversely affect people who were gathering herbs and other plant products. Thinning of piñon-juniper stands would be allowed under this alternative, so fuelwood may be available in some years,

although available quantities may be insufficient to meet demand. Depending on availability of alternative sources, prohibitions on fuelwood gathering outside the thinned areas may also be an adverse effect.

Certain Acoma Tribal lands (960 acres) are recommended for exclusion from the Planning Area under this alternative. If the Congress and the BLM added other lands to the Planning Area through acquisition and expansion, the positive and negative impacts outlined above would apply to those lands. Some ongoing uses such as fuelwood and piñon nut gathering would become more restricted, but the prohibition of incompatible uses such as commercial fuelwood sales and mineral extraction would have a positive impact on American Indian uses.

Cultural Resources

Under Alternative B, actions proposed to resolve the issue listed below would have no impacts on cultural resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

Proposals that resulted in increased visitation would result in more unauthorized surface collection and casual excavation of prehistoric sites, although the extent of these impacts cannot be quantified. Impacts from recreational use that was concentrated in defined areas or corridors would be more easily mitigated and controlled, but impacts from dispersed use to cultural resources would be more difficult to counter.

This alternative generally would allow dispersed recreation, but would emphasize development of facilities that could result in more concentrated use at certain locations. These facilities include a developed campground and an additional 40.5 miles of hiking trail. If these areas were surveyed, with their cultural resources documented and avoided, designation of specific camping areas and hiking trails could be beneficial. Adverse effects that could result from more dispersed use could be partly mitigated by public education, as well as archeological survey and documentation.

Under Alternative B, the BLM would encourage public visitation at numerous cultural sites in the Planning Area. Documentation would be sufficient to protect scientific values at the Dittert Site and at most of the five homesteads to be emphasized, although the physical structures at all of these sites would require increased maintenance under this alternative. Additional documentation and increased maintenance would be needed at the two historical schoolhouse sites. Systematic documentation would be needed at the Aldridge Petroglyphs and the Lobo Canyon Petroglyphs, with both documentation and data recovery at the Pinole Site and The Citadel. Data recovery through systematic collection of surface materials would be needed at the Ranger Station Reservoir and Cebolla Canyon Community. Similar measures would probably be required at 10 additional sites if this alternative was selected.

Numerous undocumented archeological sites near the Aldridge Petroglyphs would be subject to secondary impacts such as surface collection if public visitation increased. Other recreational activities would have little impact on cultural resources, including horseback riding, mountain biking, sightseeing, pleasure driving, and wildlife viewing. Similarly, proposed VRM-related actions would not affect cultural resources.

Issue 2--Facility Development

Under Alternative B, the BLM would develop a number of hiking trails and other facilities that would encourage use of the western portion of the Planning Area, which is characterized by very low archeological site densities. These facilities would benefit

cultural resources by drawing public use away from more sensitive areas.

Development of an additional 40.5 miles of hiking and mountain biking trails would focus visitation onto particular routes that could be modified to avoid important cultural resources. Similarly, construction of picnic areas would focus use and reduce the impacts that would occur with dispersed use. Construction of kiosks and horseback trailheads easily could be planned to avoid impacts to cultural resources. However, if the presence of trailheads encouraged dispersed use, increased adverse impacts to cultural resources such as illegal surface collection and pedestrian trampling could result.

Building a campground and amphitheater with associated facilities in the Spur Unit would require careful choice of location. This is a sensitive area, and construction here could expose important and currently poorly documented cultural resources to impacts from illegal surface collection, vandalism, and human trampling. In addition to the Class III surveys required for this project, before construction a reconnaissance survey should attempt to locate all structural sites that would be likely to receive increased day use. Baseline condition information should be established for these sites, and if any noticeable change in their condition occurred as a result of increased visitation, appropriate mitigating measures would be taken. Possible mitigation could include data recovery, redirection of public use through signing and establishment of trails, and formal closure of sensitive areas to public entry.

Issue 3--Access & Transportation

Under Alternative B, no off-road vehicle use would be allowed. This prohibition would benefit cultural resources because unrestricted, off-road vehicle use could result in direct damage (as vehicles ran over archeological sites), and could also lead to erosion that would cause damage.

Outside wilderness, approximately 19 miles of existing roads and trails would be closed, with the remaining 337.5 miles remaining open. With the possible exception of two short segments in the Spur Unit, none of the closures would affect areas of sensitive cultural resources.

Issue 4--Wilderness Management

Impacts to cultural resources under Alternative B would generally be the same as those described above for Alternative A. Extractive activities such as artifact collection and excavation would be allowed to cause short-term impacts to visual, vegetative and other natural resources, but only if long-term impacts could be mitigated.

Issue 5--Wilderness Suitability

Few cultural resources are thought to exist in the Chain of Craters WSA, so little practical impact would be anticipated if the area was released from wilderness review. If the Congress acted on the BLM's recommendation to add 3,650 acres to the Cebolla Wilderness, the impacts discussed above under Issue 4 would apply to the cultural resources there.

Issue 7--Cultural Resources

This alternative would emphasize the use and active management of cultural resources. Provisions that would directly benefit cultural resources include increased inventory requirements and an aggressive, proactive inventory program, increased current scientific information, posting of 200 antiquities signs, acquisition of access and consolidation of ownership, monitoring, stabilization, erosion control and fire suppression. The addition of the Breaks Non-NCA Unit, if implemented by the Congress, would bring hundreds of sites under more active management.

Scientific investigations, which actively would be encouraged under Alternative B, would provide current scientific information, but in some cases, would destroy portions of the affected sites, leaving them unavailable for research using future technologies and approaches. This would be a negative long-term impact to particular properties, but at the levels anticipated under this alternative (probably no more than eight projects), would not affect the long-term scientific potential of the Planning Area as a whole.

Under Alternative B, provisions would be made to allow collection of prehistoric pottery for use as temper in the manufacture of contemporary pottery. This collection would be preceded by systematic

archeological documentation, but it is likely that some information would be lost.

Interpretation would increase public awareness and appreciation of cultural resources, but would inevitably result in loss of surface artifacts at the Dittert Site, Ranger Station Reservoir, Pinole Site, The Citadel, and Cebolla Canyon Community. Sufficient documentation exists for surface artifacts at the Dittert Site and Cebolla Canyon Community, but without mitigation, active onsite interpretation at the other three sites would have long-term adverse impacts on their scientific values.

Issue 8--Wildlife Habitat

Prairie dog enhancement is proposed for an area at the mouth of Cebolla Canyon near the Cebolla Canyon Community. It is expected that the animals would remain in areas with fine, valley-bottom sediments, away from the prehistoric resources. However, the animals' location should be monitored, and if they encroached into the area of prehistoric ruins, appropriate corrective measures would be taken.

Issue 9--Vegetation

Piñon-juniper thinning would result in concentrated human use, increased likelihood of surface collection, and surface disturbance through vehicle traffic and dragging of wood during loading. Therefore, Class III cultural resources inventory and avoidance of vulnerable cultural resources would be required before thinning began.

Erosion affecting cultural resources would undoubtedly continue, but would be reduced by improved grazing management under the Resource Use Alternative. Eight historical homesteads in the Planning Area have been fenced to exclude livestock, and this alternative would provide for additional fencing if warranted.

Range improvements, spring developments, and watershed structures proposed under Alternative B would be subject to environmental assessment, and their potential adverse effects mitigated through avoidance or data recovery. Similarly, chemical, mechanical, and biological vegetative treatments under this alternative would be of small scale and would be evaluated on a case-by-case basis through separate EAs.

Prescribed fires and wildland fires under prescription could destroy historical sites with flammable elements, and damage the scientific potential of surface and near-surface archeological materials. Activities associated with fire suppression such as establishment of fire camps and construction of fire lines could also result in adverse impacts to cultural resources. Under Alternative B, 8 to 12 historical sites have been identified as high-priority fire suppression zones, and other newly discovered sites could be added to this list. Reconnaissance-level surveys looking for sites with flammable materials would be conducted in areas where prescribed fires were proposed. These areas would not generally be inventoried to Class III standards if they had low site density (refer to Map 37). Class III inventory would be considered in zones of high site density, and a cultural resource advisor would be required during fire suppression activities, regardless of the source of ignition.

Issue 10--Boundary & Land Ownership Adjustments

Expansion of the NCA to include the Breaks Non-NCA Unit would add numerous significant Anasazi ruins to the NCA, providing them with a higher level of protection and more intensive management. (Such expansion would require that the Congress amend the NCA boundary through legislation.)

The easements and acquisition of inholdings proposed under Alternative B would also benefit BLM efforts to manage cultural resources by improving access and consolidating ownership. However, under this alternative, the non-NCA lands would remain subject to mineral entry, increasing the possibility of inadvertent damage to cultural resources.

Changes in the Cebolla Wilderness boundary would bring an additional 3,650 acres into wilderness, with the effects discussed under Issue 4 above. Realignment of cherry-stemmed roads in the Cebolla Wilderness would be subject to a site-specific EA and NHPA compliance. If cultural resources were likely to be affected by this activity, appropriate avoidance or other mitigating measures would be adopted.

Summary

NCA designation and the provisions of this plan would protect cultural resources from damage as a result of deliberate, planned actions. However, natural and human factors would continue to degrade these resources. Natural deterioration would affect historical homesteads, while gully and sheet erosion would affect archeological sites. Both archeological and historical sites would continue to be vulnerable to illegal collection, looting, and vandalism. Illegal surface collection would continue to be primarily an unintended effect of recreational use, which would especially be encouraged under Alternative B. This impact would be partly mitigated by positive interpretive messages and building recreational developments in non-sensitive areas. Documentation of archeological sites before they have been seriously affected by surface collection would also partly offset the adverse effect of recreation.

Restriction of vehicle use to existing roads and trails throughout the Planning Area would help protect cultural resources. Cultural resource stabilization, erosion control, patrol and monitoring would be most extensive under Alternative B (although still restricted in wilderness). Archeological research that involved collection and/or excavation would be actively encouraged, which would increase current knowledge at the expense of future research potential.

Wildlife Habitat

Under Alternative B, actions proposed to resolve the issues listed below would have no impacts on wildlife habitat, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraph following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources

Issue 1--Recreation

Five trails (at the Ranger Station Reservoir, The Narrows, La Ventana Natural Arch, Hole-in-the-Wall, and along the Continental Divide) would be emphasized as the primary areas for hiking activities under this alternative. The impacts of use on these five trails would be that same as those identified under Alternative A. Under Alternative B, the increased emphasis on developed recreational opportunities (e.g., hiking, camping, interpretive tours, horseback riding, mountain biking) would result in additional impacts to wildlife and/or their habitats over those described for Alternative A.

Dispersed camping, hiking, picnicking, horseback riding, and mountain biking outside established recreation sites and trails would be temporary activities that occurred infrequently in any one area. These activities would create short-term impacts that could disturb wildlife species in the immediate vicinity of the activity (e.g., birds flushed from trees, rabbits from bushes), but would not be anticipated to cause any long-term impacts. It is estimated that wildlife would be disturbed on 1,280 acres per year from these
activities.

Interpretive programs and activities (e.g., hikes, walks, Ranger talks and tours) would generally be concentrated in high-use recreation/camping sites and at specific homesteads and archeological sites. The anticipated impacts would include crushing of approximately 4 acres of vegetative wildlife habitat from foot traffic (¼ acre per site at 14 sites) and a wildlife disturbance zone of approximately 560 acres (40 acres per site) within the immediate vicinity of the activities.

Issue 2--Facility Development

Expanding recreational facilities more than under Alternative A (a campground, 20 trails, 13 trailheads) would result in a direct loss of an additional 32 acres of wildlife habitat from development, and a broader area of wildlife disturbance of 6,400 acres from human use of the area (refer to Table 4-1). Development of a campground in the Spur Unit would directly destroy 10 acres of wildlife habitat and create a disturbance area of approximately 640 acres. The 20 trails would average about 2 miles each in length. The anticipated impacts would include disturbance of approximately 13 acres of habitat from foot traffic (a acre per mile) and a wildlife disturbance zone of approximately 3,200 acres (80 acres per mile) within the immediate vicinity of the trails.

Trailheads and limited parking (for 4 to 6 vehicles each) would be developed for 11 sites, causing direct habitat loss of approximately 3 acres (¼ acre

each) and a zone of disturbance on 1,920 acres (160 acres each). Four additional trailheads would be developed, with parking for 10 vehicles each at two sites, 20 vehicles at one site, and 25 vehicles at one site. The direct loss of approximately 4 acres for parking and a 640-acre zone of disturbance would occur from the establishment and use of these trailheads and parking.

In addition to the treadway for the CDNST, the BLM would build two primitive trailheads near Cerro Americano and Cerro Brillante, with graded parking for 30 vehicles at each location. These trailhead parking areas would cause a long-term loss of 3 acre of habitat (approximately 1½ acres for each site). Wildlife disturbance would occur over approximately 320 acres (160 acres for each site) near the trailheads.

The designation of three new back country byways and the expansion of the existing one along CR 42 would increase the direct effects to wildlife habitat from vegetation loss and soil disturbance caused by vehicles and other human activities. In addition, increased disturbance (e.g., noise) would be anticipated to occur. Along 337.5 miles of roads available for use under Alternative B, habitat degradation would continue to occur.

New entry signs, watchable wildlife signs, and kiosks would be built for the new and expanded back country byways under Alternative B. The 16 kiosks, which would include pullouts for 4 to 6 vehicles each, would cause a direct loss of approximately ¼ acre each, for a total of 4 acres. The zone of disturbance around these kiosks would be 640 acres totals (40 acres each). A large identification sign built along I-40 would cause habitat loss of about 100 to 200 square feet. Because all these developments would be installed along established roads, however, the direct impacts would be less than if installation was in newly disturbed locations.

Issue 3--Access & Transportation

Under Alternative B, 337.5 miles of roads outside wilderness would be open to motor vehicle use (refer to Table 2-11). Routes within wilderness would remain closed or limited for administrative purposes, and an additional 19 miles of roads outside wilderness would be closed. The lands adjacent to the closed roads would not be subject to vegetation loss and soil disturbance caused by vehicles and other human activities. In addition, these roads would eventually revegetate and provide additional habitat with reduced disturbance to wildlife populations within the area. The wildlife habitat along roads that remained open would continue to be degraded by vehicles and other human activities.

Issue 4--Wilderness Management

The impacts would be the same as those identified under Alternative A.

Issue 5--Wilderness Suitability

As identified in Alternative A, not recommending for designation 6,730 acres of existing and acquired lands contiguous to the Cebolla Wilderness would eliminate any special protections under the Interim Management Policy. However, because this area is recommended to be included within the NCA, appropriate protective measures under P.L. 100-225 are already available to protect and enhance wildlife habitat within the area.

Issue 8--Wildlife Habitat

The acreages identified under Alternative A for direct impacts and zones of disturbance would be the same under Alternative B. The description of water developments, fences, and vegetative manipulations as identified in Appendix P would also be the same.

In addition to maintaining the three existing habitat improvements (described under Alternative A), the BLM would undertake up to seven additional projects per year, for a total of up to 10 annually throughout the Planning Area. These would include four prescribed fires and one wildland fire under prescription (refer to discussion under Issue 9, Vegetation below) and five other projects (three water developments, a prairie dog colony enhancement area, and a riparian fencing development).

The prescribed fires would average approximately 750 acres each in size and the wildland fire 1,000 acres. The water developments (1,500-gallon rainwater catchments) would be installed within the Cerro Brillante Unit (T. 6 N., R. 12 W., Sec. 31, SE¼; 33, NE¼; and 35, NE¼). The long-term loss of habitat would be approximately 1,200 square feet (.02 acre) of grassland. Short-term impacts would include the crushing of vegetation by vehicles and foot traffic

during construction, and the disturbance of wildlife (e.g., birds, small mammals, reptiles) within the immediate vicinity of the site.

The prairie dog colony enhancement project would use 1,000 acres total, including the south half of the North Pasture, and the Head Pasture of the El Malpais Allotment (Breaks Unit). Enhancement of the area for prairie dogs would help support two special-status species inhabiting the area (the burrowing owl and mountain plover). If the colony was able to expand to an appropriate size (about 200 acres), this area would also be a potential release site for the black-footed ferret, one of the most endangered mammals on earth.

Prairie dogs prefer areas with short vegetative cover, which allows them to view predators and maintain a complex social system (Fagerstone and Ramey 1996). The dogs modify the grasslands in a similar manner as grazing cattle do, by feeding on grasses and clipping unpalatable plants to ground level (*ibid*.). Livestock grazing would be allowed in this area because even intense use of this kind has no negative impact on prairie dog colonies. In fact, Fagerstone and Ramey found that prairie dog burrow densities in the Conata Basin of South Dakota increased twice as fast on sites grazed by cattle as on ungrazed sites. In well-established prairie dog colonies, large areas of bare soil are common (*ibid*.).

This wildlife project could prevent the achievement of the appropriate vegetative community on the North and Head pastures of the El Malpais Allotment. However, for the following reasons, the project would have a minimal impact on achieving the overall vegetative objectives within the Planning Area: (1) this area is at the bottom of the watershed and is essentially flat with very little relief, so the erosion potential is low; (2) these pastures are part of a closed basin with no runoff into other watersheds (again, with low erosion potential); and (3) these pastures, being at the bottom of the watershed, are already disturbed annually by soil deposition from normal runoff.

The BLM would fence 1 to 1½ miles of riparian habitat along Cebolla Canyon. This area is one of the few small perennial streams sections within the Planning Area, and consequently is considered as sensitive wildlife habitat. Approximately 10 acres of habitat within the fence would be excluded from livestock grazing.

In addition to those projects already identified under Alternative B, the BLM would propose new wildlife projects to maintain and/or enhance existing habitats. These would disturb approximately ½ acre per project (3 acres per year), for a total of 60 acres over the 20-year life of this plan (refer to Table 4-1).

Issue 9--Vegetation

The general description of vegetative manipulations to accomplish vegetative objectives, which would create both beneficial and negative impacts to wildlife and their habitats, are identified under Alternative A ***except that grazing improvements including fences, wells, storage tanks, and dirt tanks create a long-term vegetative disturbance on 530 acres. Planned pipeline development and fence construction would create short-term disturbance on an additional 65 acres.***

Under Alternative B, an increased emphasis would be placed on vegetative treatments with the use of livestock grazing management practices, forest and woodland practices, prescribed fires and wildland fires under prescription, and structures (e.g., fences). Additional benefits, both short- and long-term, would be anticipated over those that would occur under Alternative A.

Piñon-juniper thinning would be emphasized under Alternative B, with ***for the propose of this analysis*** 100 acres to be conducted annually to meet vegetative objectives. This would cause short-term disturbances to wildlife habitat, but would have long-term benefits by opening up the closed piñon-juniper canopy and thus increasing vegetative diversity.

Prescribed and wildland fires would be used to accomplish vegetative objectives for forests, woodlands, and shrub-grasslands. ***It is anticipated that*** five prescribed and wildland fires ranging in size from 50 to 1,500 acres each could be expected each year under

Alternative B (averaging about 750 acres each for prescribed fires and 1,000 acres each for wildland fires under prescription). These would be the same fires identified under Wildlife Habitat above.

Riparian management would be implemented using both exclosures and grazing management practices, although grazing practices would be the preferred option to accomplish properly functioning condition. No planting of riparian species or removal of exotic species would be undertaken under Alternative B.

Issue 10--Boundary & Land Ownership Adjustments

As identified under Alternative A, acquiring lands by consolidating private inholdings into BLM administration would benefit wildlife through improved manageability, especially if the acquired lands contained sensitive habitats. Under Alternative B, additional lands not identified in the Land Protection Plan would be acquired if owners were willing to sell.

Summary

Under Alternative B, activities associated with recreation, interpretation, and facility development would result in long-term destruction of 61 acres of wildlife habitat. Near areas with high human use levels or developed facilities, an additional disturbance zone of 14,080 acres would exist. Dispersed activities (e.g., hiking, sightseeing, guided tours) would generally create intermittent impacts of a few hours or days to wildlife. Wilderness and WSA protective measures would generally provide short- and long-term benefits to wildlife and their habitats. Wildlife facilities on 3 acres and vegetation treatments on 3,100 acres annually (e.g., prescribed fires, woodland thinning) would create short-term, site-specific impacts, but would result in long-term improvement vegetative and habitat productivity.

Threatened, Endangered & Other Special-Status Species

Alternative B

As discussed under Alternative A, the BLM has completed informal consultation with the FWS under Section 7 of the ESA. As part of the informal consultation process, a Biological Assessment was prepared for all Threatened and Endangered and other Special-Status Species (Refer to Appendix Q). The FWS concurred with the BLM determinations of "May Affect - Not Likely to Adversely Affect" and no formal consultation was initiated.

Vegetation

Under Alternative B, actions proposed to resolve the issues listed below would have the same impacts on accomplishing vegetative objectives as under Alternative A. Impacts of resolving the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses and Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Achieving the Potential Natural Communities (PNCs) would be the vegetative goal for the Planning Area. A common set of long-term objectives would be established to guide management and use of vegetation. In general, vegetative species diversity would be expected to improve.

Vegetation--Forest & Woodland Resources

Under Alternative B, actions proposed to resolve the issues listed below would have the same impacts on forest and woodland resources as those discussed above for Alternative A. Impacts of resolving the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional

- Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Up to 100 acres of piñon-juniper could be thinned each year to meet vegetative objectives. The thinnings would be conducted at lower elevations, where the site potential was open woodlands, savanna or shrub-grassland. During the 20-year life of the plan, a maximum of 2,000 acres could be improved.

Up to 5 fires ranging from 50 to 1,500 acres each in size could burn each year. These would improve the ponderosa pine forest community by reducing competition with piñon-juniper, and exposing soils to allow for ponderosa pine seedling establishment. Fire could also reduce piñon-juniper in the higher elevation woodlands. In the long term, it is expected that competition for light, water and nutrients in the piñon-juniper trees would be reduced, providing healthier, uneven-aged stands of woodlands.

Vegetation--Rangeland Resources

Under Alternative B, actions proposed to resolve the issues listed below would have the same impacts on rangeland resource as those described above for Alternative A. Impacts of resolving the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

The PNCs would be part of the vegetative objectives incorporated into AMPs/CRMPs. Rest from livestock grazing use would be increased, but management of warm-season grasses would continue to be emphasized. Rangeland improvements would continue to be built to improve patterns of livestock grazing use. During the short term, improvements in vigor, productivity and reproduction would be expected for grass species. With improvement in productivity, grazing periods would be adjusted to increase the frequency and duration of rest. In the long term, cool-season grasses and desirable shrubs would increase. Based on improvements in vegetative vigor, reproduction and rest from livestock grazing, vegetation would be less susceptible to the negative effects of drought.

Social & Economic Conditions

Actions proposed to resolve the issues of recreation, vegetation (grazing), and American Indian uses and traditional cultural practices could potentially have social and/ or economic impacts. However, the differences proposed for resource use and development between alternatives would not create measurably different impacts. Therefore, the impacts for Alternative B would be the same as those described above for Alternative A.

Soil, Water & Air Resources

Under Alternative B, the actions proposed to resolve the issues listed below would have the same impacts on soil, water and air as those described above for Alternative A. Impacts from resolving the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Improvements in the Planning Area's watershed resources would result primarily from woodland

thinning, livestock grazing management practices and fire. As a result of the disturbance associated with piñon-juniper thinnings, the soil surface could be exposed to increased wind and water erosion. Selecting treatment sites that were less susceptible to erosion would reduce these short-term impacts. After thinning, roads would be rehabilitated as needed to limit erosion. Within 2 to 3 years after thinning, increased amounts of vegetative understory (i.e., forbs, grasses and shrubs) would be expected, which would reduce the soil erosion potential to less than it was before thinning. In the long term, the layering of vegetation (i.e., forbs, grasses, shrubs and trees) would reduce the likelihood of soil loss through wind and water erosion.

Responses to fire management would be similar to those anticipated for woodland thinning. Short- and long-term improvement in vegetative cover would be expected, especially on those areas selected to burn for resource enhancement. Fire in the areas burned to reduce their fuel load could be hotter, which could lengthen the vegetative recovery period. Burn prescriptions (e.g., wind speed, temperature, humidity) would be followed to help reduce the risk of vegetative damage from fire heat.

Visual Resource Management

Under Alternative B, actions proposed to resolve the issues listed below would have negligible short-term or long-term impacts exceeding the VRM objectives assigned to public lands within the Planning Area. Impacts of resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

For consistency in managing visual resources in the Planning Area, management classes would be assigned to all public lands there. Visual resources on 233,890 acres or 94 percent of the Planning Area would benefit through the assignment of VRM Classes I and II. Management to meet the objectives for these two classes would prevent activities that would create noticeable changes in the elements of form, line, color and texture found in the landscape.

The visual resources on the 14,110 acres of VRM Class III lands would be subject to a greater degree of change from facilities developed for recreational use. However, lands assigned this class usually do not rank as high scenically, so change would not cause highly contrasting impacts there.

Issue 2--Facility Development

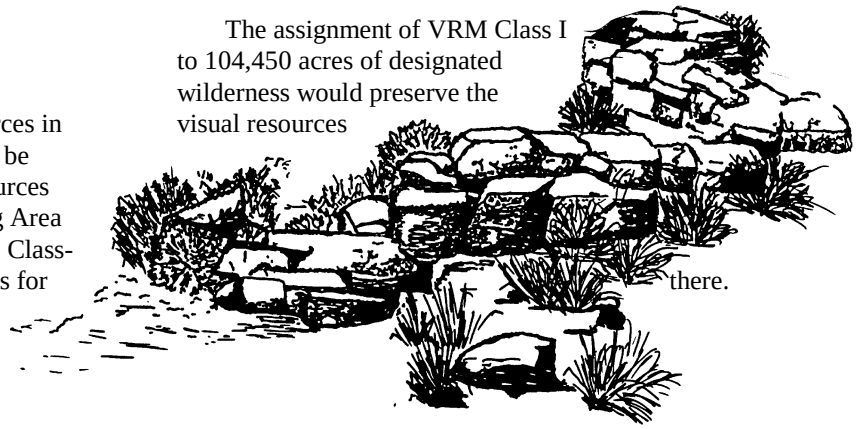
Under Alternative B, building a campground in the Spur Unit would disturb approximately 10 acres and cause short-term visual impacts from construction and the placement of structures in the landscape. Through the use of appropriate colors and materials along with the location of the campground, minimal impact on the scenic values of the area would be anticipated. Disturbance to another 33 acres under Alternative B would come from additional hiking trails, parking areas and trailheads. Added to the 17 acres currently disturbed by facilities and hiking trails, a total of 50 acres would be impacted by changes in the visual resources.

Issue 3--Access & Transportation

The reduction in motor vehicle travel routes (through the closure of 19 miles) and the restriction of motor vehicle use to designated routes would enhance visual resources. Confining vehicles to designated routes would reduce the potential for additional losses of vegetation, soil compaction and erosion from vehicle use, thus decreasing visual contrasts. Closed travel routes would be allowed to revegetate, which would also reduce visual contrasts.

Issue 4--Wilderness Management

The assignment of VRM Class I to 104,450 acres of designated wilderness would preserve the visual resources there.



The BLM would follow Class I objectives to prevent activities and structures that did not appear natural.

Issue 7--Cultural Resources

Building erosion-control structures at 25 cultural sites would create short-term visual impacts from construction disturbance and placement of the structures. However, materials that would harmonize with the surrounding landscape would be used. The resulting structures would have a low horizontal profile and would be placed in locations where disturbance was occurring from erosion. Therefore, no long-term adverse visual impacts would be anticipated. Over the long term, placing small erosion-control structures at these locations would likely enhance the visual quality of the local area as the adverse erosional contrasts were reduced and the areas were restored to resource production.

Issue 8--Wildlife Habitat

Undertaking up to 10 new habitat improvement projects would benefit visual resources over the long term. The construction of three water catchments over the life of the plan would disturb less than ¼ acre in total, which would be located away from areas of concentrated public use.

Issue 9--Vegetation

Woodland and forest treatments would create textural visual contrasts through thinning areas ***of approximate*** 100 acres in size.

Continued use of forage and range improvements for livestock management would remain evident in the landscape. No new improvements that would create surface disturbance would be proposed.

With ***an estimated*** five fires planned annually, short-term impacts on 50 to 1,500 acres per fire would be expected because the burned vegetation would be visible. Over the long term, these areas would rehabilitate, resulting in diversity and plant vigor that would enhance the area's visual resources.

Issue 10--Boundary & Land Ownership Adjustments

The acquisition of non-federal surface and subsurface estate would help preserve their scenic quality because these lands would be managed to minimize the visual contrasts that could occur (e.g., from development).

Summary

Localized visual impacts under Alternative B would come from recreational facility development and vegetative treatments. Activities that could alter the form, line, color and texture of the landscape would generally be allowed on 14,110 acres of public land classified as VRM Class III. Management activities on the 233,890 acres of Class I and II public land in the Planning Area would be restricted to conform to objectives of these classes. VRM Class I, which would allow no visual changes, would be assigned to approximately 45 percent or 104,450 acre, including designated wilderness. Acquisition of nonfederal inholdings, both surface and subsurface, would benefit the management of visual resources.

Cumulative Impacts

Under Alternative B, these would be the same as those identified under Alternative A above except, long-term vegetative disturbance would occur on 650 acres as a result of grazing improvements and recreation facilities development. Short-term vegetative disturbance would occur on 65 acres on a one time basis as a result pipeline installation and fence construction. Rehabilitation should be complete on these projects in two to three years. Fire is to be used as a vegetative improvement tool on approximately 4000 acres per year. This will have a short-term negative effect but after two to three years is expected to increase both the quality and quantity of vegetation on these acres. This acreage of improved vegetation would continue to grow as long as the treatment continues. The cumulative vegetative disturbance acreage would reach approximately 8650 acres (both short and long term). The increased quality and quantity acreage would reach several thousand acres because the improvements are expected to be effective for many years.

ALTERNATIVE C--NATURAL PROCESSES

Recreation & Facilities

Under Alternative C, actions proposed to resolve the issues listed below would have no impacts on recreation or facility development, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 1--Recreation

Under Alternative C, the BLM would maximize the opportunities for dispersed recreation while decreasing the opportunities for developed camping, hiking and picnicking. Most interpretation, which would be through printed media and personal contacts, would promote dispersed recreation and inform visitors of opportunities outside the Planning Area. Horseback riding opportunities would be the same as under the No Action Alternative. The quality of hunting opportunities would improve because of the greater levels of isolation.

Issue 2--Facility Development

With limited facilities developed, fewer visitors who depended on such facilities would use the Planning Area for recreational activities. Opportunities for camping, hiking, picnicking, back-country driving, exploring cultural or historical sites, and mountain biking would be fewer under this alternative.

Issue 3--Access & Transportation

Closing 133.1 miles of roads in the Planning Area would limit access for such recreational opportunities as driving for pleasure, back-country driving, hunting, hiking and mountain biking. However, more acreage would be in the semi-primitive, non-motorized ROS class, increasing the opportunities for recreationists interested in a more primitive and dispersed experience.

Issue 4--Wilderness Management

The net increase of 9,180 acres of wilderness would provide additional opportunities for dispersed and primitive recreation. Existing recreational facilities at locations such as The Narrows that provided access into wilderness would be removed, and recreationists would seek opportunities elsewhere.

Issue 5--Wilderness Suitability

The recommendation of the Chain of Craters WSA and contiguous Cebolla Wilderness acreage as suitable for wilderness would decrease the recreation-al opportunities for those visitors seeking mountain biking, back-country driving and other developed activities. Those visitors seeking primitive and dispersed recreational opportunities would find the additional acreage a benefit. Probably no net change in total visitor use numbers would occur; the change would be in the type of recreational opportunity available.

Issue 7--Cultural Resources

The use allocations for cultural resources made under Alternative C would decrease the number of recreational opportunities for visitors interested in sightseeing at historical and cultural sites. No sites would be available for developed recreation, nor would facilities providing access to cultural resources be developed.

Issue 9--Vegetation

Under Alternative C, the BLM would conduct a similar number of burns as under the No Action Alternative. Therefore the impacts to recreation and facilities would be the same.

Other vegetative manipulations would produce short-term impacts to recreation. During these actions, visitor use in affected areas would be restricted to protect health and safety. Immediately after the treatments, some scenic disturbance would be noticeable to visitors and users. In the long term, recrea-tionists would see an increase in the diversity of the vegetation throughout the Planning Area and improvements in vegetative and wildlife habitat that would enhance the recreational experience.

Issue 10--Boundary & Land Ownership Adjustments

If the Congress followed the BLM's recommendation for the NCA boundary changes proposed, the number of acres in the NCA would increase by 16 percent to 303,400 acres, and in wilderness by 9 percent to 110,980 acres. This acreage increase would improve the recreational potential of the Planning Area.

Access & Transportation

Under Alternative C, actions proposed to resolve the issues listed below would have negligible impacts on access and transportation. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Under Alternative C, with more emphasis on providing opportunities for semi-primitive and primitive recreation, the BLM's need to provide access for motorized vehicles would be reduced. Motorized vehicular use of the Planning Area would be on fewer miles of designated travel routes. The reduced route density would favor those recreationists who preferred nonmotorized activities.

However, concentrated use on fewer routes could lead to conflicts between users. The level of maintenance on many designated routes would be reduced, and the closure, removal or abandonment of routes and trails would make access to the public lands more difficult.

Trail access in the Planning Area would be limited to the five existing trails. Nonmotorized access would be available throughout the area, except on 128,440 acres of wilderness that would be closed to mechanical forms of transport such as mountain bikes.

Issue 2--Facility Development

The ease of accessing public lands would be impacted by removing facilities and providing fewer accommodations at sites. Existing trails would serve as access routes to public lands and features. Markers for the Narrows Rim Trail would be removed, although visitors could hike through this portion of the Planning Area without using the trail to guide them. Facilities to direct visitors to the Dittert Site would be removed.

Issue 3--Access & Transportation

Limiting vehicle use to designated routes and increasing the amount of land closed to motor vehicle access (128,440 acres) would diminish access opportunities. The opportunity to travel cross country by motor vehicle would be lost on 12,000 acres. Designated routes available for public use would be reduced from the existing 354.5 miles to 199.7 miles.

Issue 4--Wilderness Management

An additional 27,640 acres would be closed to access by motor vehicles and other forms of mechanical transport. This would be the result of the Congress expanding the Cebolla Wilderness and designating the Chain of Craters as wilderness.

Issue 5--Wilderness Suitability

If the Chain of Craters WSA was designated as wilderness, motorized and mechanical access opportunities would be lost to the general public on 18,300 acres and 46.5 miles of inventoried travel routes. The area would still be accessible for other forms of access such as hiking and horseback riding.

Of the lands contiguous to the Cebolla Wilderness, 9,340 acres would be recommended for wilderness and closed to motorized and mechanical access if the Congress designated them. The lands found unsuitable for wilderness designation under Alternative C would be managed as "limited," and motor vehicle access there would be restricted to designated travel routes.

Issue 9--Vegetation

Up to three fires ranging in size from 50 to 1,000 acres each would be expected each year. For public safety, access would be discouraged on these lands when a prescribed fire was being conducted. When planning to ignite a fire, the BLM would assess recreational use of the area to minimize travel disruptions.

Summary

The direct impacts of Alternative C on access opportunities would depend on the user's preferred or required method of travel. For those who preferred nonmotorized methods of travel, the entire Planning Area would be available. As the result of wilderness designation on 52 percent of the Planning Area, nonmotorized access opportunities would be enhanced because motorized vehicles and mechanical forms of transport would be prohibited. Access opportunities for people who preferred or were limited to motorized or mechanical means of transport would be provided on 199.7 miles of BLM designated travel routes over 48 percent of the public lands in the Planning Area. Minimal BLM-provided facilities and trails would be available to serve as access points to public lands and features within the Planning Area. Periodically, access to certain areas of public lands temporarily could be closed for a few days because of vegetative treatments such as fire, and for the practice of traditional American Indian activities.

Wilderness Management

Under Alternative C, it is assumed that the Congress would designate an additional 27,640 acres of public lands in the Planning Area as wilderness.

Actions proposed to resolve the issue listed below would have negligible impacts on wilderness. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management

Issue 1--Recreation

The 128,440 acres of public wilderness would benefit visitors who wished to experience this type of setting. Primitive and unconfined recreational use of the areas would be consistent with wilderness preservation. Opportunities for solitude would be maintained and potentially enhanced.

Issue 2--Facility Development

The removal of facilities and reduction in the level of Planning Area development around the perimeter of the two wildernesses would benefit natural wilderness values by making access less convenient. Recreational use of these areas thus would be dis- couraged, reducing the potential for threats to naturalness from human imprints associated with such use.

Issue 3--Access & Transportation

Through agreements with the BLM, owners of non-federal surface and subsurface interests, and livestock permittees with range improvement facilities within the boundaries of the two wildernesses would be provided with reasonable access. These routes would be the least impacting to the wilderness setting. For access to range improvements, other routes would have to be authorized in the Chain of Craters and the expanded Cebolla Wilderness through the use of RIM Plans. Access for developing non-federal minerals would be dealt with on a case-by-case basis. No undue or unnecessary impacts would be anticipated from such development.

Issue 5--Wilderness Suitability

Under Alternative C, the 18,300 acres of public land contained in the Chain of Craters WSA and 9,340 acres contiguous to the Cebolla Wilderness would be preserved by Congressional designation as wilderness. The manageability and recreational use of the Cebolla Wilderness would benefit from the designation of the contiguous public lands.

Issue 6--American Indian Uses & Traditional Cultural Practices

Closure of lands for privacy when religious ceremonies were being conducted by American Indian groups would displace the primitive recreational use of that area for a few days at a time. Infrequent use of a motor vehicle (i.e., once every 2 to 3 years, for no more than 1 to 2 days) by American Indians whose mobility depended on such use for

traditional cultural practices would be considered nonimpairing. Consultation between the BLM and American Indians would be needed before a formal closure and authorized use of a motorized vehicle or equipment.

Issue 7--Cultural Resources

Stabilized cultural and historical sites existing within wilderness boundaries would no longer be maintained. Consistent with Wilderness management policy, these sites would be allowed to deteriorate naturally unless an extraordinary scientific resource needed protection. No new stabilization projects or erosion-control measures would be allowed under Alternative C, which would benefit the areas' naturalness by eliminating potential surface- disturbing activities. The wilderness value of naturalness would also benefit from the denial of excavation and collection under this alternative.

Issue 8--Wildlife Habitat

Wildlife projects existing at the time of wilderness designation would be allowed to remain in place. Use of motor vehicles and motorized equipment to maintain these projects would be restricted, as the noise and sight of vehicles would have a negative impact on the wilderness experience of the visitor.

Issue 9--Vegetation

The development of AMPs and the management of livestock to improve forage conditions would benefit wilderness through enhancing the areas' natural character.

After completing a Fire Management Plan for the Planning Area, the BLM would allow wildland fires to burn as long as they did not spread outside the wilderness, or threaten human life or property.

Actions to suppress wildland fires could alter the natural landscape and disrupt the opportunities for solitude and primitive recreation, although the severity of impacts is not measurable. However, suppression actions in wilderness would be executed to minimize surface disturbance and disruption of resources and uses. In the long term, any short-term disruptions by fire could result in improved plant diversity and the return of natural ecological processes.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of non-federal surface (800 acres) and subsurface mineral interests within the boundary of the two wildernesses would enhance wilderness management and values. This enhancement would occur through eliminating both potential development that would be detrimental to the wilderness character, and the need to provide motorized access to these inholdings.

The BLM would also recommend that the Congress amend the boundary of the Cebolla Wilderness to exclude approximately 200 acres of land on the wilderness perimeter owned by Acoma Pueblo. Such an amendment would enhance wilderness management by excluding these non-federal lands from within the boundary.

Summary

Under Alternative C, the wilderness resource would benefit from the designation of 9,340 additional acres of wilderness, for a Planning Area total of 128,440 acres of public land. Visitors seeking primitive and unconfined recreational use would benefit because 52 percent of the Planning Area would be available. Wilderness designation would help maintain the existing natural character of these lands and provide opportunities for solitude through the application of closures and restrictions. The quality of the wilderness experience would be improved because of the visual, cultural and historical values within these areas. Acquisition of private surface and subsurface inholdings would benefit the manageability of these areas, eliminating the need to provide access and the potential for activities that would degrade the areas' naturalness.

Existing uses of the Cebolla, West Malpais and Chain of Craters Wildernesses for livestock grazing, traditional practices by American Indians, wildlife habitat, and primitive and unconfined recreational activities would continue to the extent allowable under the BLM Wilderness Management Policy and the Wilderness Act. Though state highways, county roads and some BLM travel routes adjacent to these

areas would remain open, the areas would not be as easily accessible under Alternative C, nor as convenient for use once accessed because of the limited trails, trailheads and facilities near these wildernesses. Interpretive services would be limited to offsite interpretive materials and facilities, primarily to educate the users about proper land ethics, not to direct use to these areas.

Wilderness Suitability

Under Alternative C, the BLM would recommend the entire 18,300 acres of public land within the Chain of Craters WSA as suitable for wilderness designation. Further, it is assumed that the Congress would accept this recommendation and designate the lands as wilderness.

Of the 10,380 acres of public land contiguous to the Cebolla Wilderness, the BLM would recommend 9,340 acres as an addition. It is assumed that the Congress would accept the recommendation and designate these lands as wilderness. It is also assumed that 1,040 acres of public land found unsuitable for designation would be released from interim management and managed under the current land use plan applying to them.

Under Alternative C, if the lands contiguous to the Cebolla Wilderness were not designated as wilderness, no direct impacts to wilderness values would be anticipated from actions implemented to resolve the other nine issues. The BLM would apply a more restrictive VRM class that would exclude visual resource alterations and preserve the existing landscape character.

The opportunity to use these designated areas for motorized recreation would be lost. Travel routes would be closed to the general public. The use of the forage and existing range improvements for livestock-grazing would be allowed to continue, but the use of motorized vehicles and equipment by livestock operators would be restricted. This would likely cause an inconvenience to livestock operators. American Indian access into these lands by motorized vehicle for traditional cultural practices would be lost with designation.

American Indian Uses & Traditional Cultural Practices

Under Alternative C, actions proposed to resolve the issue listed below would have no impacts on American Indian uses and traditional cultural practices. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

As discussed under Alternative A above, dispersed recreation is expected to continue to increase over the life of the plan. However, the BLM under Alternative C would generally discourage recreational use, so it is assumed that dispersed recreational use would increase less under this alternative. Dispersed recreation would conflict with traditional American Indian uses if visitors intruded into these activities or took items left as offerings. The probability of such incidents under Alternative C would be the lowest of all four alternatives.

Issue 2--Facility Development

Minimized facility development under Alternative C would result in fewer intrusions into American Indian traditional uses of the Planning Area.

Issue 3--Access & Transportation

It is common for vehicles to be driven off established roads during piñon gathering and other traditional activities. Under Alternative C, no off-road vehicle use would be allowed. All access for traditional Indian uses would have to be non-motorized (i.e., foot, horseback).

Altogether 133.1 of the 362.8 miles of existing roads and trails would be closed and 30 miles would be available for authorized users under Alternative C, leaving 199.7 miles open for use by the general public. A large proportion of the closed roads would be in the Chain of Craters WSA, which would become wilderness under this alternative, but other areas would be affected as well. Portions of the Brazo, Breaks Non-NCA, and Cerro Brillante Units that are now accessible by vehicle would be at least 1½ miles from vehicle access. These changes would increase

privacy but decrease the ease of access for traditional American Indian practices.

Issue 4--Wilderness Management

No special provisions would be made for American Indian use of the three wildernesses. Access by foot or horseback only could preclude activities needed for American Indian groups to continue certain traditions that maintained their close ties to El Malpais.

Issue 5--Wilderness Suitability

The BLM under Alternative C would recommend that 18,300 acres in the Chain of Craters WSA area be designated as wilderness. This would result in less vehicle-based recreation and more pedestrian use, but overall would probably not change the absolute number of visitors to this area.

Issue 7--Cultural Resources

Under the Natural Processes Alternative, the BLM would impose firm restrictions on issuing permits for research or mitigation that required physical alteration of prehistoric archeological sites. The agency also virtually would eliminate site-specific management practices. These provisions would minimize human intrusions, thereby having positive impacts on American Indian practices and uses from the standpoint of traditional Navajo and Pueblo values.

The BLM under Alternative C would also forbid the collection of surface artifacts by all people, including members of Acoma Pueblo. This traditional cultural activity could not occur within the Planning Area or elsewhere on public lands, resulting in a negative impact to traditional Acoma practices.

Issue 8--Wildlife Habitat

Reintroduction of native species and maintenance of existing wildlife habitat projects would be unlikely to affect American Indian uses. The possible effects of fire are discussed under Issue 9 below.

Issue 9--Vegetation

Prescribed and wildland fires would increase vegetative diversity, but their effects on specific plants used by American Indians in El Malpais is not known. Changes in grazing practices would be unlikely to affect American Indian uses.

Issue 10--Boundary & Land Ownership Adjustments

Proposed changes in the NCA boundary would not affect traditional American Indian uses. Acquisition of the treadway or an easement for the CDNST would increase recreational use in the Chain of Craters WSA, which is a sensitive area for the Ramah Navajos. Addition of 9,340 acres to the Cebolla Wilderness would restrict vehicle use, including for traditional practices.

Summary

Recreational use could potentially cause some serious conflicts with traditional cultural practices in the Planning Area because it would reduce privacy and increase the likelihood of intrusion. Under Alternative C, the BLM would provide less encouragement for recreational activities, thereby minimizing the ad-verse effects of recreational use. The Chain of Cra-ters Back Country Byway would be decommissioned, and a treadway would be formalized along the CDNST only where needed to reduce resource damage.

Vehicle access would be minimized under Alternative C, decreasing ease of access for traditional activities but increasing privacy. A total of 9,180 acres would be recommended for addition to the Cebolla Wilderness, and the Chain of Craters WSA would be recommended for designation. No provision would be made for American Indian access into these wildernesses.

Many activities that could conflict with traditional cultural practices would be minimized under this alternative. Archeological research involving excavation would be prohibited, and active cultural resource management (which sometimes includes actions regarded as intrusive) would be minimal. Vegetative manipulation involving the use of chemicals is not proposed under Alternative C.

Prohibitions on collection of prehistoric pottery

for use as temper in contemporary pottery would constitute an adverse impact on traditional American Indian practices. Depending on availability of alternative sources, prohibitions on fuelwood gathering also would have an adverse impact on the ability of local Indians to obtain wood for heating, cooking and other uses.

Exclusion of certain Acoma Tribal lands from the NCA is recommended under Alternative C, which could have a positive effect by reducing the potential for intrusion there. Acquisition of lands and mineral interests and possible expansion of the NCA would help to exclude uses incompatible with traditional American Indian uses, therefore having positive impacts.

Cultural Resources

Under Alternative C, actions proposed to resolve the issues listed below would have no impacts on cultural resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 1--Recreation

The Natural Processes Alternative would benefit cultural resources because the BLM would discourage recreational use of the Planning Area. However, the dispersed use allowed could cause impacts to cultural resources that were more difficult to control and evaluate than if recreation use was concentrated in specific areas. In the absence of onsite interpretations, stewardship messages would likely be less effective than if they were presented at cultural sites.

Issue 2--Facility Development

Under Alternative C, the BLM proposes no campgrounds, hiking trails, picnic areas, or other facilities to accommodate recreational use. To the extent that absence of these facilities discouraged public use, impacts such as illegal surface collection and pedestrian trampling of archaeological properties would be reduced. At the same time, facilities would provide a way to control visitor use and direct it toward areas where it would have minimal impact. This option would be foregone under the Natural Processes Alternative.

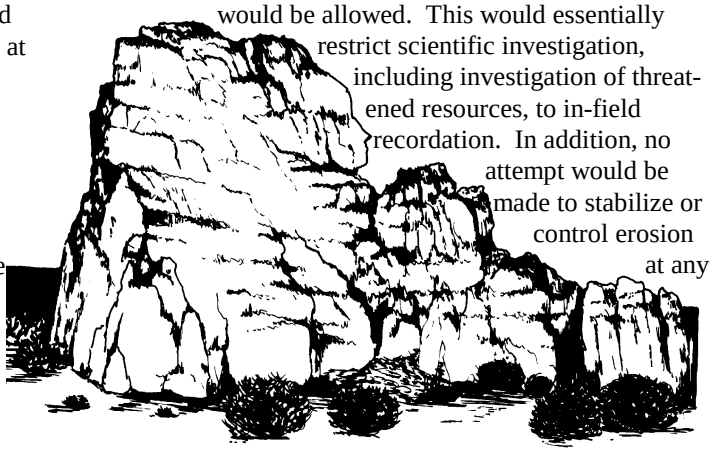
Issue 3--Access & Transportation

Under Alternative C, no off-road vehicle use would be allowed. This restriction would benefit cultural resources because such use could result in direct damage as vehicles ran over archeological sites, and could lead to erosion.

Altogether, 133.1 of the 362.8 miles of existing roads and trails would be closed under Alternative C and 30 would be open to authorized users only, leaving 199.7 miles open for public use. Many of the closed roads and trails would be in the Chain of Craters WSA and the Cerro Brillante Unit, which have low densities of cultural resources, so the closures would have no effect there. Other roads and trails to be closed are in the Spur, Breaks, and Breaks Non-NCA Units, which have high site densities, and in the Brazo and Cerritos de Jaspe Units, which have moderate densities of cultural resources. Limiting motor vehicle access in these areas would protect prehistoric and historical cultural resources by making it more difficult for scavengers and looters to bring in excavation gear, or to transport away materials such as building stone or weathered wood. At the same time, the closures would make patrolling by BLM staff more difficult.

Issue 4--Wilderness Management

Under Alternative C, no archeological research involving extractive activities or resulting in long-term or short-term impacts to wilderness values would be allowed. This would essentially restrict scientific investigation, including investigation of threatened resources, to in-field recordation. In addition, no attempt would be made to stabilize or control erosion at any



specific site within the two wildernesses, regardless of resource value. However, continued patrol and surveillance, and measures that were not site-specific (such as improved grazing management) would benefit cultural resources.

Issue 5--Wilderness Suitability

If the Congress designated as wilderness the Chain of Craters WSA and lands adjacent to the Cebolla Wilderness, the cultural resource impacts described under Issue 4 above would also apply to these areas.

Issue 7--Cultural Resources

Under Alternative C, the BLM would seek to minimize human impacts, both beneficial and adverse. The natural processes of deterioration and erosion would generally be left unchecked. Historical homesteads would deteriorate rapidly. Many of these sites, as well as prehistoric masonry ruins that have been stabilized, could lose their interpretive value during the life of this plan. Scientific values would be lost rapidly at a handful of sites that are being destroyed by gully erosion. Many other sites would experience mild negative impacts as a result of sheet erosion, although these impacts might be partially offset by the results of improved grazing management.

However, reduced vehicle access and vigorous ARPA enforcement would result in positive impacts. Cultural resources would not be subject to scientific investigations that required physical alteration, and collection of prehistoric pottery by American Indians would not be permitted. Both of these measures would produce beneficial long-term impacts to the scientific value of cultural resources in the Planning Area.

Issue 9--Vegetation

Livestock grazing could adversely affect cultural resources by reducing vegetation, thereby contributing to erosion. Trampling could break artifacts on the ground surface, and livestock could rub against historical structures, contributing to their deterioration. Erosion affecting cultural resources would undoubtedly continue, but would be reduced by improved grazing management under the Natural Processes Alternative. Eight historical homesteads in the Planning Area have been fenced to exclude livestock. Under Alternative C, no new fencing would be undertaken, and existing fencing would not be maintained, so homesteads could be damaged by livestock.

Fires, including wildland fires under prescription and prescribed fires, could destroy historical sites with flammable elements and damage the scientific potential of surface and near-surface archeological materials. Activities associated with fire suppression such as the establishment of fire camps and construction of fire lines could also result in adverse impacts to cultural resources. Under Alternative C, no historical sites would receive special protection from fire, although the BLM would seek to avoid inadvertently burning such structures during prescribed fires. Locations of proposed prescribed fires would not generally be inventoried to Class III standards if they were in areas of low site density (refer to Map 37). Class III inventory would be considered in zones of high site density, and a cultural resource advisor would be required during fire suppression activities, regardless of the source of ignition.

Issue 10--Boundary & Land Ownership Adjustments

Expansion of the NCA to include the Breaks Non-NCA Unit and the Tank Canyon-SFO Unit (which would require Congressional action) would add numerous significant Anasazi ruins to the NCA, providing them increased ARPA protection but decreased site-specific management attention. Pending legislation to modify the NCA boundaries, the BLM would manage the Breaks Non-NCA Unit under the provisions of this plan and the Tank Canyon-SFO Unit under the Socorro Resource Management Plan (where the unit is identified for sale or disposal). Site-specific management actions would be possible in the Tank Canyon-SFO Unit, which includes the Newton Site.

No easements or acquisitions specifically intended to protect cultural resources would be pursued. Closure of lands to mineral entry would help prevent inadvertent damage to cultural resources.

Changes in wilderness boundaries would bring an additional 9,180 acres into wilderness, with the

impacts discussed under Issue 4 above. Exclusion of 960 acres of Acoma Pueblo lands from the Planning Area would have no effect on cultural resources.

Summary

Few developments are planned under Alternative C, and NCA designation and the provisions of this plan would be effective in protecting cultural resources from damage as a result of deliberate, planned actions. With appropriate survey and mitigation, the minimal developments under Alternative C, including vegetative treatments and other similar proposals, should have no effect on cultural resources.

However, natural and human factors would continue to degrade cultural resources. Natural deterioration would affect historical homesteads, while gully and sheet erosion would impact archeological sites. Both archeological and historical sites would continue to be vulnerable to illegal collection, looting, and vandalism.

Illegal surface collection is primarily an unintended effect of recreational uses, which would be encouraged less under Alternative C than the other alternatives in this plan. At the same time, some mitigating measures such as interpretation would be less effective, and documentation of archeological sites would receive little emphasis.

Few proposals for recreational developments and designated areas of use are made under Alternative C, and most would be in non-sensitive areas. Vehicle use would be restricted to existing roads and trails, many of which would be closed. This would make access more difficult for vandals as well as BLM law enforcement and monitoring personnel.

Few cultural resource management activities intended to have a positive effect on specific sites would be included under Alternative C. The strategy for controlling erosion would emphasize actions that affected the Planning Area as a whole, such as improved grazing management. Most cultural resources would be subject to natural deterioration and could lose much of their interpretive potential during the 15- to 20-year life of this plan. Scientific values could be adversely affected as well. Scientific investigations involving physical alteration of cultural resource properties would be prohibited, minimizing current scientific knowledge, but preserving long-term research potential.

Wildlife Habitat

Under Alternative C, actions proposed to resolve the issues listed below would have no impacts on wildlife habitat, or the magnitude of the impacts would be negligible. Impacts of resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources

Issue 1--Recreation
& Issue 2--Facility Development

Under Alternative C, the BLM would emphasize natural processes, and would discourage or limit some recreational opportunities (e.g., hiking, camping, picnicking, interpretive tours, horseback riding, mountain biking). Limiting recreational activities within the Planning Area would decrease the impacts to wildlife and their habitats.

Three recreation areas (Ranger Station, The Narrows, La Ventana Natural Arch) and four trails (CDNST, Narrows Rim, La Ventana Natural Arch, Hole-in-the-Wall) would continue to be used under this alternative. The impacts of use in these areas are analyzed under Alternative A. The existing recreational activities and facilities have resulted in a direct loss of wildlife habitat from development (19 acres), and a broader area of wildlife disturbance from human use of the area (3,880 acres--refer to Table 4-1).

The BLM would encourage dispersed recreation under Alternative C. No new facilities would be built except where site hardening or redirecting recreational activities to a more dispersed condition was needed. No camping would be allowed at The Narrows. Recreational visitors would still be allowed to drive on many of the roads, but no back country byways would be designated and activities would be encouraged outside the Planning Area.

Under Alternative C, wildlife and their habitats would benefit to the greatest extent of any alternatives. Fewer visitors (only those who knew

about the area) and less vehicles would result in fewer impacts to habitats and fewer disturbances to wildlife species through human activities. It is estimated that wildlife would be disturbed on 320 acres per year from these dispersed activities.

Issue 3--Access & Transportation

Under Alternative C, wildlife would benefit from the closing of 133.1 miles (37 percent) of the roads in the Planning Area (refer to Table 2-11). The lands adjacent to the closed roads would not be subject to habitat degradation from vegetation loss and soil disturbance caused by vehicles and other human activities. In addition, these roads would eventually revegetate and provide additional habitat with reduced disturbance to wildlife populations within the area. However, near roads that were designated for use, wildlife habitat would continue to be subject to degradation from vehicles and other human activities.

Issue 4--Wilderness Management

Impacts to wildlife habitat under Alternative C would be the same as those identified for Alternative A. In addition, the management emphasis on natural processes would benefit wildlife species and their habitats to a greater extent than under Alternative A or B, in which the primary emphasis would be on the recreational qualities of wilderness.

Issue 5--Wilderness Suitability

If the Congress designated the Chain of Craters as wilderness, additional benefits to wildlife from protective and enhancement measures would occur. Approximately 47 miles of vehicular routes would be closed, which would eventually revegetate and provide additional habitat with reduced disturbance to wildlife populations within the area.

The designation of 9,340 acres of the 10,380 acres of lands contiguous to the Cebolla Wilderness would protect and enhance wildlife habitat because human activities in these areas would be limited. However, management of these areas as wilderness would preclude or modify certain wildlife habitat improvement projects there.

Issue 8--Wildlife Habitat

Under Alternative C, no new habitat enhancement projects would be planned, except where necessary to support a special-status species. An estimated six ½-acre projects would be developed for special-status species over the life of this plan. Wildland fires would be used to maintain habitats in the proper quality and quantity to support existing wildlife populations. It is anticipated that these fires would burn an average of 1,000 acres annually.

Issue 9--Vegetation

Under Alternative C, vegetative treatments would include livestock grazing management practices and wildland fires under prescription. With the emphasis on minimizing human management practices under this alternative, benefits to wildlife would be limited in the short term. ***Grazing improvements including fences, wells, storage tanks, and dirt tanks create a long-term vegetative disturbance on 530 acres. Planned pipeline development and fence construction would create short-term disturbance on an additional 65 acres. This is expected to create neglegible impact to wildlife.***

Riparian management would be implemented using only grazing management practices to achieve properly functioning condition, with no new exclosures being constructed. No planting of riparian species or removal of exotic species (e.g., saltcedar, Russian olive) would be undertaken under Alternative C. The objective of accomplishing properly functioning riparian areas would not be obtained in the short term and could possibly be jeopardized in the long term. Existing riparian habitats are not in a natural condition as the result of aggressive fire suppression, invasion of exotic species, and other human uses (e.g., grazing, homesteading).

Issue 10--Boundary & Land Ownership Adjustments

Only those lands needed to protect the integrity of the NCA and wilderness values would be acquired under Alternative C. As less lands would be acquired, the benefits to wildlife through improved manageability would not be as great as under other alternatives.

Summary

Under Alternative C, activities associated with recreation, interpretation, and facility development would result in long-term impacts to wildlife and their habitats on 19 acres. Near developed facilities or areas with high levels of human use, an additional disturbance of 4,200 acres would occur. Dispersed activities (e.g., hiking, sightseeing, guided tours) would generally create intermittent impacts to wildlife (lasting for a few hours or days). Wilderness and the WSA would provide the maximum benefits to wildlife and their habitats because of protective measures. Wildland fires totalling 1,000 acres annually would create short-term, site-specific negative impacts, but would result in a long-term improvement of habitat productivity.

Threatened, Endangered & Other Special-Status Species

Alternative C

As discussed under Alternative A, the BLM has completed informal consultation with the FWS and under Section 7 of the Endangered Species Act. As part of the informal consultation process, a Biological Assessment was prepared for all Threatened and Endangered and other Special-Status Species (Refer to Appendix Q). The FWS concurred with the BLM determination of "May Affect - Not Likely to Adversely Affect" and no formal consultation was initiated.

Vegetation

Under Alternative C, actions proposed to resolve the issues listed below would have the same impacts on accomplishing vegetative objectives as those described above for Alternative A. Impacts of resolving the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

The BLM would establish a common set of long-term objectives to guide management and use of vegetation in the Planning Area. Under Alternative C, livestock grazing and fire would receive management emphasis.

During the short term, livestock grazing management would provide for improved vigor, health, and productivity of herbaceous species. In the long term, livestock grazing management would allow for progress in accomplishing vegetative objectives.

Prescribed and wildland fires would be used for fuel load management, to prevent catastrophic fire and protect property. Three fires ranging in size from 50 to 1,000 acres each would be expected. These fires would occur under specified conditions (prescriptions) to reduce ground fuel and prevent fires from moving to the treetops. Resource enhancement (including restoration of ponderosa pine communities) would be a secondary benefit.

Vegetation--Forest & Woodland Resources

Under Alternative C, actions proposed to resolve the issues listed below would have the same impacts on forests and woodlands as those described above for Alternative A. Impacts of the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

No thinnings would be conducted. As a result, piñon-juniper would be expected to increase in open woodlands, savannas and/or shrub-grasslands. Up to three fires ranging in size from 50 to 1,000 acres each would be expected. The fires would improve the ponderosa pine forest community and open piñon-juniper woodlands.

Vegetation--Rangeland Resources

Under Alternative C, actions proposed to resolve the issues listed below would have the same impacts on rangeland resources as those described above for Alternative A. Impacts of resolving the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Achieving the Potential Natural Communities would be part of the objectives established in AMPs. Rest from livestock grazing use would be increased. Because of the requirement for yearlong rest, livestock grazing use would have to be reduced. The size of the reduction would be based on vegetative monitoring studies and would be sufficient to ensure proper utilization. No new rangeland improvements would be permitted to assist in providing for increased rest from livestock grazing use.

During the short term, improvements in vigor, productivity and reproduction for grass species would be slower for those areas where reductions in livestock grazing use were needed. Once proper grazing use was attained, anticipated improvements in vegetation would begin. As productivity improved, increases in livestock grazing use would be permitted. The increases would be based on monitoring studies and would not exceed current grazing preference.

In the long term, cool-season grasses and desirable shrubs would increase. Based on improvements in vegetative vigor, reproduction and rest from livestock grazing, vegetation would be less susceptible to the negative effects of drought.

Social & Economic Conditions

Actions proposed to resolve the issues of recreation, vegetation (grazing), and American Indian uses and traditional cultural practices could potentially have social and/ or economic impacts. However, the differences proposed for resource use and development between alternatives would not create measurably different impacts. Therefore, the impacts for Alternative C would be the same as those described above for Alternative A.

Soil, Water & Air Resources

Under Alternative C, actions proposed to resolve the issues listed below would have the same impacts on soil, water and air as those described above for Alternative A. Impacts from resolving the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Improvements in watershed would occur primarily as the result of livestock grazing management and fire. Vegetative ground cover would be expected to increase, reducing the likelihood of soil loss through wind and water erosion. Within 2 to 3 years after burning, increases in vegetative understory (i.e., forbs, grasses and shrubs) would be expected, which would reduce erosion potential to less than existed before the fire. Areas burned to reduce fuel load could burn hotter, which would lengthen the

vegetative recovery period. Burn prescriptions (e.g., wind speed, temperature, humidity) would be used to help reduce the risk of vegetative damage from fire heat. In the long term, the layering of vegetation (i.e., forbs, grasses, shrubs and trees) would improve, reducing the likelihood of soil loss through wind and water erosion.

Visual Resource Management

Under Alternative C, actions proposed to resolve the issues listed below would have negligible short- or long-term impacts that would exceed the VRM objectives assigned to public lands within the Planning Area. Impacts from resolving the remaining issues are discussed in the paragraphs following the list. Issue
1--Recreation

- Issue 2--Facility Development
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 3--Access & Transportation

Confining vehicles to designated travel routes would enhance the Planning Area's visual resources by reducing the potential for additional losses of vegetation, soil compaction and erosion from vehicle use, thus limiting visual contrasts. Closed roads would be allowed to revegetate, which would reduce the visual contrasts created by landform and vegetation alterations from the travel routes.

Issue 4--Wilderness Management

The assignment of VRM Class I to 128,440 acres of designated wilderness would preserve the visual resources there. Activities that did not appear to be natural would be prevented.

Issue 7--Cultural Resources

Construction of erosion-control structures and stabilization of cultural sites would only be undertaken if values were threatened and local American Indian groups concurred. Projects undertaken would create only short-term adverse impacts to visual resources from construction disturbance and placement of structures in the landscape. However, no long-term impact would be evident because native material would be used to build the control structures, they would be low-lying horizontal structures, and would be placed where disturbance was already occurring from erosion. Such structures and stabilization would likely enhance the visual quality of the local area as erosion was abated and the area restored to resource production.

Issue 9--Vegetation

The continued use of forage and range improvements for livestock management would remain evident in the landscapes, so the existing visual contrasts would remain. With up to 3 fires annually, each of which would burn between 50 and ***1,000*** acres, short-term impacts would occur as the result of visible contrasts between the blackened, burned areas and the surrounding unburned areas. Over the long term, burned areas would rehabilitate, creating vegetative diversity and plant vigor that would enhance the visual resources in the Planning Area.

Issue 10--Boundary & Land Ownership Adjustments

The acquisition of non-federal surface and subsurface estate would help preserve scenic quality by managing these lands to protect their visual quality and minimizing the degree of contrast that could occur. These lands are currently not protected from developments that could be perceived as degrading to visual resources.

Summary

Visual resources would be maintained or enhanced through the assignment of VRM Classes I and II, the two most restrictive management classes, to almost the entire Planning Area. VRM Class III, a less restrictive management class, would be assigned to only 60 acres of public land. With few surface-disturbing facilities proposed under Alternative C, localized adverse impacts to visual resources would be negligible. The closing of 133.1 miles of travel routes and allowing them to revegetate would benefit visual resources by reducing the visual contrasts created by the routes. The designation of a greater amount of public land as wilderness would also

benefit visual resources because the natural appearance on these 128,440 acres would be protected.

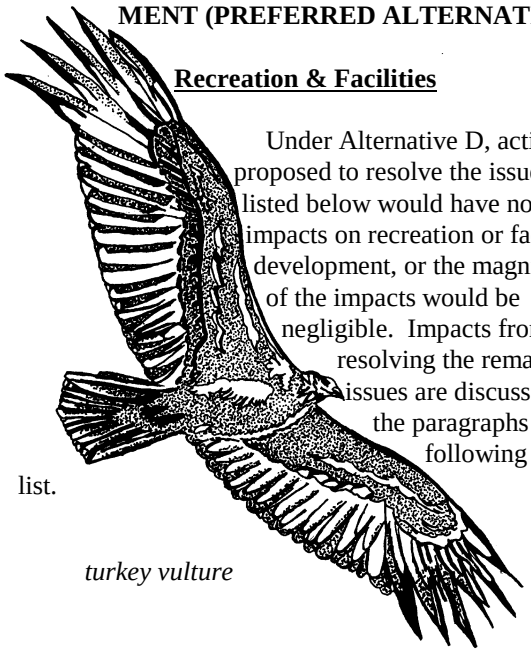
Cumulative Impacts

Under Alternative C, the cumulative impacts of actions proposed to resolve the issues would be the same as those identified under Alternative A above ***except that long-term vegetative disturbance would occur on 552 acres as a result of grazing improvements and recreation facilities development Short-term vegetative disturbance would occur on 65 acres on a one time basis as a result pipeline installation and fence construction. Rehabilitation should be complete on these projects in two or three years. Fire is to be used as a vegetative improvement tool on approximately 1000 acres per year. This will have a short-term negative effect but after two to three years is expected to increase both the quality and quantity of vegetation of these acres. This acreage of improved vegetation would continue to grow as long as the treatment continues. The cumulative vegetative disturbance acreage would reach approximately 2552 acres (both short and long term). The increased quality and quantity acreage would reach several thousand acres because the improvements are expected to be effective for many years.***

ALTERNATIVE D--BALANCED MANAGEMENT (PREFERRED ALTERNATIVE)

Recreation & Facilities

Under Alternative D, actions proposed to resolve the issues listed below would have no impacts on recreation or facility development, or the magnitude of the impacts would be negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.



turkey vulture

- Issue 4--Wilderness Management
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 1--Recreation

In general, opportunities would be more developed and better defined for those who enjoyed concentrated recreation. Developed camping and picnicking opportunities would increase, and hiking opportunities would be more defined, as the number of identified trails would increase from 5 to 15. Opportunities for horseback riding would be the same as under Alternative B. The quality of hunting would likely improve as more roads would be closed than under Alternative A. Mountain biking opportunities and users would increase, but not to the level that would be expected under Alternative B. The number of back country byway users would likely increase as these areas were improved and marketed. Visitors interested in cultural or historical properties would find up to 10 different opportunities for exploration. However, opportunities to drive for pleasure would decrease because the ROS would be managed for a decrease of 15 percent in semi-primitive motorized acreage.

Issue 2--Facility Development

A total of 44 acres (less than 1 percent of the Planning Area) would be disturbed directly by recreational developments. Developed facilities for camping and horseback riding would likely draw more users. Approximately 57 miles of developed hiking trail would increase opportunities for recreationists. Trailhead facilities would offer similar opportunities as those indicated under Alternative B, with a more primitive style and fewer sites developed. Under Alternative D, opportunities for mountain biking would not be promoted through developed facilities; rather, facilities would be built if the Limits of Acceptable Change were exceeded because of increased mountain bike use.

Opportunities for picnicking at developed areas would increase by 50 percent. Recreationists would find driving into the back country for pleasure also increasing by 100 percent, with the designation of an additional back country byway. Areas for watching wildlife would be identified, and entry identification signs would clarify the variety of recreation

opportunities available in the Planning Area. In general, the opportunities for interpretation would increase under Alternative D because of the greater number of facilities and information sources developed than under Alternative A or C (brochures, signs, kiosks, cultural sites, the amphitheater near the Spur campground).

Issue 3--Access & Transportation

Visitors would have access to the Planning Area on 273.1 miles of road designated as open. This would decrease opportunities for recreationists who were interested in driving for pleasure or back-country driving. Cross-country access by nonmotorized means would remain as is and provide opportunities for hiking, mountain biking, horseback riding or other recreational activities.

Issue 5--Wilderness Suitability

If the Congress accepted the BLM's recommendation not to designate as wilderness the Chain of Craters WSA, these lands would be open for recreational developments, and opportunities would increase for interested visitors. Driving for pleasure, hiking and mountain biking would not be limited by a wilderness designation. Under Alternative D, the BLM would also recommend a net 3,930 acres as additions to the Cebolla Wilderness, increasing the Planning Area's wilderness to 105,570 acres total (including non-BLM land).

Issue 7--Cultural Resources

Under Alternative D, the BLM would allocate up to 10 sites for public use, providing an increase in sightseeing opportunities for those visitors interested in cultural or historical properties. Scientific investigations would further enhance these opportunities. Some recreationists would be attracted to sites with antiquities signs, but others would dislike this visual intrusion.

Issue 9--Vegetation

Just as under the No Action Alternative, prescribed fires would decrease recreation opportunities during the short term (the burn period and rehabilitation). However, the impact under Alternative D would be greater because the acreage proposed to burn would be larger.

Other vegetative manipulations would produce short-term impacts to recreation. During the course of the action, visitor use to the area would be restricted to protect health and safety. Immediately after the treatment some scenic disturbance would be noticed by visitors and users. In the long term, recreationists would see an increase in the diversity of the vegetation throughout the Planning Area, improved vegetative and wildlife habitat health.

Issue 10--Boundary & Land Ownership Adjustments

If the Congress followed the BLM's recommendation for the proposed boundary changes, the NCA's acreage would increase by 16 percent to 303,400 acres, and the wilderness acreage would increase by 4 percent to 105,570 total acres. This added land wo-uld improve the Planning Area's recreation potential.

Access & Transportation

Under Alternative D, actions proposed to resolve the issues listed below would have negligible impacts on access and transportation. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 1--Recreation

Motorized access opportunities would be available on 143,270 acres through the use of 273.1 miles of designated travel routes. For those who preferred areas away from motorized vehicle use, 104,730 acres would be available. Trails designated for mountain bike use would enhance this experience and reduce the conflicts among users.

Issue 2--Facility Development

Recreational use would be enhanced through the construction of facilities such as additional trails, the

campground and amphitheater in the Spur Unit. Facilities to accommodate equestrian at The Narrows, Armijo Canyon, Hole-in-the-Wall and Cerro Brillante would benefit those accessing the Planning Area by this means. The increased use of interpretive and educational material, such as signs, kiosks and brochures would help to inform the public of motorized and nonmotorized access opportunities.

Issue 3--Access & Transportation

Motorized access opportunities would be diminished because the BLM would increase the amount of public land closed to such use by the general public (104,730 acres). On the remainder of the public land in the Planning Area, vehicle travel would be limited to designated routes, resulting in the loss of the opportunity to drive cross country on 12,000 acres that had been previously open or undesignated.

Issue 4--Wilderness Management

An 3,930 additional acres would be closed to motorized vehicle use through the expansion of the Cebolla Wilderness by the Congress.

Issue 5--Wilderness Suitability

If the Congress released the Chain of Craters WSA from further wilderness review, motorized access opportunities would continue but would be diminished through limiting use to designated routes. A total of 13.9 miles of routes would be closed, approximately 30 percent of those inventoried within the WSA.

Of the lands contiguous to the Cebolla Wilderness, 3,930 acres would be recommended for designation and would eventually be closed to motorized and mechanical access, if the Congress designated them. On the contiguous lands found not to be suitable for wilderness designation under Alternative D, motor vehicle access would be limited to designated routes.

Issue 7--Cultural Resources

Developed parking and trails to additional sites would enhance access opportunities for those who wished to visit them.

Issue 9--Vegetation

Periodically for visitor safety, access to public lands in the Planning Area would be prohibited for short periods of time when prescribed fires were ignited. Under Alternative D, up to five prescribed fires ranging in size from 50 to 1,500 acres each would be planned annually.

Summary

The direct impacts of actions proposed under Alternative D on access opportunities would depend on the user's preferred or required method of travel. For those who preferred nonmotorized travel, the entire Planning Area would be available. As the result of wilderness designation on 42 percent of the Planning Area, such opportunities would be enhanced. Access opportunities for people who preferred or were limited to motorized or mechanical means of transport would be provided on 58 percent of the public lands in the Planning Area, as long as the vehicles remained on 273.1 miles of designated travel routes.

An increase in BLM-provided horseback facilities and trails (for hiking and mountain biking) would enhance the opportunity to access public lands and features within the Planning Area. However, periodically certain areas of public land could be temporarily closed because of vegetative treatments and the practice of traditional American Indian activities.

<u>Wilderness Management</u>

Under Alternative D it is assumed that an additional 3,930 acres of public land in the Planning Area would be designated by the Congress as wilderness.

Actions proposed to resolve the issue listed below would have negligible impacts on wilderness. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 4--Wilderness Management

Issue 1--Recreation

Primitive and unconfined recreation use of the wildernesses would be allowed to continue until the

level of use threatened wilderness character. The 104,730 acres in wilderness would benefit visitors who wished to experience this type of setting.

Issue 2--Facility Development

Additional trailhead facilities located adjacent to the two wildernesses would encourage use by providing a convenient place for visitors to begin their wilderness trip. These facilities would also improve the ability of users to be dispersed throughout the wilderness, which would decrease the potential for encountering other users and help enhance the opportunities for solitude.

Issue 3--Access & Transportation

Approximately 6 miles in the Cebolla Wilderness and 18 miles of access routes in the West Malpais Wilderness have been identified for authorized use by owners of private inholdings and livestock permittees maintaining existing range improvements. The continued evidence of human activity (travel routes and the sights and sounds associated with vehicle use) would diminish the wilderness setting in the adjacent areas.

Issue 5--Wilderness Suitability

Manageability of the Cebolla Wilderness would benefit through modifying the boundary to include an additional 3,930 acres of contiguous public lands. The quality of primitive and unconfined recreation in this wilderness would also benefit, because the additional acreage includes rugged wooded terrain.

Issue 6--American Indian Uses & Traditional Cultural Practices

Closing areas for privacy when traditional American Indian activities were taking place would displace primitive recreational use during the closure period. Infrequent motor vehicle use, i.e., once every 2 to 3 years, for no more than 1 or 2 days by American Indians whose mobility depended on such use for traditional cultural practices would be considered non-impairing to wilderness values. Consultation between the BLM and American Indians would be needed be-fore formal closure and authorized motor vehicle use.

Issue 7--Cultural Resources

Cultural and historical sites stabilized within the boundaries of the wildernesses when designated would continue to be maintained and available for public use. Localized impacts from the survey, collection, excavation, and monitoring of cultural sites would not exceed the levels permitted under the BLM Wilderness Management Policy. Generally cultural resources would be left to the forces of nature. However, if additional stabilization or erosion control measures were needed because an extraordinary resource could be lost, the additional work would be accomplished using the “minimum tool.”

Issue 8--Wildlife Habitat

Wildlife projects existing in wilderness at the time of designation would be allowed to remain in place. Use of motor vehicles and motorized equipment to maintain these projects would be restricted. However, the noise and sight of vehicles in wilderness would have a negative impact on the wilderness experience of the user.

Building facilities to enhance an area's value for wildlife would not be consistent with the free operation of natural processes under wilderness management. However, it may be needed for the continued existence or welfare of wildlife living in the wilderness. With consideration of their design, placement, duration, and use, certain permanent installations to maintain conditions for wildlife would be permitted. The resulting change would have to be compatible with wilderness preservation and the installation would be the minimum needed to accomplish the task.

Issue 9--Vegetation

The development of AMPs/CRMPs and the management of livestock to improve forage conditions would benefit wilderness through enhancing the areas’ natural character.

Wildland fire suppression in wilderness could alter the natural landscape and disrupt the opportunities for solitude and primitive recreation. The severity

of impacts is not measurable, but suppression actions would be carried out to minimize surface disturbance and disruption of wilderness resources and uses. In the long term, any short-term disruptions by fire could result in improved plant diversity and the return of natural ecological processes.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of non-federal surface (800 acres) and subsurface mineral interests within wilderness boundaries would enhance management and values through eliminating development and motorized access to these inholdings that could be detrimental to wilderness character. Amending the boundary of the Cebolla Wilderness to exclude approximately 200 acres owned by Acoma Pueblo would also enhance wilderness management.

Summary

Under Alternative D, the wilderness resource would benefit on 104,730 acres of public lands designated by the Congress. The opportunities for primitive and unconfined recreation use would be found on 42 percent of the Planning Area. The existence of BLM facilities, state highways, county roads and BLM travel routes adjacent to these areas would continue to provide convenient user access. Wilderness designation would help maintain the existing natural character of these lands and provide opportunities for solitude through the application of closures and restrictions. The quality of the wilderness experience would improve from the supplemental visual, cultural and historical values within these areas. Acquisition of private surface and subsurface inholdings would benefit the wilderness manageability of these areas by eliminating both the need to provide access and the potential for activities that could degrade the areas' naturalness.

Wilderness Suitability

Under Alternative D, it is assumed that the Congress would accept the BLM's recommendation and release the entire 18,300 acres within the Chain of Craters WSA from further wilderness review. It is also assumed that the Congress would designate 3,930 acres of public land contiguous to the Cebolla Wilderness. Those 6,450 acres of public land found to be unsuitable would be released from interim management (by the BLM State Director, 30 days after approval of this El Malpais Plan).

Actions proposed to resolve the issues listed below would have negligible impacts on wilderness suitability. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 4--Wilderness Management
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 2--Facility Development

Facilities would be developed to provide amenities for users and points from which they could change from one mode of travel to another. These facilities adjacent to wilderness would encourage increased use there, which could decrease opportunities for solitude and unconfined recreation.

Issue 3--Access & Transportation

Over the long term, the sights, sounds and designated route imprints in the two areas recommended as suitable would diminish the opportunities for a wilderness experience.

Issue 5--Wilderness Suitability

On those 6,450 acres of public land released from further wilderness study, the values of solitude, naturalness, and primitive and unconfined recreation opportunities could be impaired or lost. The degree of impact would depend on the amount and type of impairing activities taking place.

Issue 6--American Indian Uses & Traditional Cultural Practices

On the east side of the Planning Area, infrequent use of a motor vehicle (i.e., once every 2 to 3 years, for no more than 1 to 2 days) by American Indians whose mobility depended on such use for traditional cultural practices would be considered non-impairing. However, such use is likely to occur more often on the west side in the Chain of Craters. Continued and frequent access into this area by motor vehicles for

traditional cultural practices would diminish its natural appearance and decrease the opportunities for solitude.

Issue 9--Vegetation

The installation of new range improvements for livestock management would adversely impact wilderness values if frequent motorized access was required. If done by mechanical means, treatments and periodic maintenance to ensure the achievement of vegetative goals would also impact wilderness values, especially naturalness.

Summary

Until the Congress acted on the BLM's suitability recommendations, activities within the Chain of Craters WSA and lands contiguous to the Cebolla Wilderness would be constrained by the BLM's Interim Management Policy to protect existing naturalness, opportunities for primitive and unconfined recreation, and solitude.

The existing dispersed types of recreation would have no impact on the suitability of the areas. Motor vehicle use by recreationists and other users would be limited to designated vehicle routes, except as needed to pull off the road when parking. No permanent recreation facilities would be built, so the opportunity for recreational uses of the area that were not dependent on facilities would be maintained.

Use of the area by American Indians for traditional cultural practices would have no impact on wilderness suitability as long as the vehicles remained on designated travel routes. No conflicts would be anticipated from the management of cultural resources, because little evidence exists of such resources within these areas. The assignment of VRM Class II objectives would maintain the existing landscape character and prevent visually dominant changes in the landscape elements. The potential for impairing disturbances from mineral exploration and development does not exist.

American Indian Uses & Traditional Cultural Practices

Under Alternative D, actions proposed to resolve the issues listed below would have no impacts on American Indian uses and traditional cultural practices. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 8--Wildlife Habitat

Issue 1--Recreation

Under Alternative D, the BLM would emphasize dispersed recreation, which is assumed to increase throughout the 15- to 20-year life of this plan. Dispersed recreation could conflict with traditional American Indian uses if visitors intruded into these activities or took items left as offerings. Under Alternative D the probability of such incidents would continue to increase.

The Ramah Navajos have identified Chain of Craters, including portions of the CDNST, as sensitive. Otherwise no specific conflicts with the locations emphasized under Alternative D are known. However, lava tubes, mountain peaks, archeological sites, and springs are sometimes important in American Indian traditional beliefs and practices.

Issue 2--Facility Development

A campground with parking, toilets, drinking water, an amphitheater, and hiking trail would be established in the Spur Unit. No conflicts are known with traditional American Indian uses in this area.

Five major trailheads would be established at Cerro Brillante, Cerro Americano, The Narrows, West Malpais, and Armijo Canyon (to the Dittert Site, Armijo Canyon Homestead and Springhouse). Other trailheads would be established at locations such as La Rendija, Cerro Rendija, and Chain of Craters only if recreational use in the five primary locations began to result in environmental damage. These facilities

would focus recreational use, resulting in increased visitation in their vicinity. Although no specific conflicts with American Indian uses are known, archeological sites, mountain peaks, and springs are often important.

The BLM is establishing a treadway within the CDNST corridor and identifying potential water sources for hikers. If increasing mountain bike use began to result in resource damage, up to 100 miles of formal biking trails would be established in the Chain of Craters, Cerritos de Jaspe, or Brazo Units. The Chain of Craters area in general has been identified as sensitive by the Ramah Navajos. Increased recreation there could disrupt traditional use.

Interpretation at the Dittert Site would include an exhibit panel in the kiosk at the Armijo Canyon trail-head and a self-guided trail with markers keyed to a trail brochure. Lower-level interpretive facilities would include primitive trailheads at the Lobo Canyon Petroglyphs, Ranger Station Reservoir, an historical homestead, West Malpais Schoolhouse, and other cultural resource sites to be identified. Registration boxes would be set up at these sites only if warranted by levels of visitation. No specific conflicts between these proposals and American Indian use have been identified. However, archeological sites are often sensitive and American Indian consultations would be needed as part of the site-specific EAs for these projects.

The NM 117-CR 42-NM 53 loop and a route in the Brazo Unit would be designated as back country byways and marked with signs. This could encourage more recreational use in the Chain of Craters area, which has been identified as sensitive by the Ramah Navajos.

Issue 3--Access & Transportation

It is common for vehicles to be driven off established roads during piñon gathering and other traditional activities. Under Alternative D, no off-road vehicle use would be allowed. Vehicle use would be allowed on designated roads and trails on 143,000 non-wilderness acres of the Planning Area, including the Chain of Craters WSA. Approximately 83 miles of roads would be closed and 273 would remain open.

Under this alternative, portions of the Brazo, Chain of Craters, and Cerro Brillante Units that are now accessible by vehicle would be 1 to 2 miles from vehicle access. These changes would increase privacy but decrease ease of access for traditional American Indian practices.

Issue 4--Wilderness Management

The impacts under Alternative D would be the same as those under Alternative B. American Indians would be allowed to access specific places within the Cebolla and West Malpais Wildernesses by vehicle under certain circumstances. It would have to be shown that, because of the physical condition of mandatory participants or other factors, vehicle use was the "minimum tool" required for access. Other factors such as the frequency and duration of visits would have to be taken into account to ensure that vehicular use would not degrade the areas' overall wilderness qualities.

Issue 5--Wilderness Suitability

Release of the Chain of Craters from WSA status would facilitate access and use of the area by American Indians by allowing continued vehicle use along designated roads and trails. Addition of 3,930 acres to the Cebolla Wilderness would limit vehicle use there, and increase the amount of walking needed for activities such as gathering piñon nuts.

Issue 7--Cultural Resources

For collecting and/or excavating prehistoric archeological sites, Alternative D would be more restrictive than Alternatives A and B, but less restrictive than Alternative C. It would be unlikely but possible that ARPA permits for these activities would be issued during the life of the plan. The Pueblo of Acoma recognizes all prehistoric sites in the Planning Area as ancestral places and, in traditional belief, considers any excavation or collection to be an adverse effect. The BLM is required to consult with American Indians before undertaking such a project, but is not absolutely bound to conform to their wishes. If permits were issued for these activities, adverse impacts to American Indians would result.

Many Pueblo people also regard active management of prehistoric archeological sites as intrusive. Under Alternative D, the BLM would undertake 1,192 acres of cultural resources inventory, post 100 antiquities signs, maintain stabilization projects at three prehistoric sites, and could consider additional prehistoric ruin stabilization or erosion control. In traditional belief, some or all of these actions could constitute an adverse effect.

Under Alternative D, members of Acoma Pueblo could collect prehistoric pottery freely in specially designated portions of the Planning Area. This requirement would restrict this traditional cultural practice and therefore would constitute an adverse impact. Under this alternative the BLM would also collect reference samples of pottery from sites in the areas made available for Acoma use. This measure also would likely be offensive to some traditional Pueblo people.

Issue 9--Vegetation

Springs are sometimes important places in traditional American Indian belief, so special attention would be given to American Indian consultations when springs were fenced to improve riparian areas. Prescribed and wildland fires would increase vegetative diversity, but the effect of this activity on specific plants used by American Indians in El Malpais is not known. Chemical treatments would be of concern to American Indians gathering wild plants, and would be closely coordinated with groups using the area for this purpose.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of the treadway or an easement for the CDNST would increase recreational use in the Chain of Craters area, which is sensitive for the Ramah Navajos.

Summary

Increasing recreational use would have the most serious and pervasive impacts upon traditional cultural practices in the Planning Area. Such use would create long-term negative impacts by reducing privacy for traditional activities and increasing the likelihood of non-Indian intrusions. Dispersed recreational use would increase under this alternative, encouraged by recreational developments and aspects of the interpretive program. Several proposals would accommodate increased use in the Chain of Craters WSA, which has been identified as sensitive for the Ramah Navajos.

Motor vehicle access would be limited to existing roads and trails. Under this alternative, the BLM would leave more roads open than under Alternative C, but less than under Alternative A or B. Decreased vehicle access would make traditional practices such as piñon nut gathering more difficult, but would enhance privacy for other practices. Provisions would be included under this alternative to allow infrequent vehicle access into wilderness under certain circumstances.

Some of the activities and decisions proposed under Alternative D could have other negative impacts. The BLM would not strictly prohibit archeological research involving excavation, although stro-ngly discouraging it. Some other activities under this alternative such as signing, ruin stabilization, and ero-sion control intended to protect ruins may be considered intrusive by traditional American Indian people. Collection of prehistoric pottery for use as temper would be allowed, but only through a formal permit process. Chemical treatment as a means of vegetative manipulation could adversely impact people who were gathering herbs and other plant products. Thinning of piñon-juniper stands would be allowed under this alternative, so fuelwood could be available in some years. However, there would be no assurance that sufficient quantities would be made available to meet demand. Depending upon the availability of alternate sources, prohibitions on fuelwood gathering outside the thinned areas may also be an adverse effect.

Certain Acoma Tribal lands are recommended for exclusion from the Planning Area under this alternative. If the Congress passed legislation, additional lands would be added to the NCAand the impacts, positive and negative, outlined here would apply there also. Some ongoing uses such as fuelwo-od and piñon nut gathering would become more re-stricted, but incompatible uses such as commercial fuelwood sales and mineral extraction would be pro-hibited, which would have a positive impact on American Indian uses and traditional practices. Acquisition of land and mineral interests included under this alternative would also help exclude

incompatible uses.

Cultural Resources

Under Alternative D, actions proposed to resolve the issue listed below would have no impacts on cultural resources. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

Under this alternative, the BLM would generally encourage dispersed recreational activities that might affect cultural resources, including camping, hiking, hunting and picnicking. Proposals that led to increased visitation would result in more unauthorized surface collection and casual excavation of prehistoric sites, although the extent of these impacts cannot be quantified. When recreational use was dispersed, adverse impacts would be more difficult to counter.

The BLM would attempt to concentrate camping in the Spur Unit and picnicking at The Narrows, and would designate 57 miles of hiking trail. If these areas and corridors were surveyed, with cultural resources documented and avoided, designation of specific camping areas, picnic areas and hiking trails would be beneficial to cultural resources. Adverse effects that could result from more dispersed use would be partly mitigated by public education, as well as archeological survey and documentation.

Under Alternative D, the BLM would encourage public visitation at the Dittert Site, Ranger Station Reservoir, and at up to six historical homesteads. Documentation is sufficient to protect scientific values at the Dittert Site and the homesteads, although the physical structures at all of these sites would require increased maintenance. Systematic documentation would be needed at the Lobo Canyon Petroglyphs, with data recovery through systematic collection of surface materials at the Ranger Station Reservoir.

juniper

Issue 2--Facility Development

Development of 57 miles of trail would focus visitation onto particular routes that could be modified to direct visitor use away from sensitive cultural resources. The picnic area and trailheads are not known to be in especially sensitive areas, but Class III inventories would be conducted in a ¼-mile radius around these facilities to consider secondary impacts.

The proposed campground in the Spur Unit would require special survey and monitoring. The proposed campground is near areas of dense cultural resources that would be vulnerable to surface collection. In addition to Class III inventories, the BLM would conduct a reconnaissance survey within a 1-mile radius before developing the campground, attempting to locate and document all sites vulnerable to illegal surface collection. The condition of these sites would be monitored carefully, and if any changes in their condition were detected from recreational use of the campground, appropriate mitigating measures would be taken (e.g., data recovery, closure of affected areas to public entry).

Issue 3--Access & Transportation

Under Alternative D, no off-road vehicle use would be allowed, benefitting cultural resources by preventing erosion and direct damage from vehicles running over archeological sites. Approximately 83 miles of roads and trails outside wilderness would be closed and 273 would remain open. Many of the roads and trails to be closed are in the Chain of Craters and Cerro Brillante Units, which have low densities of cultural resources, so these closures would not benefit such resources. Other roads and trails to be closed are in the Spur, Breaks, and Breaks Non-NCA Units, which have high site densities, and in the Brazo and Cerritos de Jaspe Units which have moderate densities. Limiting motor vehicle access in these areas would protect prehistoric and historical cultural resources by making it more difficult for scavengers and looters to bring in excavation gear or to transport away materials such as building stone or weathered wood. At the same time, limited access would make patrol by BLM specialists and law enforcement personnel more difficult.

Issue 4--Wilderness Management

Under the Alternative D, scientific investigations in wilderness areas would be restricted by the "minimum tool" standard and would be limited to activities that resulted in no significant visual, vegetative or other natural resource impact. Resource deterioration due to natural decay and natural erosion would be allowed to continue unless unusual resources were threatened, and even then remedial actions would be restricted by wilderness considerations.

However, wilderness is generally patrolled more intensively than other BLM lands. This would increase the likelihood that ARPA violations would be discovered and reported.

Issue 5--Wilderness Suitability

Under this alternative, additional lands would be added to the Cebolla Wilderness, including some with high densities of cultural resources. The impacts of this addition would be the same as those described above under Issue 4.

Issue 7--Cultural Resources

Under Alternative D, as under Alternative A, the BLM would emphasize conservation of cultural resources for future use. However, under Alternative D, provisions for inventory, NHPA compliance, and scientific investigations that included collection and excavation would be more strict. These measures, as well as proposals for signing, access easements and consolidation of ownership, road closure, monitoring, stabilization, and fire suppression would have mild positive long-term impacts on the scientific and public values of cultural resources.

Stringent requirements for scientific investigations would limit current scientific information from the NCA, but would leave more sites in better condition over the long term. At the levels projected for this alternative it is unlikely that long-term scientific potential of cultural resources within the NCA would be negatively affected.

Under this alternative the BLM would issue permits to members of Acoma Pueblo, allowing them to collect prehistoric pottery for use in the manufacture of contemporary pottery. This would inevitably result in the irretrievable loss of some scientific information. However, issuing individual permits for particular sites or areas would allow the agency to control the scale of this activity, develop and implement mitigating measures. Permits would be restricted to well-documented sites. In many cases buried materials would remain onsite, potentially becoming available for scientific excavation. The BLM could also retain a sample of the surface material for future analysis. Under these conditions, serious short- and long-term adverse impacts would be avoided.

Interpretation would increase public awareness and appreciation of cultural resources, but would inevitably result in the loss of surface artifacts at the Dittert Site and the Ranger Station Reservoir. Sufficient documentation exists for surface artifacts at the Dittert Site, but without mitigation, establishment of a trail at the Ranger Station Reservoir would cause a long-term loss of the scientific value of the site.

Issue 8--Wildlife Habitat

Prairie dog enhancement is proposed for an area at the mouth of Cebolla Canyon near the Cebolla Canyon Community. It is expected that the animals would remain in the fine, valley-bottom sediments, away from the prehistoric resources. However, their behavior would be monitored, and if disturbance encroached into the area of prehistoric ruins, appropriate corrective measures would be taken.

Issue 9--Vegetation

Livestock grazing could adversely affect cultural resources by reducing vegetation and contributing to erosion. Trampling could break artifacts on the ground surface, and livestock rubbing against historical structures could contribute to their deterioration. Erosion affecting cultural resources would undoubtedly continue, but would be reduced by improved grazing management under Alternative D. Eight historical homesteads in the Planning Area have been fenced to exclude livestock, and this alternative provides for additional fencing if warranted.

Any vegetative improvement activity that was likely to result in surface disturbance, such as timber thinning operations that included harvesting the trees, would be subject to Class III cultural resources inventory.

Fire could destroy historical sites with flammable elements and damage the scientific potential of surface and near-surface archeological materials. Associated activities such as establishment of fire camps and construction of fire lines could also result in adverse impacts to cultural resources. Under this alternative, 8 to 12 historical sites have been identified for protection from fire, and other newly discovered sites could be added to the list. Reconnaissance-level surveys looking for sites with flammable materials would be conducted in areas where prescribed fires were
proposed. Areas proposed for prescribed fires would not generally be inventoried to Class III standards if they had low site density (refer to Map 37). Class III inventory would be considered in zones of high site density, and a cultural resource advisor would be required during fire suppression activities, regardless of the source of ignition.

Issue 10--Boundary & Land Ownership Adjustments

If completed by the Congress, expansion of the NCA to include the Breaks Non-NCA and Tank Canyon SFO Units would add numerous significant Anasazi ruins, providing them with a higher level of protection and more intensive management. Pending legislation, the Breaks Non-NCA Unit would be subject to provisions of this plan, but the Tank Canyon-SFO Unit would remain subject to the Socorro Resource Management Plan (in which it is identified for sale or disposal).

The easements and acquisition of inholdings proposed under Alternative D could also benefit BLM efforts to manage cultural resources by improving access and consolidating ownership. Closure of lands to mineral entry would help prevent inadvertent damage to cultural resources. Realignment of cherry-stemmed roads in the Cebolla Wilderness would be subject to a site-specific EA and NHPA compliance. If cultural resources were likely to be affected, appropriate avoidance or other mitigating measures would be adopted.

Summary

NCA designation and the provisions of this plan would be effective in protecting cultural resources from damage as the result of deliberate, planned actions. However, natural and human factors would continue to degrade cultural resources under Alternative D. Natural deterioration would affect historical homesteads, while gully and sheet erosion would affect archeological sites. Both archeological and historical sites would be vulnerable to illegal collection, looting, and vandalism, although these impacts could be decreased somewhat if visitors heeded interpretive messages about the need to leave sites intact.

Recreational development and designated areas of use would be in both nonsensitive and sensitive areas under Alternative D. Additional systematic documentation would be needed in several areas proposed for recreational developments and cultural resources interpretation. Vehicle use would be limited to designated roads, and some existing roads and trails would be closed. These provisions would help protect cultural resources from off-road vehicle damage and make access more difficult for looters, as well as for BLM personnel engaged in monitoring

and patrol activities.

Management activities intended to have a positive effect on cultural resources such as stabilization, erosion control, patrol and monitoring would be limited to the most important sites and restricted in wilderness. Archeological research that involved collection and/or excavation would not be prohibited under this alternative, but strongly discouraged.

Wildlife Habitat

Under Alternative D, actions proposed to resolve the issues listed below would have no impacts on wildlife habitat, or the magnitude of the impacts would be considered negligible. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources

Issue 1--Recreation

Under Alternative D, the BLM would emphasize some concentrated and developed recreational opportunities (e.g., hiking, camping, interpretive tours, horseback riding, mountain biking). As identified under Alternative A, three areas (Ranger Station, La Ventana Natural Arch, The Narrows) would continue to be used for recreational activities that would result in impacts to wildlife and/ or their habitats.

Interpretive evening programs would occur three to four times a week at the Spur Unit amphitheater with up to 30 people each night, so approximately 1,920 people would attend during the 16-week summer season. Six additional, interpretive guided hikes with approximately 25 to 50 people each would occur at the Dittert and/or other archeological sites. The anticipated impacts would include disturbance on approximately 2 acres of habitat from foot traffic (¼ acre per site at about seven sites), and in a zone of approximately 280 acres (40 acres per site) near the activities. Wildlife in the immediate vicinity of the activity would be disturbed and vegetative habitat would be crushed by people walking around the area.

Five trails (Ranger Station Reservoir, Narrows Rim, La Ventana Natural Arch, CDNST, Hole-in-the-Wall) would be emphasized for hiking activities under Alternative D. The impacts of these five trails were identified under Alternative A, and would be the same under Alternative D.

Dispersed camping, hiking, picnicking, horseback riding and mountain biking outside the established recreation sites and trails would create only short-term disturbances to wildlife species in the immediate vicinity (e.g., birds flushed from trees, rabbits from bushes). These activities would not be anticipated to cause any long-term impacts. It is estimated that wildlife would be disturbed on 960 acres per year.

Issue 2--Facility Development

Expanded recreational facilities would result in a direct loss of an additional 19 acres of wildlife habitat from the development, and a broader zone of wildlife disturbance on 3,340 acres due to human use of the area (refer to Table 4-1). The development of a campground in the Spur Unit would directly disturb 8 acres of wildlife habitat, and create a disturbance zone of approximately 640 acres.

Additional trails for hiking and sightseeing would be emphasized at 10 cultural, historical and scenic sites throughout the Planning Area during the summer months. For analysis purposes, these trails are each anticipated to be about 2 miles long. The anticipated impacts would include disturbance of approximately 7 acres of habitat from foot traffic and a zone of approximately 1,600 acres within the immediate vicinity of the trails.

Trailheads and limited parking (four to six vehicles each) would be developed at three sites. Direct disturbance of approximately 1 acre (¼ acre each) and a zone of 480 acres (160 acres each) would occur from the establishment of these facilities. Three other trailhead and parking sites would be developed with parking for 8, 20 and 25 vehicles. Direct disturbance of approximately 3 acres and a zone of 480 acres would result from the establishment of these facilities.

In addition to developing the treadway for the CDNST, the BLM would build two primitive trailheads near Cerro Americano and Cerro Brillante, with graded parking for 20 vehicles at each location.

These trailhead parking areas would cause a long-term loss of 2 acres of habitat (approximately 1 acre for each site). Wildlife disturbance would be expected over approximately 320 acres near the sites (160 acres each).

The designation of one new back country byway and the expansion of the existing one along CR 42 would create direct impacts to wildlife habitats from vegetative loss and soil disturbance caused by vehicles and other human activities. In addition, increased disturbance (e.g., noise) would occur from these
facilities.

New entry and watchable wildlife signs and kiosks would be installed for the new and expanded back country byways under Alternative D. The four kiosks would directly impact approximately ¼ acre each (including a pullout for four to six vehicles each), for a total of 1 acre. In addition, a zone of disturbance around these kiosks would be 160 acres (40 acres each). Two large identification signs built along I-40 would impact approximately 100 to 200 square feet each. All these developments would have direct impacts on habitats, but because they would be installed along established roads, the impacts would be less than if the developments were in undisturbed locations.

Issue 3--Access & Transportation

Under Alternative D, vehicle use would be restricted to 273.1 miles of roads outside wilderness (refer to Table 2-11). Wildlife would benefit from closing 83.4 miles (23 percent) of the roads in the Planning Area. The lands adjacent to the closed roads would not be subject to habitat degradation from vegetation loss and soil disturbance caused by vehicles and other human activities. Limiting vehicles to designated roads would also reduce habitat degradation by minimizing the number of new roads that appeared over time. In addition, closed roads would eventually revegetate, providing additional habitat with reduced disturbance to wildlife populations within the area.

Habitat along roads that continued to be designated for use would be subject to ongoing degradation from vehicles and other human activities.

Issue 4--Wilderness Management

Impacts on wildlife habitat from wilderness management under Alternative D would be the same as those identified under Alternative A. However, the primary emphasis under Alternative D would be on the recreational qualities of the wilderness setting.

Issue 5--Wilderness Suitability

If the Congress designated 3,930 acres contiguous to the Cebolla Wilderness, wildlife habitat would be protected and enhanced. Until designation, these lands would be managed under the Interim Management Policy (except where it applied to minerals), which would also protect wildlife habitat. Under Alternative D, a smaller quantity of lands would be recommended for wilderness (5,410 acres) than under Alternative C, but more than under Alternative A or B, under which no lands would be recommended. However, management of this area under the Interim Management Policy and potentially as wilderness could preclude or modify certain wildlife habitat improvement projects.

Issue 8--Wildlife Habitat

In addition to maintaining the existing developments (refer to Alternative A), the BLM would undertake up to eight wildlife habitat improvement projects annually (up to three fires and five other projects). The facility projects would disturb approximately ½ acre per project, for a total of 2 acres per year over the 15- to 20-year life of this plan (refer to Table 4-1). The two prescribed fires would average approximately 500 acres each in size, with the wildland fire under prescription estimated at 1,000 acres.

As described under Alternative B, five wildlife enhancement projects would be planned under Alternative D, including three water catchments, a prairie dog colony enhancement area, and a riparian fencing development. The three water developments (1,500-gallon rainwater catchments) would be installed in the Cerro Brillante Unit (T. 6 N., R. 12 W., Sec. 31, SE¼; Sec. 33, NE¼; Sec. 35, NE¼). The long-term loss of habitat would be approximately 1,200 square feet (.02 acre) of grassland. In addition, short-term

impacts would include the crushing of vegetation by vehicles and foot traffic during construction, and the disturbance of small wildlife (e.g., birds, rodents, reptiles) within the immediate vicinity of the site.

The prairie dog colony enhancement project would use about 1,000 acres of both the south half of the North Pasture and the Head Pasture of the El Malpais Allotment (Breaks Unit). This unit contains the largest known prairie dog colony within the Planning Area. Enhancement for prairie dogs would help support two special-status species in the area (burrowing owl and mountain plover). If the prairie dog colony expanded to an appropriate size (about 200 acres), it would also be a potential release site for the black-footed ferret, one of the most endangered mammals on earth. Impacts of this colony would be the same as those discussed above under Alternative B.

Under Alternative D the BLM would fence approximately 1 to 1½ miles of riparian habitat along Cebolla Canyon. This is one of the few small perennial streams within the Planning Area, and consequently is considered sensitive wildlife habitat. Approximately 3 acres of habitat would be excluded from livestock grazing under this alternative.

In addition to those projects already identified under this alternative, new projects would be proposed to enhance existing habitats. These projects could each disturb between less than an acre (for water developments) and 1,500 acres (for prescribed and wildland fires) annually.

Issue 9--Vegetation

The general positive and negative impacts of vegetative treatments to wildlife and their habitats are identified under Alternative A ***except that grazing improvements including fences, wells, storage tanks, and dirt tanks create a long-term vegetative disturbance on 530 acres. Planned pipeline development and fence construction would create short-term disturbance on an additional 65 acres.***

As under Alternative B, under Alternative D the BLM would increase the emphasis on vegetative treatments with the use of livestock grazing, prescribed and wildland fires, and structures (e.g., fences). Piñon-juniper thinning would be emphasized, with ***for the purpose of this analysis*** 100 acres to be conducted annually to meet vegetative objectives. This vegetative manipulation would cause a short-term disturbance to wildlife habitat, but would create long-term benefits by increasing vegetative diversity and opening up the closed piñon-juniper canopy.

Prescribed and wildland fires would be used to accomplish vegetative objectives for forests, woodlands, and shrub-grasslands. ***An estimated*** five fires could be expected annually under this alternative, ranging in size from 50 to 1,500 acres each, with an average size of approximately 500 acres (for prescribed fires) to 1,000 acres (for wildland fires under prescription). (These would be the same five fires identified under Wildlife Habitat above.)

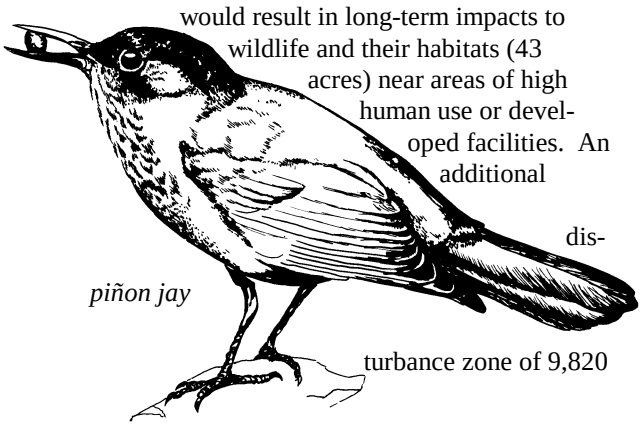
Riparian management would be implemented using both exclosures and grazing management practices to accomplish objectives for properly functioning condition. The BLM would plant riparian species and/ or remove exotic species (e.g., saltcedar, Russian olive) under this alternative.

Issue 10--Boundary & Land Ownership Adjustments

Acquisition of lands under Alternative D would be the similar to that identified under Alternative B. The consolidation of private inholdings into BLM administration would benefit wildlife through improved manageability, especially if the acquired lands contained sensitive habitats. Under this alternative, additional lands not identified in Alternative A under the Land Protection Plan would be acquired if owners were willing to sell.

Summary

Under Alternative D, activities associated with recreation, interpretation, and facility development would result in long-term impacts to wildlife and their habitats (43 acres) near areas of high human use or developed facilities. An additional disturbance zone of 9,820



piñon jay

acres would occur from human activities. Dispersed activities (e.g., hiking, sightseeing, guided tours) would generally create intermittent impacts (of a few hours or days) to wildlife. Activities in wilderness and the WSA would generally provide short- and long-term benefits to wildlife and their habitats because of the associated protective measures. Wildlife facilities on approximately 3 acres and vegetation treatments (e.g., prescribed and wildland fires, woodland thinning) totalling 3,100 acres would create short-term, site-specific negative impacts, but would result in long-term improvement of habitat productivity.

Threatened, Endangered & Other Special-Status Species

Alternative D:

As discussed under Alternative A, the BLM has completed informal consultation with the FWS under Section 7 of the ESA. As part of the informal consultation process, a Biological Assessment was prepared for all Threatened and Endangered and other Special-Status Species (Refer to Appendix Q). The FWS concurred with the BLM determinations of "May Affect - Not Likely to Adversely Affect" and no formal consultation was initiated.

Vegetation

Under Alternative D, actions proposed to resolve the issues listed below would have the same impacts on accomplishing vegetative objectives as the actions under Alternative A. Impacts from resolving the remaining issue are discussed in the paragraph following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Achieving the Potential Natural Communities would be the vegetative goal for the Planning Area. As a result, a common set of long-term objectives would be established to guide management and use of vegetation. In general, vegetative species diversity would be expected to improve.

Vegetation--Forest & Woodland Resources

Under Alternative D, actions proposed to resolve the issues listed below would have the same impacts on accomplishing forest and woodland objectives as those for Alternative A. Impacts from resolving the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

For the purpose of this analysis it is estimated that approximately 100 acres of piñon-juniper could be thinned each year to meet forest and woodland objectives. The thinnings would be conducted at lower elevations where the site potential was open savanna or shrub-grassland. During the life of this plan, ***an estimated*** 2,000 acres could be improved.

Approximately 50 acres dominated by piñon-juniper with the potential to be ponderosa pine would also be thinned. ***F***ires ranging in size from 50 to 1,500 acres each could be burned each year to improve the ponderosa pine forest community and provide for an open piñon-juniper woodland community.

Vegetation--Rangeland Resources

Under Alternative D, actions proposed to resolve the issues listed below would have the same impacts as those for Alternative A. Impacts from resolving

the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4--Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Achieving the Potential Natural Communities would be the vegetative goal in AMPs/CRMPs. Rest from livestock grazing use would be increased. Rangeland improvements would continue to be built to allow increased rest from grazing use.

During the short term, improvements in vigor, productivity and reproduction would be expected for grass species. With increases in productivity, grazing periods would be adjusted to increase the frequency and duration of rest. In the long term, cool-season grasses and desirable shrubs would increase. Based on improvements in vegetative vigor, reproduction, and rest from livestock grazing, vegetation would be less susceptible to the negative effects of drought.

Social & Economic Conditions

Actions proposed to resolve the issues of recreation, vegetation (grazing), and American Indian uses and traditional cultural practices could potentially have social and/ or economic impacts. However, the differences proposed for resource use and development between alternatives would not create measurably different impacts. Therefore, the impacts for Alternative D would be the same as those described above for Alternative A.

Soil, Water & Air Resources

Under Alternative D, actions proposed to resolve the issues listed below would have the same impacts on soil, water and air as those for Alternative A. Impacts from resolving the remaining issue are discussed in the paragraphs following the list.

- Issue 1--Recreation
- Issue 2--Facility Development
- Issue 3--Access & Transportation
- Issue 4-Wilderness Management
- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices
- Issue 7--Cultural Resources
- Issue 8--Wildlife Habitat
- Issue 10--Boundary & Land Ownership Adjustments

Issue 9--Vegetation

Vegetative ground cover would be expected to increase, reducing the likelihood of soil loss through wind and water erosion. Improvements in watersheds would result primarily from woodland thinning, livestock grazing management and fire. As a result of the disturbance associated with the piñon-juniper thinning, the soil surface could be exposed to increased wind and water erosion. Selecting sites for treatment that were less susceptible to erosion would reduce this short-term risk. After thinning, the BLM would rehabilitate roads as needed to limit erosion.

Within 2 to 3 years after thinning, increases in the vegetative understory (i.e., forbs, grasses and shrubs) would occur, reducing the erosion potential to less than it was before thinning. In the long term, the layering of the vegetative ground cover (i.e., forbs, grasses, shrubs and trees) would improve, reducing the likelihood of soil loss through wind and water erosion.

Vegetative responses to fire would be similar to those anticipated for woodland thinning. Short- and long-term improvements in vegetative cover would be similar, especially in those areas selected to burn for resource enhancement. Fires in the areas burned to reduce fuel load could be hotter, which could lengthen the vegetative recovery period. Burn prescriptions (e.g., for wind speed, temperature, humidity) would be used to help reduce the risk of vegetative damage from fire heat.

Visual Resource Management

Under Alternative D, actions proposed to resolve the issues listed below would have negligible impacts exceeding the VRM objectives assigned to public land within the Planning Area. Impacts from resolving the remaining issues are discussed in the paragraphs following the list.

- Issue 5--Wilderness Suitability
- Issue 6--American Indian Uses & Traditional Cultural Practices

Issue 1--Recreation

Visual resources on 247,940 acres or just slightly less than all of the Planning Area would benefit through the assignment of VRM Class I and II management objectives, as under Alternative C. Management to meet the objectives for these two classes would prevent activities that would create noticeable changes in the elements of form, line, color and texture found in the landscape. VRM Class I, the most restrictive for changes to the landscape, would be assigned to 104,730 acres of wilderness, while the remaining 143,210 acres would fall under VRM Class II management objectives. The visual resources on the 60 acres of VRM Class III lands immediately surrounding the BLM Ranger Station would be subject to a greater degree of change.

Issue 2--Facility Development

The construction of a campground in the Spur Unit would disturb approximately 8 acres, resulting in short-term visual impacts. With the facility's design, the limited number of units, and the location being screened from the major travel routes, minimal impact would occur on the scenic values of the area. Visual resources on another 33 acres would be disturbed by hiking trails and associated facilities (i.e., parking areas and trailheads).

Issue 3--Access & Transportation

Closing 83.4 miles of travel routes and restricting motor vehicle use to the designated routes left open would enhance visual resources. Closed roads would be allowed to revegetate, reducing the visual contrasts from landform and vegetative alterations.

Issue 4--Wilderness Management

The assignment of VRM Class I to 104,730 acres of designated wilderness would preserve the visual resources by preventing activities that would leave human imprints or not appear natural.

Issue 7--Cultural Resources

The construction of erosion-control structures at 256 cultural sites would create short-term visual impacts. However, because native material would be used for the control structures, which would be low-lying, horizontal and placed where erosional disturbance was already occurring, no long-term visual impacts would be evident. The structures would likely enhance the visual quality of the local areas as erosion was abated, the areas were restored to resource production, and further exposure of soil and loss of vegetation was prevented.

Issue 8--Wildlife Habitat

Undertaking up to 10 projects to improve habitat would benefit visual resources over the long term. The construction of three water catchments over the life of the plan would result in less than ¼ acre of disturbance; these would be located, if possible, in areas where they would be screened from view by vegetative and topographic features.

Issue 9--Vegetation

Woodland and forest treatments would create visual contrasts in texture through thinning on areas up to 150 acres in size. The location, amount of thinning required, and spatial distribution of treatments would help determine the severity of the impact on visual resources.

The continued use of forage and range improvements for livestock management would remain evident in the landscape. No new improvements would be proposed.

With up to five fires planned annually, covering 50 to 1,500 acres each, short-term visual impacts would occur from the visibility of the blackened burned area and the contrast between it and the surrounding unburned area. Over the long term, these areas

would rehabilitate, helping to create diversity and plant vigor that would enhance visual resources.

Issue 10--Boundary & Land Ownership Adjustments

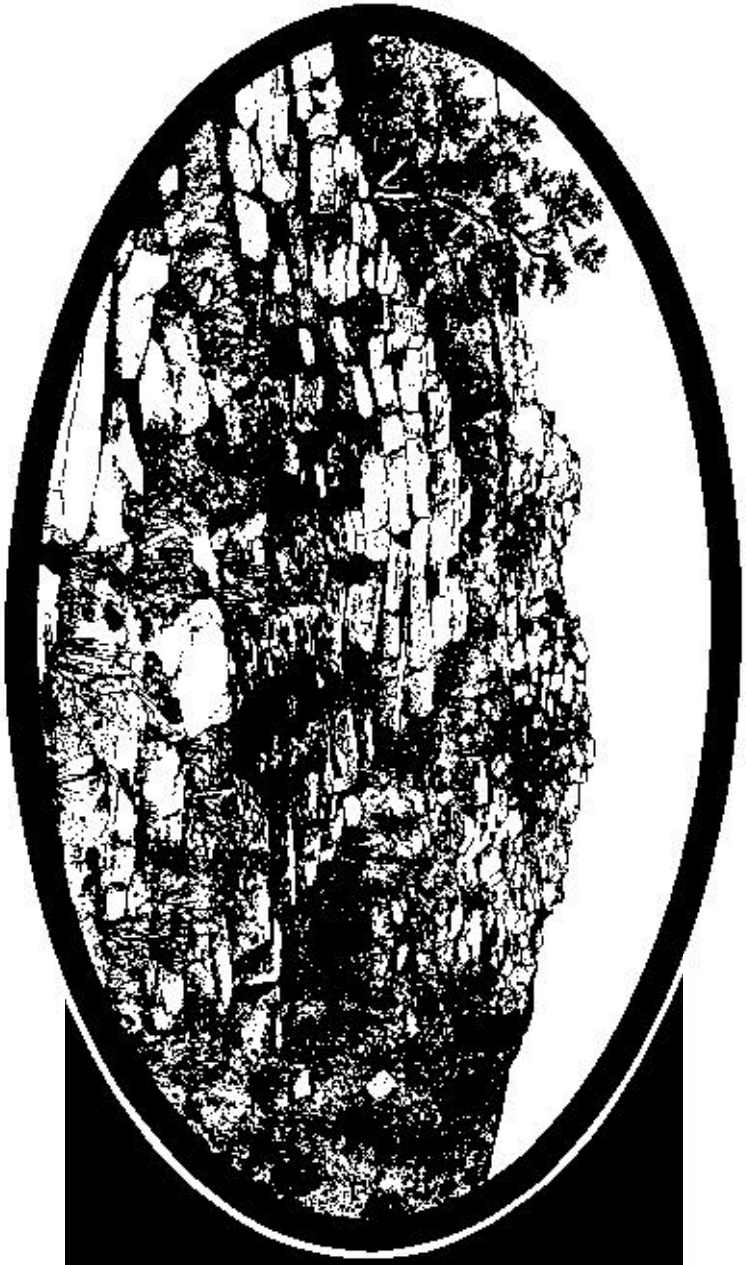
The acquisition of nonfederal surface and subsurface estate would help preserve scenic quality because these lands would be managed to protect their visual quality by minimizing the degree of contrasts that could occur.

Summary

Localized impacts to visual resources would come from recreational facility development and vegetative treatments under Alternative D. VRM Class III would be assigned to 60 acres, on which activities would be allowed that could moderately alter the form, line, color and texture of the landscape. Activities on the other 247,940 acres of public land in the Planning Area would be restricted to conform to ob-jectives for VRM Classes I and II. Wilderness designation and the assignment of VRM Class I to 104,730 acres of public land would especially help maintain and enhance visual resources. Acquisition of non-federal inholdings (both surface and subsurface) would benefit the management of visual resources by minimizing the contrasts that could occur within the Planning Area.

Cumulative Impacts

Under Alternative D, these would be the same as those identified under Alternative A above ***except long-term vegetative disturbance would occur on 613 acres as a result of grazing improvements and recreation facilities development. Short-term vegetative disturbance would occur on 65 acres on a one time basis as a result pipeline installation and fence construction. Rehabilitation should be complete on these projects in two to three years. Fire is to be used as a vegetative improvement tool on approximately 3000 acres per year. This will have a short-term negative effect but after two to three years is expected to increase both the quality and quantity of vegetation on these acres. This acreage of improved vegetation would continue to grow as long as the treatment continues. The cumulative vegetative disturbance acreage would reach approximately 6613 acres (both short and long term). The increased quality and quantity acreage would reach several thousand acres because the improvements are expected to be effective for many years.***



CHAPTER 5

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CHAPTER 5

CONSULTATION AND COORDINATION

INTRODUCTION

This chapter describes the consultation and coordination activities the BLM has carried out while preparing this draft document. Public comments on the document and BLM responses to them will be included in this chapter of the Final El Malpais Plan.

Consultation and coordination have occurred in a variety of ways throughout the planning process. Formal and informal efforts have been made to involve the public, other federal agencies, American Indian tribal groups, state and local governments. More detailed documentation of this effort is on file at the Albuquerque Field Office, as is a complete list of all those contacted.

CONSULTATION REGARDING WILDLIFE

The BLM must consult with the U.S. Fish & Wildlife Service under Section 7 of the Endangered Species Act of 1973 before any agency project is initiated that may affect any federally listed, special-status, plant or wildlife species or its habitat. This proposed plan is considered a major federal action, so the BLM has initiated informal consultation. Letters documenting this activity are on file at the Albuquerque Field Office.

CONSISTENCY WITH OTHER PLANS

BLM planning regulations require that Resource Management Plans be consistent with officially approved or adopted resource-related plans, policies and procedures of other federal agencies, American Indian tribes, state and local governments. To ensure such consistency, the BLM has sent letters to all the groups and agencies listed in Table 5-1. These same entities have received copies of this document for their comment.

No inconsistencies are known between any of the plan alternatives and officially approved and adopted, resource-related plans of any of the above-mentioned groups. The BLM will continue to consult and coordinate during the public comment periods on this plan.

PUBLIC PARTICIPATION

Public participation in this El Malpais Plan is a dynamic process that continues throughout plan development and beyond. In addition to formal public participation, informal contact occurs frequently with public land users and interested persons. All applicable public participation is documented and analyzed in the planning process and kept on file at the Albuquerque Field Office.

Public involvement is essential to the success of the plan. Although public input is welcome at any time, the BLM provides five specific opportunities for public comment, participation or review during the planning process.

1. The BLM 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 agency also identified the general planning criteria and invited public comment. This letter invited them to participate again by attending meetings and/or providing written comments (refer to page 5-7).

2. With the NOI, the BLM officially initiated the scoping process. The agency then held public meetings to develop planning issues and review planning criteria in Grants (April 24-25, 1995), the Ramah Navajo Chapter House (April 25, 1995), and Albuquerque (April 26-27, 1995) (refer to page 5-73). The BLM met with the Acoma Tribal government on April 4, 1995, and accepted written comments until scoping officially ended on May 19, 1995. Completing Steps 1 and 2 of the planning process, the agency mailed out information on the results of public scoping on July 24, 1995, to all on the El Malpais Plan mailing list.

3. The BLM is providing a 90-day public comment period for this document. Public meetings to collect oral comments on the plan are scheduled for Albuquerque, Grants and Ramah. To gather input on the suitability of the Chain of Craters Wilderness Study Area

for wilderness designation, the agency will also hold a formal public hearing.

4. After publishing the Proposed Plan and Final EIS, the BLM will provide a 30-day period for public protests of the RMP Amendment decisions. (Note: BLM regulations provide that only those people who participated in the planning process may protest a proposed RMP Amendment, and those protests are limited to specific issues commented on during the planning process.)

5. The BLM will then release the ROD and Approved Plan (RMP Amendment), including any significant changes made as the result of an action on a protest. Appeals of activity-level planning decisions can be made by those parties adversely affected at the time the ROD is released.

After the plan is published, the BLM will prepare an annual update to keep members of the public informed about the progress made in plan implementation. The update will also describe the activity plans to be prepared the following year so interested persons may request copies and comment on them. This effort will enable the public to become further involved in specific land management actions resulting from plan implementation.

PREPARERS OF THE PLAN

This plan has been prepared by an interdisciplinary team of BLM resource specialists. Table 5-2 lists the names and qualifications of each team member.

Comment on the Draft Summarized

Copies of the comment letters follow the list of preparers along with BLM's responses. Thirty-seven comment letters were received regarding the Draft Plan/EIS. Six of the letters required no response. Three letters were submitted by more than one commentor (form letters) and require a response. The other fourteen letters had one or more comments requiring a response. Comments were received from individuals, groups, and Federal, State and Local Government agencies.

Copies of the Hearings Transcripts follow the comment letters and responses. Hearings were held in Grants, Quemado and Albuquerque, New Mexico. At the Grants Hearings it was suggested that we use the Public Law 100-225 language regarding the continuation of grazing within the NCA. The legislative language was used in the text. There were no comments received at the Quemado Hearings. At the Albuquerque Hearings access and road closure questions were raised. These questions were similar to questions raised in the comment letters and BLM has referenced comment 6-A in response. There was also a comment relative to grazing management systems suggesting that a rest system was not as affective as scattering animals well over the area and stocking the area at conservative rate. In response, the EIS does not refer to long term or continuous rest from livestock grazing but emphasizes periodic growing season rests as a means to allow important forage and browse plants to periodically complete their growth cycle and reproduce. The BLM has implemented a modified Merrill system as a test. This system provides for continuous year long livestock, but each year one quarter of the grazing area is rested from livestock grazing. Over a four year period the entire area would receive rest from livestock use. The grazing use intensity objectives set for this system are 50 to 40 percent use. To attain this grazing intensity level, conservative stocking is required. The BLM does have concerns about the effects of continuous year long grazing on shrubs and grasses preferred by livestock. If these preferred plants are reduced Species composition is reduced. The system being tested is based on the commentor's recommendations. The effects of livestock grazing will be monitored and evaluated over a five year period beginning with the grazing year 2000.

TABLE 5-1

PARTIAL LISTING OF GROUPS AND AGENCIES RECEIVING THE EL MALPAIS PLAN

American Indian Tribes and Groups

Acoma Pueblo
Alamo Navajo Chapter
All Indian Pueblo Council
Cañoncito Navajo Chapter
Laguna Pueblo
Navajo Tribal Council
Ramah Navajo Chapter
Zuni Pueblo

Businesses

Continental Divide Electric Cooperative
Cottonwood Gulch Foundation
First National Bank
G S & S Partnership
Grant County Farm & Livestock
Grants State Bank
Hampton Builders Corporation
Headquarters West Ltd.
Hunter Corporation
Jerome P. McHugh & Associates
Mariah Associates
Moleres Ranch Inc.
NationsBank
NM-AZ Land Company
Pitchford Properties
Public Lands Association
Public Service Co. of NM
Quivira Research Center
REI
Sandia Man Films
SW Off Road Enterprises
Sunset Inc.
Techado Land & Cattle Co.
Western Land Bank
Wilderness Center
Williams Co.
Zia Research
Zuni Archeology Program

Interest Groups

Albuquerque Wildlife Federation
American Wilderness Alliance
American Wildlands
American Fisheries Association
Amigos Bravos
Archeological Conservancy
Backcountry Horsemen
Center for Environmental Research
Central NM Audubon Society
Cibola Chamber of Commerce
Commission of Wilderness Supporters
Continental Divide Trail Society
Defenders of Wildlife
Earth First
East Manzano Alliance
Friends of Paleontology
Forest Guardians
Gallup Convention & Visitors Bureau
Grand Canyon Trust
Greater Gila Biodiversity Project
Los Amigos del Malpais
National Audubon Society
National Parks & Conservation Association
National Wildlife Federation
Natural Resources Defense Council
NM Archeological Council
NM Cattle Growers Association
NM 4 Wheelers
NM Garden Clubs
NM Land Use Alliance
NM Mountain Club
NM PIRG Fund
NM Speleological Society, Sandia Grotto
NM Trials Association
NM Volunteers for the Outdoors
NM Wilderness Coalition
NM Wilderness Study Committee
NM Wildlife Federation
Plateau Sciences Society
Public Land Users Association
Public Lands Action Network
Sandia Mountain Wildlife Association
Sierra Club
Southwest Research & Information Center
The Nature Conservancy
The Wilderness Society
The Wildlife Society
Tonantzin Land Institute

University of Arizona
University of New Mexico

TABLE 5-1 (concl'd)

Interest Groups, concl'd

Wilderness Watch, NM Chapter
Wildlife Rescue of NM
Zuni Mountain Coalition

Federal Government Agencies

Advisory Council on Historic Preservation
Bureau of Indian Affairs (BIA),
Eastern Navajo Agency
BIA, Ramah Agency
BIA, Southern Pueblos Agency
BIA, Zuni Agency
Bureau of Mines
Bureau of Reclamation
Dept. of Energy
Dept. of Justice
Dept. of Transportation
Environmental Protection Agency
Fish & Wildlife Service
Dept. of Interior,
Office of Environmental Project Review
National Park Service (NPS),
El Malpais Nat'l Monument
NPS, El Morro Nat'l Monument
NPS, Southwest Cluster
Natural Resources Conservation Service
Rural Economic & Community Devel. Admin.
U.S. Air Force
U.S. Army Corps of Engineers
U.S. Forest Service, Cibola National Forest
U.S. Forest Service, Southwest Region
U.S. Geological Survey

State Government Agencies

Governor's Office
Bureau of Mines & Mining
Dept. of Agriculture
Dept. of Finance & Administration,
State Clearinghouse
Dept. of Game & Fish
Dept. of Highways & Transportation
Dept. of Parks & Recreation
Dept. of Tourism
Environment Dept.
NM Museum of Natural History
NM Office of Indian Affairs
State Game Commission
State Historic Preservation Office
State Land Office

Local Government Agencies

Catron County
Cibola County
City of Gallup
City of Grants
Coalition of AZ/NM Counties
Middle Rio Grande Council of Governments
Village of Milan

U.S. Congress

The Honorable Pete V. Domenici
The Honorable Jeff Bingaman
The Honorable Joe Skeen

TABLE 5-2

LIST OF PREPARERS

Name	Assignment	Education	Related Experience [a]
Core Team John Bristol	Wilderness, Recreation, Visual Resources, Transportation Planning	BS Landscape Architecture	BLM Outdoor Recreation Planner, 16 years BLM Landscape Architect, 5 years USFS Landscape Architect, 6 years
John Roney	Cultural Resources, American Indian Concerns, Lands	BA Sociology/Anthropology MA Anthropology	BLM Cultural Resource Specialist, 22 years
Jim Silva	Wildlife Habitat, Threatened & Endangered Species, Vegetation, Fire	BS Biology	BLM Wildlife Biologist/Natural Resources Specialist, 24 years
Margaret Sorensen	Recreation, Facility Development, Interpretation	BS Geology/Education	BLM Interpretive Specialist, 11 years
Gene Tatum	Vegetation, Range Management, Woodland Resources	BS Range Science	BLM Natural Resource Specialist, 5 years BLM Rangeland Mgt. Specialist, 15 years
Natural Resource & Planning Advisors Steve Fischer	Planning Advisor, NCA Manager	BA Political Science, Fine Art MA Anthropology	BLM Natural Resource Specialist, 2 years BLM Project Manager/NCA Manager, 10 years BLM Public Affairs Specialist, 3 years
Kent Hamilton	Planning Advisor, Social & Economic Conditions	BS Agricultural Economics	BLM Community Planner, 10 years BLM Economist, 11 years BIA Economist, 15 years
Patricia McLean	Planning Advisor, Geology & Minerals	BA English	BLM Manager, 11 years (Retired) BLM Administration, 8 years
Jerry Wall	Soil & Water Advisor	BS Forestry Management MS Forest Soils	BLM Soils Scientist, 21 years USFS Soils Scientist, 10 years
J.W. Whitney	Planning Advisor	BS Botany	BLM Natural Resource Specialist, 30 years

TABLE 5-2, concl'd

Name	Assignment	Education	Related Experience [a]
Technical & Document Production Staff M'Lee A. Beazley	Graphic Artist, Desktop Publisher & Printing Coordinator	Certified Graphic Design	BLM Visual Information/Printing Specialist, 5 years
Crista Carroll	Geographer	BFA MA Geography	BLM Geographer, 11 years
Jeanne Holtby	Proofreader	High School Diploma	BLM Range Clerk, 4 years
Greg Homan	Cartographer (NM)	BS - Geography	BLM/Other, 11 years
Barbara Laskar	Word Processor	High School Diploma	BLM Staff Assistant, 20 years
Anna Salas	Word Processor & Process Records Mgr.	High School Diploma	BLM Staff Assistant, 16 years
Jennifer Schultz	Copy Editor & Proofreader	BA Psychology	Temporary Assistant
Sarah W. Spurrier	Writer-Editor	BA Psychology MBA	BLM Writer-Editor, 17 years Technical Writer-Editor, 2 years (pvt. industry)

Note: [a] Acronyms are as follows: BIA--Bureau of Indian Affairs, BLM--Bureau of Land Management, USFS--U.S. Forest Service.

COMMENT LETTER: 1

No. 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

RECEIVED
BLM
99 SEP 22 AM 9:53
ALBUQUERQUE, N.M.

SEP 17 1999

Mr. Edwin J. Singleton
Manager
Albuquerque Field Office
Bureau of Land Management
435 Montano Road NE
Albuquerque, NM 87107-4935

Dear Mr. Singleton:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Bureau of Land Management (BLM) Draft Environmental Impact Statement (DEIS) for the Rio Puerco Resource Management Plan Amendment for the El Malpais National Conservation Area (NCA), and Chain of Craters Wilderness Study Area, New Mexico.

The purpose of the El Malpais Plan and DEIS (formally the *Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement for El Malpais National Conservation Area and Chain of Craters Wilderness Study Area*) is to satisfy requirements of the National Environmental Policy Act (NEPA) to evaluate the environmental effects associated with various land use management proposals for public lands of the El Malpais NCA and designated adjacent lands.

The DEIS evaluates alternatives to current management plans in place and considers changes to the size of the El Malpais NCA. Specifically, BLM proposes to adjust the boundaries of the El Malpais NCA to remove 960 acres of land belonging to the Acoma Tribe, add 41,300 acres of contiguous public lands for a total El Malpais NCA size of 302,440 acres in Cibola, Catron, and Socorro counties, New Mexico, and modify land use management practices.

Four potential land use management alternatives are considered in the DEIS: Existing Management (equivalent to the No Action Alternative), Resource Use (more intensive recreational development of the NCA), Natural Processes (less active management of the NCA, including removal of some recreational facilities), and Balanced Management (which adds some 0new recreational facilities, and is designated as the Preferred Alternative). Implementation of any of the action alternatives would comply with the congressional law that established the NCA in 1987. BLM is required to manage NCAs with a "higher order of protection" than for multiple use lands.

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EPA rates this proposed action as "**EC-2,**" i.e., EPA has "**Environmental Concerns and Requests Additional Information in the Final EIS**." We have identified several environmental concerns that need to be included in the Final EIS (FEIS) to complement and to more fully insure compliance with the requirements of NEPA and the CEQ regulations. These areas include document clarity, mitigation, livestock grazing, water quality, recreation, transportation, cultural resources, wildlife habitat, environmental justice, permitting, and general editorial needs. Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act, to inform the public of our views on proposed Federal actions.

Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the FEIS. If you have any questions, please contact Mike Jansky of my staff at (214) 665-7451 for assistance.

EPA appreciates the opportunity to review the DEIS. We request that you send our office five copies of the FEIS at the same time that it is sent to the Office of Federal Activities, EPA, 401 M Street S.W., Washington, D.C. 20460.

Sincerely yours,

Robert D. Lawrence, Chief
Office of Planning and Coordination
Compliance Assurance and Enforcement Division

Enclosures

DETAILED COMMENTS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
RIO PUERCO RESOURCE MANAGEMENT PLAN AMENDMENT, MANAGING LAND AND RESOURCE FOR EL MALPAIS NATIONAL CONSERVATION AREA AND CHAIN OF CRATERS WILDERNESS STUDY AREA, SOUTH OF THE CITY OF GRANTS, CIBOLA COUNTY, NEW MEXICO

Background

The purpose of the El Malpais Plan and DEIS (formally the *Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement for El Malpais National Conservation Area and Chain of Craters Wilderness Study Area*) is to satisfy requirements of the National Environmental Policy Act (NEPA) to evaluate the environmental effects associated with various land use management proposals for public lands of the El Malpais National Conservation Area (NCA), New Mexico and designated adjacent lands. The Department of Interior's Bureau of Land Management (BLM) is the proponent for this action. The BLM Albuquerque, NM Field Office is the designated lead office. In addition to evaluating alternative land use management proposals for El Malpais NCA, the DEIS also serves to amend the Rio Puerco Resource Management Plan, as required by law.

The DEIS evaluates alternatives to current management plans in place and considers changes to the size of the El Malpais NCA. Specially, BLM proposes to adjust the boundaries of the El Malpais NCA to remove 960 acres of land belonging to the Acoma Tribe, add 41,300 acres of contiguous public lands for a total El Malpais NCA size of 302,440 acres in Cibola, Catron, and Socorro counties, New Mexico, and modify land use management practices. Four potential land use management alternatives are considered in the DEIS: Existing Management (equivalent to the No Action Alternative), Resource Use (more intensive recreational development of the NCA), Natural Processes (less active management of the NCA, including removal of some recreational facilities), and Balanced Management (which adds some new recreational facilities, and is designated as the Preferred Alternative). Implementation of any of the action alternatives would comply with the congressional law that established the NCA in 1987. BLM is required to manage NCAs with a "higher order of protection" than for multiple use lands.

SPECIFIC COMMENTS

Management Units
Reference Chap. 1

1-A Due to the large number of administrative and management units discussed in the DEIS, the document should clearly indicate those units that are within the scope of the document, and those that are not. For example, it should be clearly stated early in Chapter 1 that El Malpais National Monument is entirely outside the scope of the document. Please clarify in the Final EIS.

RESPONSES TO COMMENT LETTER: 1

1-A--On page 1-2 in the section, "Location of the Planning Area," the last sentence has been changed to read, "The northern section of the Planning Area nearly surrounds, <u>but does not include</u>, the El Malpais National Monument, administered by the National Park Service (NPS)."

Document Clarity
Reference Chap. 3 and 4

1-B The analysis of environmental effects is conducted according to the issues of concern outlined in Chapter 1. Focusing on the same 10 issues for each of the resource areas of concern is potentially limiting and in many cases, causes redundancies or inconsistencies in the analysis. For example, on p. 4-5, the analysis of transportation resources includes a discussion of cultural resources. The discussion of transportation issues should focus solely on transportation issues.

1-C In another example, the analysis of American Indian Use and Traditional Cultural Resources and the analysis of Cultural Resources demonstrate how the structure can create inconsistencies in the analysis. Under the American Indian Uses resource discussion, the impacts to Issue 7-Cultural Resources are discussed, however, in the discussion of Cultural Resources, a "no impact" determination is made with regard to Issue 6-American Indian Uses and Traditional Cultural Practices. It is not clear how impacts can occur in one instance but not in the other instance. These conclusions appear to be inconsistent. Please clarify in the Final EIS (FEIS).

Continuing Management Guidance and Actions Common to All Alternatives
Reference p. 2-2

1-D The DEIS dismissal of detailed analysis for existing actions, decisions, and guidelines which would be continued regardless of which alternative is selected, is not adequately justified. Ongoing management activities and developments should be evaluated for potential environmental effects. For example, the development of a Ranger Station nature trail is mentioned but not assessed in Chapter 4.

Criteria for Selection of Alternatives
Reference Chap. 1

1-E The DEIS should list and describe specific criteria used to determine how the alternatives were formulated and how they were selected for analysis. There are many combinations of management approaches that might offer varying degrees of resource use and natural process priorities. For example, why not consider establishing 5 or 15 new hiking trails instead of the proposed 20, 10, or none. In addition, there are many geographic units within the study area at which variable management principals could be applied. The EIS should provide information on how the alternatives were selected and what criteria were used in the selection process.

No Action Alternative
Reference p. S-2, Table A, p. 2-27, p. 4-2

1-F Table A indicates that the camping and picnic facilities under the No Action Alternative are all currently in existence. P. 2-27 states that "limited facility development beyond what already exists in the Planning Area would be undertaken." This statement is inconsistent with the Table A information. The EIS should list or describe any proposed facilities under the No Action

1-B--In Chapter 1, ten issues are identified as requiring management resolution. In Chapter 2, four potential courses of action (alternatives) are described to resolve the issues. Chapter 3 contains descriptions of numerous resources of the Planning Area, the opportunities and constraints on their use, and the support services required for effective resource conservation and use. Chapter 4 contains the analysis of the potential impacts under each alternative. We have found that this format allows the public to follow the impacts by alternative or by resource/support service. The format may cause some redundancy but not inconsistencies in analysis. We have reexamined page 4-5 of Chapter 4 and find no inconsistencies.

Planning for a multiple-use agency is complicated by the agency's need to provide support services. Access to cultural sites is accounted for in the access and transportation acreage and mileage. Access and transportation services development and needs can be required by or restricted by cultural resource availability. If the cultural resources can be visited and viewed by recreators, access is desirable. If on the other hand, cultural resources need protection, restriction of access is desirable. It is useful in our planning and National Environmental Policy Act (NEPA) analysis to examine each resource or service need in relation to the issues to determine what the impacts of implementing each alternative would be. (The document text has not been changed)

1-C--Discussion on page 4-9 (Issue 7--Cultural Resources) states that implementing the cultural resources management program outlined in the No Action Alternative could impact American Indian uses and traditional cultural practices. The discussion on page 4-10 considers how the management program for American Indian uses and traditional cultural practices could affect cultural resources. Because the No Action Alternative does not include management actions specifically related to these practices (refer to page 2-35), cultural resources would not be affected. In other words, under this alternative, management of cultural resources would affect American Indian uses and traditional cultural practices, but management actions related to these uses and practices would not affect cultural resources.

1-D--The Ranger Station Nature Trail was evaluated for potential environmental effects in an Environmental Assessment (NM-017-90-04), as stated on page 2-2 of the Draft Plan/EIS. Also, the impacts of the additional ½ mile of trail are considered in this Proposed Plan/Final EIS.

1-E--The purpose of this document is to provide land use planning for public lands and resources of the NCA, in accordance with Section 301 of Public Law 100-225 (refer to page 1-2 and Appendix A-2). It is a complex multiple-use plan addressing 10 major issues and 4 different alternatives.

After the initial scoping and consultation with the National Park Service, it became apparent that public interests ranged from the BLM making minimal changes in the NCA and letting it remain "natural," to making developments that would encourage higher levels of visitation and enjoyment of the naturalvalues. The specifics for each alternative were based on assessment by an interdisciplinary team of BLM specialists, who considered other NEPA and planning documents to get a regional and national perspective. The team determined that a reasonable way to approach alternatives would be to select general themes or management philosophies to guide alternative development. These specialists discussed geographic units, regulatory and resource constraints, and resource potentials, making a range of recommendations suited to the areas and their capabilities. They then grouped these recommendations to form the alternatives. The criteria established with the issues in Chapter 1 were considered in this alternative development process.

Alternative, as well as provide support for the conclusion on p. 4-2, which states that 22 acres of land would be disturbed as a result of facility development. Table A also lists hiking trails under the No Action Alternative as "5 existing trails". P. 2-27 states that "when built, the Nature Trail (approved in 1989) would extend from..." The FEIS should clarify whether new trails are expected to be built under the No Action Alternative, in addition to the current 5 existing trails.

Mitigation Measures

1-G The DEIS lacks a discussion of specific mitigation measures that BLM proposes for instances where impacts have the potential to be adverse. The EIS should clearly describe mitigations that BLM proposes. It is expected that the Record of Decision for the EIS will detail those measures that BLM will take to reduce impacts.

Baseline Environmental Data
Reference Chap. 3

1-H The DEIS lacks data sources and citations for most of the baseline environmental data presented in Chapter 3. The EIS should provide sources and citations, if available, for each of the primary resources described in Chapter 3.

Age of Analysis

1-I There are a number of instances in the DEIS that indicate that some of the scoping and analysis for this DEIS was accomplished a number of years ago. For example, public scoping meetings were held in April of 1995 and some of the visitor data projections are from 1988. Given the length of time that has passed in some cases, and that the BLM intends that the "the life of this El Malpais Plan is 15 to 20 years," we are concerned that the public involvement and analysis source data may require updating. The EIS should address to what extent the four year old scoping meetings are still considered to be adequate (that is, the content of the alternatives have not changed substantially and the public has been kept informed during this time). Also address the formal monitoring, review, and update procedures that BLM will use to ensure that the DEIS analysis remains valid during the 20 year life of this plan.

LIVESTOCK GRAZING

Proposed Livestock Grazing Developments
Reference, p. S-2, Table A, pp. 2-39 to 2-40, Maps 33 and 34, Chap. 3, Chap. 4, p. 4-12

1-J Table A should list livestock grazing developments for any of the DEIS alternatives. The facilities described are all recreation related. However, p. 2-40 states that for Alternative B, "more developments related to...livestock...are proposed." The FEIS should describe in detail the existing and proposed facilities for livestock grazing (for example, fences, dirt tanks, pipelines, troughs, windmills, corrals) under each of the alternatives.

1-F--The term, "limited facility development" was intended to express that facilities already approved through the NEPA process but not yet built would be developed as funding permitted. Further facility development could be needed for resource protection, interpretation and environmental education, and visitor safety and health, but its extent would not be known until the need for action was identified and evaluated. No additional recreational facilities such as campgrounds, trails, picnic sites or trailheads would be built. Changes have been made in Table A and within the text of the document to clarify the proposed level of development.

1-G--Little mitigation has been proposed in this plan because much of the Planning Area has been under special management for years [as several Wilderness Study Areas (WSAs), an outstanding natural area, and a natural environmental area], as identified in the *Rio Puerco Resource Management Plan* (RMP). Because much of the acreage has been under interim wilderness management to maintain wilderness values, federal minerals are not available for development. (The BLM can also acquire private surface and mineral rights as they become available.)

Continuing management under the added requirements of the NCA legislation has removed other conflicting uses that would have required mitigation. For example, the legislation requires the withdrawal of lands from entry under the land laws (so they cannot be sold or exchanged), and prohibits commercial timber and woodland harvest. Motorcycle races or other off-road vehicle competitive events are excluded. The BLM must monitor recreational values, and has identified the limits of acceptable change to them. (However, American Indian access is allowed, and valid existing rights-of-way remain open.) Because of all these requirements and special management conditions, much of what might have been mitigation was used to create the alternatives.

The BLM develops more specific mitigation measures and Best Management Practices during planning for individual projects, including the management of livestock grazing allotments.

1-H--Much of the information in Chapter 3 is based on Field Office file data gathered and developed for this document. Formal references added for cultural resources are listed below; references for socioeconomic information are listed at the end of Tables 3-17, 3-18 and 3-19 in this final document. Information about traditional cultural properties and practices in the El Malpais NCA is drawn primarily from government-to-government contacts between the BLM and the American Indian tribes and pueblos who have interests in the area. These sources supplement the text references and reference list found in the draft document.

The cultural-historical framework for the El Malpais area was defined in the mid-20th century by two researchers:

> Dittert, Alfred Jr. 1959. *Culture Change in the Cebolleta Mesa Region, Central Western New Mexico*. Unpublished doctoral dissertation. Tucson, AZ: University of Arizona.
>
> Ruppe, Reynold Jr. 1953. *The Acoma Culture Province: An Archaeological Concept*. Unpublished doctoral dissertation. Cambridge, MA: Harvard University.

(Continued 1-H)

The other major source of information is a series of large-scale, Class II and Class III, cultural resource inventories funded by the BLM and completed through the University of New Mexico, Office of Contract Archaeology (Albuquerque, NM).

Doleman, William H. 1990. *El Malpais NCA, 1989 Archeological Survey, Final Summary Report*.

Elyea, Janette. 1990. *The NZ Project, Archeological Survey Report.*

Wozniak, Frank E. and Marshall, Michael P. 1991. *The Prehistoric Cebolla Canyon Community: An Archeological Class III Inventory of 320 Acres of BLM Land at the Mouth of Cebolla Canyon.*

Marshall, Michael P. 1993. *Archeological Investigations in the Cerritos de Jaspe Subunit of the El Malpais Conservation Area, The 1991 BLM Survey.*

Elyea, Janette; Hogan, Patrick and Wilson, C. Dean. 1994. *The Armijo Canyon Archeological Survey.*

1-I--The scoping and analysis data have been reviewed. The interest level on this EIS has been low from the beginning, in part because many people were reasonably well satisfied with decisions in the original Plan/Environmental Assessment (EA--1991). Therefore, the issues raised in the 1995 scoping were those not resolved in the original document, including wilderness, levels of recreational development (including vehicular access), American Indian concerns and Continental Divide Trail location. These concerns led to the earlier Plan/EA decisions being appealed on procedural technicalities. The issues continue to relate to the same resources.

Baseline information and public attitudes toward cultural resources and American Indian traditional cultural practices have not changed in any significant way since scoping for the DEIS. The BLM has maintained contact with local tribes regarding American Indian concerns, as outlined in Table R-A below. No comments from these groups were received on the draft document.

Visitor data projections were done based on the comparison of highway “capture rates” at other National Park Service facilities that are similar to the El Malpais Complex (the National Monument and National Conservation Area) in terms of park features, resources and/or physical situation. Capture rates represent the proportion of motor vehicles that enter an area as compared to the number of vehicles that are known to travel an adjacent or nearby roadway.

TABLE R-A

BLM CONSULTATIONS WITH AMERICAN INDIAN GROUPS DURING PREPARATION OF THE EL MALPAIS DRAFT PLAN/EIS

Week of April 3, 1995	BLM staff met w/Zuni Tribal Council, Ramah Navajo Chapter officials, & Acoma Tribal officials.
May 15, 1995	BLM staff received a resolution from Ramah Navajo Chapter regarding its participation as a cooperating agency.
July 1995	BLM staff responded to Ramah resolution.
April 1996	BLM staff invited Governors & Presidents of interested & affected Pueblos & Navajo Chapters to an update meeting on the plan. Invitation was in writing, w/follow-up telephone calls to Laguna, Zuni, Ramah & Cañoncito. Meeting was held on May 1, 1996, w/Acoma in attendance.
October 1996, January & March 1997	BLM staff made additional contacts w/Ramah Chapter about the Chain of Craters Wilderness Study Area.
April 15, 1997	BLM staff met w/Ramah Chapter officials for further plan discussion.
August 24, 1999	BLM staff delivered copies of Draft Plan/EIS to Zuni Governor & Tribal Council, encouraging review & comment.
September 13, 1999	BLM staff delivered copies of Draft Plan/EIS to Acoma Lt. Governor & Lands Administrator, encouraging review & comment.
September 14, 1999	BLM staff delivered copies of Draft Plan/EIS to Ramah Navajo Chapter President & officials, encouraging review & comment.

The BLM relies on the judgment of its interdisciplinary teams to assess data, trends and projections for the future. The El Malpais Team recognized the limits on the data, but considered it to be the best available, and adequate for completion of the Plan/EIS. The Congress specified that the plan for the NCA include four parts: (1) An implementation plan for interpretation and public education, (2) Public facility plans, (3) Natural and cultural resource management plans, and (4) A wildlife resource management plan. After scoping (both with the public and with resource specialists), six other issues were included in the Plan/EIS. The document is comprehensive and should remain a viable land use plan for the next 15 years.

1-K Maps 33 and 34 show livestock grazing improvements in the Cebolla Wilderness and the West Malpais Wilderness, respectively. The maps should indicate whether these are existing or proposed improvements, under what alternative(s) they are proposed, should provide text or table details on the developments, and must provide a full analysis of their potential impacts on, for example, wildlife habitat, threatened and endangered species, water resources, recreational opportunities, cultural resources, and visual resources.

1-L P. 4-12 states that "range improvements...proposed under the No Action Alternative would be subject to environmental analysis, and their potential adverse effects would be mitigated." It is expected that such analysis would be accomplished in this DEIS and not be deferred. Additionally, this statement is not made in relation to the other alternatives.

Water Quality Impacts of Livestock Grazing
Reference p. 2-56

1-M The EIS must address in detail the impacts to water quality as a result of current and proposed activities. In particular, springs used by livestock should be assessed for existing and future water quality impacts. This concern should be addressed in the FEIS.

Development of Springs
Reference p. 2-56

1-N The EIS must detail both current practices and proposals to pipe water away from springs for livestock. Specifically, impacts of spring developments on water quality, wildlife and wildlife habitat, and ground water recharge are expected to be addressed. Please address in the Final EIS.

Alternative C Grazing
Reference p. 2-57

1-O The DEIS states that under Alternative C grazing [would be] reduced but provides no details for this statement. The FEIS should explain to what extent would grazing be reduced and identify which areas.

Grazing Rest Periods
Reference p. S-7, p. 4-19

1-P Alternative A (No Action) indicates that a longer minimum rest period from livestock grazing is proposed under the No Action Alternative, but does not indicate what the current, baseline conditions and practices are. P. 4-19 states that "planned rest from livestock grazing management would be increased" and also proposes but does not describe "improved patterns of livestock grazing use." This implies some shortcomings or impacts due to current grazing practices. Current practices are neither described nor assessed in the DEIS, nor is the proposed increase in rest periods explained. The FEIS should provide a description of current livestock

(Continued 1-I)

1-J--You are correct, page 2-40 mentions that more livestock developments are proposed. However, no specific range improvements are proposed under Alternative B. The text has been revised to state that additional livestock facilities could be developed if monitoring indicated a need, and NEPA analysis was done (refer to page 2-64--"If monitoring studies indicated the need, existing plans would be revised, new plans developed , and/or livestock grazing use reduced").

1-K--Maps 33 and 34 show existing improvements. Map 33 is referred to on page 3-10 of the Draft Plan/EIS, while Map 34 is referred to on page 3-13.

1-L--When this draft document was prepared, no specific range improvements were planned under the No Action Alternative, and no need for them had been identified under any alternative. The improvements were expected to be the same under all alternatives until monitoring provided data that suggested other improvements were needed for effective management. The statement on page 4-12 was intended to indicate the BLM's commitment to NEPA compliance if monitoring indicated the need for other improvements.

Since the draft was prepared, litigation has been brought against the BLM that requires site-specific NEPA analysis for the renewal of most of the grazing permits in the Planning Area. As a result of the litigation, the BLM has delayed work on this Proposed Plan/Final EIS and completed some qualitative assessments (monitoring) and site-specific environmental assessments (EAs) on 13 of the 16 NCA allotments. This monitoring and assessment has shown a need for management improvements to upgrade ecological conditions on five of these allotments; some improvements are already being developed. The BLM has found no significant impacts resulting from grazing permit renewals nor these improvements. The allotments and improvements (including new ones) are shown in Table R-B below. They would be the same under any

TABLE R-B

RANGE ALLOTMENTS BY STATUS AND IMPROVEMENTS, EL MALPAIS NCA

Item	Before Recent Grazing EAs	After Recent Grazing EAs
Principal Class of Livestock Cow-Calf	12	11
Yearling	2	3
Season of Use Yearlong	13	12
Seasonal	3	4
AUMs Permitted (NCA total)	35,942	35,942
Grazing System Year Round	8	8
Seasonal Use	3	4
Deferred Rotation	3	5
Fence (miles--NCA total)	494	503

1-M--The DEIS is quite specific in stating that the only perennial waters within the Planning Area are two springs for which no water quality data is available. One spring, Cebolla, was in private ownership until recently when it was purchased and fenced by the BLM. The associated wetlands also have been fenced to exclude livestock.

The other spring, Cebollita, is high on the side of a steep mesa slope and is only impacted by occasional trespass livestock. It was originally developed by a homesteader and diverted for irrigation on private lands below the mesa. The diversion is a long way downslope from the spring and has had no known impact on groundwater recharge, wildlife, wildlife habitat or water quality. The BLM has no basis for challenging the private landowner's right to the diversion.

The BLM's goal in piping some water away from springs is to remove livestock impacts from the spring and associated wetlands. This policy is part of the agency's ongoing program to reestablish riparian ecosystems and improve water quality.

The mitigation of past livestock impacts by eliminating sediment and fecal material in the water should improve water quality. None of the alternatives in the Plan/EIS proposes to reverse the fencing or livestock exclusion.

1-N--Refer to Response 1-M.

1-O--No specific reductions in livestock grazing are proposed under Alternative C, nor are specific range improvements. Refer to Responses 1-J and 1-L.

1-P--Page S-7 (Summary Table) of the Draft Plan/EIS refers to the rest period required in Allotment Management Plans (AMPs) or Coordinated Resource Management Plans (CRMPs) as they are developed. The need to develop AMPs or CRMPs is based on resource conditions or management issues. As livestock grazing is not an issue to be resolved in this EIS, no detailed alternative consideration and impact analysis were performed nor presented in the document. The statement on page 4-19 (revised) that "rest from livestock grazing use would be increased and rangeland improvements would be constructed to improve patterns of livestock grazing use" reflects management actions that would be addressed in an AMP. Where applied, these management actions would have a positive impact on vegetation.

grazing rest period policies, an assessment of their environmental impacts, and the purposes of the proposed increase in rest periods.

Impacts of Livestock Grazing
Reference Chap. 4

1-Q The EIS does not quantify or assess the effects of both current and proposed livestock grazing practices. Although the granting of allotments can be considered to be outside the scope of this FEIS, the effects of these activities within the Planning Area must be described and quantified. Provide a full analysis of these activities and land uses, to include, at a minimum, the number of head of cattle (or animal unit months) that are authorized and exercised throughout the planning area, length of grazing time by allotment, analysis of impacts of grazing (such as on surface disturbance, erosion, soil compaction, water quality, water use, wildlife habitat, cultural resources disturbance). It is imperative that the FEIS provide a comprehensive analysis so that the public and interested groups and agencies can be properly informed of current and proposed activities and their impacts.

Livestock Allotments Status
Reference p. 3-31, Table 3-13, p. 3-28

1-R Table 3-13 indicates that a number of livestock grazing allotments that overlap the planning area are Category I allotments, which are "managed to improve their ecological condition and resolve resource conflicts." This implies that some issues and concerns exist with these allotments. The EIS should provide details on these issues and their status in Chapter 3. These issues are relevant to providing the public with complete information on existing conditions, and to properly assessing proposed improvements within Category I allotments.

RECREATION

Discouragement of Recreation
Reference p. 2-57

1-S The DEIS states that under Alternative C, "recreational use would be discouraged." The Final EIS should provide details for this statement. The discussion that follows does not indicate a discouraging of recreation, but an emphasis on dispersed opportunities verus facility-centered recreation.

Recreation Visitation Projections
Reference, p. 3-1

1-T The DEIS states that recreation visitation is projected to grow to about 207,600 by year 2000. The citation given for this projection is 1988. Given that 10+ years have passed since that projection was made, the FEIS should provide much more recent figures and projections. P. 3-1

1-Q--BLM land use plans such as the one for this El Malpais NCA are issue driven. Only those resource uses at issue are subject to the NEPA requirements of alternative formulation and impact analysis. Threatened and endangered species assessments have been made, with no determination that livestock is an issue. Wilderness recommendations to the Congress through the BLM's *New Mexico Statewide Wilderness Study* (1988) concluded that livestock grazing does not affect these areas' suitability for designation as wilderness. During the development of the Plan/EIS, no BLM specialist identified the need to consider livestock grazing as an issue requiring resolution in the Planning Area.

The BLM evaluates range condition and adjusts livestock grazing numbers when needed as part of its ongoing range management program. As stated on page 2-15, the agency completed a livestock grazing EIS in 1982 and followed up with monitoring studies. Appendix L, Table L-1, displays the adjustments in livestock grazing use and management that were made in 1992 based on the monitoring studies. Site-specific NEPA EAs for grazing permit/lease renewals have been completed in 1999-2000 for 13 of the 16 grazing allotments overlapping the Planning Area. EAs for the other three Planning Area allotments are scheduled for completion in 2002. Based on these considerations, livestock grazing is not an issue for this Plan/EIS.

1-R--Of the 16 allotments listed in Table 3-13, page 3–31, 6 are in the "I" (Improve) category. Allotment management changes have been implemented to improve resource conditions and resolve resource conflicts. Appendix L, Tables L-1 and L-2, displays the management changes made before completion of the Draft Plan/EIS. These tables have been updated in the Final EIS to display changes made since publication of the draft document.

Once an allotment is placed in the "I" category, it is not easily changed to the "M" (Maintain) category. Improving resource conditions or resolving resource conflicts sufficiently to allow reclassification can take 10 or more years. Monitoring studies, data collection and evaluation must be performed in many cases for over 10 years before adequate information exists for such a reclassification. "I" category allotments are the highest priority for committing BLM resources. Keeping allotments in the "I" category maintains the agency's priority and focus for monitoring studies.

1-S--Clarification of "recreational use would be discouraged" in Alternative C has been provided in the Final EIS. The BLM's intent would not be to promote or market recreational opportunities within the Planning Area, but to direct visitors inquiring about such opportunities to other areas.

1-T--The visitor use figure of 65,000 applies to Fiscal Year 1995, as stated in Table 3-1. This table and the text of Chapter 3 have been revised to reflect more recent visitor use figures for the NCA and National Monument.

also states that "current" visitation is about 65,000/year, but does not provide either a year or citation for this figure.

TRANSPORTATION

Motor Vehicle Use Designations
Reference, p. S-2, Table A, p. 2-33, Table 2-10

1-U The DEIS is inconsistent in the use of nomenclature referring to motor vehicle use designations within the Planning Area. Table A figures are listed for Access by Non-motorized, Non-mechanized Means, Cross-Country Vehicle Travel, Off-Highway Vehicle Access, and Open Vehicle Routes. Table 2-10 provides data listed by area status as Open, Closed, Limited, or Un-designated. Please clarify in the FEIS.

Paving Projects
Reference Chap. 4

1-V The DEIS should provide a listing, description, and analysis of effects of any proposed new paved or upgraded roads, by alternative. There are scattered references within the DEIS to such actions, but no clear proposed activities are described and assessed.

CULTURAL RESOURCES

National Register Eligible Sites
Reference p. S-6, Table A

1-W Table A indicates that there are 4-5 likely sites that are National Register eligible under Alternatives A and D (no figures provided for Alternative B), but none for Alternative C. The EIS should provide rationale for why sites eligible under Alternatives A and D would not be eligible under Alternative C. The assumption is that BLM would elect to not nominate these sites under Alternative C, although they would still be considered to be National Register eligible. Please address in the FEIS.

Consultations with New Mexico SHPO and Native American Tribes and Pueblos

1-X The FEIS must provide details on consultations with the New Mexico State Historic and Preservation Officer (SHPO) and Native American Tribes and Pueblos with regards to each of the alternatives, including plans for on-going consultation for identified sites, management of scientific investigations and excavations, disposition of recovered cultural artifacts, status of the planning area's historic and archaeological resources protection plan (HARRP), effects of current and proposed recreation and grazing developments on cultural resources, and a clear description of relevant management procedures intended to protect cultural and archaeological resources.

1-U--For consistency, the terms in Table A and Table 2-10 have been revised.

1-V--We did state that we would work with other road administrators if upgrades, realignments, rehabilitation or construction proposals involving their roads were needed (refer to page 2-4 of the Draft Plan/EIS). Upgrades of any BLM-administered road would be the result of the increased frequency of maintenance or reconstruction of an existing road. Reconstruction would generally occur when resource protection or user safety was needed as the result of a natural occurrence or management practice.

Analysis of the impacts from upgrading BLM roads does not appear to be essential to a reasoned choice among the alternatives. Improved accessibility as a result of road upgrades from reconstruction or maintenance may result in changes in visitation to areas accessed by the roads. Visitation may increase because of improved access for those who did not have the proper vehicle to negotiate the rough road before it was upgraded. However, present users could also have to go elsewhere because they could no longer enjoy the driving challenge of a rough road and the experience of isolation, with other visitors accessing the area. In Chapter 3 of the Draft Plan/EIS, recreational visitor use along BLM-administered roads is estimated to be low.

1-W--The "Special Designations" entries in Table A (page S-6) refer to nominations of archeological and historical sites to the National Register of Historic Places, which is not the same as eligibility of sites for the register. The criteria for National Register eligibility are very broad. Most of the hundreds of archeological sites found in the El Malpais NCA have the potential to yield information important in prehistory, and are therefore eligible for the National Register regardless of which plan alternative is selected. In practice, only the most deserving properties are actually nominated to the National Register. The table entries present varying degrees of emphasis placed on the actual nomination process under the four plan alternatives, not the numbers of properties that might be considered eligible for nomination.

1-X--The DEIS was sent to the New Mexico State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation. The SHPO's comments are included in this document. Compliance with the National Historic Preservation Act is based on the "Protocol Agreement between New Mexico Bureau of Land Management and New Mexico State Historic Preservation Officer," which was implemented under the BLM's national cultural resources Programmatic Agreement.

Consultations for this plan with American Indian tribes and pueblos are listed in Response 1_I. Alternatives for treatment of cultural resources were highlighted during each consultation. A complete listing of American Indian groups who received copies of the DEIS for review is provided on page 5-3 of the draft document.

We remind you that the Advisory Council on Historic Preservation has published its final rule, replacing the previous regulations in order to implement the 1992 amendments of the National Historic Preservation Act (NHPA). The final rule became effective June 17, 1999.

Active Management of Archaeological Sites

1-Y The DEIS states that actions undertaken under "active management" of archaeological sites "could constitute an adverse effect." Please provide details on these potential adverse effects, including whether the effects would be on the resources themselves and/or on traditional cultural practices, the specific nature of the effects, the mitigations that are planned to lessen such effects, and consultations that BLM has had with the New Mexico SHPO and Native American Tribes and Pueblos in regards to these activities.

WILDLIFE HABITAT

Fencing

1-Z There are a number of places where the DEIS mentions current or proposed fencing. For example, p. 2-55 describes proposed riparian fencing under Alternative B, and fencing to support grazing allotments is mentioned in a number of places. The FEIS should provide a detailed analysis for each alternative of the current and potential effects of various fencing projects on wildlife habitat (including water access issues and habitat fragmentation), and on recreational and Indian access to the planning area.

THREATENED AND ENDANGERED SPECIES

Consultation with USFWS and New Mexico Department of Game and Fish
Reference Chap. 4 general, p. 4-17, Chap. 5, Appendix Q

1-AA The DEIS states that "informal consultation" has occurred between BLM and US Fish and Wildife Service (USFWS) regarding potential effects on threatened and endangered species, and states that such consultation is "anticipated to be completed by early 1999." Given that the DEIS was released in June 1999, it is suggested that the Final EIS provide details on consultative activities. The FEIS should indicate the status of such consultation and should at a minimum contain copies of relevant correspondence between BLM and USFWS. No consultation is apparent with the New Mexico Department of Game and Fish. There is no Biological Assessment (BA) provided with the DEIS. This makes the document incomplete in terms of public information and review. At a minimum, the FEIS should contain a copy of the BA, and address the status of the USFWS Biological Opinion.

Threatened, Endangered & Other Special-Status Species
Reference pp. 2-11 to 2-12

1-Y--The statements referred to in this comment are found on pages 4-9, 4-29, and 4-60. They are part of a discussion that points out that cultural resources in the El Malpais NCA are valued from several differing points of view, and these different viewpoints cannot always be reconciled. Actions intended to protect scientific and interpretive values, such as signing, stabilization, and erosion control, can also be seen as intrusions that detract from the spiritual qualities attributed to the sites by traditional American Indians. Allowing nature to take its course on the sites, as some American Indians advocate, would inevitably lead to the loss of scientific and interpretive values.

Many of the management prescriptions developed in this document (especially under Alternative D) are compromises intended to conserve scientific and interpretive values while still respecting traditional American Indian values. Examples include effective prohibition of scientific research that involves site disturbance, and establishment of procedures to allow collection of prehistoric sherds for use in pottery making.

The key to mitigating or resolving these issues is continual consultation with all of the publics who have a stake in managing these resources. Consultations with the New Mexico SHPO, American Indian tribes and pueblos regarding these activities are discussed above in response to comment 1-I.

1-Z--The fencing identified on page 2-55 (1½ miles to protect the riparian area along Cibola Creek) was built in February 2000 as part of the BLM's grazing permit reauthorization process. The fence was constructed to agency standards to prevent any access problems for wildlife, so no habitat fragmentation is anticipated. No access problems for recreation users or American Indian people are anticipated.

1-AA--Refer to Appendix Q, which contains a copy of the Biological Assessment and the U.S. Fish and Wildlife Service's Biological Opinion/Concurrence Letter.

1-AB The DEIS stated on p. 2-12 that "Under any alternative, actions will not be allowed to...affect...special-status species or their habitats. This commitment will be met by preparation of an EA before any action is permitted." The use of multiple EAs for determining impacts on these species, would increase the probability that cumulative effects of the actions proposed under each alternative would not be assessed fully. Request that the FEIS address whether USFWS has endorsed this approach. In addition, the manner in which this approach is used in conjunction with the BA should be addressed.

1-AB--All actions proposed in the Plan/EIS were evaluated in the Biological Assessment (refer to Appendix Q). Individual EAs for projects to protect T&E species would be completed if the projects were not already identified in the EIS.

SOCIAL AND ECONOMIC CONDITIONS

Environmental Justice Analysis
Reference pp. 3-38 to 3-40, pp. 4-20 to 4-21

1-AC Chapter 3 indicates that the planning includes substantial numbers of minority and low-income residents. Note that much of the data presented in this section is at least 5 years old. The DEIS states on pp. 4-20 to 4-21 that "impacts to minority and low-income populations and communities have been considered, with no significant impact anticipated." No basis or support for this statement is provided within the DEIS.

1-AC--Several local American Indian tribes consider the NCA region to be part of their traditional tribal use area, including the Acomas, Lagunas, Zunis and Ramah Navajos. In particular, the Ramahs, who live west of the NCA, continue to use the region for gathering natural materials for traditional and subsistence purposes (including plants, piñon nuts and fuelwood), hunting and religious practices. Under the Preferred Alternative, 14 miles of local routes in the Chain of Craters Unit near the Ramah area would be closed to motorized vehicles. Tribal members who used portions of the unit near these routes would have to access them on foot or by horseback unless otherwise authorized. However, the Ramahs are not solely dependent on this 18,000-acre area for these uses.

On February 11, 1994, the President signed Executive Order #12898 which addresses environmental justice in minority and low income populations and places new responsibilities upon EPA and other Federal agencies in all activities requiring environmental assessment and review under the National Environmental Policy Act.

In accordance with Title VI of the Civil Rights Act of 1964, the Executive Order directs each Federal agency to ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

The Executive Order further directs each Federal agency to analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. section 4321 et seq. Mitigation measures outlined or analyzed in an environmental assessment, environmental impact statement, or record of decision, whenever feasible, should address significant and adverse environmental effects of proposed Federal actions on minority communities and low-income populations.

1-AD Each Federal agency is directed to provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of meetings, crucial documents, and notices.

1-AD--Consultations with American Indian tribes and pueblos are discussed above in Response 1-I.

Each Federal agency is required under the Executive Order to ensure that the public, including minority communities and low-income communities, has adequate access to public information relating to human health or environmental planning, regulations, and enforcement when required under the Freedom of Information Act, 5 U.S.C. section 552, the Sunshine Act, 5 U.S.C. Section 552b, and the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11044.

1-AE Therefore, the EIS must address the applicability of the Executive Order to the Federal action being analyzed in the NEPA process and document measures taken by the agency to fully assess the effects on minority communities and low-income communities. Although social and economic impacts have always been a consideration in EPA's Section 309 reviews, the Presidential Memorandum highlights the necessity to better integrate the consideration of human health, social and economic effects into the Section 309 review process. The Executive Order calls for collection and analysis of information on race, national origin, income level and other appropriate information for areas surrounding projects that have expected environmental, health and economic effect on those populations. Environmental Justice impacts should be fully addressed in the Final EIS. We have enclosed a copy of the EPA guidance document entitled, "Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses," to assist you in preparing the Final EIS. Please provide the analysis that supports your conclusion.

SOIL, WATER AND AIR

Map of Water Resources

1-AF The FEIS should provide a complete map of water resources within the Planning Area, including springs and associated riparian areas, perennial streams, and ephemeral wetlands.

Analysis of Effects on Water Resources
Reference p. 4-21, pp. 4-38 to 4-39, p. 4-52, pp. 4-68 to 4-69

1-AG The EIS should provide analysis of effects on water resources for any of the four alternatives. The referenced pages are largely limited to discussions of vegetation and fire management issues. We ask that the FEIS address and analyze the potential effects of current and proposed activities and developments on water resources throughout the planning area, including effects on all surface waters, water quality, groundwater use and quality, policies regarding wells, and proposed sources of water for current and proposed facilities.

Clean Water Act 402(p) National Pollutant Discharge Elimination System (NPDES) Permits
Reference Chap. 4

1-AH The FEIS should address whether NPDES permits are expected to be required for any

1-AE--Cibola County is a minority county, as indicated by the figures shown in Table 3_17. In 1990, the county's American Indian population was over 38 percent of the total. The Hispanic population was 34 percent, making the total minority population more than 72 percent. However, because analysis has determined that the Preferred Alternative would not cause significant impacts, a disproportionate distribution of impacts in Cibola County would not be a problem.

Other environmental justice considerations are stakeholder involvement, benefits and burdens. The BLM has maintained contacts with American Indian groups living and having cultural interests in Cibola County throughout the planning process. The plan includes measures to allow for some uninterrupted American Indian use within the NCA on specific occasions.

In Appendix R of the Draft Plan/EIS, Catron County population figures are provided, showing that minorities account for approximately 30 percent of the total population. If the Preferred Alternative created significant impacts and more than 30 percent of these impacts affected minorities, the BLM would consider this a disproportionate impact on low-income or minority groups. Based on the management actions being proposed for Catron County, the BLM believes no impacts to the human environment of Catron County would occur, and no disproportionate distribution of impacts would exist.

[Note: Catron County was not included in the draft document until it became evident that approximately 15,100 acres of federal land adjoining the Planning Area lie within the county (.3 percent of the total county acreage). These lands have high-value cultural resources similar to those in the NCA. The BLM has included the lands in this document to recommend their addition to the NCA for efficiency of management and resource protection. This recommended area would require plan amendment and NEPA analysis only if the Congress formally designated it as part of the NCA.]

1-AF--As discussed on pages 3-32 and 3-40 of the Draft Plan/EIS, water resources in the area consist of two springs with about 20 acres of wetlands, no perennial streams, a dozen ephemeral channels and several ephemeral playas, and stock tanks and shallow windmills for watering livestock. Showing these resources on a map would mean that they were critical to some proposed activity, the informational process, or the final decision. The only activity proposed for these waters is protecting the springs and wetlands, which is nearly completed.

1-AG--The DEIS documents the analysis of the impacts of all four alternatives. The effect of the total of all uses, both current and proposed, on surface and ground water would be very small. Well and spring water are used only when livestock are present in a pasture that has these features. Earthen stock tanks capture some surface runoff when it rains.

No designated stream segments or water quality standards exist in the area. Additional water quality and riparian protection for the two springs, the wetlands, and the two playas is being built. Little water quality data for analysis is available from the area.

1-AH--No activities proposed would require either Section 402(p) or 404 Clean Water Act permits.

current or proposed developments. For example, the construction of hiking trails could require storm water general permits for disturbed areas greater than five acres.

Clean Water Act (CWA) Section 404 Permits
Reference Chap. 4

1-AI The FEIS should address whether CWA Secton 404 consultation and permits are expected to be required for any current or proposed developments and land usages that may affect wetlands. Such determinations should be supported with evidence of consultations with the US Army Corps of Engineers.

1-AI--Refer to Response 1-AH.

EDITORIAL COMMENTS

Presentation of Data on Alternatives
References: p. 2-24, Tables 2-6 and 2-7, p. 2-26, Table 2-8, p. 2-28, Table 2-9, p. 2-33, Tables 2-10 and 2-11

1-AJ The tables in the DEIS which provide specific details about the alternatives are presented in the discussion of Alternative A. The DEIS therefore presents the details of Alternatives B, C, and D before these alternatives have actually been introduced or described. We recommend moving these summary tables to the end of Chapter 2 or splitting up the information such that it is presented by alternative. Please address in the FEIS.

1-AJ--We use this format because many readers find it easier to absorb information in pictorial (tabular) format rather than from narrative. They can generally get a comparative picture of the difference between alternatives when they read through the section describing the first alternative. These tables are then referred to in the later alternatives. We have used this format for some time and feel it effectively conveys our information.

Glossary
Reference p. 3-4

1-AK P. 3-4 of the DEIS uses the term "kipuka" and says "refer to the Glossary" but the term is not contained in the Glossary. Please correct this discrepancy in the FEIS.

1-AK--The term "kipuka" has been added to the glossary.

COMMENT LETTER: 2

No. 2

El Malpais Plan
Team Leader
BLM
435 Montaño NE
Albuquerque, NM

Thanks for your comment

September 22, 1999
2724 Veranda Rd NW
Albuquerque, NM 87107

Hello Team Leader of the El Malpais Plan!

I am writing to encourage the BLM to decide upon Alternative "C", Natural Processes.

It is a very good idea to officially let nature "take care" of the Cebolla Canyon and Sand Canyon roads. This would go a long way toward making the "Cebolla Wilderness" truly wilderness*.

Ideally, I would like to see the entire 10,380 acres added to the "Cebolla Wilderness".

Thanks for your attention.

Sincerely,

Jan A. Cummings

Jan A. Cummings

* Cutting grazing back toward the vanishing point would also increase the naturalness of this land ~~also~~ immensely.

RESPONSE TO COMMENT LETTER: 2

Comment acknowledged.

COMMENT LETTER: 3

No 3

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Box 1306
Albuquerque, New Mexico 87103

In Reply Refer To:
R2/ES-HC/EC

SEP 22 1999

Memorandum

To: El Malpais Plan Team Leader, Bureau of Land Management, Albuquerque, New Mexico

From: Acting Assistant Regional Director - Ecological Services

Subject: El Malpais Plan and Draft Environmental Impact Statement (EC #99-0025)

This draft Environmental Impact Statement (EIS) has been prepared by the Bureau of Land Management (BLM) for the purpose of land use planning for public lands and resources of the El Malpais National Conservation Area (NCA) and certain adjacent lands. The Federal Land Policy and Management Act of 1976 (FLPMA) provides the basic authority for BLM activities relating to public lands management. Under FLPMA, such management directives include preservation and protection of certain lands in their natural condition as well as providing for other human land uses. Because the planning area was designated as an NCA, the BLM is required to manage the area's resources with a higher order of protection than that followed on other multiple use lands.

The El Malpais NCA and adjacent planning areas involves 248,000 acres of public lands and 36,500 acres of private lands located south of the City of Grants, Cibola County, New Mexico. The NCA is bordered on the east by the Acoma 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. The planning area also includes four administrative features; the Cebolla Wilderness, the West Malpais Wilderness, the Chain of Craters Wilderness Study Area, and the El Malpais National Monument, which is administered by the National Park Service. Additionally, lands adjacent to the south side of the planning area which are being considered for inclusion within the El Malpais NCA, are identified as the Techado Mesa Unit and Tank Canyon Unit. These lands comprise an additional 15,000 acres.

Fish and Wildlife Service (Service) biologists have reviewed the subject document and provide the following comments:

GENERAL COMMENTS

3-A The draft EIS adequately addresses most of the important fish and wildlife resource concerns, with the exception of federally-listed species. The biological assessment (BA), which is currently being prepared for the NCA, was not included in the draft document for public review. The preferred alternative (Alternative D) proposes to create a management balance by combining selected actions from the remaining alternatives.

Many of the actions proposed within the preferred alternative do not appear to present significant potential for adverse impacts on important fish and wildlife resources. Nonetheless, consistent with management of an NCA at a "higher order of protection", the Service recommends Alternative C, since it appears to more fully promote the purposes of an NCA. For example, Alternative C proposes 23,700 more acres of "Wilderness Status" lands, 73.4 less miles of open vehicle routes, longer pasture rest periods for grazing uses, and no extractive activities, when compared to the preferred alternative.

3-B Ongoing and proposed activities within the planning area include recreation, facility development, road and trail use/development, vegetation removal, prescribed burning and wildland fire management, grazing management, and watershed management. The potential impacts of these activities on all wildlife resources, including threatened and endangered species, should be evaluated. The final EIS should identify and summarize the findings (effects determinations) for all species considered in the analysis. Habitats that support threatened, endangered, proposed or other special-status species should receive management priority.

3-C Throughout the document (pages 3-26, 4-17, 5-1), it is stated that BLM is conducting informal consultation with the Service under section 7 of the Endangered Species Act. To date, this "informal consultation " has consisted of requests for species lists and updates of those lists. The Service is concerned about potential impacts on threatened, endangered, and proposed species, but cannot provide more specific input until we have reviewed the BA. The BA should identify all existing and potential threatened and endangered species habitat within the planning area, and evaluate the impacts of ongoing activities and potential impacts of the preferred alternative. Although the document states that it is BLM's policy not to allow activities to adversely affect federally listed or other special status species, the Service should be contacted any time an activity "may affect" listed species, to ensure that proposed avoidance or mitigation measures adequately remove the potential for adverse effects.

3-A--The Biological Assessment and U.S. Fish and Wildlife concurrence are shown as Appendix Q in this Proposed Plan/Final EIS.

3-B and 3-C--Refer to Appendix Q in this Proposed Plan/Final EIS.

SPECIFIC COMMENTS

Page 2-10, Habitat Maintenance, Improvement, and Expansion

3-D This section indicates raptor protection will be improved by requiring powerlines to be built to "electrocution-proof" specifications identified in Olendorff, *et al.* 1981. Please note that the latest guidance to prevent raptor electrocutions is included in the publication Suggested Practices for Raptor Protection on Power Lines - The State of the Art in 1996 by the Avian Power Line Interaction Committee. This document may be requested from the Raptor Research Foundation at 12805 St. Croix Trail, Hastings, Minnesota 55033, phone 612-437-4359 or JMFITZPTRK@aol.com.

3-D--The publication, *Suggested Practices for Raptor Protection on Power Lines--The State of the Art in 1996* is now referenced as the most current information available.

Page 3-26, Threatened, Endangered, and Other Special-Status Species

3-E The document states that six federally listed species (bald eagle, black-footed ferret, southwestern willow flycatcher, Mexican spotted owl, Zuni fleabane, and puzzle sunflower) and one proposed species (mountain plover) are known to occur, or that potential habitat may exist, within the planning area. Please note that on August 25, 1999, the Service delisted the American peregrine falcon which was known to occur within the area; therefore, section 7 regulations no longer apply to this species. However, the Service recommends continued consideration of project effects on this species and protection of its habitat.

3-E, 3-F and 3-G--Refer to Appendix Q in this Proposed Plan/Final EIS.

3-F The Pecos sunflower *(Helianthus paradoxus)* is known to occur just outside the planning area near I-40 and Grants and could potentially occur within the planning area (Charlie McDonald, USFWS, pers. comm.). Potential habitat for this species, which include wetlands and other moist soil areas, should be identified and managed accordingly. The draft EIS states (for all alternatives) that if monitoring studies indicate the need, existing livestock grazing plans could be revised, new plans developed, and/or use could be reduced. The Service believes that potential Pecos sunflower habitat within the planning area could be improved through grazing management. Removal of cattle from wetlands and moist soil areas from the middle of July through November of each year would significantly improve habitat conditions for this species.

SUMMARY COMMENTS

3-G In the event that the preferred alternative is selected, the Service recommends the final EIS consider habitat requirements for all listed and proposed species within the planning area. Conservation measures to protect habitat for candidate species and species of concern may help prevent the need for future listings.

We appreciate the opportunity to provide comments on this environmental document. Please direct further questions to Carol Torrez, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office at 505- 346-2525 extension 115.

COMMENT LETTER: 4

No. 4

Ref: Draft El Malpais Plan and EIS
6/99 document 1610(010)

Gregory S. Nelson
738 Mainsail Place
Naples, FL 34110

September 20, 1999

Bureau of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, NM 87107-4935

Dear Sir or Madam:

4-A I recently visited the El Malpais area during a vacation. While in the area, I learned of the El Malpais plan and EIS draft. I looked at the plan via the Internet once I returned to my home. Based on my experiences while in the area, I have some concerns over the plan as presented. It appears to me that the plan is an attempt to rid the area of cattle ranchers, rather than simply looking out for the best of the land. I am an avid hiker and nature lover and I fully support the preservation of nature for future generations. However, I see no need to change the status of this area of land from NCA to a Wilderness Area.

While in the area, I saw very few people at all. This is already very remote country. Changing the status of the land to wilderness area will have little effect on traffic in the area. Much of the land is being used by cattle ranchers. My understanding is that these ranchers lease most of the land and have permits from the BLM for raising cattle. The number of head permitted is controlled by the BLM and is based on the ability of the land to support the cattle, while protecting the land from abuse. Hence, the presence of cattle on the land should not pose a threat to the preservation of the land.

4-B With this assumption in place, it is necessary for these ranchers to have ample access to the land (via motorized and non-motorized means) to properly care for the cattle and maintain the fences. Reducing their ability to access the land is simply forcing them out of business. Additionally, proper watering of the cattle is necessary for the survival of the cattle. The deactivation of any existing water supplies (as described in Appendix I) will kill the cattle and again, force the ranchers out of business.

If the concern for the land is due to an anticipated increase in traffic by tourists, then might I suggest finding a way to reduce that traffic, rather than using a method that will put hard working ranchers out of business. While on my vacation, I found the land to be in very good shape. I found that the cattle have not run down the land's ability to produce vegetation. It seems that the BLM has done a very good job at setting the proper limits to prevent over grazing. In addition, I found the ranchers to be very in tune to the preservation of the land. After all, the well being of the land is in their best interests too.

I do not support the changing of the land status in the Chain of Craters area from NCA to Wilderness status. I also do not support the halting of grazing while an environmental impact study is performed in the area. If an impact study is to be done, then it should be done under the current conditions. It is not appropriate to change the environment in order to perform a study.

Sincerely,

Gregory S. Nelson

RESPONSES TO COMMENT LETTER: 4

4-A--As explained on pages 1-1 and 1-14 of the Draft Plan/EIS, Section 501(b) of P.L. 100-225 directs the BLM to review and recommend to the Congress the suitability or nonsuitability of the area called the "Chain of Craters" for preservation as wilderness. (Two wildernesses are now part of the NCA.) In complying with Supplemental Program Guidance 1623.61, the agency also must identify public lands having wilderness characteristics. To meet this requirement, the BLM reviewed 10,380 acres of acquired and public lands contiguous to the Cebolla Wilderness (refer to page 3-16 and J_1 of the Draft Plan/EIS for more details). If an area or part of an area is suitable, the BLM submits a recommendation through the Secretary of the Interior and the President to the Congress to include the area in the National Wilderness Preservation System. No proposal is made in the plan to "rid the area of cattle ranchers."

4-B--Development of this well and storage tanks was contrary to the provisions in Chapter III, Section 3(c)(Livestock Developments), Part D (Rangeland Management) of the Interim Management Policy and mandates of Section 603(c) of the Federal Land Policy and Management Act (FLPMA) of 1976. However, because of the expressed need for a reliable water source in this portion of the grazing allotment, use has been allowed to continue, pending future Congressional action on the Chain of Craters. If the Congress accepted the BLM's proposed recommendation for the Chain of Craters WSA, the well would not have to be deactivated. If the Congress determined that the area should be designated as wilderness, the well and storage tanks could be "cherry-stemmed" out during boundary delineation at the time of legislation.

COMMENT LETTER: 5

8/23/99

John A Schneider
W8466 Maple La.
Park Falls, WI 54552

Bureau of Land Management
Albuquerque Field Office
435 Montano Rd. NE
Albuquerque, NM 87107-4935

Dear Team Leader,

The EIS should be done no more than once every 10 years. More than that would only be a waste of tax dollars. I have never had a problem with cattle over grazing on my land or the BLM land.

Please respond with your thoughts on this subject.

Thank you

John A. Schneider

John A Schneider

RECEIVED
BLM
99 AUG 27 AM 11: 27
ALBUQUERQUE, N.M.

RESPONSE TO COMMENT LETTER: 5

5--Comment acknowledged.

No. 6

8/18/99

Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

Ref: Draft El Malpais Plan and EIS 6/99 document 1610(010)

After reviewing the proposed study plan, I have a few questions regarding the positions taken in some of the Alternatives. While I agree in principle with your preferred Alternative D, I feel some of the statements regarding impact are wrong or based on bad assumptions.

Access and Transportation (p 4.55)

6-A Issue #3 states that the BLM would increase the amount of public land closed to motorized vehicle use. This in turn would eliminate access and use by the majority of the American people since their ability to enjoy would be eliminated. The land would only be available to the physically fit which is a sever case of discrimination to say the least.

In the Chain of Craters area, 13.9 miles of road would be closed (30% of available roads in the WSA) . Also, on page 4.59, the plan calls for no off road vehicle use even in some areas of the Chain of Craters area. The statement also acknowledges that the use of off road motorized vehicular activity for the gathering cattle is common. Page 4-68 (Social and Economic Conditions) states that these changes would not create measurably different impacts i.e., no change vs elimination of cross country vehicle traffic. To eliminate that access for the gathering as well as for maintenance of the grazing
6-B operations, would severely impact the ability to effectively perform those functions, if not rendering them cost prohibitive. In most cases, it would require additional manpower to properly function and would already strain a economically depressed industry. Contrary to popular opinion, the cattle ranchers struggle to just make ends meet. It is not an industry that can easily adjust for changes in operating costs when markets are extremely tight with minimal margins. Bear in mind, that most of the Ranchers affected by this study are family owned with large debt loads.

I would propose that the area remain as is; NCA vs Wilderness, and that the access routes remain as is with better management of the traffic and adjust the use of the roads accordingly as is presently done. At present, road maintenance is controlled by the BLM through there normal management policies. If it's not the BLM's recommendation to make The Chain of Craters a wilderness then the management of the area should remain as is unless management date indicates otherwise. To start eliminating access to these areas, is the same as designating the area as wilderness.

(Note: Letters 11, 14, 16, 20, 21, 22 and 25 are identical to Letter 6, and thus are not reprinted nor responded to individually.)

6-A--While you may want unrestricted use, others demand absolute protection. The BLM's responsibility is to listen to the diverse voices of the public and provide the best possible balance in natural resource management while following all public land laws. Executive Orders (EOs) 11644 and 11989 and the BLM's regulations at Title 43 of the Code of Federal Regulations (CFR), Part 8340 include provisions for designating public land areas as open, limited or closed to the operation of off-highway vehicles. The Secretary and the BLM must also comply with the duties clearly enumerated in Section 603(c) of FLPMA, which states that the BLM must manage WSAs so as not to impair their suitability for preservation as wilderness.

EO 11644 provides procedures to ensure that the use of off-road vehicles on public lands is controlled and directed to protect the resources, promote the safety of all users, and minimize conflicts among the various uses. In complying with this order and FLPMA, the BLM is offering the Preferred Alternative as the best solution.

6-B--Within criteria specified in the BLM's Interim Management Policy and the Wilderness Act, the use of motorized vehicles and equipment for the support of livestock grazing operations is permissible, but not without some inconveniences. Such use would be based on a rule of practical necessity, reasonableness, the minimum tool, and the effects on wilderness values, not the sole convenience of the operator.

Summary

- Do not reduce the accessibility to the Chain of Craters Area through road closures. Keep the area available to all Americans regardless of the physical capability.
- Recognize that the Ranching operations now using the areas in question will be severely impacted economically if the area is closed off to motorized vehicle use. The ranching operations in the areas in question are not limited to "Gathering". Access to the area is an ongoing requirement for water and fence maintenance as well as watching over the well being of the cattle and the range land.

6-C I am concerned that there are four alternatives presented that seriously conflict with one another especially regarding Wilderness designation and access. If the areas in question do not fit the Wilderness requirements as the BLM has stated in 1991 GMP as well as in this report, then why would the alternatives [illegible] designation?? I would suggest that a proper EIS study should include the one recommendation and the facts supporting that recommendation. The way it is now, it appears that the BLM is trying to satisfy all organizations desires regardless of what the facts say. Lets get back to one recommendation supported with the facts. **No Wilderness designation** for the Chain of Craters area, and, no reduction of access to the area, in fact, maybe improved access.

EE 8-21-99

6-C--Requirements of the National Environmental Policy Act (NEPA) and regulations at 43 CFR 1600 require the BLM to explore and evaluate all reasonable alternatives. According to the "Policies, Criteria and Guidelines for Conducting Wilderness Studies on Public Lands" published in the *Federal Register* on February 3, 1982 (Vol. 47, No.23, pp. 5098-5122), any plan or EIS containing wilderness recommendations should identify a range of alternatives allocating all, part or none of the WSA to wilderness. The need for alternatives arises from the possibilities that the preliminary recommendations made by the agency may be altered during administrative review and reporting process, and ultimately may be changed by the Congress. Through using alternatives, the following can be identified: (1) the probable impacts on other resource values and uses in the area that could result from wilderness designation, or (2) the extent to which the wilderness values of the area would be foregone or adversely affected as the result of not being designated.

8/19/99
Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

Subject: Draft El Malpais Plan and EIS 6/99 document 1610(010)

The present EIS and Plan in my opinion does not take into consideration the BLM's responsibility or capability in managing that balance between Public use and protection of the natural state of the land as defined in the BLM mission statement. In several of the alternatives, The Chain of Craters was to be designated a Wilderness area
7-A without any clear reason as to why. Was this based upon the assumption that the BLM is unable to effectively manage the balance between public use and protection of the natural state because they dont have the expertise, or is it because they lack the financial support of the Government to do so.

In the prior GMP (1991), The BLM did not find cause to recommend any alternatives that called for a change to Wilderness status. What has changed? The land is the same, the criteria for Wilderness classification is the same, so why does the Plan now present alternatives that include Wilderness classification for the Chain of Craters area?

If the Chain of Craters area must be isolated from the public through designation as a Wilderness, then shouldn't **all** public land be so declared. Isn't the protection of all public lands equally important? Or, is this area being considered a isolated area (Wilderness) because we have not provided the BLM with the funds necessary to properly protect this area through effective management. Has the financial and political power of the special interest groups become stronger and more important than the charter of the BLM.

The EIS and use study for the El Malpais area must consider the best way to **balance** its use between Public use and natural state protection through utilization of the BLM agency direction and, be funded accordingly. It is too easy to shut the area down to the Public because of an unwillingness to properly fund the management.

Another area of concern regarding the basis for the Chain of Craters Wilderness
7-B status decision that is lacking is the impact on existing users of the area in question. While I understand that individual economic impact is not a major factor in these actions, it should be considered or at least addressed. In the Chain of Craters area, the primary private use of the land is ranching; cattle grazing through allotment control by the BLM which was allowed by Congress as a condition when the area was designated a NCA.

7-A--The BLM's proposed recommendation to be sent forward through the Secretary and the President to the Congress would be that the Chain of Craters WSA is nonsuitable for wilderness preservation. However, our policies require that when a WSA is being recommended as nonsuitable, the probable effects of alternative uses on the WSA's wilderness values be identified. As stated above in Response 6-C, the BLM's preliminary recommendation may change, so a reasonable range of alternatives must be considered. Existing and potential uses within the Chain of Craters are identified in the Draft Plan/EIS (refer pages 3-14, 3-15 and Appendix I).

7-B--As described in the Introduction to Chapter 4, impacts are discussed by alternative for each specific resource or program. These impacts would occur from management actions developed as alternative ways of resolving the ten issues most pertinent to the Planning Area's management and allocation of public land resources, their use and protection.

In several areas of the Plan, reference to grazing impact were just generally addressed. i.e., on page I-10, the plan acknowledges the law (P.L. 100-225) that allows for continuation of grazing in the Chain of Craters area but, goes on to say that appropriate use of motorized and mechanized equipment would still be allowed. In reality, the present Wilderness regulations requires that the Ranchers would have to apply for special permits stipulating exactly what had to be done etc..... a bureaucratic nightmare to say the least. In most cases, it is safe to say that the only motorized activity that would be allowed is that of an emergency or major project and only if approved. This does not address the needs of the Ranchers for continuous access for fence, water maintenance, doctoring animals etc. which is a never ending job.

7-C Also, in Appendix I, page I-6, the plan will call for deactivating existing water supplies and related equipment from the Chain of Craters area. These wells were put in place because it was not possible to effectively water livestock (or wildlife for that matter). The rancher prior to the insertion of the water system on the southern portion of the Los Cerros allotment, had gone into bankruptcy because of the lack of ability to economically provide water to his livestock.

To consider that these operations can be now done only with non motorized equipment and no supplemental water capability without any negative impact on the Rancher is short sighted to say the least. The real bottom line is that the Wilderness designation will eliminate effective Ranching in those areas. One of the statements supporting the Wilderness designation on page I-17 that says the Indians and Ranchers objections can be accommodated. This statement is total without merit unless that accommodation is contrary to every Wilderness regulation presently in existence.

Therefore, if the Chain of Craters is designated a Wilderness area, then the existing ranching operations as we now know, will most likely cease to exist because of the increased manpower and costs associated with the new restrictions. This does not even address the enormous personal loss due to land and business values etc affected by a decision to designate the subject area a Wilderness. This will be a major impact on an already strained industry and would more than likely put the affected Ranchers out of business.

On the surface this may not seem to be a major concern and in fact may be desirable by some organizations. However, under the present circumstances, most if not all of the maintenance and improvements (i.e. water availability) is being done by the ranches with their own funding in a cooperative basis with and under the control of the BLM. The condition of the land is critical to the ranchers ability to continue to stay in business. They do more on a daily basis to protect the land than any other group or organization or agency. Putting these people out of business would leave a gaping hole in the protection and development of the existing public lands.

As with most industries, there are some who would exploit the land for short term gain. However, the protection against this solely rests on the management responsibility

7-C--Refer to Response 4-B regarding deactivation of the water system in the Los Cerros Allotment.

of the BLM and can be effective if they are allowed to do this and are properly funded with existing laws and policies.

So again it comes down to the BLM having the capability to manage as long as they are effectively funded. At present, most field agents are tied up in offices away from the land buried under mounds of paperwork much of which is tied to many lawsuits and the associated politics. It would be interesting to see how much more effective our land management would be if the BLM were free to do what they do best - field management.

7-D A last consideration is the accessibility of this area to the general public.. At present time and especially if the area in question is designated wilderness, accessibility to the area is most difficult and will be limited to those that are physically fit to hike into the area to appreciate it's beauty. The EIS study must consider making the area accessible to a majority of the public through improved roads and other services. To fail to do so, will make this area non existent to most Americans, again, because the Government failed to fund the BLM agency to do their job of effective management.

7-D--Refer to Response 6-A.

In summary, I would suggest that he BLM reconsider the alternatives designating the Chain of Craters as a Wilderness based on the following additional factors:

o The BLM,s ability to effectively manage the balance between the public use and protection of the land to meet the goals of proper stewardship with the proper funding without closing the area to the general public through wilderness designation.

o Consider the negative affect on the maintenance, improvement and protection of the Chain of Craters environment without the involvement of the ranching industry if the decision forced the ranching industry out of business.

o Consider the sever limiting effect of the availability of the Chain of Craters area to the majority of the public that are not physically capable to access the area to enjoy its beauty if the area is declared a Wilderness area.

7-E I would suggest that in addition, the El Malpais Plan and EIS should contain an expert BLM recommendation to the Congress on which alternative best satisfies the needs of the public in balance with the environment protection. To provide four (4) alternatives that cover the gambit of all interested parties defeats the reason for the study in the first place. Which one does the BLM in its expert opinion feel best satisfies the requirements of proper stewardship of the public land in question and why.

7-E--Refer to Response 6-C regarding the requirements for considering alternatives during wilderness study. The BLM analyzed impacts on specific resources and programs to assist in determining whether the areas under study were more suitable for wilderness designation or other uses. BLM decisions were based on this analysis.

One last comment for consideration in the program. This plan was intended to come up with an environmental Impact Study for the Area in question. Since the issue of this plan for public review, there has been pressure brought upon by some environmental groups to halt the grazing until these studies are complete. In the interest of trying to settle this suit, the BLM has suggested that they would agree to a "No Grazing

Alternative " analysis. I would suggest that the study (Plan) continue to support the decision made by the BLM and highlighted on page 2-75 of the plan. No grazing is inconsistent with P.L. 100-225 which established this area as a NCA in the first place.

Also, the BLM on that same page has stated that the Resource conditions in that area do not warrant area wide prohibition of livestock grazing. The existing RMP's contain the prescriptions needed to meet the resource objectives, including vegetative objectives.

LE 8-21-99

COMMENT LETTER: 12
No. 12

8/2/99

Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

99 AUG 30 PM 4:18
ALBUQUERQUE, N.M.

Ref: Draft El Malpais Plan and EIS 6/99 document 1610(010

The plan in question seems to be biased towards shutting the land off from the general public through wilderness designations or closure of access to the area.

12-A These positions dont take into affect the majority of the people that should have access to the area. With no motorized access, the majority of senior citizens and the general public will not be able to enjoy the proported beauty of the area. This is contrary to the basis of an EIS study.

In addition, the study seems to be a vehicle as written to get the ranchers off of the land. While your study acknowledges the right by law for grazing under the management of the BLM, it presents options that will make the grazing economically impractical and will force the ranchers out of business. Even the statement in Appendix I on page I-6 whereby the existing water improvements would have to be removed because they were not grandfathered, is an admission of a way to shut out grazing. You can't graze if you do not have water. Also, is it good stewardship and environmentally correct to reduce the well being and health of the wildlife and the land by eliminating the source of water just because of when it was put in ????

12-B The biggest concern for Wilderness designation is the potential impact on the private land owners in the area. While the study does not specifically say that the land owner will be penalized if the wilderness designation is made, it does imply that the Government could impose **"visual easements"** which in turn could prevent the landowners to build. This in turn would and has in the past, rendered the private land values to drop to insignificant levels. Is this the American way?? Lets make the study clear on exactly what will take place if the Wilderness designation is put into effect. Lets not eliminate or screen vital information from the decision making process. Will there be "Visual Easements" if the Chain of Craters area is designated wilderness status ??

RESPONSES TO COMMENT LETTER: 12

12-A--As presented in Tables 2-10 and 2-11 in the Draft Plan/EIS, 58 percent of the Planning Area remains available for vehicle use on 273.1 miles or 75 percent of the roads inventoried in 1996. Wilderness designation through P.L. 100-225 had already closed 41 percent of the Planning Area to motorized use by the general public. Under the Preferred Alternative, the BLM would close only an additional 1 percent of the Planning Area and 81.4 miles of inventoried roads.

12-B--Yes, the government could seek visual easements, but this would require a willing grantor. An easement is not a fee acquisition or purchase of the private property by the federal government. Easements may be purchased or donated. In a purchase, the landowner(s) would receive compensation for any rights acquired by the federal government.

COMMENT LETTER: 13

No 13

Philip R. Kennicott
P. O. Box 633
Sandia Park, NM 87047

September 6, 1999

El Malpais Plan Team Leader
Bureau of Land Management
Albuquerque Field Office
435 Montano Road NE
Albuquerque, NM 87107-4935

Dear Sir:

The following are my comments on the Draft El Malpais Plan and Environmental Impact Statement. I approach the problem from the standpoint of a retired individual who looks forward to recreation opportunities in the National Conservation Area, while bearing in mind the need for preserving existing resources and continued use of the grazing resource.

I am generally in agreement with Alternative D. It appears to be as reasonable a choice as possible between the various conflicting needs.

13-A I would like you to bear in mind that not all users of the recreational resources of the Conservation Area are able to hike long distances. I would like to see as many opportunities for motorized access as possible, consistent with resource preservation. For example, I would like to see the access corridor to the Hole in the Wall changed to Motorized Semiprimative. Limited use of motorized access does not harm the ground surface, and such a change would provide an important recreational resource to those unable to hike long distances.

When and if the level of use to such areas becomes a problem, I note that Guadeloupe National Park makes effective use of keyed access. A prospective visitor obtains a key from a ranger at the Visitor Center and leaves his name and address. Both the identity of users and the level of use can be controlled.

Sincerely,

Philip R. Kennicott

RESPONSE TO COMMENT LETTER: 13

13-A--The BLM has tried to take into account the needs of the users and the resources, and balance the uses. Hole-in-the-Wall is located inside the West Malpais Wilderness. Section 4(c) of the Wilderness Act and 43 CFR 8560.1-2 prohibit the use of motorized equipment, motor vehicles and other forms of mechanical transport for (1) valid exiting rights, (2) emergences involving personal health and safety, and (3--under certain conditions) in support of livestock grazing operations under which the use had occurred before designation. The type of access you desire is not one of these exceptions.

No. 17

State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855
Fax: (505) 827-2836

GARY E. JOHNSON
Governor

PETER MAGGIORE
Secretary

September 7, 1999

El Malpais Plan Team Leader
Bureau of Land Management
Albuquerque Field Office
435 Montano Road NE
Albuquerque, N.M. 87107-4935

Dear Team Leader:

RE: DRAFT EL MALPAIS PLAN AND ENVIRONMENTAL IMPACT STATEMENT; US DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT, ALBUQUERQUE FIELD OFFICE; JUNE 1999

This transmits New Mexico Environment Department (NMED) staff comments concerning the above-referenced Draft Environmental Impact Statement (DEIS).

The DEIS is a revision and update to the *Resource Management Plan* which focuses on expansion of the El Malpais National Conservation Area, located in Cibola County. The proposals presented will involve lands which surround the El Malpais National Monument, occupying the southern and western edges of the Rio San Jose, and the majority of the Malpais subbasins of the Rio Puerco Watershed.

This review focuses on issues involving water resources and quality, and riparian and wetlands environment and habitat. Any action that degrades the water quality, increases or causes impairments, or results in any violations of water quality standards would be unacceptable. It is recognized that the region does not host extensive live surface water streams. Limited zones of perennial flow occur at the outflow of a small number of springs, the most significant being the Cebolla and Cebollita Springs, in Cebolla Canyon. No direct conflicts with State Water Quality Standards are anticipated. The region is recognized as containing a largely internal drainage pattern, and it serves as an important regional recharge area for aquifer units. A small number of playa lakes may be seasonally present, and any surface activity that may dirty or contaminate their local drainage accumulation area should be curtailed. The surface drainage pattern that is present dominantly reflects ephemeral washes that respond during infrequent storm events and snowmelt. The protection of water quality can indirectly be accomplished via pro-active protection of the springs, playa lakes, and the scant riparian and wetland habitat areas present in the region, and by a commitment by the Bureau of Land Management (BLM) to respond to events or circumstances which arrest the development of erosive zones in the ephemeral drainage areas.

17-A Four management alternatives are presented. Water and riparian/wetland-related issues in the various alternatives do not vary substantially. In the opinion of Surface Water Quality Bureau

17-A--The BLM is protecting riparian and wetland areas and water quality in the Planning Area.

17-A (SWQB) staff, the BLM's stated commitment to fence and protect any springs and associated perennial reaches, and to take all appropriate actions to protect riparian and wetland habitats is the key to protecting surface water quality and maximizing the quality and quantity of groundwater in the region. Provided they accomplish this by specifically addressing spring development and protection, pasture exclosure and fencing, and grazing management issues, the critical concerns of SWQB staff will be met. The prevention of livestock feeding, salting, and confinement / holding facilities in the proximity of wet areas will afford maximum protection. The BLM commits to the closure of unutilized water wells and reclaiming areas of former watershed projects that are no longer functioning or serving their original purpose.

Alternatives A, B, and C do not include any plan for enhancement of riparian areas by planting of additional riparian species or removing exotic species. The **Alternative D, therefore, is preferred** since it does include possible planting of additional and complimentary riparian species, and / or removing exotic species such as salt cedar or Russian olive in riparian settings. This may lead to stabilized banks, reduced erosion, and translate to protected or improved water quality.

We appreciate the opportunity to comment on this document. Please let us know if you have any questions.

Sincerely,

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 1293ER

COMMENT LETTER: 18

No 18

September 6, 1999

El Malpais Plan Team Leader
BLM, Albuquerque Field Office
435 Montano Road NE
Albuquerque, NM 87107-4935

Ref: Comments
Draft El Malpais Plan and EIS

As a member of the Continental Divide Trail Alliance, I offer these comments on the Draft Plan. In doing so, new information not addressed in the Plan is presented and a substantive new recreation alternative develops.

The Alliance was not on the mailing list for the Plan and therefore did not have the opportunity to participate in *Issue Identification*. Please include the Alliance in mailings for future planning activities which may directly or indirectly affect or influence the Continental Divide National Scenic Trail (CDNST).

18-A The acquisition of additional acreage in and around the southern portion of the Cebolla Wilderness, and the proposed expansion of the NCA and Cebolla Wilderness boundaries, has presented a significant opportunity for reconsideration of the Continental Divide Trail route in the southern portion of the NCA.

The current route of the CDNST in this area is unsatisfactory because it brings the Trail to a paved State Highway (117) which is then followed southwesterly for approximately 30 miles where it then accesses a well graded unpaved State Highway (163) southeasterly for 22 miles into Pie Town. This route was selected to avoid trespassing on private lands and was seen as "a *short term solution*....while allowing agencies involved to work on easements to get the Trail off existing roads *in the long term*". The Decision Notice for the Central New Mexico Section, Cibola Planning Segment, however, stated in a response to a public comment that "*agency expectations ..... are not high for getting the hiker off the road from Pie Town north to the southern boundary of the El Malpais NCA*".

This letter, therefore, requests as consideration of new information, that the CDNST be routed into the southern portion of the newly acquired lands being considered for the NCA and the Cebolla Wilderness, as shown on the attached map. From the southern boundary of the public lands in question, the CDNST would then utilize the public right of way of County Road 41 for the remaining 20 miles into Pie Town. This is a new alternative that was not considered during the planning for Central New Mexico Section of the CDNST route north of Pie Town. The CDTA is willing to go before the Catron County Commission to present this alternative since it will utilize a County road for the distance between the new NCA proposed southern boundary and Pie Town.

This alternative reduces the public road right of way that must be utilized from approximately **52** paved and unpaved State Highway miles to **20** occasionally graded County road miles. The subsequent long-term work of obtaining easements off of this 20-mile section of road is made much simpler by the 60% reduction in length.

RESPONSES TO COMMENT LETTER: 18

18-A--The long-term goal for the Continental Divide National Scenic Trail (CDNST) is to get hikers and equestrian users off the roads. However, until an easement is acquired for the proposed CDNST, or the owner is willing to sell or exchange, users will not be able to cross private land along the La Rendija segment of the trail without permission. In the meantime, they will have to seek alternative routes around private lands, which could be as you have suggested. Since the agency has been studying route locations through this area, several have been proposed by users and the agency. This plan provides for side or connecting trails to the CDNST and the use of other spur rountes or cross-country travel to link segments of the CDNST separated by non-Federal lands. Though the county road you recommend would receive less vehicle traffic, a safety problem would still exist, along with the problem of visitors having to breathe dust from passing vehicles on this type of road. As stated in response to comments on the *Continental Divide National Scenic Trail Environmental Assessment Draft Report--Central New Mexico Section, Cibola Planning Segment* (USDA, Forest Service 1992), the selected route for this trail is considered to be the best when considering all inputs from users, private landowners, tribal governments and other government agencies.

By incorporating the Trail through a portion of the Cebolla Wilderness, the primitive, back country, and non-motorized nature of the CDNST is enhanced. Indeed, wilderness and the CDNST are meant for each other! The cultural features that abound within the Cebolla Wilderness will also add much to the recreational and educational experience of Trail users.

We encourage consideration of the full 9,180 acres (Alternative C) as an addition to the Cebolla Wilderness with the modification that certain access roads from County Road 41 be cherry stemmed to the Alternative D boundary. We do not believe that bringing the wilderness boundary to the highway or County Road right of way fence results in a detraction to the overall wilderness qualities of the area. The highway right of way fence is already used as a wilderness boundary elsewhere in the Cebolla wilderness and makes an identifiable location for the wilderness boundary.

18-A Alternative D also calls for declaring the Chain of Craters WSA unsuitable for wilderness protection. We recognize the concerns of the neighboring Native American community for motorized access to certain areas, particularly for the elderly, but don't like to see a potential wilderness area lost to the CDNST. A modified route for the CDNST that incorporates a portion of the Cebolla Wilderness would help offset this loss and there appears to be an opportunity for including a portion of the West Malpais wilderness into a revised CDNST route as well.

18-B The La Rendija easement or property acquisition should continue to be part of the overall recreation plan but as a spur trail to the CDNST rather than the main route.

Another CDNST issue affecting the El Malpais Planning Area is the determination of a route that removes the CDNST from the State Highway between Gallup and the southern end of the Zuni-Acoma Trail. This issue is not addressed as part of this comment on the El Malpais Plan, but a long term alternative to the use of the State Highway right of way in this area is needed.

18-C The Draft document incorrectly shows the CDNST following State Highway 53 west of the Zuni-Acoma Trail. It is my understanding that a off-highway CDNST route has been located in this area. Please reflect this change in the final document.

In summary, this letter presents new information and considerations, not contained in the El Malpais Draft EIS, regarding routing of the CDNST. This results in a substantive new recreation alternative that incorporates the route of the CDNST through the Alternative C proposed Cebolla Wilderness expansion area with the modification that certain access roads from County Road 41 be cherry stemmed to the Alternative D wilderness boundary.

Sincerely,

Joseph Gendron
CDTA Volunteer

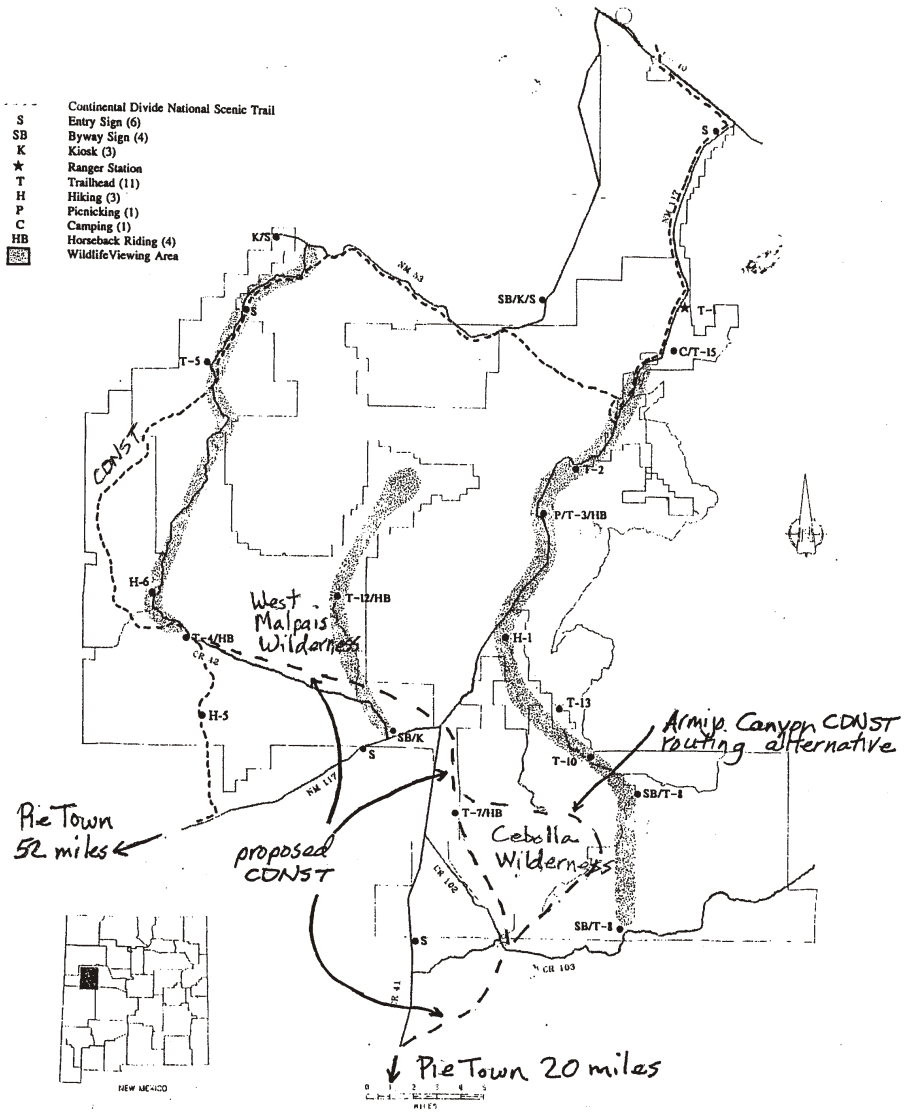
Copy: Kevin Carson, BLM Socorro

Continental Divide Trail Alliance

18-B--The BLM will continue to seek an easement for the CDNST through private lands in the Cerro Brillante-AFO Unit.

18-C--Since the Draft Plan/EIS was sent to the printer, the marked location of the trail treadway has been established through the use of satellite data and the Global Positioning System. A new map with an updated location of the CDNST has been added to the Proposed El Malpais Plan/Final EIS. Refer to Map 38 for updated location of the CDNST.

El Malpais Planning Area



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for

No. 19

COMMENT LETTER: 19

RESPONSE TO COMMENT LETTER: 19

Continental Divide Trail Society

3704 N. Charles St. (# 601) Baltimore MD 21218 410/235-9610

September 8, 1999

El Malpais Plan Team Leader
Bureau of Land Management
Albuquerque Field Office
435 Montaño Road NE
Albuquerque, New Mexico 87107-4935

Re: Draft Rio Puerco Resource Management Plan Amendment/EIS

Dear Sir:

We have reviewed the subject RMP/EIS for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and contiguous lands (your 1610(010)).

You have identified the purpose of the document to be "land use planning for the public lands and resources" of the NCA and certain adjacent lands. As we understand the proposal, it is anticipated that prior decisions with respect to the location of the Continental Divide National Scenic Trail (CDNST) will continue to be implemented. This is stated explicitly (p.2-23) with respect to Alternative A, but it seems to be implied for the other Alternatives as well.

19-A We consider the Plan to be deficient because of its failure to consider reasonable alternatives with respect to land use planning for the CDNST. Such consideration is called for in the light of both the Bureau's past statements and the recent land-tenure changes that have taken place in the NCA. The reviews that are needed can be tiered to the EIS — i.e., they can be undertaken separately no matter whether Alternative B, C, or D is selected. In the case of each of these alternatives, however, the planned action should be modified to assure that the location of the CDNST would be reviewed in a timely manner.

The fundamental issue is one that is addressed in the 1992 Record of Decision. With respect to the comment (which CDTS had made) that "hiking on roads (especially paved) highly detracts from the hiking experience," the response was: "We highly agree! ...On Federal lands, all efforts will be made to get the trail off roads and out of site [sic] of roads." The subsequent acquisition of additional lands within the NCA now makes it possible to implement this goal far more satisfactorily than was heretofore the case.

You may recall that our Society, on April 8, 1993, protested the decision. In the response for the State Director (1617.2 (93513)) dated April 5, 1994, we were advised that the Bureau "would be willing to enter into an agreement with the Continental Divide Trail Society for you and your group to work on solving the challenges of this eastern route, thus providing the hiker a possible choice in routes at some future date." We responded, as we were invited to do, by letter dated April 21, 1994, to the attention of Mr. Overbaugh, in which we asked for the Bureau's "thoughts, particularly as to guidelines that might be used to define a relationship." Although we did not receive a response to this letter, we remain eager and willing to cooperate with you. The EIS should reflect the Bureau's continued willingness to honor its commitment.

19-A--Reference to the CDNST corridor was made on page 2-3 in the "Continuing Management Guidance" section of the Draft Plan/EIS. It was implied that the corridor location that had already been evaluated through the NEPA process would stand. However, moving the treadway away from roads within this corridor is a long-term goal for the trail, as stated in the *Continental Divide National Scenic Trail Decision Notice and Finding of No Significant Impact for the Central New Mexico Section, Cibola Planning Segment* (USDA, Forest Service 1993).

The existing route for the CDNST includes nearly 50 miles of walking along high-standard (largely paved) highways. Based on your letter of July 14, 1999, signed for Mr. Edwin J. Singleton (1610(010)), it appears that the CDNST could be located so as to traverse the NCA southeast along Cebolla Canyon and then southwest along BLM Road 2016 to the southern boundary of the NCA, with travel south to Pie Town, for slightly over 20 miles, mostly on county roads that we understand to be relatively lightly traveled. (Any remaining private sections along BLM 2016 could be detoured around, if necessary.) By relocating the trail in this manner, you would be enhancing the enjoyment of the Trail, reducing the serious safety risks associated with travel along high-speed roads, and implementing your previous undertakings.

In our view, the reconsideration of the CDNST location should also include an examination of routes that would avoid the highway walk south of Grants (via either the Neck of the eastern part of the Zuñi Mountains). Moreover, because the desired use of the CDNST is for hikers and horsemen, we would welcome a fresh look at the Recreation Opportunity Spectrum classifications along the route, notably along BLM Road 2016. If a portion of BLM Road 2003 is designated as a Back Country Byway, it should remain a low-standard way suited to high clearance vehicles only, as we understand from your letter of July 14, 1999 to be the case at present. These matters need not be addressed now, but can await the separate review of the CDNST that we are calling for.

I look forward to hearing from you with respect to the concerns that we have identified. You can reach us by phone as indicated above or by e-mail at cdtsociety@aol.com.

Sincerely,

James R. Wolf
Director

No 23

8/2/99

Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

Ref: Draft El Malpais Plan and EIS 6/99 document 1610(010)

While interested in protecting the environment, I am also interested in making sure the natural resources of this great nation are managed for the benefit of all Americans. With that in mind, A few questions come to mind regarding the direction the study plan appears to be taken.

23-A From what I read, it appears that this study plan has an undercurrent basis that is being pressured by the Environmental groups opposed to any private use of public land, be it commercial or recreational. In many instances, the Alternatives tend to put forth actions that eliminate the availability of the area in question to the majority of American people and, those that commercially use the land allowed by law (Ranching community.) On page 4-55 and 4-59 for example, the report calls for closing off roads (in one case 30%) that would prevent motorized access to the area. As big as the area is, this would only mean that those who wish to use the area would have to walk. Highly impractical since the area coves about 100 sq miles.

23-B In addition, the report indicates that motorized access is commonly used by the Rancher for conducting their daily business, i.e. gathering , repairs etc. To close this option off from the rancher would seem to put a major economic hardship on them possibly to the point of preventing them from staying in business. I know that that is exactly the objective of some groups in the Southwest and it would seem that this is their primary goal rather than "protecting" the environment. The EIS must consider the impact on the ranchers and whether their access will deteriorate the condition of the area. It seems to me that the rancher has been taking care of that land long before it became politically correct to "Manage" the land by eliminating the people from it.

23-C Another area of concern is the statement in the Appendix I, page I-6 concerning removal of certain improvements to bring the area back to Wilderness condition. Specifically, the removal of a well source for water. It seems that by removing this water source, the area would be pushed back to a difficult environment for wildlife and an impossible environment for cattle grazing. Since grazing is allowed by law, the statement saying that grazing would still be allowed in the Wilderness seems to be without merit. The cattle cannot be grazed for effective range management if there is only water from natural sources i.e. dirt tanks etc. Since we all know that the rainfall in the area is slight to say the least, removal of the well will force the cattle either off the land or to severely over graze the area around the water. It is my understanding that the prior rancher that

23-A--Refer to Response 6-C.

23-B--As the result of grazing allotment boundary adjustments, one less allottee is affected by the present BLM designated wilderness. Allotment 201 no longer overlaps the West Malpais Wilderness. Table 3-6 and the text have been revised to reflect this change. Refer also to Response 6-B.

23-C--Refer to Response 4-B.

had the area before the water improvements were put in went out of business because he could not effectively keep the stock properly watered or dispersed. So, from an environmental standpoint, it appears that to declare the Chain of Craters as a Wilderness and eliminate the existing water sources would be harming the environment , not helping.

Lets make the recommendation based upon the facts and eliminate all of the other options. Lets make the recommendations consistent with the social and economic impact of the existing legal users of the land and the right of all to have accessibility regardless of the physical well being.

Steven H Quandt

No 24
8/18/99

Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

Subject: Draft El Malpais Plan and EIS 6/99 document 1610(010)

I have a few comments and concerns with the basis for the conclusions drawn in the subject management and EIS plan.

24-A First of all, I don't understand the reasoning behind four (4) alternatives being presented. It seems to me that one alternative should be presented that satisfies the requirements of the study and provide the facts supporting the recommendation. Should the Chain of Craters be designated wilderness or not. One alternatives says yes and three say no. Some alternatives say reduce road and motorized vehicular traffic and some say no change. It seems to me that there is one right recommendation.

24-B Secondly, while I agree with the BLM's "preferred" alternative which I suspect is their recommendation, I disagree with some of the issues regarding access. If the Chain of Craters is truly a national treasure then it should be made available to as many American citizens as possible without destroying it's value to the country. By closing off access to the area (ref p 4-59 Access and Transportation), the ability to enjoy this area will be limited to only the physically fit hikers which I believe are a minority. How would senior citizens get to appreciate this part of their country. I believe the study should include a recommendation and plan to **improve** the access especially county road 42 rather than eliminate motorized access to the interior of the area. I also believe that the BLM has the policy and authority at present to manage the area for proper protection.

24-C Another area of concern that I have is in reference to the ranching community's use of the study area. I believe the NCA law allowed for the Ranching community to continue grazing cattle under the management of the BLM policies. In several areas of the plan, there are conclusions made that eliminating motorized vehicle access to the area would not harm or hinder the cattle ranching operations in place. To the contrary. Access to the range land is a continuous requirement both for fence and water management as well as on going maintenance of the cattle (Health & well being). By eliminating motorized access, these Ranchers will be required to add considerable expense in both equipment and manpower to accomplish the same activity no being done with motorized vehicles. This will put a major financial strain on these people who can ill afford it. Alternate C on page 4-44 & 4-45 says this will be an inconvenience. Gross understatement!!

(Note: Letters 24 & 29 are identical, and thus are not reprinted nor responded to individually.)

24-A--Analysis of a range of alternatives, including the Preferred Alternative, is required by 40 CFR 1502.10(e). Before impacts can be analyzed in detail, reasonable alternatives must be developed to (1) satisfy the identified purpose and need for taking the proposed action, and (2) resolve the issues. The BLM manager evaluates the alternatives and the estimation of their effects and develops a Preferred Alternative.

24-B--Cibola County is responsible for maintaining County Road 42. As explained on page 2-4 of the Draft Plan/ EIS, the BLM will work with the county when a realignment, upgrade or rehabilitation proposal is presented.

24-C--Refer to Response 4-B.

From what I can gather, there is not enough consideration given in this study to the social and economic requirements of a true EIS. We have the tools and policies in effect to properly protect and manage this area for the well being of all Americans without shutting it down and closing it off for no ones benefit. Lets not do what is politically correct to do based upon special interest money, but rather do what is best for the American people.

DANIEL PEARMAN

15 Sep 99

COMMENT LETTER: 28

No. 28

United States Department of the Interior

NATIONAL PARK SERVICE

INTERMOUNTAIN REGION
Intermountain Support Office - Denver
12795 West Alameda Parkway
Post Office Box 25287
Denver, Colorado 80225-0287

IN REPLY REFER TO: DES 99/016

September 13, 1999

Kent Hamilton
Planning & Environmental Coordinator
Bureau of Land Management
435 Montano Road NE
Albuquerque, NM 87107-4935

Subject: Draft Rio Puerco Resource Management Plan Amendment/EIS for the El Malpais National Conservation Area and Chain of Craters Wilderness Study Area

Dear Mr. Hamilton:

We reviewed the Draft Rio Puerco Resource Management Plan Amendment/EIS for the El Malpais National Conservation Area and Chain of Craters Wilderness Study Area and have no comments. This represents the consolidated comments of the National Park Service. If you should have any questions, please contact me at (303) 969-2377.

Sincerely,

Greg Cody

Greg Cody
NEPA/Section 106 Specialist
National Park Service
Intermountain Region-Denver Support Office
12795 W. Alameda Pky.
Lakewood, CO 80225-0287

RESPONSE TO COMMENT LETTER: 28

28--Comment acknowledged.

COMMENT LETTER: 30

No. 30

September 23, 1999

1487 12th Avenue
San Francisco, CA 94122

El Malpais Plan Team Leader
BLM- Albuquerque Field Office
435 Montano Rd. N.E.
Albuquerque, N.M. 87107-4935

Ref: 1610 (010)

Thank you for supplying me with a copy of the Draft Resource Management Plan and EIS for the El Malpais National Conservation Area, Chain of Craters WSA and contiguous lands (BLM-NM-PL-99-003-1610) and for the opportunity to comment. I do have an abiding interest and concern for these lands, and your continuing efforts to keep me informed are appreciated. Please continue to do so.

My comments below are based on that concern and are sincerely meant constructively. The same applies to my previous actions on behalf of the New Mexico Wilderness Coalition in successfully pursuing an appeal of the original General Management Plan (GMP) and its associated Finding of No Significant Impact (FONSI) (Ref. IBLA 92-13). I recognize that the current document is the long-awaited result of the IBLA's finding regarding that appeal and that the issuance of the RMP is indeed a major Federal action requiring the associated EIS. I note that the IBLA's decision was rendered on April 20, 1994, and the current document not issued until five years later, in June, 1999. Public comment is then to be closed on September 24, an entirely inadequate time for sufficient public review and comment. In order to comment appropriately and adequately, I hereby request a further 30 to 60 days opportunity to submit further comments. Given the disproportionate time taken by BLM to issue this document relative to the short time allowed for public review, I believe this request is quite reasonable. Also see comments below regarding the lack of a Biological Assessment.

OVERALL RECOMMENDATION

I would urge the adoption in large part of the management approach described in this document as Alternative C. I will not refer to this Alternative by the subtitle given in the document as "Natural Processes" because I consider the various subtitles to be biased and potentially misleading. This is particularly true of the so-called "Balanced Management" alternative. I consider this subtitle to be self-serving and somewhat contrived to support the agency's preferred alternative. Many members of the public can and do equally view most of Alternative C as a more "balanced management" alternative; this simply depends on the weighting and emphasis of various values and aspects of the plan.

SPECIFIC RECOMMENDATIONS
Adjacent lands to be included

General

I do support BLM's proposal for the addition of the identified adjacent lands to the NCA, and I commend BLM for the acquisitions and proposal as a proactive approach to rational land management.

30-A Referring to page 2-6, BLM states that the lands contiguous to the Cebolla Wilderness will be managed under the Interim Management Policy, with an exception for mining. I would point out that the stated exception may well be in conflict with previous Congressionally mandated requirements for the BLM to carry out wilderness suitability assessment, recommendation and interim management on lands managed by BLM.

Lands contiguous to the Cebolla Wilderness

I strongly urge BLM to recommend for Wilderness designation the entire 10,380 acres studied. I find no cogent statement and no convincing reasons given for not doing so. On the contrary, all of this land is quite suitable for Wilderness designation by all criteria for naturalness, opportunities for solitude, size, proximity to existing wilderness, 30-B and contribution to diversity of the National Wilderness Preservation System. This should be done regardless of which overall plan alternative might be selected for implementation. Natural processes are already well along in the process of erasing previous vehicular use in all of these areas. Further, BLM cannot realistically expect to have the resources to manage any of this land as anything other than Wilderness.

Biological Assessment

This document contains apparently contradictory statements regarding a Biological Assessment. Page 2-11 states that BLM's informal consultation with USFWS is expected to be completed by early 1999. Appendix Q, titled Biological Assessment, states that at the end of informal consultation, the Biological Assessment and an 30-C associated Biological Opinion, if issued by USFWS, will be attached to this document. Since this document was issued in June 1999, well after "early 1999", the Biological Assessment should be available, but is neither included nor attached. The Biological Assessment would be invaluable in assessing the completeness and appropriateness of the Draft RMP and EIS.

Please inform me of the status of the Biological Assessment, USFWS Biological Opinion, and provide copies upon issuance.

Chain of Craters WSA

BLM does not have a clear statement of any rationale for not recommending the 30-D Chain of Craters WSA for Wilderness designation under any of the Alternatives A, B, or D. Pending such a statement it is impossible to support any plan not recommending this WSA for Wilderness designation.

Respectfully submitted,

John Somers

30-A--If lands are being studied for wilderness under Section 202 of FLPMA, existing and new mining operations under the 1872 Mining Law are regulated under 43 CFR 3802 only to prevent unnecessary or undue degradation of the lands, not to prevent impairment of wilderness suitability as would be required under Section 603 of FLPMA. Although FLPMA does not require Section 202 WSAs to be given interim management protection, the BLM has the authority under Section 302 of FLPMA to manage these lands similarly. The authority to regulate mining activities to the nonimpairment standard would only apply to the areas that meet the criteria of Section 603 of FLPMA. Section 302 provides the authority to regulate mining on all public lands to prevent unnecessary or undue degradation.

30-B--The primary goal of the BLM's wilderness study process is to determine an area's suitability or nonsuitability for preservation as wilderness. The BLM recommends for wilderness designation only those lands for which it has been determined, through the agency's multiple resource planning process and with public involvement, that wilderness is the most appropriate use of the land and its resources. Though you state that no clear reason exists for not recommending the 10,380 acres adjacent to the Cebolla Wilderness as suitable for designation, others oppose designating any more lands within the NCA as wilderness.

30-C--Refer to Appendix Q in this Proposed Plan/Final EIS

30-D-NEPA and regulations at 43 CFR 1600 require the BLM to explore and evaluate all reasonable alternatives. According to the "Wilderness Study Policy; Policies, Criteria and Guidelines for Conducting Wilderness Studies on Public Lands" published in the *Federal Register* on February 3, 1982 (Vol. 47, No.23, pp. 5098-5122), any plan or EIS containing wilderness recommendations should identify a range of alternatives allocating all or part or none of the WSA to wilderness. Though you state that no clear reason exists for not recommending the Chain of Craters as suitable for designation, others oppose designating this area as wilderness. Refer also to Responses 6-C and 30-B.

COMMENT LETTER: 31

No. 31

September 23, 1999

El Malpais Team Leader
Bureau of Land Management
Albuquerque Field Office
435 Montano Road
Albuquerque, NM 87107

Re: Draft El Malpais Plan and Environmental Impact Statement

Dear Team Leader:

Thank you for the opportunity to provide written comment on the above document. The Draft plan appears to be very thorough and covers a broad range of alternatives. This letter is written to address specific comments on the "Access & Transportation" issues with some general comments toward "wilderness suitability".

I am a current member and Past President of the New Mexico 4 Wheelers. Our group consists of 40 family members who enjoy the opportunity to travel the New Mexico outback with four wheel drive vehicles. Several members and guests joined me in visiting the El Malpais area during the comment period to get a first hand look at the splendid beauty of this remote area. We specifically drove roads (trails, byways) in the south central area, the Chain-of-Craters WSA area, and Cebolla Canyon areas. I base the following comments on this research and my review of the Draft document.

The BLM has proposed some questions in their Plan that I will attempt to address. In particular, "What roads and trails should the BLM provide for access to or across the Planning area's public lands?" and "Which roads should be designated as open, limited, or closed to use?".

31-A My review of the 'Chain-of-Craters' area discovered much solitude from primitive motorized trails (byways). The single road (trail, byway) through Cebolla Canyon is the only access to this area providing scenic solitude for picnics and/or exploration via motorized travel to our handicapped population. The road (trail) is quite accessible in an SUV and should be kept open except when the weather is intolerant of safe or non-destructive travel.

31-B The 'Chain-of-Craters' area is full of routes for motorized use and I agree with the BLM Field Office's recommendation that this area be released from the WSA category. I don't believe this area could meet the original intent of the 'wilderness' criteria established by the Wilderness Act of 1964. All routes in this area should remain open, which is contrary to the Plan's recommendation for Alternatives B through D. The Plan's proposal to close "duplicate" routes is flawed in respect to the fact that some of these routes travel different canyons and provide exposure to different flora and fauna than can be accessed via open routes.

The Alternatives propose very few recreational facilities and this is consistent with maintaining the naturalness of the area. The proposed parking lots for equestrian access are a good idea, but improvements to existing trails or byways is discouraged. I believe access to the area is currently acceptable for the amount of traffic it receives.

I agree with the BLM's choice of Alternative 'D' with modifications. Road closure should be equal to Alternative 'B' with maintaining the Cebolla Canyon Community road open. I also believe the recommendation of 3,930 acres of additional wilderness should not be made. The areas described are not in eminent danger of being developed. Therefore, this would be a waste of taxpayers money.

RESPONSES TO COMMENT LETTER: 31

31-A--As explained in the alternatives and shown on the access and transportation maps, the road through Cebolla Canyon would remain open to public use. The BLM also recognizes that this road requires maintenance and upgrades to provide for safe use.

31-B--Refer to the second paragraph of Response 6-A.

Cross country travel should be discouraged and this is consistent with Alternatives B-D. Development of the campground as noted in Table 'A', page S-2 for Alternative D should be completed. The "Narrows" area also makes an excellent picnic ground and slight development of this area would be preferable.

The El Malpais Plan area has excellent opportunities for all types of users as it's currently managed and significant changes are not necessary. Most of the recommendations made by Alternative 'D' are improvements that will improve access and negatively impact the area due to increased traffic. That is why I recommend Alternative 'D' with modifications as I have listed.

I look forward to receiving a revised Environmental Impact Statement proposal. I feel my comments are reasonable and provide information necessary to make some minor adjustments to the preferred alternative.

Sincerely,

Mark Wolf
7019 Red Sky Ct., NE
Albuquerque, NM 87111

COMMENT LETTER: 32

COMMERCIAL RESOURCES
(505)-827-5724

SURFACE RESOURCES
(505)-827-5793

MINERAL RESOURCES
(505)-827-5744

ROYALTY
(505)-827-5772

State of New Mexico
Commissioner of Public Lands
Ray Powell, M.S., D.V.M.
310 Old Santa Fe Trail, P. O. Box 1148
Santa Fe, New Mexico 87504-1148
Phone (505)-827-5760, Fax (505)-827-5766

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ADMINISTRATIVE MGMT.
(505)-827-5700

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(505)-827-5713

PLANNING
(505)-827-5752

September 22, 1999

Mr. Edwin Singleton, Manager
US Bureau of Land Management
Albuquerque District Office
435 Montano Rd., NE
Albuquerque, NM 87107-4935

RE: Draft Rio Puerco Resource Management Plan Amendment/EIS for El Malpais National Conservation Area

Dear Mr. Singleton:

Thank you for the opportunity to review and comment on the above referenced Environmental Impact Statement.

From our review of the document, we have concluded that none of the proposed alternatives will have an effect on state trust lands. No state trust lands are proposed for inclusion in the management area and we foresee no impacts resulting from the proposed action. Accordingly, we have no comments to provide.

Sincerely,

RAY POWELL, M.S., D.V.M
COMMISSIONER OF PUBLIC LANDS

Jd/rp

RESPONSE TO COMMENT LETTER: 32

32--Comment acknowledged.

NO 33

SHARON ARMIJO
CLERK — P. O. BOX 197
(505) 533-6400
JANET PORTER
TREASURER — P. O. BOX 407
(505) 533-6384
SUSAN GRIFFIN
ASSESSOR — P. O. BOX 416
(505) 533-6577
JOHN C. SNYDER
SHERIFF — P. O. BOX 467
(505) 533-6222
LILLIE LANEY
PROBATE JUDGE

STATE OF NEW MEXICO

CATRON COUNTY

RESERVE, NEW MEXICO 87830

JOHN HAND
COMMISSIONER DISTRICT NO. 1
CARL G. LIVINGSTON
COMMISSIONER DISTRICT NO. 2
AUGGIE D. SHELLHORN
COMMISSIONER DISTRICT NO. 3
COMMISSION OFFICE
P. O. BOX 507 — (505) 533-6423
FAX (505) 533-6433

Comments
for
Rio Puerco Resource Management Plan Amendment
Environmental Impact Statement
El Malpais National Conservation Area
and
Chain of Craters Wilderness Study Area

FAXED 9/24/99 4:18pm AP

Dear Bureau of Land Management:

The following outlines the comments of Catron County on the proposal of the El Malpais National Conservation Area and Chain of Craters Wilderness Study Area.

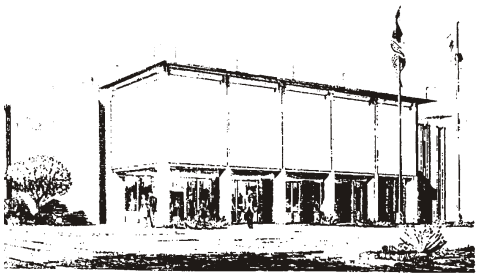
33-A 1. Please be informed that this proposal and the identified area in Catron County is next to a proposed subdivision of a large size. This impact of the subdivision will cause an urban impact spillover in the Study Area of which was not analyzed.

33-B 2. Within the EIS no report was made on a required Environmental Justice analysis. Please provide this information to Catron County for review.

33-C 3. Catron County also is concerned about continued possibility of changing designations for the Study Area that could preclude certain traditional activities such as livestock grazing in this area. Catron County has established that these activities are required for the continuation of small minority businesses.

Sincerely,

Adam Polley
Catron County Manager



33-A--We are aware of the Wild Horse subdivision, which is discussed on page R-6 of Appendix R in the Draft Plan/EIS. The urban spillover impacts of this development would not be the result of the BLM's recommendation to add areas in Catron County with valuable cultural resources to the NCA. These impacts are therefore not analyzed in this document, whose scope is the potential impacts of four BLM management alternatives on the resources and uses of the NCA Refer also to Response 1-AE.

33-B--Refer to Response 1-AE.

33-C--Implementation of the Preferred Alternative (D) would not preclude livestock grazing. In its reasonable foreseeable development scenario, the BLM would not expect grazing to be excluded. However, the agency does not have the ultimate decisionmaking authority on public lands.

the
Central New Mexico Group
of the
Sierra Club
207 San Pedro NE
Albuquerque, NM 87108

September 12, 1999

El Malpais Plan Team Leader
US Department of the Interior
US Bureau of Land Management
Albuquerque Field Office
435 Montaño Road NE
Albuquerque, NM 87107-4935

Team Leader:

The several thousand members of the Central New Mexico Group, Rio Grande Chapter, of the Sierra Club have clear interests in the public lands and public resources under your agency's stewardship as a direct result of our roles as conservationists, recreationists, public lands stakeholders, and, perhaps most important, citizens and taxpayers. Thus, we have an equally clear civic obligation to respond, in reference to 1610 (010), to the ***Draft Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and Contiguous Lands,*** hereinafter referred to as the ***Draft EIS.*** In submitting this response, the Central New Mexico Group of the Sierra Club believes that there is an obligation to remain, as well as intrinsic value in remaining, true to the original intent of the National Environmental Policy Act (NEPA) and to 40 CFR 1500 through 1508, the original and still applicable promulgating regulations. We believe that this approach helps to prevent the dilution of intent that can result from subsequent reinterpretation. In this context, our comments will be heavily based upon 40 CFR 1500 through 1508. We trust that your agency has, in accordance with 40 CFR 1500.2(a), "to the fullest extent possible" attempted to "interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations."

34-A

34-A--The BLM has "to the fullest extent possible" attempted to "interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the [National Environmental Policy] Act and these regulations."

First, allow us to very clearly state our preference for Alternative "C" (the socalled "Natural Processes" Alternative) for the immediate future management of these lands. We generally tend to prefer to have the highest priority placed on conservation, particularly in an area that has been specifically dedicated to conservation. In this context, we would prefer to see the least amount of motorized traffic permitted and the largest areas of wilderness preserved. At the same time, our very strong preference for Alternative "C" also reflects our concern about the influences currently driving your agency's operations and decisionmaking processes, here in New Mexico, in the presence of the current state government. To be more specific, our recent experience with the process leading to the ***Draft Statewide Resource Management Plan/Environmental Impact Statement (EIS) for New Mexico Standards for Public Land Health and Guidelines For Livestock Grazing Management*** has left us alarmed with, outraged by, and disappointed in the grotesque and improper level of political interference insinuating itself into your agency's operations in New Mexico. As a result of such recent experiences, we believe that there is significant risk that development activities and the funds allocated for them could be led astray from their originally stated resource protection and public use enhancement goals. Thus, it is our desire to see some of those operations and decisions deferred, pending improvements in the political and ethical climates.

34-B Frankly, our review of the ***Draft Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and Contiguous Lands*** also leaves us with some severe concerns, particularly in association with our recent review of the ***Draft Environmental Assessment for the Cerro Brillante Coordinated Resource Management Plan of July 1999,*** a copy of which is attached for the record. As we discussed on pages four through six of our review of the ***Draft Environmental Assessment for the Cerro Brillante Coordinated Resource Management Plan of July 1999,*** the Cerro Brillante Grazing Allotment lies entirely within and is a designated part of the El Malpais National Conservation Area. Thus, the management of grazing on, the coordinated resource management of, the Cerro Brillante Grazing Allotment is clearly connected to and has clear cumulative impacts on the El Malpais National Conservation Area and with actions taking place there, particularly with regard to potential wildlife impacts and disturbance. Yet, these obviously connected actions with obviously cumula-

34-B--The BLM does not believe it has used improper segmentation in preparing this document. The BLM planning system has multiple levels (refer to page 1-10 of the Draft Plan/EIS). Additionally, the agency has done NEPA compliance outside the planning system.

The allotments that overlap the NCA were included in the *Draft Environmental Impact Statement for the Proposed West Socorro Rangeland Management Program* (1982), undergoing NEPA analysis along with all other BLM allotments in the area. The BLM used allotment-specific data to analyze grazing impacts within the West Socorro area, which included the present El Malpais NCA.

Administration was moved from the Socorro Resource Area to the Rio Puerco Resource Area (now the Albuquerque Field Office), and the grazing decisions were brought forward into the *Rio Puerco Resource Management Plan* (1986). This RMP is the broadest level of BLM planning and is accompanied by a NEPA compliance EIS that includes analysis of potential impacts for all lands allocated for grazing in the RMP decisions.

In 1987, the Congress passed Public Law 100-225 which, among other things, designated the El Malpais area as an NCA and required the BLM to prepare a General Management Plan for it. The agency's plan, which included initiatives to establish desired plant communities, was completed in 1991 and appealed on procedural grounds. The BLM lost the appeal and was directed to redo the plan (*Interior Board of Land Appeals Decision 92-3*).

The current replacement document identifies the BLM's intent to pursue its goals for reaching desired plant communities through developing activity-level plans for allotment management. For some allotments including the Cerro Brillante, the agency is also developing Coordinated Resource Management Plans (CRMPs), which are similar to Allotment Management Plans but are more inclusive in that they analyze all uses and resources involved in the effort to achieve desired plant communities and other objectives. The CRMPs constitute some activity- and project-level planning in that some specific projects are discussed (e.g., vegetative treatments, water developments, fencing) and included in the environmental analysis.

The El Malpais Plan/EIS is not yet approved, so the Cerro Brillante CRMP is in conformance with the decisions of the Rio Puerco RMP. If the BLM selected the Preferred Alternative for implementation in the NCA, the Cerro Brillante decisions would be acceptable without modification. If modifications were required to the El Malpais Plan/EIS decisions, livestock management would be coordinated and designed to complement other programs (refer to page 2-15 of the Draft El Malpais Plan/EIS). RMP-level planning is the broad programmatic level under which the CRMP activity-level planning occurs. The intent is to meet the required levels of planning and NEPA compliance, not to segment NEPA analysis.

[Note: This process has been further complicated by litigation requiring the BLM to complete site- specific NEPA assessments on several Planning Area allotments for grazing permit renewals (refer to Response 1-L for more explanation). The Proposed Plan/Final EIS now includes a cumulative impact section to address grazing improvements.]

tive impacts are being addressed through two, at least two of which we are aware, separate NEPA processes and neither of these processes discloses the existence of the other. Your agency is engaging in improper segmentation under the NEPA for the purposes of evading public disclosure and scrutiny.

34-C With the proper connection between these two separate NEPA processes established, all of the rest of our comments on the ***Draft Environmental Assessment for the Cerro Brillante Coordinated Resource Management Plan of July 1999,*** including our comments about the need to include information about the history of and the circumstances surrounding the relatively recent removal of a thriving herd of Bison from these public lands, need to be addressed in this ***Draft EIS.*** Again, this information needs to be provided to enable the public to properly scrutinize any potential conflicts of interest between the conservation mission of the National Conservation Area and commercial grazing activities that are being promoted, for the same lands, but through separate NEPA processes.

To be honest, we sincerely do not believe that your agency is pursuing a genuine NEPA process here, but rather checking a box through the use of an illusion of a process, and we resent it. Please keep us on any and all public notice lists; notify us of any further information or draft documents as they become available.

Respectfully,

Michael Norte
Chairman
Conservation Committee

34-C--The bison were never in the Cerro Brillante Allotment. Therefore, livestock use of this allotment did not interfere with the bison relocation nor removal.

The BLM considered the Cerro Brillante Unit, which includes the Cerro Brillante Allotment, as an alternative site for the bison relocation in the *Environmental Assessment for the Bison Management Plan, El Malpais National Conservation Area* (1992). However, the Breaks Unit near the Cebolla Wilderness was determined to be a more suitable location for the bison herd release and establishment.

The bison were brought from the Fort Wingate Military Facility near Gallup, New Mexico in February of 1993 and were released in the Breaks Unit. They scattered through the wilderness and neighboring areas until they were removed in the spring of 1995. The reasons for their removal as stated in the *Environmental Assessment for the Bison Relocation, El Malpais National Conservation Area* (1994) were, "the presence of the herd in the NCA has caused more resource damage (including destruction of property and domestic animals) than originally anticipated. Adequate fencing to properly contain the bison would be very costly (between $¼ and ½ million), and its construction within the Cebolla Wilderness would be incompatible with wilderness and recreation uses. Visitor safety continues to be a strong concern."

It is difficult to assign a significant value to the bison in terms of cumulative impacts, because the State of New Mexico transferred ownership of the bison and received a small economic return.

the
Central New Mexico Group
of the
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207 San Pedro NE
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August 23, 1999

Team Leader, Grazing Permit Renewals
US Department of the Interior
US Bureau of Land Management
Albuquerque Field Office
Albuquerque, NM 87107-4935

Team Leader:

34-D The several thousand members of the Central New Mexico Group, Rio Grande Chapter, of the Sierra Club have clear interests in the public lands and public resources under your agency's stewardship as a direct result of our roles as conservationists, recreationists, public lands stakeholders, and, perhaps most important, citizens and taxpayers. Thus, we have an equally clear civic obligation to respond, in reference to 4160 (010), to the ***Draft Environmental Assessment for the Cerro Brillante Coordinated Resource Management Plan of July 1999,*** hereinafter referred to as the ***Draft Plan/EA.*** In submitting this response, the Central New Mexico Group of the Sierra Club believes that there is an obligation to remain, as well as intrinsic value in remaining, true to the original intent of the National Environmental Policy Act (NEPA) and to 40 CFR 1500 through 1508, the original and still applicable promulgating regulations. We believe that this approach helps to prevent the dilution of intent that can result from subsequent reinterpretation. In this context, our comments will be heavily based upon 40 CFR 1500 through 1508. We trust that your agency has, in accordance with 40 CFR 1500.2(a), "to the fullest extent possible" attempted to "interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations."

34-D--The following are responses to comments on the Cerro Brillante CRMP/EA, which were submitted by Michael Norte with his comments on the El Malpais Plan/EIS.

We have some severe concerns with this ***Draft Plan/EA.*** Allow us to communicate them as concisely as feasible, given the need to properly and completely document them.

First, allow us to review your agency's obligations under 40 CFR 1500.1(b).

> *NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.*

Allow us to also refer to a portion of 40 CFR 1500.2.

> *Federal agencies shall to the fullest extent possible... facilitate public involvement in decisions...*

We very strongly believe that the ***Draft Plan/EA*** is deficient in meeting these statutory obligations, as well as many others. To begin with, while the ***Draft Plan/EA*** has been constructed to highlight coordinated resource management, material within the ***Draft Plan/EA*** itself seems to raise the question of 34-D 2-A whether the range improvements being proposed are actually intended as the basis to support a significant increase in livestock grazing levels. The ***Draft Plan/EA*** has also been improperly segmented away from other ongoing NEPA analyses that contain information about the proper role of these public lands as part of a National Conservation Area, information that the 34-D 2-B public needs in order to properly scrutinize the appropriateness of the proposed action. Finally, the ***Draft Plan/EA*** omits information about the circumstances surrounding the relatively recent removal of an established herd of Bison from these public lands, again all of which is information that the public needs in order to properly scrutinize the proposed action and 34-D 2-C any potential conflicts of interest between the conservation mission of the National Conservation Area and the commercial grazing activities that are at the heart of this proposed action.

For example, on page 14 of the ***Draft Plan/EA,*** buried deep within many pages of good words about wildlife and woodlands, under the heading of *Rangeland Management,* we are informed that the existing "10-year term permit would be reissued for the current numbers of livestock." We are led to believe, on the basis of much of the material in the ***Draft Plan/EA,*** that the reason for the elaborate fencing and additional water developments

34-D/2-A--The current grazing use (200 animal units yearlong) is 26 percent less than the grazing preference (270 animal units yearlong) authorized under the expiring permit (70/270=25.9 percent). The permittee has voluntarily taken this reduction while he determines how best to make effective use of the allotment. The improvements (fencing and water system) are proposals agreed to by the permittee that would effectively use the full preference under a management system designed to maintain and improve the ecological health of the allotment. No authorized increase in livestock grazing preference would occur unless monitoring (as required in the grazing regulations) showed that additional capacity existed.

The permit was transferred to the current permittee with a preference for 270 animals yearlong. The permittee agreed to improvements for more effective use of the allotment's resources.

It would have clarified the stocking levels under the Proposed Action had we mentioned the preference numbers on page 14 of the Cerro Brillante CRMP/EA under the "Rangeland Actions" heading. However, it is stated on this page, "The 10-year term permit would be reissued for the current numbers of livestock" (270 animals yearlong). On page 29 of the Affected Environment section it is stated, "Cerro Brillante has a grazing preference of 266 cattle and 4 horses yearlong." The permittee could run this number now if he wished. Permitting 270 animals to graze yearlong does not constitute an increase from currently authorized use. It appears we have used different terminology. Our permit authorizations are usually referred to as "preferences."

34-D/2-B--Refer to Response 34-B above.

34-D/2-C--Refer to Response 34-C above.

34-D 2-A

that are being proposed is to enable the permittee to better rotate "the current numbers of livestock" for the benefit of the resource. Yet, on page 66, under *Appendix A* to the ***Draft Plan/EA,*** paragraph four indicates that the previous permittee was transferred a preference for about 270 animals yearlong, but "agreed to graze approximately 200 animal units yearlong pending range improvements." Do the elaborate fencing and additional water developments that are included in this proposed action constitute the "pending range improvements" that were to be implemented prior to the previous permittee being allowed to go from the current stocking level of 200 animals yearlong to the aforementioned 270 animals yearlong?

Refer to 34-D/2-A above

Paragraph five reinforces this concern when it asserts that the current use of 200 animal units yearlong is a "very conservative stocking level" that is "appropriate while the new permittee learns the area and transitions to the desired higher level of management proposed in this CRMP." We are left to presume that the inferred "desired higher level of management proposed in this CRMP" is the increased pasture rotation to be afforded by the elaborate fencing and additional water developments that are included in this proposed action and that, thus, this fencing and development may indeed constitute the "pending range improvements" that were to be implemented prior to the previous permittee being allowed to go from the current stocking level of 200 animals yearlong to the aforementioned 270 animals yearlong? Again, do the elaborate fencing and additional water developments that are included in this proposed action constitute the "pending range improvements" intended to enable the permittee to go from the current stocking level of 200 animals yearlong to the aforementioned 270 animals yearlong and, if so, why is it not made more clear to the public, within the body of the ***Draft Plan/EA*** and not in the fine print of some appendix, that the proposed action will result in the impacts associated with a thirty-five percent increase in stocking levels?

34-D 2-A

Refer to 34-D/2-A above

While the original enabling legislature may have permitted a continuation of livestock grazing within this National Conservation Area, we do not believe that an increase of this magnitude was either envisioned or intended, particularly without clear public disclosure and full public scrutiny beforehand. We believe that a thirty-five percent increase in stocking levels, particularly within a National Conservation Area, constitutes a significant impact requiring the preparation of a full environmental impact statement, regardless of whether the actual increase in stocking levels occurs during

the next 10-year permit reissue or is deferred to a subsequent reissue. At the least, we do not believe that a valid FONSI can be issued for this proposed action until such time that these questions are answered completely, clearly, and in a manner that correctly discloses the true scope of the proposed action and properly facilitates public scrutiny of potential impacts.

Allow us to now address the illicit practice known as "segmentation" of an action subject to assessment under the National Environmental Policy Act. To begin with, both the National Environmental Policy Act (NEPA) and its promulgating regulations, including the portions of 40 CFR 1508.25 quoted below, recognize that many connected or similar activities, as well as many activities that may seem unrelated to an untrained observer, have impacts and effects that are additive, multiplicative, or otherwise cumulative, often as a function of their extent, intensity, or duration. Such impacts or effects can be additive, multiplicative, or cumulative either temporally or geographically, directly or indirectly, acutely or chronically.

> *...agencies shall consider...*
> *(1) Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:*
> *(i) Automatically trigger other actions which may require environmental impact statements.*
> *(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.*
> *(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.*
> *(2) Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.*
> *(3) Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography...*

Allow us to continue with a reference to 40 CFR 1508.7.

> *"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency, whether federal or nonfederal, or person undertakes such other actions. Cumulative impacts can result from individually*

> *minor but collectively significant actions that take place over a period of time.*

A further definition of "Effects" is provided by 40 CFR 1508.8.

> *"Effects" include:*
> *(a) Direct effects, which are caused by the action and occur at the same time and place.*
> *(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include... effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects and impacts as used in these regulations are synonymous. Effects includes ecological, such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems,... whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.*

The practice of "segmentation" involves breaking a single action, with significant impacts, into many smaller incremental pieces, each separated by artificial agency, process, or temporal boundaries, effectively disguising such significant impacts by that separation. In this manner, both the public and the judicial system can be misled into seeing, not a single action with interrelated cumulative impacts, but a stream of seemingly discrete, individual adjustments, each with its own apparently smaller, apparently less significant, individual repercussions. Once segmented into pieces, many of the smaller "bits" of the broader action may be small enough to be "farmed out" for implementation by other agencies or parties or even to fall within the threshold for categorical exclusions, thus evading any public scrutiny at all. Whether by burying parts of the agenda beneath the threshold of public visibility or by revealing the parts in such deceptively small incremental doses that they raise minimal attention, "segmentation" is an illegitimate tactic for concealing the full intent or impact of a proposed action. The use of "segmentation" as a means of concealing, misrepresenting, and disguising the true scope and magnitude of cumulative impacts from public scrutiny is thus intended to deceive the public into accepting an integrated set of mutually related, interdependent, connected, cumulative, or similar actions that might never be as easily accepted, if the broader context of which they

are a part were ever revealed and documented in proper accordance with the National Environmental Policy Act.

34-D 2-B

The practice of "segmentation" is quite clearly proscribed by federal regulation, including proscriptions against it in 40 CFR 1508.25 and 1508.27(b)(7). There is established case law against the practice. In this context, why is the action proposed in this ***Draft Plan/EA*** not fully disclosed for public scrutiny in the currently ongoing ***Draft Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and Contiguous Lands?*** Why is the existence of the currently ongoing ***Draft Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and Contiguous Lands*** not more clearly disclosed in this ***Draft Plan/EA?*** Why are the relationships between these two parallel NEPA processes not more clearly disclosed and discussed in either document? Why are we to believe that the actions proposed in this ***Draft Plan/EA*** will not have impacts that are connected, cumulative, or similar to those proposed under the ***Draft Rio Puerco Resource Management Plan Amendment/Environmental Impact Statement (EIS) for the El Malpais National Conservation Area (NCA), Chain of Craters Wilderness Study Area, and Contiguous Lands?*** Why is there not a single document addressing the full range of these actions? Many, if not all, of the actions proposed in each of these two parallel NEPA processes will clearly have impacts that are connected, cumulative, or similar to those proposed under the other, particularly where potential wildlife disturbance is concerned. Your agency is engaging in improper segmentation of an action subject to the NEPA.

There are, in fact, a number of activities that are connected to, dependent upon, or similar to livestock grazing in their impacts and effects or have cumulative impacts that can magnify or be magnified by the immediate or cumulative impacts of livestock grazing, particularly with regard to impacts on wildlife and its habitat on the lands under your agency's stewardship. Your agency has a statutory obligation to comprehensively assess and analyze each and every one of these connected, cumulative, or similar actions or impacts as they are associated with the public resources addressed in this ***Draft Plan/EA,*** including actions of other agencies that have cumulative impacts and actions that would not proceed without the presence of the subsidized grazing activities that are involved here. Unfortunately, this

Refer to Response 34-D/2-B above

Draft Plan/EA fails to provide any such properly complete and comprehensive analysis.

34-D 2-D

As 40 CFR 1508.8 clearly indicates, cumulative and connected impacts are not restricted to direct effects. For example, various agencies frequently underwrite "animal damage control" activities, frequently allowing similar private actions, in areas associated with grazing allotments. Predation on livestock is invariably the focus of these actions, since there is rarely, if ever, a sufficient history of any other kind of predation to warrant these operations. In accordance with 40 CFR 1508.25(a)(1)(ii), these "animal damage control" activities would not proceed on the lands under your agency's stewardship without your agency acting, either previously or simultaneously, to subsidize livestock grazing on these lands. In accordance with 40 CFR 1508.25(a)(1)(iii), these "animal damage control" activities are, regardless of the agencies or individuals that actually undertake them, interdependent parts of the larger action represented by subsidized livestock operations and depend on this larger action for their justification. Stated in other ways, your agency's actions, with regard to subsidizing livestock grazing, have both "induced changes in the pattern of land use" and stimulated other actions and effects that have impacted, even eliminated, populations of grizzly bears, black bears, wolves, mountain lions, eagles, hawks, raccoons, foxes, coyotes, jaguars, and other species. Even those species that have survived have suffered distortions of their natural population dynamics, often triggering endangered species restoration costs in the process. Thus, these "animal damage control" activities, their impacts, and the associated subsidized livestock operations are "connected actions" that should have been discussed in this ***Draft Plan/EA*** in order to properly document cumulative impacts resulting from any proposed level of subsidized grazing.

34-D 2-E

Many other actions fall into these categories. Roads and fences fragment habitat. Water developments impact the natural watertable, surface flows, the water available to downstream plant and animal life, and on movement patterns and concentrations of livestock, which then compact the soil, promote erosion, and harass wildlife. In truth, livestock operations on public lands are highly subsidized activities that are necessarily supported by elaborate and costly range management, legal, public relations, and contracting structures within your own agency. These requirements clearly have a significant impact on the funds available to support your fundamental resource protection responsibilities. Thus, the development and mainte-

34-D/2-D--In an EA prepared by the U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Services (APHIS), Animal Damage Control (ADC), the impacts of the predator control program for Northern New Mexico (16 northern counties) were addressed (*EA and Decision for Predator Damage Management in the Albuquerque ADC District in Northern New Mexico*, 1997). The resulting decision was reviewed in 1998 by the USDA, APHIS, Wildlife Services (WS) and updated. Under this updated decision, wildlife damage control activities by the WS are permitted in response to predator-caused losses of livestock, property, or wildlife, or threats to human safety.

The following issues are analyzed in detail in the ADC EA.

1. The impact of WS predator damage management (PDM) on:
   a. Target species populations (e.g., coyote, mountain lion, black bear);
   b. Nontarget species populations, including threatened and sensitive species;
   c. Private recreational and commercial fur harvest; and
   d. The agricultural community and other agencies, socially and economically.
2. The impact to WS PDM from the public's use of public lands.
3. The coyote population at which the WS's take would result in increases in rodent, rabbit, and other prey species populations that would, in turn, cause detrimental effects on vegetative resources.
4. The cost of providing PDM services for livestock protection, compared to the value of livestock losses avoided.
5. The humaneness and selectivity of WS PDM methods.

Program activities, methods and their potential impacts on Issues 1c, 1d, 2, 3, 4 and 5 were the same during the 1998 review as those analyzed in the ADC EA and thus did not require any additional review. To determine if impacts with regard to Issues 1a and 1b have remained within parameters described in the EA, the WS compiled and reviewed the following information on PDM activities during the past year. Table A shows the number of animals killed by the WS during PDM activities in the district during 1997. The New Mexico Department of Game & Fish provided estimates of sport and other harvest. (Sport harvest data are for season 1996-97, the most current available.)

ADC activities in the past decade have been conducted on approximately 1.6 percent of the public land in northern New Mexico, resulting in the killing of 48 coyotes (on public land) but no other target or nontarget species. These facts tend to indicate no current threat exists to wildlife populations as the result of ADC activities in northern New Mexico. (BLM staff have been told by Wildlife Services personnel that no predator control activity has been conducted on BLM public lands in the NCA area in recent years.) Additionally, it is the policy of APHIS when conducting ADC actions to ensure species diversity and viability (p. 2-14 of the ADC EA).

BLM staff did not identify any direct impacts of grazing to wildlife in the Cerro Brillante Allotment. The cumulative impacts of grazing to wildlife are those shown in Table 1 from the ADC EA (reproduced below), which were found not to be significant.

Table 1. WS Take (animals killed) and Cumulative Take (sport harvest) of Target and Nontarget Species during PDM Activities of the Albuquerque District of the New Mexico Wildlife Services Program in 1997.

Species	WS Take	Other Harvest (Sport and other Depredation Take)	Total Take	Estimated Population	Cumulative Take as % of Population	Sustain-able Harvest Level	Statewide Population Trend (from NMGF[2])
Target Species:							
Coyote	1,774	577	2,351	53,000	4.4%	70%	stable
Mountain Lion	0	79	79	750 - 1,300[3]	6.1 - 10.5%	28%[4]	stable
Black Bear	1	239	240	2,000[5]	12.0%	20%	stable
Nontarget Species[6]:							
Gray Fox	5	244	249	28,000	0.9%	NA	stable
Kit Fox	5	1	6	3,500	0.2%	NA	stable
Red Fox	4	16	20	NA	NA	NA	stable
Swift Fox	17[7]	0	17	NA	NA	NA	NA
Bobcat	4	131	135	NA	NA	20%	stable
Badger	5	37	42	NA	NA	NA	NA
Striped Skunk	20	79	99	NA	NA	NA	stable
Fer/FR Dog	16	NA	16	NA	NA	NA	NA
Porcu-pine	4	NA	4	NA	NA	NA	NA
Raccoon	1	160	161	NA	NA	NA	stable

[2] K. Mower, NMGF, pers. comm.

[3] The NMGF only provides an estimate of the statewide mountain lion population. The estimate for 1997 was 1500-2600. For purposes of this analysis, the population in the Albuquerque District is assumed to be approximately ½ of the statewide estimate.

[4] Based on Logan et al. (1996) which provided information and conclusions suggesting annual kill rates for adult mountain lions would likely need to exceed 28% to maintain a population at low levels.

[5] The NMGF only provides an estimate of the statewide black bear population. The estimate for 1997 was 4000. For purposes of this analysis, the population in the Albuquerque District is assumed to be approximately ½ of the statewide estimate.

[6] Some of the animals taken in this category were actually target animals but are included here to assure cumulative impacts are considered.

[7] Only 5 of these swift fox were taken as nontarget animals. The rest were collected at the request of the NMGF for a study.

nance of these costly "livestock support" functions within your own agency are "interdependent parts of a larger action and depend on the larger action for their justification" and cumulative actions, "which when viewed with other proposed actions have cumulatively significant impacts." In this context, a complete and thorough analysis of these functions, a statement of their costs, and a full disclosure of their organizational and budgetary impacts on your overall resource protection responsibilities need to be included within this ***Draft Plan/EA.***

34-D
2-C

Again, the ***Draft Plan/EA*** omits information about the history of and the circumstances surrounding the relatively recent removal of an established herd of Bison from these public lands. This information needs to be provided since there is clear potential for similar and cumulative impacts from these two species and especially since, as recent events near Yellowstone National Park clearly indicate, there is a tremendous history of controversy and potential for conflict of interest surrounding the relationship between Bison, cattle, Euroamerican ranching interests, and Native American cultural interests. The public needs an adequate baseline of information on all of these aspects of the situation in order to properly scrutinize the proposed action, its potential impacts, and any potential conflicts of interest between the conservation mission of the National Conservation Area and the commercial grazing activities that are at the heart of this proposed action.

Please keep us on any and all public notice lists; notify us of any further information or draft documents as they become available.

Respectfully,

Michael Norte
Chairman
Conservation Committee

34-D/2-E--The scope of the CRMP/EA is to discuss impacts rather than subsidies. However, subsidies, whether for the development of recreation, the conservation of natural resources or the continuation of grazing, frequently are designed to improve the social or economic aspects of the human environment.

Section 4 of the Taylor Grazing Act specifies that improvements needed for the care and management of livestock may be built on public land under permit or other cooperative arrangement.
The cooperative arrangement for the Cerro Brillante Allotment requires monetary contribution from the permittee. All water wells developed on this allotment have been paid for with private funds obligated by the permittee, including installation costs (which often exceed the cost of materials), and maintenance costs for the life of each well. Materials supplied through the BLM are purchased with range improvement funds, which are derived from a portion of the grazing fees that is identified by law to be returned for improvement of the land. BLM contracts to accomplish other project work would be paid for in the same manner.

The BLM's contribution of appropriated funds is only for the design and permitting of planned projects. This is to ensure that any project constructed on public land is compatible with multiple use mandates.

FLPMA provides for this action in Section 401(b)(1), resulting in beneficial cooperative public land projects since 1976. FLPMA also states in Section 401, "The annual distribution and use of range betterment funds authorized by this paragraph shall not be considered a major Federal action requiring a detailed statement pursuant to section 4332(c) of title 42 of the United States Code."

No 35

COMMENT LETTER: 35

RESPONSES TO COMMENT LETTER: 35

THG Corporation

N57 W30520 Stevens Road
Hartland, Wisconsin, 53029
Thomas H. Gabel, President
Email @ THG_Corp@att.net
(414) 367-2591

8/2/99

Bureau Of Land Management
c/o El Malpais Plan Team Leader
Albuquerque Field Office
435 Montano Road NE
Albuquerque, New Mexico 87107-4935

Ref: Draft El Malpais Plan and EIS 6/99 document 1610(010)

Before commenting on the El Malpais plan and EIS draft, I'd like to repeat a statement that was included on the inside cover of the Plan. This statement defines the basic objectives and goals of the BLM for the management and environmental control of public lands that has been put into effect by the Congress:

> **"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".**

35-A The present EIS and Plan in my opinion does not take into consideration this agencies responsibility or capability in managing that balance between Public use and protection of the natural state of the land as defined in the above statement. In several of the alternatives, The Chain of Craters was to be designated a Wilderness area without any clear reason as to why.

In the prior GMP (1991), The BLM did not find cause to recommend any alternatives that called for a change to Wilderness status. What has changed? The land is the same, the criteria for Wilderness classification is the same, so why does the Plan now present alternatives that include Wilderness classification for the Chain of Craters area? Has the financial and political power of the special interest groups become stronger and more important than the charter of the BLM ?

35-A--Refer to Response 7-A.

The EIS and use study for the El Malpais area must consider the best way to **balance** its use between Public use and natural state protection through utilization of the BLM agency direction and, be funded accordingly

35-B Another area of concern regarding the basis for the Chain of Craters Wilderness status decision that is lacking is the impact on existing users of the area in question. While I understand that individual economic impact is not a major factor in these actions, it should be considered or at least addressed. In the Chain of Craters area, the primary private use of the land is ranching; cattle grazing through allotment control by the BLM which was allowed by Congress as a condition when the area was designated a NCA (P.L.100-225).

In several areas of the Plan, reference to grazing impact were just generally addressed. i.e., on page I-10 in Appendix I, the plan acknowledges the law (P.L. 100-225) that allows for continuation of grazing in the Chain of Craters area but, goes on to say that appropriate use of motorized and mechanized equipment would still be allowed. In reality, the present Wilderness regulations requires that the Ranchers would have to apply for special permits stipulating exactly what had to be done etc..... a bureaucratic nightmare to say the least. In most cases, it is safe to say that the only motorized activity that would be allowed is that of an emergency or major project and only if approved. This does not address the needs of the Ranchers for continuous access for fence & water maintenance, doctoring animals etc. which is a never ending job. Performing these functions with alternate means(Foot or horseback) just isn't practical.

Also, in Appendix I, page I-6, the plan will call for deactivating existing water supplies and related equipment from the Chain of Craters area. These wells were put in place because it was not possible to effectively water livestock (or wildlife for that matter) manually. The Ranch owner prior to the insertion of the water system on the southern portion of the Los Cerros allotment, had gone into bankruptcy because of the lack of ability to economically provide water to his livestock.

To consider that these operations can be now done only with non motorized equipment and no supplemental water capability without any negative impact on the Rancher is short sighted to say the least. The real bottom line is that the Wilderness designation will eliminate effective Ranching in those areas. One of the statements supporting the Wilderness designation on page I-17 in Appendix I says the Indians and Ranchers objections can be accommodated. This statement is total without merit unless that accommodation is contrary to every Wilderness regulation presently in existence.

Therefore, if the Chain of Craters is designated a Wilderness area, then the existing ranching operations as we now know, will most likely cease to exist because of the increased manpower and costs associated with the new restrictions. This does not even address the enormous personal loss due to land and business values etc affected by a decision to designate the subject area a Wilderness. This will be a major impact on an

35-B--Refer to Response 6-B.

already strained industry and would more than likely put the affected Ranchers out of business.

On the surface this may not seem to be a major concern and in fact may be desirable by some organizations. However, under the present circumstances, most if not all of the maintenance and improvements (i.e. water availability) is being done by the ranches with their own funding in a cooperative basis with and under the control of the BLM. The condition of the land is critical to the ranchers ability to continue to stay in business. They do more on a daily basis to protect the land than any other group or organization or agency. Putting these people out of business would leave a gaping hole in the protection and development of the existing public lands.

As with most industries, there are some who would exploit the land for short term gain. However, the protection against this solely rests on the management responsibility of the BLM and can be effective if they are allowed to do this and are properly funded
35-C with existing laws and policies.

So it appears that the designation of the Chain of craters as a wilderness area does not effectively balance the land use for the benefit of the American people. Instead, it would appear that the livelihood of the present stewards of the land would be sacrificed for others to have a place of "Solitude". The area in question is already remote and provides a significant amount of "solitude" without the wilderness designation and, the BLM has the authority and capability to manage it properly as long as they have the necessary resources and manpower. At present, most field agents are tied up in offices away from the land buried under mounds of paperwork much of which is tied to many lawsuits and the associated politics. It would be interesting to see how much more effective our land management would be if the BLM were free to do what they do best - field management.

A last consideration is the accessibility of this area to the general public.. At present time and especially if the area in question is designated wilderness, accessibility to the area is most difficult and will be limited to those that are physically fit to hike into the
35-D area to appreciate it's beauty. The EIS study must consider making the area accessible to a majority of the public through improved roads and other services. To fail to do so, will make this area non existent to most Americans

In summary, I would suggest that he BLM reconsider the alternatives designating the Chain of Craters as a Wilderness based on the following additional factors:

o The BLM,s ability to effectively manage the balance between the public use and protection of the land to meet the goals of proper stewardship with the proper funding without closing the area to the general public through wilderness designation especially since this area does not meet the criteria based upon the BLM's original analysis.

35-C--The primary goal of the BLM wilderness study process is to determine an area's suitability or nonsuitability for preservation as wilderness. The BLM recommends for wilderness designation only those areas for which it has been determined, through the agency's multiple resource planning process and with public involvement, that wilderness is the most appropriate use of the land and its resources. Though you have expressed opposition to designating the Chain of Craters as wilderness, others have expressed that the area should be recommended as suitable for designation to protect the wilderness values they feel are present in the area, such as the opportunity for solitude.

35-D--The BLM tries to accommodate public land recreational users by providing areas for those who are physically fit to hike and enjoy solitude, as well as areas for those who may not be physically mobile and depend on motorized equipment for access. Our recommendation is that the Chain of Craters is not suitable for preservation as wilderness. However, the Congress makes the final decision. Recreation, natural and cultural resources have been considered when proposing designated routes for vehicle travel.

o Consider the negative affect on the maintenance, improvement and protection of the Chain of Craters environment without the involvement of the ranching industry if the decision forced the ranching industry out of business.

o Consider the sever limiting effect of the availability of the Chain of Craters area to the majority of the public that are not physically capable to access the area to enjoy its beauty if the area is declared a Wilderness area.

35-E I would suggest that in addition, the El Malpais Plan and EIS should contain an expert BLM recommendation to the Congress on which alternative best satisfies the needs of the public in balance with the environment protection. To provide four (4) alternatives that cover the gambit of all interested parties defeats the reason for the study in the first place. Which one does the BLM in its expert opinion feel best satisfies the requirements of proper stewardship of the public land in question and why.

One last comment for consideration in the program. This plan was intended to come up with an environmental Impact Study for the Area in question. Since the issue of this plan for public review, there has been pressure brought upon by some environmental groups to halt the grazing until these studies are complete. In the interest of trying to settle this suit, the BLM has suggested that they would agree to a "No Grazing Alternative " analysis. I would suggest that the study (Plan) continue to support the decision made by the BLM and highlighted on page 2-75 of the plan. No grazing is inconsistent with P.L. 100-225 which established this area as a NCA in the first place.

Also, the BLM on that same page has stated that the Resource conditions in that area do not warrant area wide prohibition of livestock grazing. The existing RMP's contain the prescriptions needed to meet the resource objectives, including vegetative objectives.

Thomas H. Gabel

cc Mr Steve Fisher
Mr Gary Wood

35-E--Alternatives have been considered as required by NEPA. Alternative D is the BLM's Preferred Alternative, which the agency feels would provide the best balance of environmentally sound uses. Under this alternative, the BLM would recommend to the Congress that the Chain of Craters Wilderness Study Area was unsuitable for inclusion in the wilderness preservation system.

COMMENT LETTER: 36

No. 36

Central New Mexico Audubon Society
POST OFFICE BOX 30002 — ALBUQUERQUE, NEW MEXICO 87190

RECEIVED BY
99 JUN 30 AM 11:07
ALBUQUERQUE, N.M.

June 29, 1999

Edwin J. Singleton, Manager
United States Department of the Interior
Bureau of Land Management
Albuquerque Field Office
435 Montano Road N.E.
Albuquerque, New Mexico 87107-4935

Re: 1610 (010);
Comment on Draft El Malpais Plan and Environmental Impact Statement

Dear Mr. Singleton:

Thank you for providing the above draft to us for comment.

We strongly recommend the adoption of Alternative C as presented in the Draft. This would maximize the extent of the wilderness area designated, and in our opinion provide the best protection for the significant wildlife and cultural resources of the area. The preferred alternative would have far greater impacts on the areas that are ripe for wilderness designation and, therefore, we believe the preferred alternative should not be adopted.

Thank you for your work in protecting this valuable national resource.

Very truly yours,

Jeffrey D. Myers, Conservation Chair

JDM:pn

cc: Beth Hurst, President, Central New Mexico Audubon Society
David Henderson, State Director, National Audubon Society

\\JDM\Docs\Pete\CORRESP\singleton-edwin.ltr.doc

RESPONSE TO COMMENT LETTER: 36

36--Comment acknowledged.

COMMENT LETTER: 37

No. 37

GARY E. JOHNSON
Governor

STATE OF NEW MEXICO
OFFICE OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION
LA VILLA RIVERA BUILDING
228 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87501
(505) 827-6320

00 FEB 2

ALBUQUERQUE, N.M.

February 23, 2000

Mr. Kent Hamilton
El Malpais Plan Team Leader
Bureau of Land Management
Albuquerque Field Office
435 Montaño Road NE
Albuquerque, NM 87107-4935

Re: Draft El Malpais Plan and Environmental Impact Statement

Dear Mr. Hamilton:

We have reviewed the Draft El Malpais Plan and Environmental Impact Statement (DEMPEIS). We offer the following comments. The affected environment section of the document does a creditable job of summarizing the nature and distribution of cultural resources in the El Malpais National Conservation Area (NCA) and associated land planning units. You identify four alternatives for management and describe the potential environmental consequences of each one by resource class. We will only comment on the cultural resources sections.

Future individual undertakings under all alternatives would continue to be the subject of consultations with our office as per the protocols of the Programmatic Agreement we have. Alternative A (no action) represents no change from current management strategies. However, you discuss scientific investigations and increased visitor use of cultural resources. We wish to reiterate the Advisory Council's position that research excavation is an adverse effect on cultural resources. Any interpretation of cultural sites is also an adverse effect. We recommend that site condition be assessed when a site is recorded. We would prefer preservation treatments as an alternative to stabilization and development in most cases. Signed sites and those near trails or developed areas should be studied before the surface artifacts disappear. These areas should be survey priorities under your plan. We support your prohibition on collecting artifacts for use in contemporary pottery. We know of no exemptions from ARPA and NHPA requirements for this activity. Perhaps the Pueblo ceramicists could be offered sherd already collected and analyzed that are just sitting in storage as an alternative to collecting sherds from unrecorded and unexcavated sites. We support your policy on brief land-closures for Native American ceremonies.

Alternative B (Resource Use) identifies a number of activities that could affect cultural resources. Most of these activities have the potential to adversely affect cultural resources. We are concerned about the earmarking of 14 sites for public use and scientific excavations. This will be a significant adverse effect. We would prefer preservation treatments and surface

RESPONSE TO COMMENT LETTER: 37

37--Comment acknowledged.

investigations to excavations. As mentioned above, we support alternatives to surface collections of pottery for use in modern pottery.

Alternative C (Natural Processes) would reduce or eliminate active management of cultural resources. We would consider such a decision to be an adverse effect. Historic properties should be monitored and maintained to prevent loss of important information. As mentioned above, we support alternatives to surface collections of pottery for use in modern pottery.

The preferred Alternative D (Balanced Management) will result in adverse effects to sites developed for public use and scientific investigations. Other proposed activities will result in adverse effects such as roads, trails, and visitor and equine facilities. As mentioned above, we support alternatives to surface collections of pottery for use in modern pottery.

Viewed strictly from a preservation perspective, Alternative C, with certain modifications, represents the best alternative. However, your agency is charged with managing all resources. We believe that your preferred alternative does provide something of a balance between the sometimes conflicting resources needs. We are confident that whatever the decision is, you will continue to manage the cultural resources of the El Malpais National Conservation Area (NCA) and associated land planning units in a responsible manner.

Thank you for seeking our opinion of the DEMPEIS and for considering our comments. Please contact me at (505)827-4064 if you have any questions.

Sincerely,

Michael L. Elliott

Michael L. Elliott, RPA
Staff Archaeologist

Xc: John Roney, Archeologist, BLM, Albuquerque Field Office

COPY

IN THE MATTER OF
DRAFT EL MALPAIS NATIONAL CONSERVATION AREA PLAN AND ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Monday, July 26, 1999
7:12 p.m.
Grants High School
500 Mountain Road
Grants, New Mexico

REPORTED BY: YVONNE C. GONZALES, NM CCR #062
500 Oak Street, N.E., Suite 102
Albuquerque, New Mexico 87106

1 **A P P E A R A N C E S**

2 MR. WILLIAM M. DALNESS
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4 Post Office Box 27115
Santa Fe, New Mexico 87502-0115
5
MR. EDWIN J. SINGLETON
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7 435 Montano Road, N.E.
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MR. STEVE FISCHER
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10 435 Montano Road, N.E.
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MR. KENT HAMILTON
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El Malpais Plan Team Leader
13 435 Montano Road, N.E.
Albuquerque, New Mexico 87107
14
15
* * * * * * * *
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* * * * * * * *
25

MR. DALNESS: This public hearing will come to order. Good evening and welcome to this public hearing which has been convened by the Bureau of Land Management of the Department of the Interior. The purpose of this public hearing is to receive comments concerning the Draft El Malpais National Conservation Area Plan and Environmental Impact Statement prepared by the Bureau of Land Management Albuquerque Office in New Mexico.

If approved, several proposals contained in the Draft Plan and Environmental Impact Statement would amend the Rio Puerco Resource Management Plan. The amendment would apply to four issues: recreation and visual resource management; access and transportation; wilderness suitability; and boundary and landownership adjustments.

Let's hold for a minute.

(A short recess was taken.)

MR. DALNESS: We started the public hearing, and then we stopped. We're going to restart the public hearing for your benefit. This public hearing --

MR. DeYOUNG: Couldn't find the place. Sorry.

MR. DALNESS: Happy to have you. This

1 public hearing will come to order. The Draft Plan/EIS
2 includes a Wilderness Suitability assessment for the Chain
3 of Craters Wilderness Study Area located within the
4 National Conservation Area, as well as recommendations to
5 Congress regarding adjustments to the National
6 Conservation Area and Cebolla Wilderness boundaries in
7 Cibola and Catron Counties. A limited number of copies
8 are available at the sign-in desk.
9 This public hearing in Grants is the first
10 public hearing scheduled. Two other public hearings have
11 been scheduled: one in Quemado, Tuesday, July 27; and one
12 in Albuquerque, Wednesday, July 28.
13 Notice of the comment period for this Draft
14 Plan/EIS was published in the Federal Register on June 11.
15 Notification of the place and time of this public hearing
16 is contained in the Plan/EIS and was distributed to local
17 newspapers and media outlets.
18 My name is William Dalness. I'm with the
19 BLM New Mexico State Office. I'll be the hearing officer
20 this evening. I have a limited role in this process. I
21 make no recommendations in connection with this proceeding
22 or the El Malpais Plan/EIS. My role is to ensure that the
23 hearings are conducted in a fair and orderly manner.
24 The follow representatives from the BLM are
25 here to consider your comments. They are, to my left: Ed

1 Singleton, Albuquerque Field Office Manager; Steve Fisher,
2 Albuquerque Field Office Watershed Team Leader; and Kent
3 Hamilton, BLM El Malpais Plan Team Leader.
4 This hearing is an information-gathering
5 event. It is not a forum for public debate or discussion.
6 If you wish to speak, please register at the registration
7 table first. Oral comments received in this hearing will
8 provide the BLM with additional information for review in
9 finalizing the Draft Plan/EIS.
10 Your oral statement must be relevant to the
11 Draft Plan/EIS. The agency representatives may ask
12 clarifying questions or seek additional information at the
13 conclusion of the speaker's comments. Questions asked by
14 one of the hearing panel do not indicate any predetermined
15 position of the official or the BLM. They're intended
16 only to clarify the information you provide in your
17 comments.
18 To ensure a complete and accurate record of
19 the hearing, only one person can speak at a time. Also,
20 we request that everyone remain quiet. An official court
21 reporter is here to record this hearing and to provide a
22 verbatim transcript. She is seated to my right.
23 Written copies of comments are helpful. If
24 you have an extra copy of your prepared remarks, please
25 provide it to the court reporter after your presentation

1 and it will marked as an exhibit and made part of the
2 record. Your remarks, however, will be recorded whether
3 or not you follow a prepared text.
4 We have two hours this evening. During the
5 two hours, we want to accommodate everyone who wishes to
6 speak on the record and, if possible, after the hearing is
7 adjourned, allow some time for informal discussions after
8 the hearing.
9 Because we apparently only have one speaker
10 registered at this time, we will waive the time limitation
11 on the speaker. Speakers will be called in the order in
12 which their names appear. In the event that a speaker is
13 not present, we will proceed with the next person on the
14 list.
15 If, after all registered speakers have
16 completed their time and anybody else wishes to speak, we
17 will allow them to do so. We will adjourn the hearing
18 when it is apparent that there are no more speakers or at
19 9 o'clock.
20 Each person shall begin his or her remarks
21 by providing your name, and if you represent an
22 organization or group, the name of your organization or
23 group. If you wish to ask questions, the questions should
24 be read into the record during your presentation.
25 The BLM is also accepting written comments

from parties who wish to provide them. Written comments must be postmarked no later than September 24, 1999. They should be addressed to: El Malpais Plan Team Leader, BLM Albuquerque Field Office, 435 Montano Road, Northeast, Albuquerque, New Mexico, 87107. For your convenience, this address appears on a handout when you signed in.

All comments timely received and postmarked no later than September 24 will be considered in developing the final plan. Copies of the transcript of this hearing may be obtained by making the necessary arrangements with the court reporter.

After all persons have spoken for the record, we will adjourn the public hearing. After which, panel members will be happy to respond to your questions if there's sufficient time to do so. Questions raised and statements made after the hearing will not be part of the record and will not be included as comments for response.

Again, I must emphasize that questions will be entertained only after the formal hearing has been adjourned and only if the time of adjournment is reasonable.

Are there any questions on the hearing's procedure? I have one registered speaker. I'd like to call Mr. Tim DeYoung. Please state your name and if you represent an organization. Thank you.

MR. DeYOUNG: Thank you, Mr. Dalness. My name is Tim DeYoung. I'm an attorney with the Modrall law firm in Albuquerque. I'm here tonight representing the York Ranch.

I think it's somewhat ironic that folks that fought your original FONSI, or Finding of No Significant Impact, are not here tonight and made you do all this work. I think you've done a really good job. We generally support the Draft/EIS.

The only comment I would like to make tonight -- and I should say that we will be submitting written comments. We've also -- and so you know -- hired as a consultant, Dr. Jerry Holechek, who's a professor of range science at New Mexico State. He's been helping us develop a range plan for our ranch and for the El Malpais allotment. It's the largest allotment in the El Malpais National Conservation Area.

Dr. Holechek intends to present written comments at the Albuquerque meeting. We will submit written comments later.

The purpose of my statements tonight are very simple. I just would like to remind you-all of some key historical facts about the legal requirements that Congress has announced with respect to the continued grazing.

1 As you know, Public Law 100-225 was enacted
2 on December 31, 1987. With your permission, I would like
3 to hand out copies of that act. I'd also like to make
4 this act part of the record. I would recommend you-all
5 attach this act, because this is the act that created both
6 the monument and the National Conservation Area.
7 We have done fairly thorough research about
8 the administrative record, the legislative history of this
9 act, the hearings that went on both in New Mexico and in
10 Washington, D.C. We talked to folks who were there.
11 During those hearings, what you'll find are
12 some strong pro-grazing and anti-grazing sentiments. I
13 think that's accurate. Some people didn't want any
14 grazing at all. Some ranchers, such as my client, wanted
15 continuation of grazing, which they had done for
16 generations.
17 The law that was passed, we believe, was a
18 reasonable compromise between those two competing
19 interests. Within the monument -- the act provides that
20 within the monument, grazing completely cease as of
21 January 1, 1998. You know better than I, but it's our
22 understanding that there is no grazing going on within the
23 monument.
24 Outside of the monument, but within the
25 National Conservation Area, Congress was very specific

1 with respect to the continuation of grazing. Let me refer
2 you to what I have highlighted for you-all. That is, two
3 sections. One, Section 302(d). It says, "Except as
4 otherwise provided in Section 402(b)" -- which we'll get
5 to in a minute --- "within the conservation area, the
6 grazing of livestock shall be permitted to continue,
7 pursuant to" -- it goes on -- "pursuant to applicable
8 Federal law ... and subject to such reasonable
9 regulations," and so forth.
10 One of the first things you learned in law
11 school is that, when interpreting legislative history,
12 when the legislature or Congress uses "shall be," that
13 means something. It means that they're taking away your
14 discretion as an agency and mandating that you allow the
15 continuation of grazing. I think that's very important
16 that Congress used such strong language.
17 If we would turn to the next page -- if you
18 look at Section 402(b), this refers to what happens within
19 the wilderness areas designated by this act. As you know
20 within the National Conservation Area, there are certain
21 wilderness areas. And within our allotment, as well, we
22 have wilderness areas.
23 One thing I didn't highlight -- Section
24 402(a) says that -- starts out with -- "Subject to valid
25 existing rights." There is a lot of litigation about what

1 that means, but it basically says if you had preexisting
2 rights, the creation of wilderness areas are subject to
3 those valid existing rights.
4 Then it gets even more explicit in Paragraph
5 B. It says, "Within the wilderness areas designated by
6 this Act, the grazing of livestock, where established
7 prior to the enactment of this Act, shall be permitted to
8 continue subject to such" -- blah, blah. And the same
9 language.
10 Once again, Congress is making it extremely
11 clear that grazing shall be continued outside of the
12 national monument.
13 I bring these comments to your attention for
14 two reasons: one, there's at least two places in the
15 Draft/EIS where I think the language used is not as
16 explicit as the language used by Congress. It might lead
17 to some misunderstanding.
18 Specifically at Page 2-75 -- and here I
19 wholeheartedly concur with BLM's conclusion that you don't
20 need to look at the no grazing alternative, which some
21 people had advocated. But citing the law, 100-225, it
22 says, grazing "is permitted". We think that language
23 should be "shall be permitted." In other words, you
24 should mirror exactly what Congress said.
25 Page 3-29 -- it's a little word that says,

1 "livestock grazing may continue." The word "may" connotes
2 you may let it continue or you may not. I'm quibbling
3 about some small words, but I just want to emphasize to
4 you that in light of the act, "shall be" is the language
5 we think you should use.
6 Now, these might be considered minor points,
7 but I think -- as you know, the original decision by BLM
8 to have a GMP rather than an RMP was challenged by the
9 Wilderness Coalition. One of the reasons they thought you
10 should do an EIS was because the GMP that you-all had done
11 proposed a management plan for the support of grazing,
12 which the Coalition argued required an RMP, which is a
13 resource management plan -- which, as you know, the
14 Interior Board of Land Appeals required you to do an EIS.
15 So that was on their mind way back in the early '90s.
16 It's still on the minds of some groups.
17 As you know, in October 1998 the Forest
18 Guardians and TNE, Inc., filed a lawsuit against the BLM
19 in federal court arguing that the BLM had violated NEPA by
20 renewing grazing permits within the National Conservation
21 Area, including our own, which, ironically, Congress had
22 not enacted one.
23 That case is still pending. We sought to
24 intervene. We have been granted partial intervention.
25 That case is still pending. So I'm not going to comment

further about the case.

But as you know and as we know, a tax on grazing on public land continues. They continue here in the National Conservation Area. That's why I think it's -- underline the importance to recognize that Congress has addressed the issue. Congress has said grazing shall be allowed to continue.

You all are doing it. I think ou have a good plan. I think it's a valid plan. We stand ready to work with you. Thank you for the opportunity to present these comments. I'd be happy to answer any questions you might have.

MR. DALNESS: Thank you. Do we have any other registered speakers? There are no other registered speakers, so we will adjourn this public hearing. We'll stay around a little while and reconvene if necessary. The hearing is adjourned.

(A recess was taken from 7:29 p.m. to 7:40 p.m.)

(The Proceeding concluded at 7:40 p.m.)

1 **C E R T I F I C A T E**

2 I, Yvonne C. Gonzales, a Certified Court Reporter, do
3 hereby certify that the Proceedings of the above-entitled
4 cause were reported by me stenographically on July 26,
5 1999, and that the within transcript is a true and
6 accurate transcription of my shorthand notes.
7 I further certify that I am neither an attorney nor
8 counsel for, nor related to or employed by any of the
9 parties to the action, and that I am not a relative or
10 employee of any attorney or counsel employed by the
11 parties hereto, or financially interested in the action.
12
13
14 _____
Yvonne C. Gonzales, CCR
15 Notary Public
16
17
My Commission expires:
18 3-20-2001
19
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UNITED STATES PUBLIC LAWS
100th Congress - First Session
Convening January 6, 1987

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DATA SUPPLIED BY THE U.S. DEPARTMENT OF JUSTICE. (SEE SCOPE)
Additions and Deletions are not identified in this document.

PL 100-225 (HR 403)
December 31, 1987

An Act to establish the El Malpais National Monument and the El Malpais National Conservation Area in the State of New Mexico, to authorize the Masau Trail, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I – EL MALPAIS NATIONAL MONUMENT
ESTABLISHMENT OF MONUMENT

SEC. 101. (a) "16 USC 460uu" In order to preserve, for the benefit and enjoyment of present and future generations, that area in western New Mexico containing the nationally significant Grants Lava Flow, the Las Ventanas Chacoan Archeological Site, and other significant natural and cultural resources, there is hereby established the El Malpais National Monument (hereinafter referred to as the "monument"). The monument shall consist of approximately 114,000 acres as generally depicted on the map entitled "El Malpais National Monument and National Conservation Area" numbered NM-ELMA- 80,001-B and dated May 1987. The map shall be on file and available for public inspection in the offices of the Director of the National Park Service, Department of the Interior.

(b) As soon as practicable after the enactment of this Act, the Secretary of the Interior (hereinafter referred to as the "Secretary") shall file a legal description of the monument with the Committee on Interior and Insular Affairs of the United States House of Representatives and with the Committee on Energy and Natural Resources of the United States Senate. Such legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in such legal description and in the map referred to in subsection (a). The legal description shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

TRANSFER

4 SEC. 102. "16 USC 460uu-1" Lands and waters and interests therein within the boundaries of the monument, which as of the day prior to the date of enactment of this Act were administered by the Forest Service, United States Department of Agriculture, are hereby transferred to the administrative jurisdiction of the Secretary to be managed as part of the monument in accordance with this Act. The boundaries of the Cibola National Forest shall be adjusted accordingly.

MANAGEMENT

SEC. 103. "16 USC 460uu-2" The Secretary, acting through the Director of the National Park Service, shall manage the monument in accordance with provisions of this Act, the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), and other provisions of law applicable to units of the National Park System. The Secretary shall protect, manage, and administer the monument for the purposes of preserving the scenery and the natural, historic, and cultural resources of the monument and providing for the public understanding and enjoyment of the same in such a manner as to perpetuate these qualities for future generations.

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PERMITS

SEC. 104. "16 USC 460uu-3" Where any lands included within the boundary of the monument on the map referred to in subsection 101(a) are legally occupied or utilized on the date of enactment of this Act for grazing purposes, pursuant to a lease, permit, or license which is --

(a) for a fixed term of years issued or authorized by any department, establishment, or agency of the United States, and

(b) scheduled for termination before December 31, 1977,

the Secretary, notwithstanding any other provisions of law, shall allow the persons holding such grazing privileges (or their heirs) to retain such grazing privileges until December 31, 1997, subject to such limitations, conditions, or regulations as the Secretary may prescribe to insure proper range management. No grazing shall be permitted on lands within the boundaries of the monument on or after January 1, 1998.

TITLE II -- MASAU TRAIL
DESIGNATION OF TRAIL

SEC. 201. "16 USC 460uu-11" In order to provide for public appreciation, education, understanding, and enjoyment of certain nationally significant sites of antiquity in New Mexico and eastern Arizona which are accessible by public road, the Secretary, acting through the Director of the National Park Service, with the concurrence of the agency having jurisdiction over such roads, is authorized to designate, by publication of a description thereof in the Federal Register, a vehicular tour route along existing public roads linking prehistoric and historic cultural sites in New Mexico and eastern Arizona. Such a route shall be known as the Masau Trail (hereinafter referred to as the "trail").

AREAS INCLUDED

SEC. 202. "16 USC 460uu-12" The trail shall include public roads linking El Malpais National Monument as established pursuant to title I of this Act, El Morro National Monument, Chaco Cultural National Historical Park, Aztec Ruins National Monument, Canyon De Chelly National Monument, Pecos National Monument, and Gila Cliff Dwellings National Monument. The Secretary may, in the manner set forth in section 201, designate additional segments of the trail from time to time as appropriate to link the foregoing sites with other cultural sites or sites of national significance when such sites are designated and protected by Federal, State, or local governments, Indian tribes, or nonprofit entities.

INFORMATION AND INTERPRETATION

SEC. 203. "16 USC 460uu-13" With respect to sites linked by segments of the trail which are administered by other Federal, State, local, tribal, or nonprofit entities, the Secretary may, pursuant to cooperative agreements with such entities, provide technical assistance in the development of interpretive devices and materials in order to contribute to public appreciation of the natural and cultural resources of the sites along the trail. The Secretary, in cooperation with State and local governments, Indian tribes, and nonprofit entities, shall prepare and distribute informational material for the public appreciation of sites along the trail.

MARKERS

SEC. 204. "16 USC 460uu-14" The trail shall be marked with appropriate markers to guide the public. With the concurrence and assistance of the State or local entity having jurisdiction over the roads designated as part of the trail, the Secretary may erect thereon and maintain signs and other informational devices displaying the Masau Trail Marker. The Secretary is authorized to accept the donation of suitable signs and other informational devices for placement at appropriate locations.

TITLE III -- EL MALPAIS NATIONAL CONSERVATION AREA

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ESTABLISHMENT OF AREA

SEC. 301. "16 USC 460uu-21" (a) In order to protect for the benefit and enjoyment of future generations that area in western New Mexico containing the La Ventana Natural Arch and the other unique and nationally important geological, archeological, ecological, cultural, scenic, scientific, and wilderness resources of the public lands surrounding the Grants Lava Flows, there is hereby established the El Malpais National Conservation Area (hereinafter referred to as the "conservation area"). The conservation area shall consist of approximately 262,690 acres of federally owned land as generally depicted on a map entitled "El Malpais National Monument and National Conservation Area" numbered NM-ELMA-80,001-B and dated May 1987. The map shall be on file and available for inspection in the offices of the Director of the Bureau of Land Management of the Department of the Interior.

(b) As soon as practicable after the date of enactment of this Act, the Secretary shall file a legal description of the conservation area designated under this section with the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the United States House of Representatives. Such legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in such legal description. The legal description shall be on file and available for public inspection in the offices of the Director of the Bureau of Land Management, Department of the Interior.

MANAGEMENT

SEC. 302. "16 USC 460uu-22" (a) The Secretary, acting through the Director of the Bureau of Land Management, shall manage the conservation area to protect the resources specified in section 301 and in accordance with this Act, the Federal Land Management and Policy Act of 1976 and other applicable provisions of law, including those provisions relating to grazing on public lands.

(b) The Secretary shall permit hunting and trapping within the conservation area in accordance with applicable laws and regulations of the United States and the State of New Mexico; except that the Secretary, after consultation with the New Mexico Department of Game and Fish, may issue regulations designating zones where and establishing periods when no hunting or trapping shall be permitted for reasons of public safety, administration, or public use and enjoyment.

(c) Collection of green or dead wood for sale or other commercial purposes shall not be permitted in the conservation area.

(d) Except as otherwise provided in section 402(b), within the conservation area the grazing of livestock shall be permitted to continue, pursuant to applicable Federal law, including this Act, and subject to such reasonable regulations, policies, and practices as the Secretary deems necessary.

TITLE IV – WILDERNESS
DESIGNATION OF WILDERNESS

SEC. 401. "16 USC 460uu-31" (a) In furtherance of the purposes of the Wilderness Act (78 Stat. 890; 16 U.S.C. 131), there are hereby designated as wilderness, and, therefore, as components of the National Wilderness Preservation System, "16 USC 1132 note" the Cebolla Wilderness of approximately 60,000 acres, and the West Malpais Wilderness of approximately 38,210 acres, as each is generally depicted on the map entitled "El Malpais National Monument and National Conservation Area" numbered NM-ELMA-80,001-B and dated May 1987. The map shall be on file and available for inspection in the offices of the Director of the Bureau of Land Management, Department of the Interior.

(b) As soon as practicable after the date of the enactment of this Act, the Secretary shall file a legal description of each wilderness area designated by this Act with the Committee on Interior and Insular Affairs of the United States House of Representatives and with the Committee on Energy and Natural Resources of the United States Senate. Such legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in such legal description. The legal description shall be on file and available for

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public inspection in the offices of the Director of the Bureau of Land Management, Department of the Interior.

MANAGEMENT

SEC. 402. "16 USC 460uu-32" (a) Subject to valid existing rights, each wilderness area designated under this Act shall be administered by the Secretary, through the Director of the Bureau of Land Management, in accordance with the provisions of the Wilderness Act governing areas designated by that Act as wilderness, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the date of enactment of this Act.

(b) Within the wilderness areas designated by this Act, the grazing of livestock, where established prior to the enactment of this Act, shall be permitted to continue subject to such reasonable regulations, policies, and practices as the Secretary deems necessary, as long as such regulations, policies, and practices fully conform with and implement the intent of Congress regarding grazing in such areas as such intent is expressed in the Wilderness Act and section 108 of Public Law 96-560 (16 U.S.C. 1133 note).

TITLE V -- GENERAL PROVISIONS
MANAGEMENT PLANS

SEC. 501. "16 USC 460uu-41" (a) Within three full fiscal years following the fiscal year of enactment of this Act, the Secretary shall develop and transmit to the Committee on Interior and Insular Affairs of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate, separate general management plans for the monument and the conservation area which shall describe the appropriate uses and development of the monument and the conservation area consistent with the purposes of this Act. The plans shall include but not be limited to each of the following:

(1) implementation plans for a continuing program of interpretation and public education about the resources and values of the monument and the conservation area;

(2) proposals for public facilitiess to be developed for the conservation area or the monument, including a visitors center in the vicinity of Bandera Crater and a multiagency orientation center, to be located in or near Grants, New Mexico, and adjacent to Interstate 40, to accommodate visitors to western New Mexico;

(3) natural and cultural resources management plans for the monument and the conservation area, with a particular emphasis on the preservation and long- term scientific use of archeological resources, giving high priority to the enforcement of the provisions of the Archeological Resources Protection Act of 1979 and the National Historic Preservation Act within the monument and the conservation area. The natural and cultural resources management plans shall be prepared in close consultation with the Advisory Council on Historic Preservation, the New Mexico State Historic Preservation Office, and the local Indian people and their traditional cultural and religious authorities; and such plans shall provide for long-term scientific use of archaeological resources in the monument and the conservation area, including the wilderness areas designated by this Act; and

(4) wildlife resources management plans for the monument and the conservation area prepared in close consultation with appropriate departments of the State of New Mexico and using previous studies of the area.

(b)(1) The general management plan for the conservation area shall review and recommend the suitability or nonsuitability for preservation as wilderness of those lands comprising approximately 17,468 acres, identified as "Wilderness Study Area" (hereafter in this title referred to as the "WSA") on the map referenced in section 101.

(2) Pending submission of a recommendation and until otherwise directed by an Act of Congress, the Secretary, acting through the Director of the Bureau of Land Management, shall manage the lands within the WSA so as to maintain their potential for inclusion within the National Wilderness Preservation System.

(c)(1) The general management plan for the monument shall review and recommend the suitability or nonsuitability

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for preservation as wilderness of all roadless lands within the boundaries of the monument as established by this Act except those lands within the areas identified as "potential development areas" on the map referenced in section 101.

(2) Pending the submission of a recommendation and until otherwise directed by Act of Congress, the Secretary, through the Director of the National Park Service, shall manage all roadless lands within the boundaries of the monument so as to maintain their potential for inclusion in the National Wilderness Preservation System, except those lands within the areas identified as "potential development areas" on the map referenced in section 101.

ACQUISITIONS

SEC. 502. "16 USC 460uu-42" Within the monument and the conservation area, the Secretary is authorized to acquire lands and interests in lands by donation, purchase with donated or appropriated funds, exchange, or transfer from any other Federal agency, except that such lands or interests therein owned by the State of New Mexico or a political subdivision thereof may be acquired only by exchange. It is the sense of Congress that the Secretary is to complete the acquisition of non-Federal subsurface interests underlying the monument and the conservation area no later than three full fiscal years after the fiscal year of enactment of this Act.

STATE EXCHANGES

SEC. 503. "16 USC 460uu-43" (a) Upon the request of the State of New Mexico (hereinafter referred to as the "State") and pursuant to the provisions of this section, the Secretary shall exchange public lands or interests in lands elsewhere in the State of New Mexico, of approximately equal value and selected by the State, acting through its Commissioner of Public Lands, for any lands or interests therein owned by the State (hereinafter referred to as "State lands") located within the boundaries of the monument or the conservation area which the State wishes to exchange with the United States.

(b) Within six months after the date of enactment of this Act, the Secretary shall notify the New Mexico Commissioner of Public Lands what State lands are within the monument or the conservation area. The notice shall contain a listing of all public lands or interest therein within the boundaries of the State of New Mexico which have not been withdrawn from entry and which the Secretary, pursuant to the provisions of sections 202 and 206 of the Federal Land Policy and Management Act of 1976, has identified as appropriate for transfer to the State in exchange for State lands. Such listing shall be updated at least annually. If the New Mexico Commissioner of Public Lands gives notice to the Secretary of the State's desire to obtain public lands so listed, the Secretary shall notify the Commissioner in writing as to whether the Department of the Interior considers the State lands within the monument or conservation area to be of approximately equal value to the listed lands or interests in lands the Commissioner has indicated the State desires to obtain. It is the sense of the Congress that the exchange of lands and interests therein with the State pursuant to this section should be completed within two years after the date of enactment of this Act.

MINERAL EXCHANGES

SEC. 504. "16 USC 460uu-44" (a) The Secretary is authorized and directed to exchange the Federal mineral interests in the lands described in subsection (b) for the private mineral interests in the lands described in subsection (c), if –

(1) the owner of such private mineral interests has made available to the Secretary all information requested by the Secretary as to the respective values of the private and Federal mineral interests to be exchanged; and

(2) on the basis of information obtained pursuant to paragraph (1) and any other information available, the Secretary has determined that the mineral interests to be exchanged are of approximately equal value; and

(3) the Secretary has determined –

(A) that except insofar as otherwise provided in this section, the exchange is not inconsistent with the Federal Land Policy and Management Act of 1976; and

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(B) that the exchange is in the public interest.

(b) The Federal mineral interests to be exchanged under this section underlie the lands, comprising approximately 15,008 acres, depicted as "Proposed for transfer to Santa Fe Pacific" on the map referenced in subsection (d).

(c) The private mineral interests to be exchanged pursuant to this section underlie the lands, comprising approximately 15,141 acres, depicted as "Proposed for transfer to U.S." on the map referenced in subsection (d).

(d)(1) The mineral interests identified in this section underlie those lands depicted as "Proposed for transfer to Santa Fe Pacific" and as "Proposed for transfer to U.S." on a map entitled "El Malpais Leg. Boundary, HR3684/S56", revised 5-8-87.

(2) As soon as practicable after the date of enactment of this Act, the Secretary shall file a legal description of the mineral interest areas designated under this section with the Committee on Interior and Insular Affairs of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate. Such legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in such legal description. The legal description shall be on file and available for public inspection in the offices of the Director of the Bureau of Land Management, Department of the Interior.

(e) It is the sense of the Congress that all exchanges pursuant to this section shall be completed no later than three years after the date of enactment of this Act.

ACOMA PUEBLO EXCHANGES

SEC. 505. "16 USC 460uu-45" (a)(1) Upon the request of the Pueblo of Acoma, the Secretary shall acquire by exchange any lands held in trust for the Pueblo of Acoma (hereinafter referred to as "trust lands") located within the boundary of the conservation area which the Pueblo wishes to exchange pursuant to this section. Such trust lands shall be exchanged either for --

(A) lands described in subsection (c) (with respect to trust lands west of New Mexico Highway 117); or

(B) public lands of approximately equal value located outside the monument and outside the conservation area but within the boundaries of the State of New Mexico which are selected by the Pueblo of Acoma, so long as such exchange is consistent with applicable law and Bureau of Land Management resource management plans developed pursuant to the Federal Land Policy and Management Act of 1976.

(2) All lands selected by and transferred to the Pueblo of Acoma at its request pursuant to this section shall thereafter be held in trust by the Secretary for the Pueblo of Acoma in the same manner as the lands for which they were exchanged.

(3) Any lands west of New Mexico Highway 117 which are acquired by the Secretary pursuant to this section shall be incorporated into the monument and managed accordingly, and section 104 and all other provisions of this Act and other law applicable to lands designated by this Act as part of the monument shall apply to such incorporated lands.

(b) For purposes of acquiring lands pursuant to subsection (a) of this section, the Secretary, consistent with applicable law and Bureau of Land Management resource management plans described in subsection (a), shall make public lands within the boundaries of the State of New Mexico available for exchange. Nothing in this Act shall be construed as authorizing or requiring revocation of any existing withdrawal or classification of public land except in a manner consistent with applicable law.

(c)(1) The Secretary shall make the lands within the areas identified as "Acoma Potential Exchange Areas" on the map referenced in section 301 available for transfer to the Pueblo of Acoma pursuant to this subsection.

(2) Upon a request of the Pueblo of Acoma submitted to the Secretary no later than one year after the date of

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enactment of this Act, lands within the areas described in paragraph (1) shall be transferred to the Pueblo of Acoma in exchange for trust lands of approximately equal value within that portion of the conservation area west of New Mexico Highway 117. The Secretary may require exchanges of land under this subsection to be on the basis of compact and contiguous parcels.

(3) Any lands within the areas described in paragraph (1) not proposed for exchange by a request submitted to the Secretary by the Pueblo of Acoma within the period specified in paragraph (2), and any lands in such areas not ultimately transferred pursuant to this subsection, shall be incorporated within the conservation area and managed accordingly. In addition, any lands in that portion of the areas described in paragraph (1) lying in section 1, township 7N, range 9W, New Mexico Principal Meridian, not transferred to the Pueblo of Acoma pursuant to this subsection shall be added to and incorporated within the Cebolla Wilderness and managed accordingly.

EXCHANGES AND ACQUISITIONS GENERALLY; WITHDRAWAL

SEC. 506. "16 USC 460uu-46" (a) All exchanges pursuant to this Act shall be made in a manner consistent with applicable provisions of law, including this Act, and unless otherwise specified in this Act shall be on the basis of equal value; either party to an exchange may pay or accept cash in order to equalize the value of the property exchange, except that if the parties agree to an exchange and the Secretary determines it is in the public interest, such exchange may be made for other than equal value.

(b) For purposes of this Act, the term "public lands" shall have the same meaning as such term has when used in the Federal Land Policy and Management Act of 1976.

(c) Except as otherwise provided in section 505, any lands or interests therein within the boundaries of the monument or conservation area which after the date of enactment of this Act may be acquired by the United States shall be incorporated into the monument or conservation area, as the case may be, and managed accordingly, and all provisions of this Act and other laws applicable to the monument or the conservation area, as the case may be, shall apply to such incorporated lands.

(d)(1) Except as otherwise provided in this Act, no federally-owned lands located within the boundaries of the monument or the conservation area shall be transferred out of Federal ownership, or be placed in trust for any Indian tribe or group, by exchange or otherwise.

(2) Except as otherwise provided in this Act, and subject to valid existing rights, all Federal lands within the monument and the conservation area and all lands and interests therein which are hereafter acquired by the United States are hereby withdrawn from all forms of entry, appropriation, or disposal under the public land laws and from location, entry and patent under the mining laws, and from operation of the mineral leasing and geothermal leasing laws and all amendments thereto.

(e) The acreages cited in this Act are approximate, and in the event of discrepancies between cited acreages and the lands depicted on referenced maps, the maps shall control.

(f) The Secretary is authorized to accept any lands contiguous to the boundaries of the Pecos National Monument (as such boundaries were established on the date of enactment of this Act) which may be proposed for donation to the United States. If acceptance of such lands proposed for donation would be in furtherance of the purposes for which the Pecos National Monument was established, the Secretary shall accept such lands, and upon such acceptance such lands shall be incorporated into such monument and managed accordingly.

(g)(1) "16 USC 431 note" Capulin Mountain National Monument is hereby redesignated as Capulin Volcano National Monument.

(2) Any reference in any record, map, or other document of the United States of America to Capulin Mountain National Monument shall hereafter be deemed to be a reference to Capulin Volcano National Monument.

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(3) Section 1 of the Act of September 5, 1962 (76 Stat. 436) is hereby amended by striking the remaining portion of section 1 after "boundaries of the monument" and inserting "shall include the lands and interests in lands as generally depicted on the map entitled 'Capulin Volcano National Monument Boundary Map' which is numbered 125-80,014 and dated January 1987.".

(4) Jurisdiction over federally-owned lands within the revised boundaries of the monument is hereby transferred to the National Park Service, without monetary consideration, for administration as part of the monument.

ACCESS

4 SEC. 507. "16 USC 460uu-47" (a) In recognition of the past use of portions of the monument and the conservation area by Indian people for traditional cultural and religious purposes, the Secretary shall assure nonexclusive access to the monument and the conservation area by Indian people for traditional cultural and religious purposes, including the harvesting of pine nuts. Such access shall be consistent with the purpose and intent of the American Indian Religious Freedom Act of August 11, 1978 (42 U.S.C. 1996), and (with respect to areas designated as wilderness) the Wilderness Act (78 Stat. 890; 16 U.S.C. 131).

(b) In preparing the plans for the monument and the conservation area pursuant to section 501, the Secretary shall request that the Governor of the Pueblo of Acoma and the chief executive officers of other appropriate Indian tribes make recommendations on methods of --

(1) assuring access pursuant to subsection (a) of this section;

(2) enhancing the privacy of traditional cultural and religious activities in the monument and the conservation area; and

(3) protecting traditional cultural and religious sites in the monument and the conservation area.

(c) In order to implement this section and in furtherance of the American Indian Religious Freedom Act, the Secretary, upon the request of an appropriate Indian tribe, may from time to time temporarily close to general public use one or more specific portions of the monument or the conservation area in order to protect the privacy of religious activities in such areas by Indian people. Any such closure shall be made so as to affect the smallest practicable area for the minimum period necessary for such purposes. Not later than seven days after the initiationj of any such closure, the Secretary shall provide written notification of such action to the Energy and Natural Resources Committee of the United States Senate and the Interior and Insular Affairs Committee of the House of Representatives.

(d) The Secretary is authorized to establish an advisory committee to advise the Secretary concerning the implementation of this section. Any such advisory committee shall include representatives of the Pueblo of Acoma, the Pueblo of Zuni, other appropriate Indian tribes and other persons or groups interested in the implementation of this section.

COOPERATION

SEC. 508. "16 USC 460uu-48" In order to encourage unified and cost effective interpretation of prehistoric and historic civilizations in western New Mexico, the Secretary is authorized and encouraged to enter into cooperative agreements with other Federal, State and local public departments and agencies, Indian tribes, and nonprofit entities providing for the interpretation of prehistoric and historic civilizations in New Mexico and eastern Arizona. The Secretary may, pursuant to such agreements, cooperate in the development and operation of a multiagency orientation center and programs on lands and interests in lands inside and outside of the boundaries of the monument and the conservation area generally, with the concurrence of the owner or administrator thereof, and specifically in or near Grants, New Mexico, adjacent to Interstate 40 in accordance with the plan required pursuant to section 501.

WATER RIGHTS

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SEC. 509. "16 USC 460uu-49" (a) Congress expressly reserves to the United States the minimum amount of water required to carry out the purposes for which the national monument, the conservation area, and the wilderness areas are designated under this Act. The priority date of such reserved rights shall be the date of enactment of this Act.

(b) Nothing in this section shall affect any existing valid or vested water right, or applications for water rights which are pending as of the date of enactment of this Act and which are subsequently granted: Provided, That nothing in this subsection shall be construed to require the National Park Service to allow the drilling of ground water wells within the boundaries of the national monument.

(c) Nothing in this section shall be construed as establishing a precedent with regard to any future designations, nor shall it affect the interpretation of any other Act or any designation made pursuant thereto.

AUTHORIZATION

SEC. 510. "16 USC 460uu-50" There is authorized to be appropriated $16,500,000 for the purposes of this Act, of which $10,000,000 shall be available for land acquisition in the national monument; $1 million shall be available for development within the national monument; $4 million shall be available for land acquisition within the conservation area; $1 million shall be available for development within the conservation area; and $500,000 shall be available for planning and development of the Masau Trail.

Approved December 31, 1987.

LEGISLATIVE HISTORY – H.R. 403:

HOUSE REPORTS: No. 100-116 (Comm. on Interior and Insular Affairs).

SENATE REPORTS: No. 100-100 (Comm. on Energy and Natural Resources).

CONGRESSIONAL RECORD, Vol. 133 (1987): June 1, considered and passed House. Dec. 17, considered and passed Senate, amended. Dec. 18, House concurred in Senate amendment.

PL 100-225, 1987 HR 403

END OF DOCUMENT

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IN THE MATTER OF
DRAFT EL MALPAIS NATIONAL CONSERVATION AREA PLAN AND
ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Tuesday, July 27, 1999
7:11 p.m.
Quemado High School
Quemado, New Mexico

REPORTED BY: YVONNE C. GONZALES, NM CCR #062
500 Oak Street, N.E., Suite 102
Albuquerque, New Mexico 87106

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Albuquerque, New Mexico 87107

* * * * * * * *

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* * * * * * * *

MR. DALNESS: This public hearing will come to order. Good evening and welcome to this public hearing which has been convened by the Bureau of Land Management of the Department of Interior. The purpose of this public hearing is to receive coments concerning the Draft El Malpais National Conservation Area Plan and Environmental Impact Statement prepared by the Bureau of Land Management Albuquerque Field Office, New Mexico.

If approved, several proposals contained in the Draft Plan/EIS would amend the Rio Puerco Resource Management Plan. The amendment would apply to four issues: recreation and visual resource management; access and transportation; wilderness suitability; and boundary and landownership adjustments.

The Draft Plan/EIS includes a wilderness suitability assessment for the Chain of Craters Wilderness Study Area located within the National Conservation Area, as well as recommendations to Congress regarding adjustments to the National Conservation Area and Cebolla Wilderness boundaries in Cibola and Catron Counties. A limited number of copies of the Plan/EIS are available at the sign-in desk.

This public hearing is one of three. There was one in Grants yesterday and there's one in Albuquerque tomorrow.

Notice of the comment period for this Plan/EIS was published in the Federal Register on June 11, 1999. Notification of the meeting was made to local newspapers.

My name is William Dalness. I'm with the BLM New Mexico State Office. I'll be the hearing officer this evening. I have a limited role in this process. I make no recommendations in connection with this proceeding or the El Malpais Plan/EIS. My role is to ensure that the hearings are conducted in a fair and orderly manner.

The following representatives from the BLM are here to consider your comments. On my left, there's Ed Singleton, Albuquerque Field Office Manager; to his left, Steve Fisher, Albuquerque Field Office Watershed Team Leader; and Kent Hamilton, BLM El Malpais Plan Team Leader.

This hearing is an information-gathering event. It's not a forum for public debate or discussion. If you wish to speak, please register at the registration table first. Oral comments received at this hearing will provide the BLM with additional information for review in finalizing the Draft Plan/EIS.

Your oral statement must be relevant to the Draft Plan/EIS. The agency representatives may ask clarifying questions or seek additional information at the

conclusion of the speaker's comments. However, questions asked by one of the hearing panel do not indicate any predetermined position of the BLM.

To ensure a complete and accurate record of the hearing, only one person will speak at a time. The court reporter is here to record this hearing and provide a verbatim transcript. She's seated to my right.

Written copies of your comments are helpful, if you have one. Please provide it to the court reporter immediately following your presentation. It will be marked as an exhibit and made part of the record. However, your remarks will be recorded whether or not you follow a prepared text.

We have two hours this evening. During the two hours, we want to accommodate everyone who wishes to speak. If possible, we will allow some time for informal discussions after the hearing.

We don't have any registered speakers at this time. If, after all registered speakers have completed their comments and there is sufficient time, we will ask if anybody else wishes to speak and allow them to do so. We will adjourn the hearing when it is apparent that there are no more speakers or at 9 o'clock.

When speaking, each person shall begin his or her remarks by providing his or her name and the

1 organization or group represented, if you represent an
2 organization or group. If you wish to have questions
3 considered, please make those part of the record when you
4 speak.
5 The BLM will also accept written comments.
6 Written comments must be postmarked no later than
7 September 24, 1999. They should be addressed to the El
8 Malpais Plan Team Leader, BLM Albuquerque Field Office,
9 435 Montano Road, Northeast, Albuquerque, New Mexico,
10 87107. This address is on a handout at the sign-in table.
11 All comments received and postmarked no
12 later than September 24 will be considered in developing
13 the Final Plan/EIS. Copies of the transcript of this may
14 be obtained by making the necessary arrangements with the
15 court reporter.
16 After all persons have spoken for the
17 record, we will adjourn. After which, the panel members
18 will be happy to respond to your questions. Questions
19 raised and statements made after the hearing will not be
20 part of the record and will not be included as comments
21 for response in the Final Plan/EIS.
22 Again, I must emphasize that questions will
23 be entertained only after the formal hearing has been
24 adjourned and if we have reasonable amount of time.
25 Are are there any questions? Does anybody

wish to speak at this time? You're happy to do so. I have nobody that's registered to speak. We'll adjourn this hearing at this time. We'll stand around a couple of minutes to see if there's anybody else. We'll reconvene if we have to. Thank you.

(The Proceeding concluded at 7:16 p.m.)

1 **C E R T I F I C A T E**

2 I, Yvonne C. Gonzales, a Certified Court Reporter, do
3 hereby certify that the Proceedings of the above-entitled
4 cause were reported by me stenographically on July 27,
5 1999, and that the within transcript is a true and
6 accurate transcription of my shorthand notes.
7 I further certify that I am neither an attorney nor
8 counsel for, nor related to or employed by any of the
9 parties to the action, and that I am not a relative or
10 employee of any attorney or counsel employed by the
11 parties hereto, or financially interested in the action.
12
13
14 _____
15 Yvonne C. Gonzales, CCR
Notary Public
16
17 My Commission expires:
18 3-20-2001
19
20
21
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25

COPY

IN THE MATTER OF
DRAFT EL MALPAIS NATIONAL CONSERVATION AREA PLAN
AND ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Wednesday, July 28, 1999
7:08 p.m.
Del Norte High School
5323 Montgomery Boulevard, N.E.
Albuquerque, New Mexico

REPORTED BY: ELIZABETH HURST-WAITZ, NM CCR #099, RMR
500 Oak Street, N.E., Suite 102
Albuquerque, New Mexico 87106

5-104

1 **A P P E A R A N C E S**

2 MR. WILLIAM M. DALNESS, CHAIRPERSON
Bureau of Land Management
3 New Mexico State Office
1474 Rodeo Road
4 Post Office Box 27115
Santa Fe, New Mexico 87502-0115
5

MR. EDWIN J. SINGLETON
6 Bureau of Land Management
Albuquerque Field Office Manager
7 435 Montano Road, N.E.
Albuquerque, New Mexico 87107
8

MR. STEVE FISCHER
9 Bureau of Land Management
Albuquerque Field Office Watershed Team Leader
10 435 Montano Road, N.E.
Albuquerque, New Mexico 87107
11

KENT HAMILTON
12 Bureau of Land Management
El Malpais Plan Team Leader
13 435 Montano Road, N.E.
Albuquerque, New Mexico 87107
14

15 * * * * * * * *

16 **I N D E X**

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By Mr. Phillip Kennicott 14
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24 Reporter Certificate 16

25 * * * * * * * *

1 MR. DALNESS: This public hearing will come
2 to order. Good evening, and welcome to this public
3 hearing, which has been convened by the Bureau of Land
4 Management, Department of Interior. The purpose of this
5 public hearing is to receive comments concerning the Draft
6 El Malpais National Conservation Area Plan and
7 Environmental Impact Statement prepared by the Bureau of
8 Land Management Albuquerque Field Office in New Mexico.
9 If approved, several proposals contained in
10 the Draft Plan and Environmental Impact Statement would
11 amend the Rio Puerco Resource Management Plan. The
12 amendment would apply to four issues: recreation and
13 visual resource management; access and transportation;
14 wilderness suitability; and boundary and land ownership
15 adjustments.
16 The Draft Plan/EIS includes a Wilderness
17 Suitability assessment for the Chain of Craters Wilderness
18 Study Area located within the National Conservation Area,
19 as well as recommendations to Congress regarding
20 adjustments to the National Conservation Area and Cebolla
21 Wilderness boundaries in Cibola and Catron Counties. We
22 have extra copies of the EIS plan available for you here.
23 This is the last of three public hearings.
24 The other two were in Grants on Monday, September 26, and
25 Quemado on Tuesday -- did I say September? They were in

1 Grants on Monday, July 26, and Quemado on Tuesday,
2 July 27.
3 Notice of the comment period for this Draft
4 Plan/EIS was published in the Federal Register on June 11,
5 and notification of the place and time is in the EIS, and
6 it was also distributed to local newspapers.
7 My name is William Dalness. I'm with the
8 BLM New Mexico State Office, and I'll be the hearings
9 officer this evening. I have a limited role in this
10 process. I make no recommendations in connection with
11 this proceeding or the Plan/EIS. My role is to ensure
12 that the hearings are conducted in a fair and orderly
13 manner.
14 The following representatives from the BLM
15 are here to consider your comments. On my right is Ed
16 Singleton, Albuquerque Field Office Manager; to his right,
17 Steve Fischer, Albuquerque Field Office Watershed Team
18 Leader; and to his right, Kent Hamilton, BLM El Malpais
19 Plan Team Leader.
20 This hearing is an information-gathering
21 event. It is not a forum for public debate or discussion.
22 If you wish to speak, you must have registered first at
23 the registration table. And oral comments received at
24 this hearing will provide the BLM with additional
25 information for review and finalizing the Draft Plan/EIS.

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1 Your oral statement must be relevant to the
2 Draft Plan/EIS. The agency representatives may ask
3 clarifying questions or seek additional information at the
4 conclusion of a speaker's remarks. However, those
5 questions asked do not indicate any predetermined position
6 of the official or the BLM.
7 To ensure a complete and accurate record of
8 the hearing, only one person will be asked to speak at a
9 time. An official court reporter is here to record this
10 hearing and will provide a verbatim transcript. If you
11 have an extra copy of your prepared remarks, provide it to
12 the court reporter immediately after your presentation.
13 It will be marked and made a part of the record of the
14 hearing. Your remarks will be recorded whether you follow
15 a prepared text or not.
16 We have two hours this evening, and during
17 the two hours we want to accommodate everybody who wishes
18 to speak on the record and, if possible, allow for
19 additional time for informal discussions after the
20 hearing. Because we have only two speakers, we will not
21 impose a time limit. However, I reserve the right to
22 limit the speaker's time if it's appropriate.
23 Speakers will be called in the order in
24 which their names appear on the list. If, after all
25 registered speakers have finished and you decide you want

to speak after all, you may come up and speak. We will adjourn this evening at 9:00 o'clock.

When you come up, please give your name, and if you represent an organization or a group, the name of that organization or group. If you have questions that you want considered, those questions should be asked into the record as part of your presentation.

The BLM is also accepting written comments, which must be postmarked no later than September 24, 1999. They should be addressed to the El Malpais Plan Team Leader, BLM Albuquerque Field Office, 435 Montano Road, Northeast, Albuquerque, 87107. This address appears on the handout at the sign-in table. All comments received and postmarked no later than September 24 will be considered in developing the final plan and EIS.

If you wish a transcript of this hearing, you must make your own arrangements with the court reporter.

After all persons have spoken for the record, we will adjourn the public hearing, after which the panel members will be happy to respond to your questions if we have sufficient time to do so. Questions raised and statements made after the hearing has been adjourned will not be included as comments for response in the Final Plan/EIS.

Again, I must emphasize that questions will be entertained only after the formal hearing has been adjourned, and only if we have sufficient time to do so.

Does anybody have any questions on the procedures?

I have two people that have signed up to speak. The first person is Mr. Robert Norton.

MR. ROBERT NORTON: Well, this is going to be short. Bob Norton from Edgewood, New Mexico. And though I didn't plan to speak this evening, but apparently we need some other folks to talk, so I will.

I have some familiarity with the area involved, having gone over there and gone in the backcountry a little bit. There are some areas that I am not yet familiar with, so I can't speak on all portions of the draft plan at this time until I look at it further.

But what I enjoy doing as a user of our public lands is exploring backcountry roads, getting into the backcountry and seeing areas that are off the main routes. For example, in the plan, the Tecolote Mesa is mentioned. I've been to that and driven up the road that's on that. It's actually a very well-defined four-wheel drive road and is included on the map over there.

You know, that area really -- even though

it's nice, very special, a nice backcountry experience visiting that area, but it hardly meets wilderness criteria. So I would entertain that that road would remain open. Access

Traveling back into that area, past a number of roads that are already currently closed -- and there didn't seem to be any good reason, in my opinion, that they should be closed. Of the four alternatives, well, D, of course, calls for closing 23 percent of the roads; C, 37 percent of the roads. Both Alternative A and B are between what? Negligible to five percent.

And I would believe that Alternative A and B, as regards to backcountry access, would be the preferred alternatives in that regard.

Again, some other areas that I've been to are no longer under the jurisdiction of BLM. The Cerro Bandera area, I guess, has been adopted by the National Parks, so another area that's really outside the scope of this.

But anyway, that's really what I wanted to say. You know, however primitive the backcountry road, you know, it's still enjoyable to take it. And, you know, with current management practices, four-wheel-drive access, OHV access, mountain bikers can also access those same roads. But if they're closed up as wilderness, even

the mountain bikers would be banned.

And I would entertain that areas that legitimately meet the wilderness criteria, by all means, let's protect them. But areas that see current -- current use -- and you know, I personally did not evidence any negligible -- well, what am I trying to say? I couldn't see where there was any significant damage that would be offered by continued use as it is now. Thank you.

MR. DALNESS: Thank you.

The next speaker is Dr. Jerry Holechek.

DR. JERRY HOLECHEK: I just wanted to say it's a pleasure to be here and provide a few comments on the plan. And it's a pretty detailed plan, and generally, I was pretty impressed with it.

MR. DALNESS: Could you tell us if you represent anybody, please?

DR. JERRY HOLECHEK: Yes. Right now I will. I do represent somebody. I'm a range science professor at New Mexico State University, and I serve as a consultant for FNF Properties, LLC, owners of the York Ranch.

And over the last several months, I have visited the El Malpais area and York Ranch repeatedly, and we've initiated vegetation surveys and monitoring on the York Ranch. And I am fairly familiar with some of the plans for livestock management on the York Ranch.

1 And one of the concerns that I had in
2 reviewing the EIS is that it kind of emphasizes the
3 importance of rest as a range improvement or range
4 recovery tool. And I would acknowledge that rest can be
5 appropriate as a range recovery tool under certain
6 situations, particularly when land has been overgrazed and
7 needs a period of generally, we think, three to four
8 years, if it's been heavily overgrazed, for the vegetation
9 to recover.
10 But after that, generally -- and we have
11 quite a bit of research on that -- that rest has not been
12 that effective in most cases. In other words, you reach a
13 point of diminishing returns, in terms of facilitating
14 further recovery.
15 And we have quite a bit of research from
16 here in New Mexico, and also a great deal of research on
17 the kind of rangeland, blue grama rangeland, that
18 generally characterizes that area, that shows that the
19 best management strategy has basically been to scatter the
20 animals well over the area and stock the area at a
21 conservative rate.
22 And we have technology that we've published
23 and has been tested in several cases that allows us to set
24 sustainable stocking rates that will allow further
25 recovery and vigor and improvement in vegetation

1 composition. And this kind of a strategy involves
2 scattering the animals and keeping them well distributed,
3 using all the pastures.
4 Because actually, in studies in New Mexico
5 and Arizona, both states -- and I might add, Colorado and
6 Wyoming -- has actually given equally, and some of these
7 studies, actually better results than schemes that involve
8 a lot of rotation and rest periods.
9 And I would mention also, not only has the
10 vegetation responded as well or better -- and here I would
11 cite some of the studies I've been involved in on the
12 College Ranch, but I would also mention studies in Arizona
13 that were done by S. Clark Barton. In my comments, I've
14 provided a summary of these studies, so anybody can go and
15 obtain them and read them.
16 And so the essence of my comments is that we
17 feel that these alternative strategies that are less
18 intensive, involving conservative stocking and using as
19 much -- most of the range every year, has generally been a
20 sound strategy in this part of the world and should be
21 considered as an alternative strategy to more intensive
22 strategies that involve long deferment or rest periods,
23 and the flip side of that, may involve heavier use of the
24 pastures when the animals are in the pastures.
25 And so having made those comments -- sure?

1 MR. SINGLETON: I'd like to ask just a
2 qualifying statement, Dr. Holechek. Is what you or your
3 client is proposing more along the lines of a more
4 traditional deferred system, where you use everything, you
5 use it conservatively, and maybe change the patterns of
6 use, so that it's not used, let's say, two or three
7 consecutive years in a row, for example, during the hot
8 growing season?
9 DR. JERRY HOLECHEK: Yes, I think that's a
10 very good question. And I have really considered the
11 literature on this and published a recent paper in a peer
12 review journal on this subject area. And also, I'm a
13 senior author on the standard text in range management.
14 And we've collected all the grazing studies
15 in the world and really looked at them and really
16 considered this. And the strategy that we feel has the
17 highest certainty for success and has been the best
18 evaluated has been a system developed by Leo Merrill in
19 Texas, that involves use of four pastures.
20 It involves using three herds and rotating
21 growing season nonuse among the pastures so the weakest
22 pasture -- if there's a riparian consideration during the
23 critical growing period, or if there are other critical
24 periods -- that nonuse, four-month nonuse period, can be
25 shifted around to accommodate whatever special concerns.

1 And all ranches and rangelands are
2 different. And what we like is the flexibility that this
3 gives. Because it may be that in certain areas, that one
4 pasture may be inordinately weak and you would want to
5 maybe give it two years' growing season rest in a row,
6 rather than just one. And you may have other pastures
7 that are in real high condition that are very flat, where
8 a nonuse period would be less appropriate.
9 MR. SINGLETON: Sure. Okay. Thank you.
10 DR. JERRY HOLECHEK: You bet.
11 MR. DALNESS: Thank you. Did you give the
12 reporter your --
13 DR. JERRY HOLECHEK: Sure.
14 MR. DALNESS: I assume that you do have an
15 extra copy?
16 DR. JERRY HOLECHEK: Yeah, I do have two
17 copies.
18 MR. DALNESS: Thank you.
19 Okay, does anybody else wish to speak at
20 this time? This is your last chance. Do you want to say
21 something on the record?
22 MR. PHILLIP KENNICOTT: I'd like to, if I
23 may.
24 MR. DALNESS: Please go forward and give
25 your name and who you represent, if you represent

1 somebody.

2 MR. PHILLIP KENNICOTT: My name is Phillip

3 Kennicott. I am representing myself for these remarks.

4 I'd like to amplify something that Mr. Norton said:

5 access to the backcountry. This is important, but when

6 one reaches a period in one's life that I have reached,

7 for example, that gets harder and harder. One can't go

8 out on the trail and hike. I happen to have a broken

9 foot, and I could probably make a mile or two miles, but

10 that would be about the end of it.

11 I think it's extremely important that back

12 roads remain open. The back roads are not going to

13 disappear. We can pretend that they're not there, but

14 there's a place in Rocky Mountain National Park. One

15 drives down from the trail ridge road on the west side. I

16 have been doing this for 25 years now, and you can still

17 see where the old road is, despite the fact that the Park

18 Service has tried to move it, planted trees where it used

19 to be. Those trees are up about 10, 12 feet now. Those

20 roads are not going to disappear.

21 That is not going to be wilderness country

22 in areas where one tries to pretend the road does not

23 exist. So my argument is, let's leave those roads open.

24 Let's be careful how they're used. Find ways of managing

25 them so we don't damage the environment. But let's don't

close them down. We would be closing a significant part of the population out of its public lands. Thank you.

MR. DALNESS: Thank you. Could you spell your last name, please?

MR. PHILLIP KENNICOTT: That's K-E-N-N-I-C-O-T-T.

MR. DALNESS: Thank you. Does anybody else wish to speak at this time? I see no other speakers. So we will adjourn this hearing, and thank you very much. And we'll stay here as long as we need to, up until 9:00, if you wish to ask some further questions. Thank you.

(The Public Meeting concluded at 7:27 p.m.)

* * * * * * * *

1 **C E R T I F I C A T E**

2

3 I, Elizabeth Hurst-Waitz, Registered Merit Reporter
4 and New Mexico Certified Court Reporter #099, do hereby
5 certify that the Proceedings of the above-entitled cause
6 were reported by me stenographically on Wednesday,
7 July 28, 1999, and that the within transcript is a true
8 and accurate transcription of my shorthand notes.
9 I further certify that I am neither employed by nor
10 related to nor contracted with (unless excepted by the
11 rules) any of the parties or attorneys in this action, and
12 that I have no interest in the final disposition of this
13 action.
14
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16
17 COPY
18
19 Elizabeth Hurst-Waitz, CCR, RMR
Certified Court Reporter #099
License Expires: 12/31/99
20
21
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24
25

July 22, 1999

Mr. Edwin J. Singleton
Manager, Albuquerque Field Office
Bureau of Land Management
435 Montano Road NE
Albuquerque, NM 87107-4935

Dear Mr. Singleton:

This letter provides comment on the "Draft El Malpais Plan and Environmental Impact Statement." Specifically, I will comment on Alternative D-Balanced Management (Preferred Alternative)-Vegetation and Rangeland Resources, p. 4-68.

I am a Range Science professor at New Mexico State University and serve as a consultant for FNF Properties LLC, owners of the York Ranch. Over the last several months I have visited the El Malpais area and York Ranch repeatedly, conducted vegetation surveys on the York Ranch, and met repeatedly with the Bureau of Land Management regarding livestock management on the York Ranch.

My concern centers around the recommended use of periodic rest from livestock grazing as a means of improving vegetation vigor and composition. While rest may be appropriate in certain situations, it is not the only approach that can be successful in range improvement (see Klipple and Bement 1961). Other approaches should be available to BLM. Rest has been defined by range managers as providing range units with a year or more of non-use of a period of non-use (see Society for Range Management, 1989, A Glossary of Terms Used in Range Management, Denver, CO). Although it is well established that rest periods can improve forage plant health, several studies reviewed by Vallentine (1990), Heady and Child (1994), and Holechek et al. (1998) cast doubt on the benefits of rest versus conservative graving (removal of about 30-35% of annual forage production). A well conducted, long term study in the Chihuahuan Desert of New Mexico showed black grama actually maintained itself better under conservative grazing than protection (Paulsen and Ares 1962). Forage plants on conservatively or lightly grazed ranges have actually done better during and after drought than those on areas with no grazing (Paulsen and Ares 1962, Ganskopp and Bedell 1981).

In the southwestern United States several studies have shown forage plants grazed season-long or continuously at conservative levels have performed as well or better than those on pastures where rest periods were included in the grazing schedule (Martin and Cable 1974, Hughes 1982, Martin and Severson 1988, Pieper et al. 1991, White et al. 1991, Beck and McNeely 1993).

Recent well replicated, long term studies in the shortgrass prairie of Wyoming (Manley et al. 1997) and tallgrass prairie of Oklahoma (McCollum et al. 1999) have shown no differences in range trend or productivity when pastures grazed season long were compared to those grazed with various non-

use or rest periods. Grazing intensity was the primary factor that influenced forage plant productivity in these studies.

Heady and Child (1994) reviewed the long term (20 year) results of various grazing management practices applied on 95 different pastures on the Vale Oregon district, Bureau of Land Management. All seasonally grazed pastures started with moderate grazing and had increased forage production during the 20 years. Season of use made little difference. There was no evidence that rotational grazing schemes had any advantages over season long grazing in terms of improving range condition or forage production. The key factor in range improvement appeared to be the reductions in grazing intensities that were applied when the project was initiated in 1966.

In a comprehensive review of over 50 grazing studies from Africa, O'Reagain and Turner (1992) concluded that any differences in continuous and various rotation grazing schemes (short-duration grazing included) in terms of range trend and forage plant productivity were doubtful. Stocking rate or grazing intensity was the primary factor affecting long term grazing outcomes. Holechek et al. (1999) drew the same conclusion in a review of grazing studies from North America. A similar conclusion was reached by Wilson (1986) in a review of grazing research in Australia.

The Merrill 3 herd/ 4 pasture rotation system is an extensive grazing approach that has shown a definite advantage over continuous grazing from a vegetation standpoint in central Texas (Heitschmidt et al. 1990, Taylor et al. 1993). This strategy involves multiple herds and non-use of no more than 25% of the range at any time. All range units receive use every year. I believe this strategy is sound for most New Mexico rangelands, including the El Malpais area.

In closing, I recommend that alternative grazing management approaches, such as the Merrill system, involving conservative grazing, keeping livestock well distributed over the landscape, and making some use of all grazable pastures every year be carefully considered, and be available to BLM as a management option. Considerable science supports this range management approach for New Mexico rangelands from vegetation, wildlife, watershed, livestock, and financial stand points.

Thank you.

Sincerely,

Jerry Holechek, Ph. D.
Professor, Range Science
New Mexico State University

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in the letter by Jerry Holechek

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