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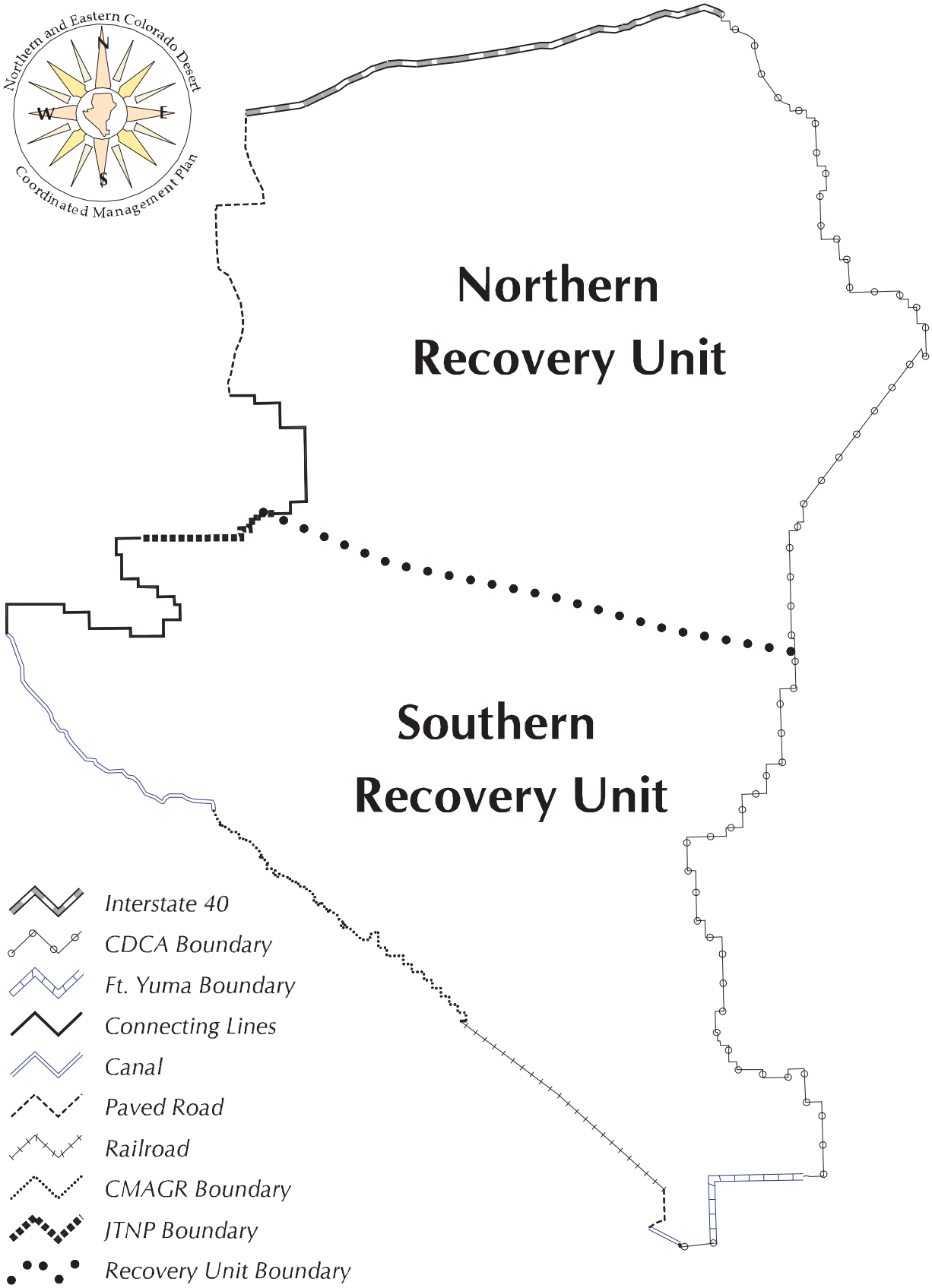
Vicinity Map

May 29, 2002

Map 1-1

Scale 1 : 5,300,000

NECO Boundary and Tortoise Recovery Units

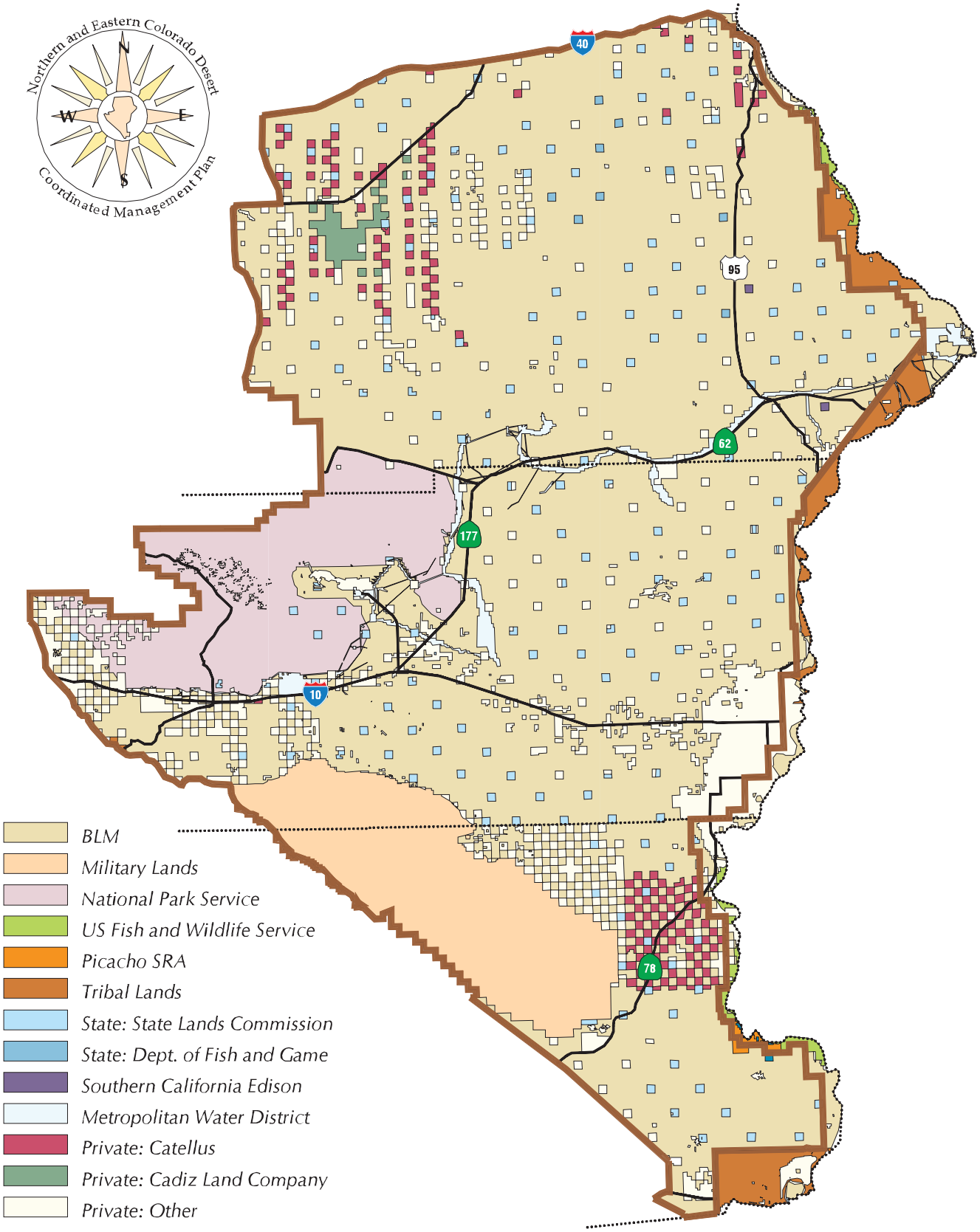


June 5, 2002

Map 1-2

Scale 1:1,120,000

Land Ownership



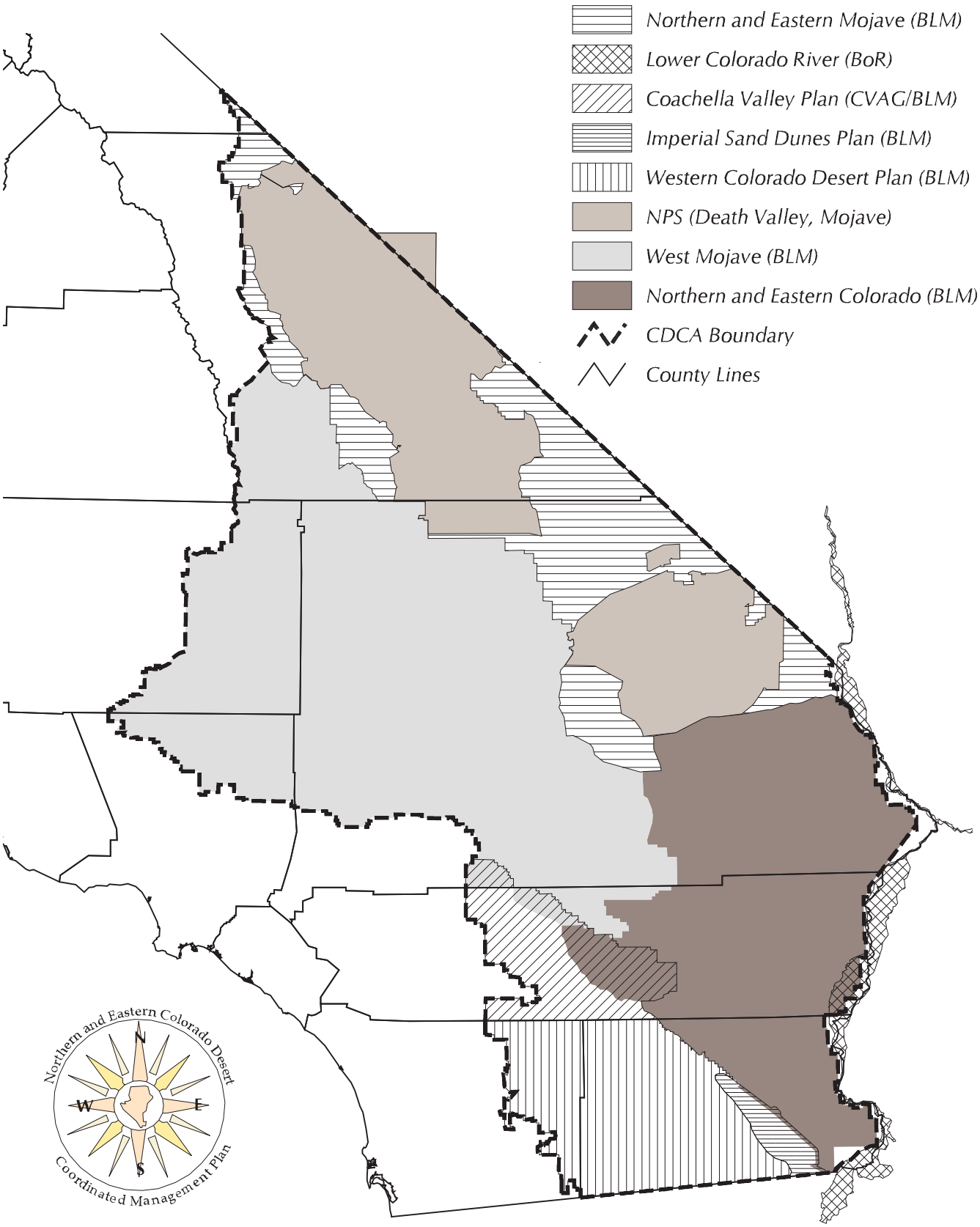
Please refer to Base Map for features not described here

June 5, 2002

Map 1-3

Scale 1 : 1,120,000

Concurrent Desert Plans

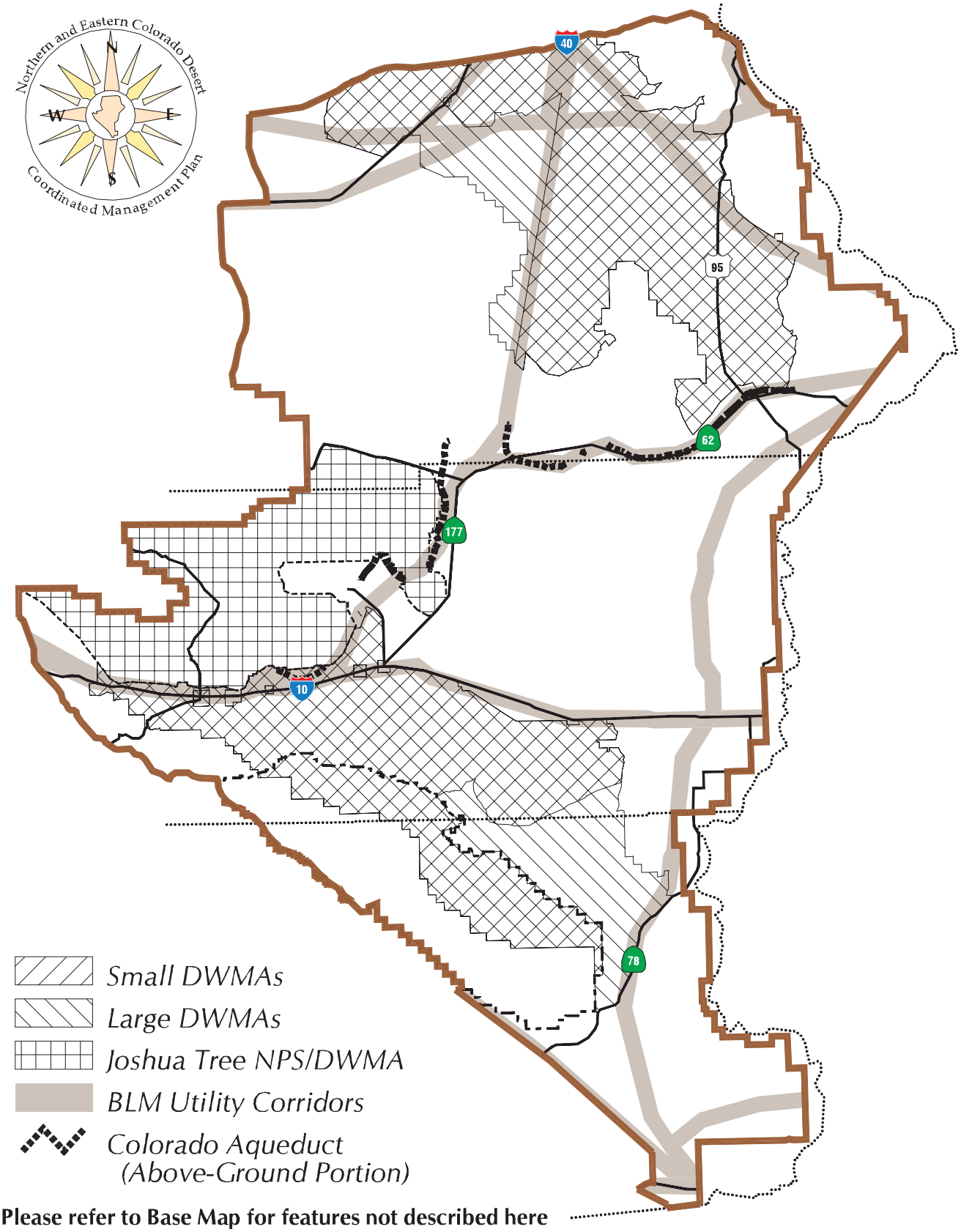


June 5, 2002

Map 1-4

Scale 1 : 2,800,000

Utility Corridors



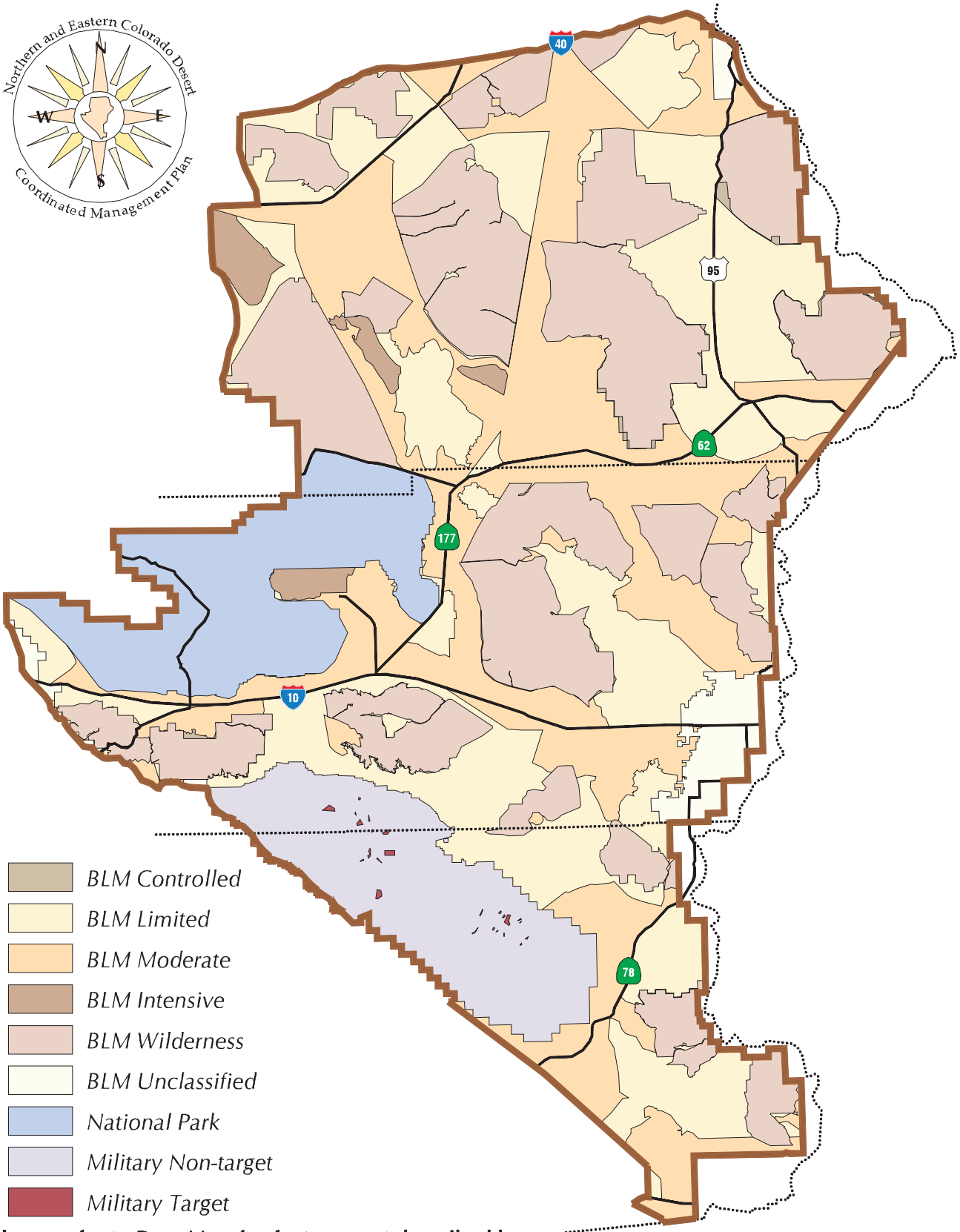
Please refer to Base Map for features not described here

May 30, 2002

Map 2-1

Scale 1 : 1,120,000

Current BLM Multiple Use Classes



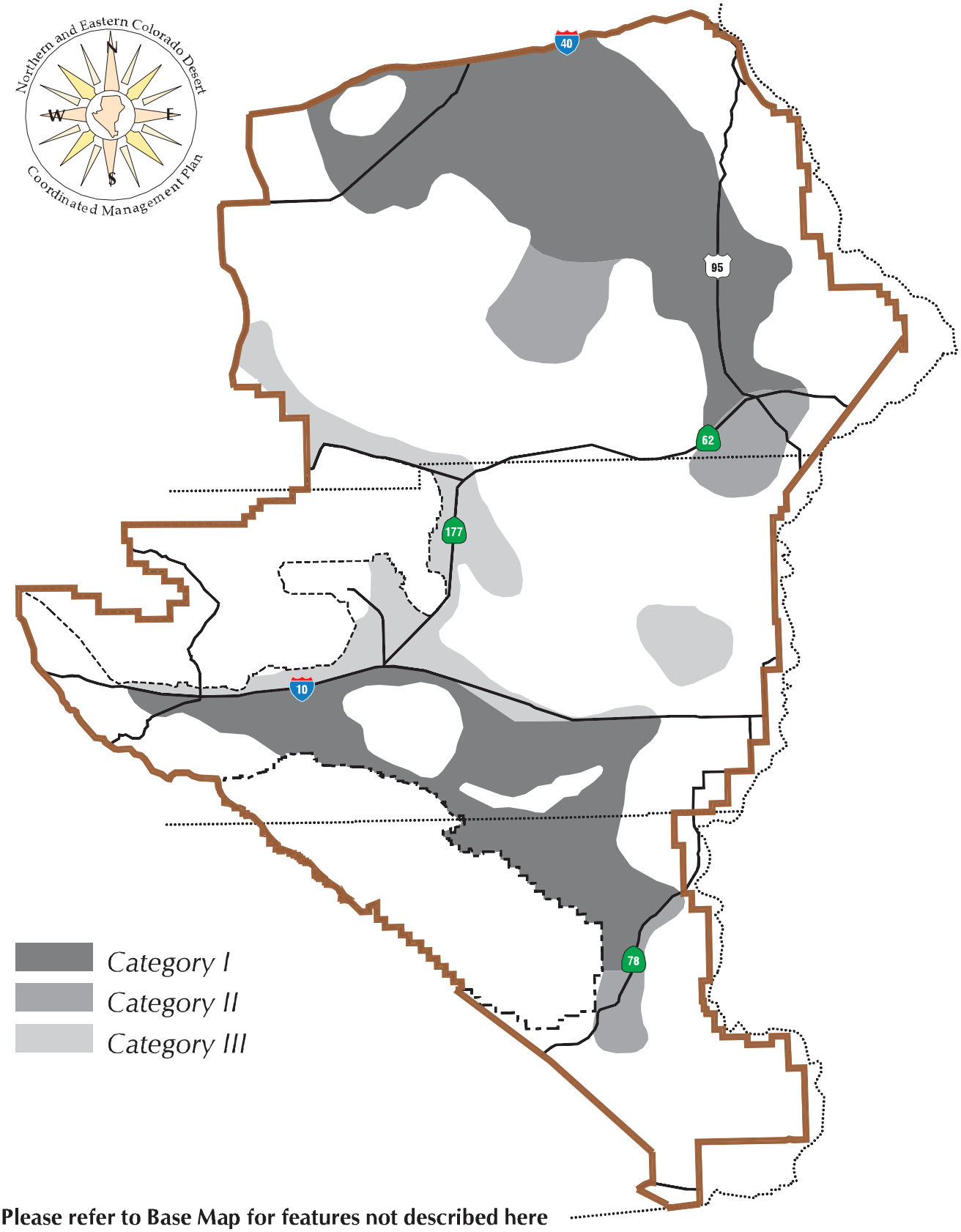
Please refer to Base Map for features not described here

May 30, 2002

Map 2-2

Scale 1 : 1,120,000

Current BLM Desert Tortoise Categories



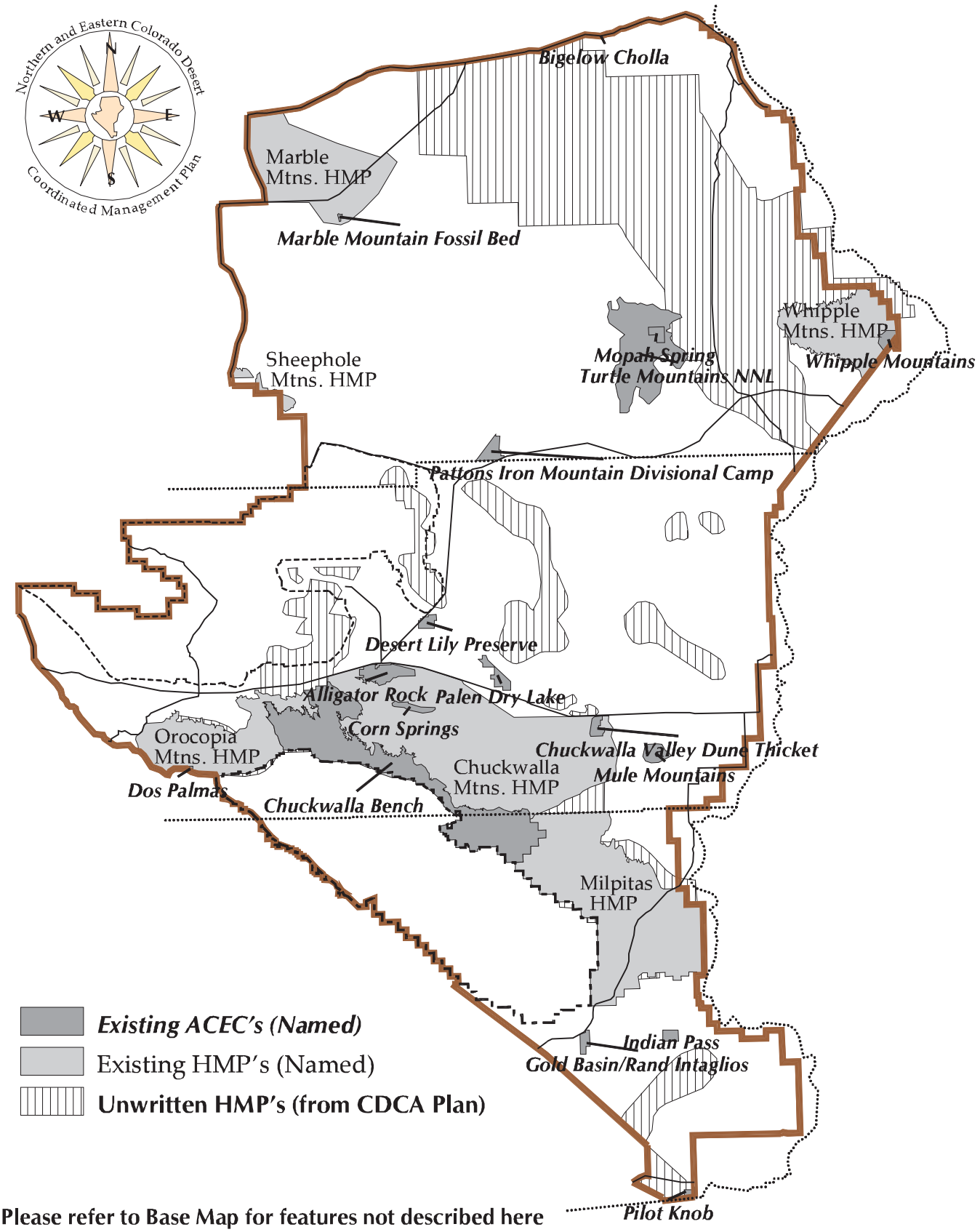
Please refer to Base Map for features not described here

May 30, 2002

Map 2-3

Scale 1 : 1,120,000

Current HMPs and ACECs



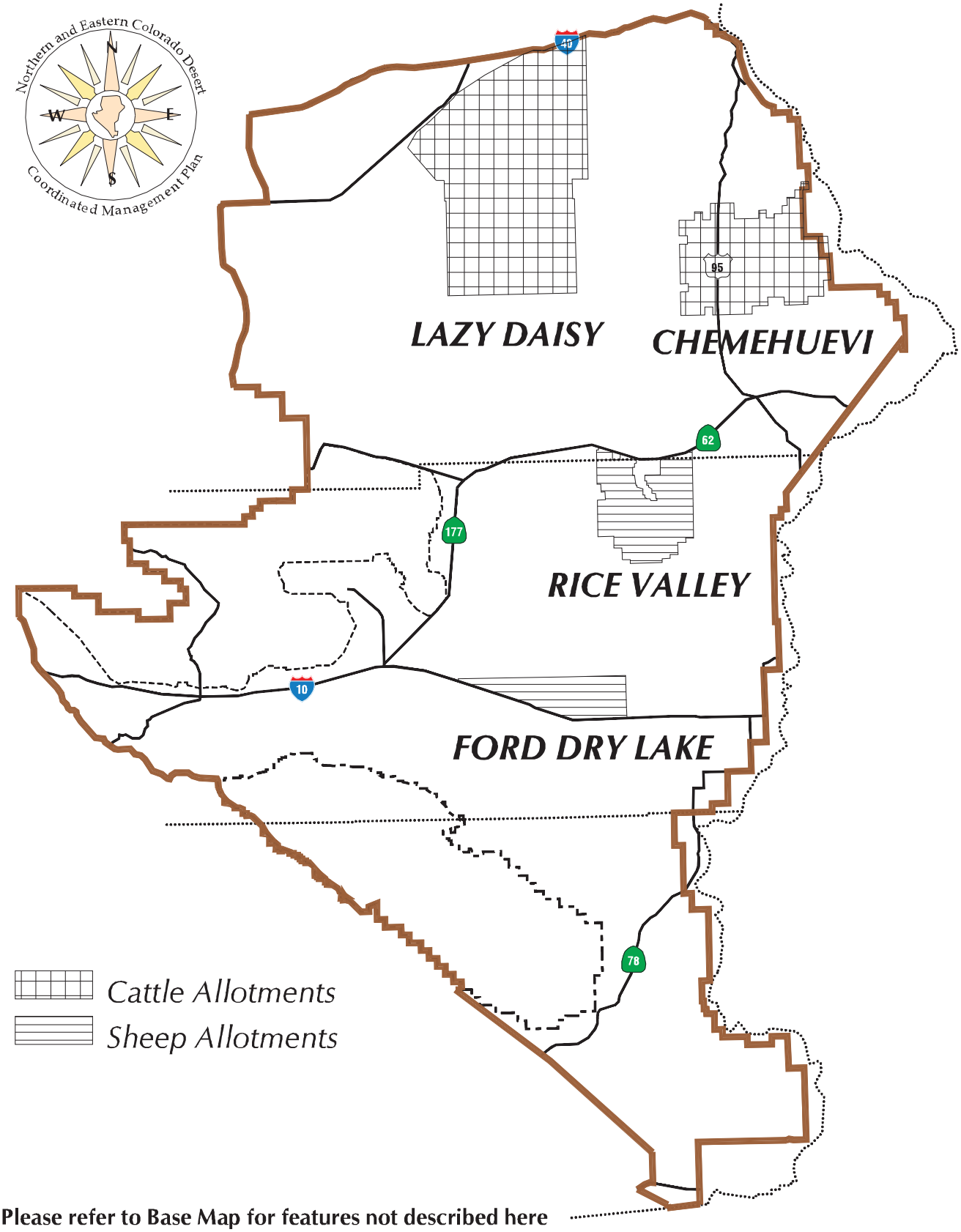
Please refer to Base Map for features not described here

June 5, 2002

Map 2-4

Scale 1 : 1,120,000

Current Grazing Management



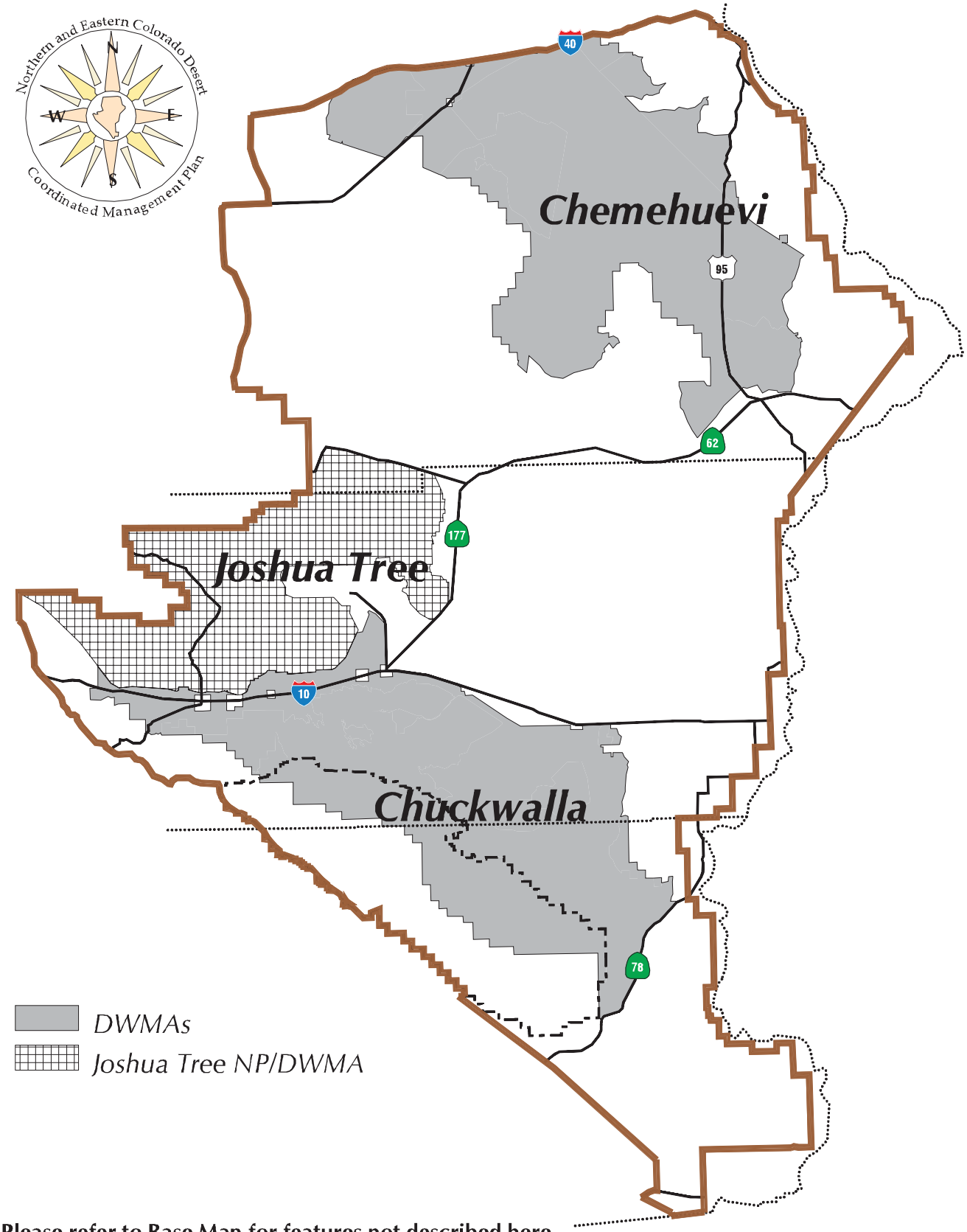
Please refer to Base Map for features not described here

May 30, 2002

Map 2-5

Scale 1 : 1,120,000

Proposed Plan
DWMAs



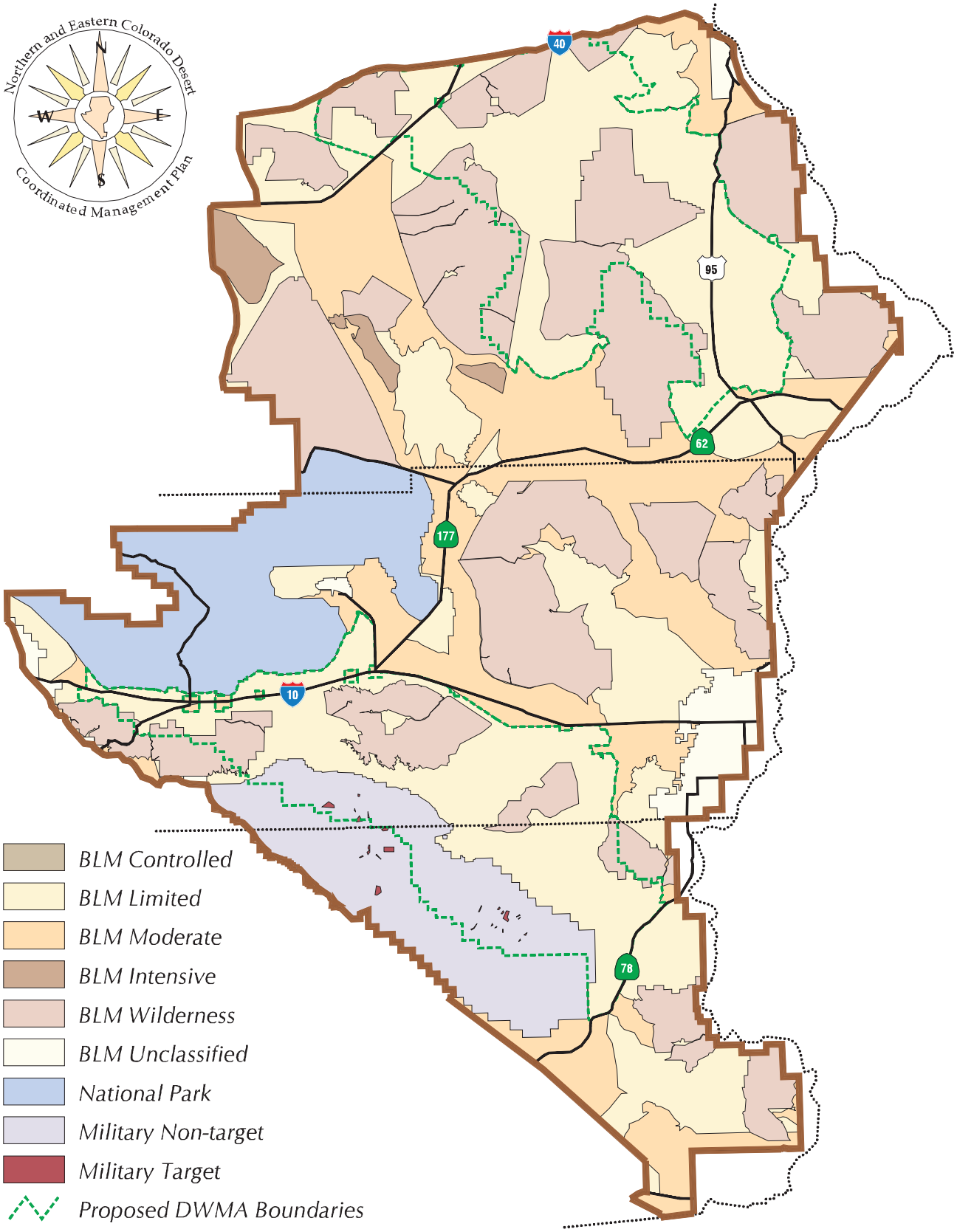
Please refer to Base Map for features not described here

June 5, 2002

Map 2-6

Scale 1 : 1,120,000

Proposed PLan
BLM Multiple Use Classes



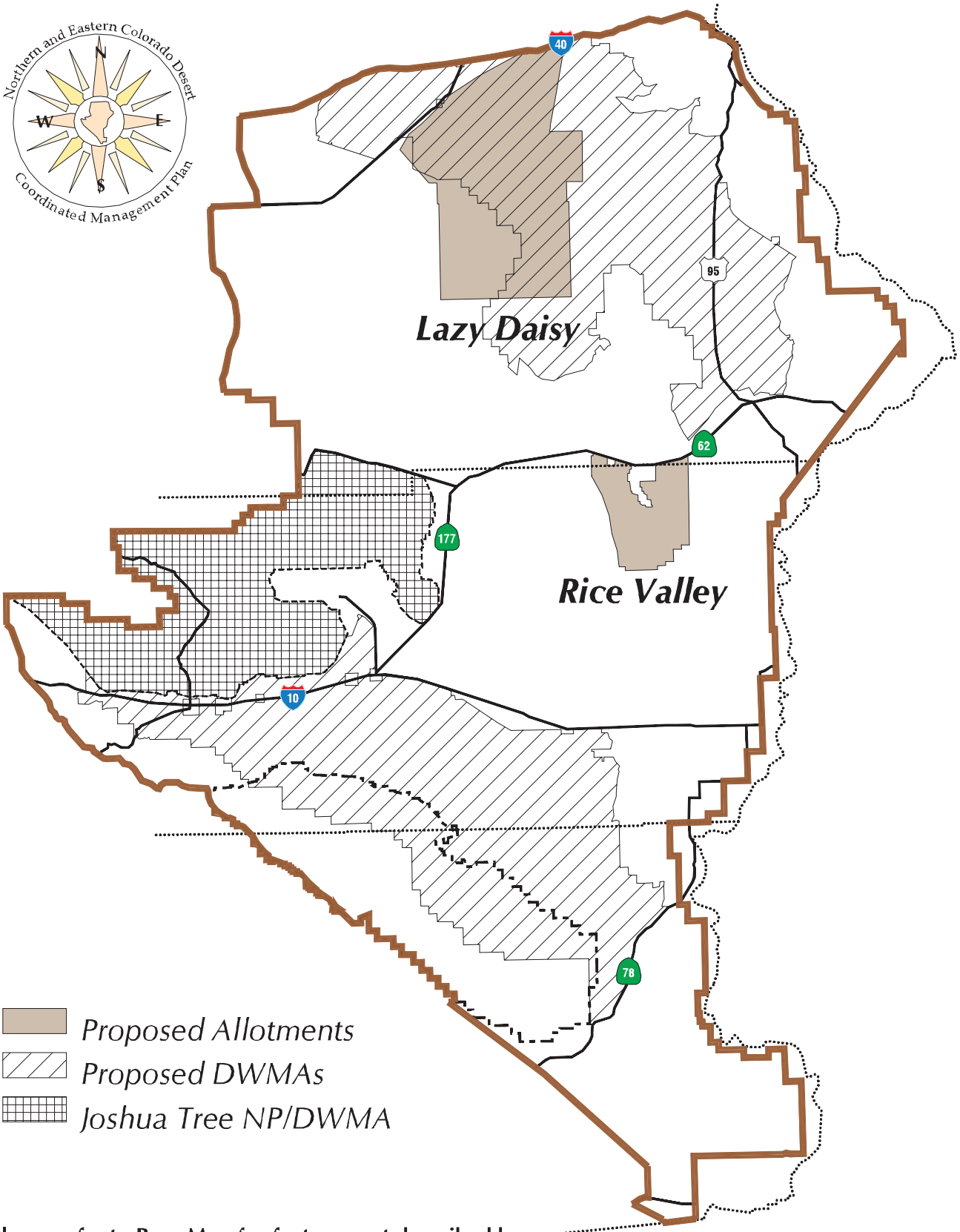
Please refer to Base Map for features not described here

May 30, 2002

Map 2-7

Scale 1 : 1,120,000

Proposed Plan
Grazing Management



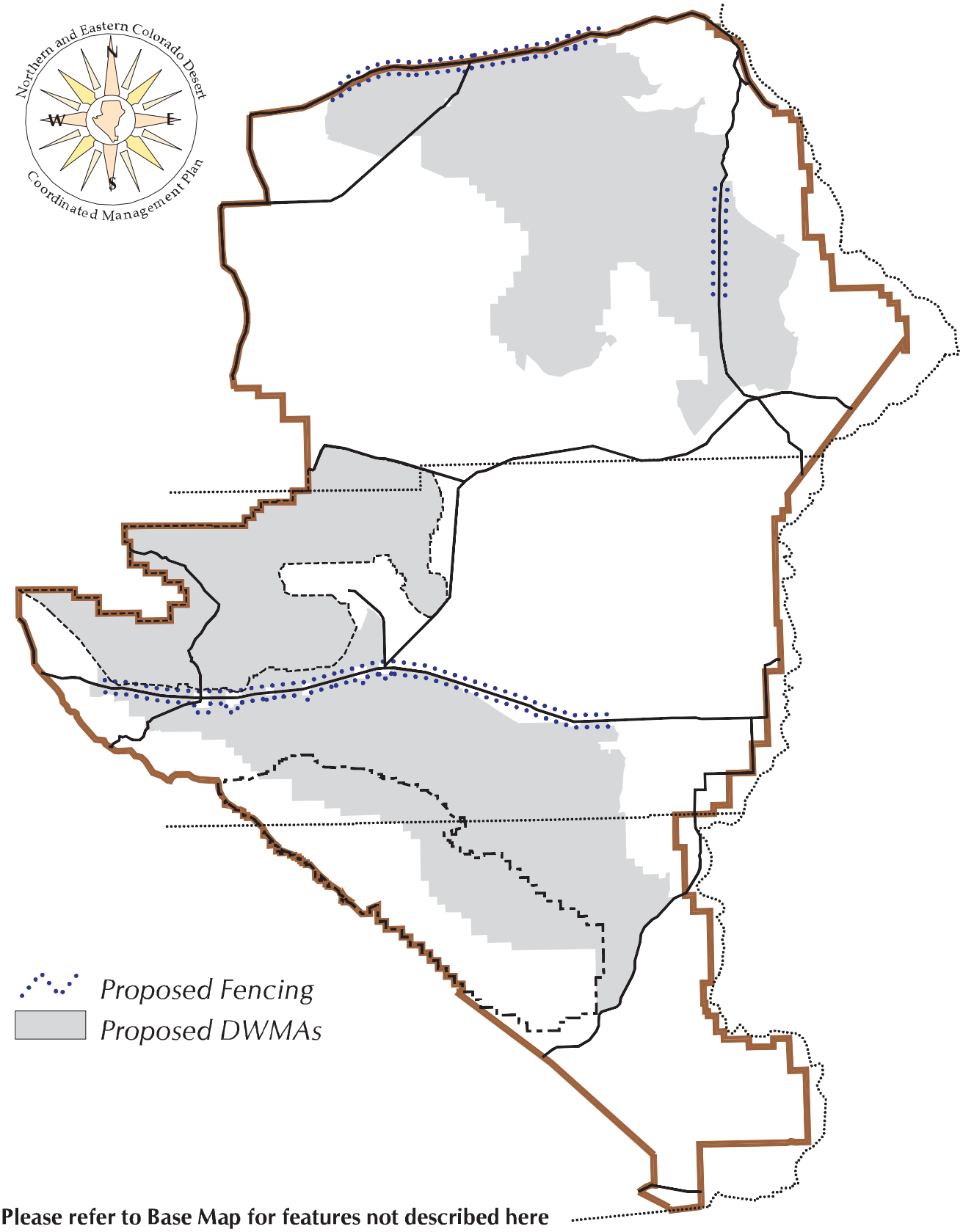
Please refer to Base Map for features not described here

May 30, 2002

Map 2-8

Scale 1 : 1,120,000

Proposed Plan
Tortoise Fencing



Please refer to Base Map for features not described here

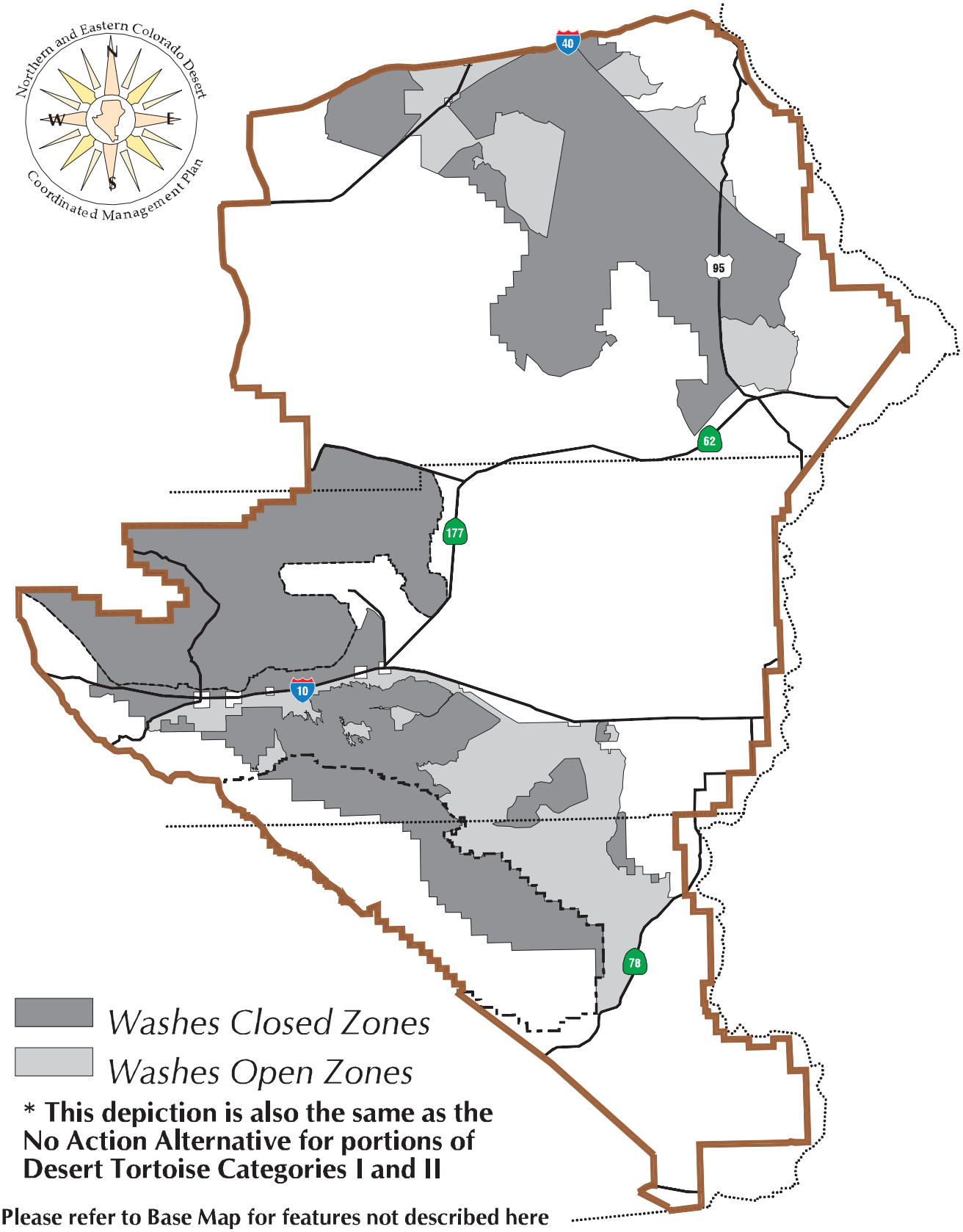
May 30, 2002

Map 2-9

Scale 1 : 1,120,000

Proposed Plan*

Routes of Travel Designations-Washes Closed Zones in DWMAs



*** This depiction is also the same as the No Action Alternative for portions of Desert Tortoise Categories I and II**

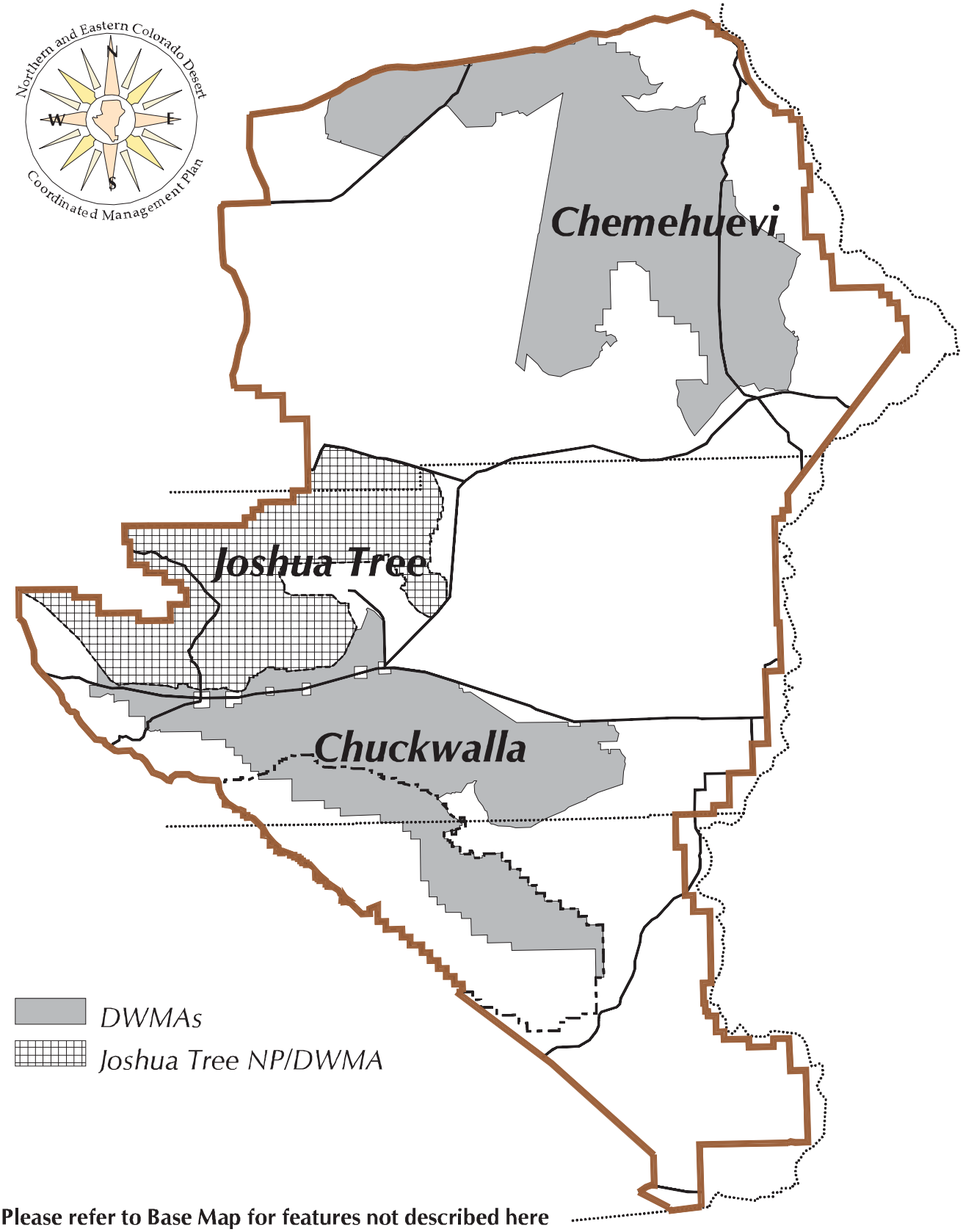
Please refer to Base Map for features not described here

May 30, 2002

Map 2-10

Scale 1 : 1,120,000

Small DWMA A & B Alternatives
DWMAs



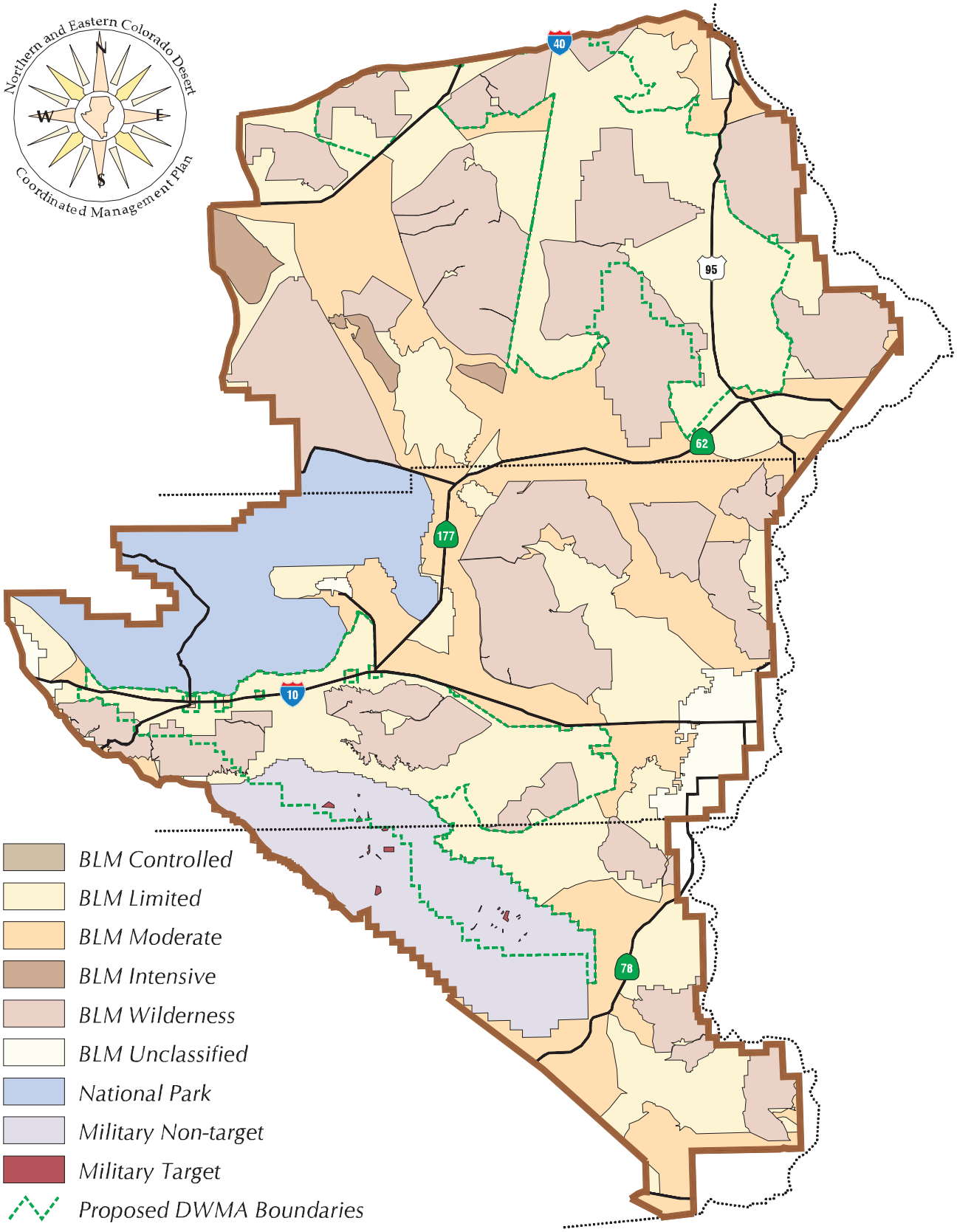
Please refer to Base Map for features not described here

June 5, 2002

Map 2-11

Scale 1 : 1,120,000

Small DWMA A & B Alternatives
BLM Multiple Use Classes



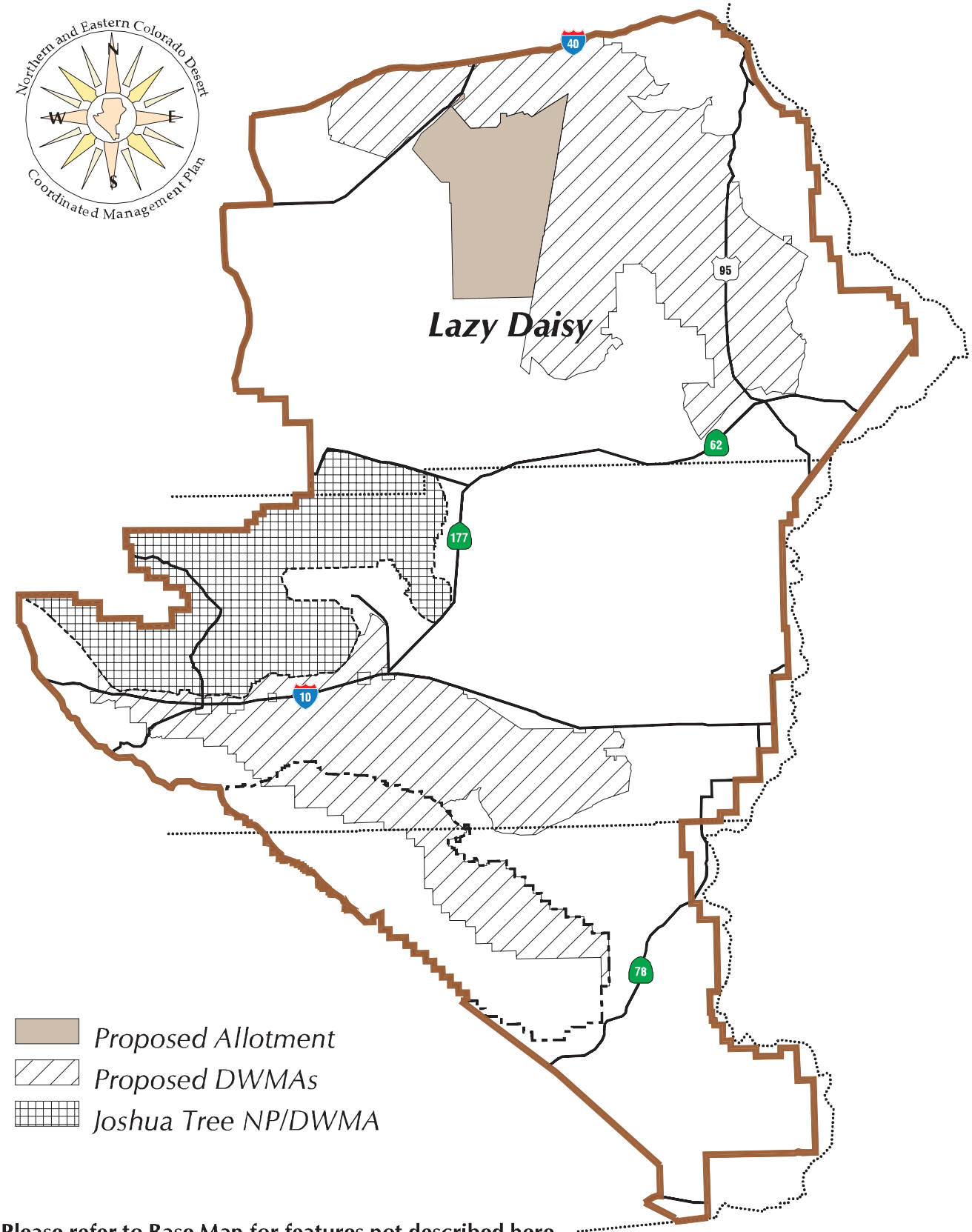
Please refer to Base Map for features not described here

May 30, 2002

Map 2-12

Scale 1 : 1,120,000

Small DWMA A Alternative
Grazing Management



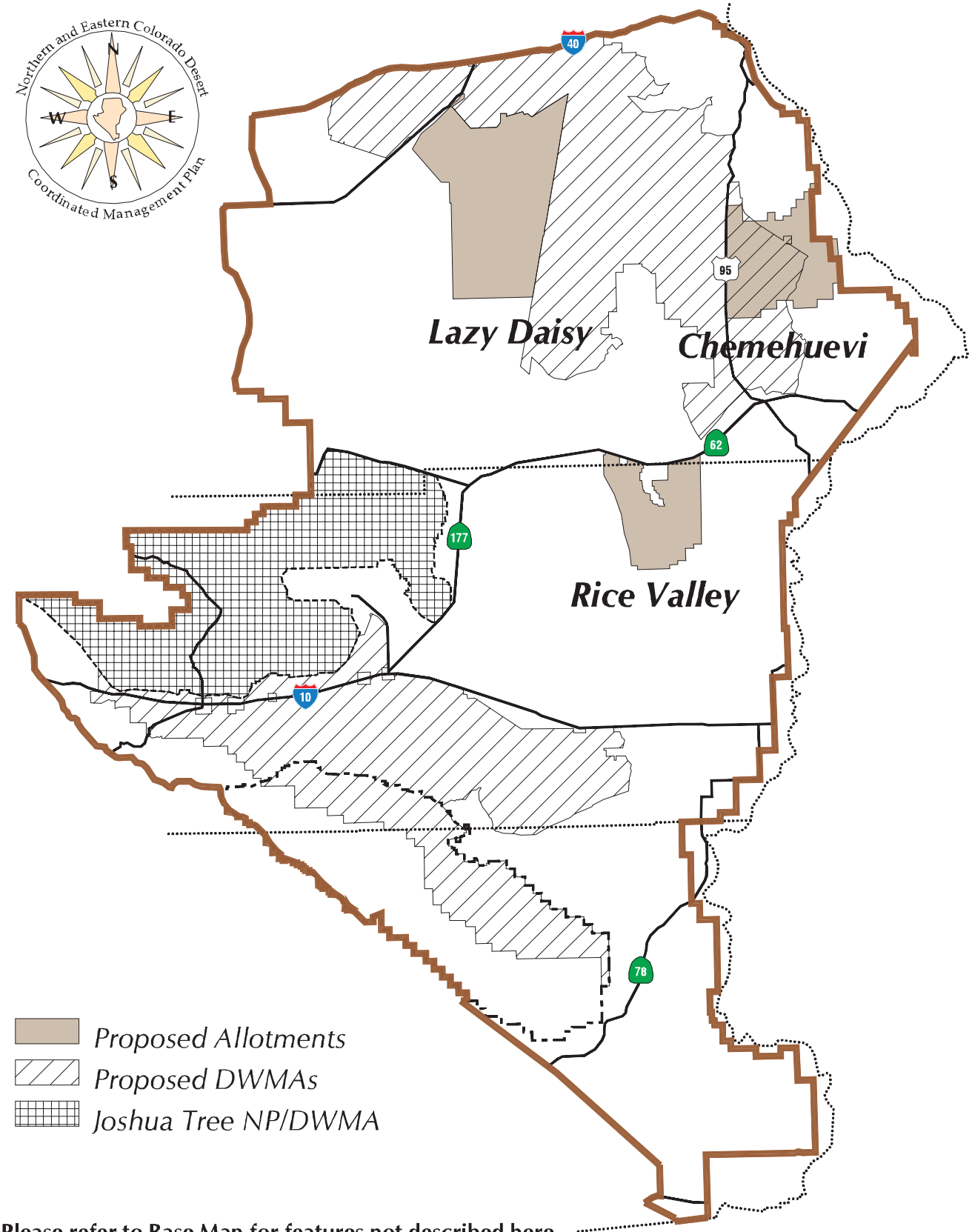
Please refer to Base Map for features not described here

May 30, 2002

Map 2-13

Scale 1 : 1,120,000

Small DWMA B Alternative
Grazing Management



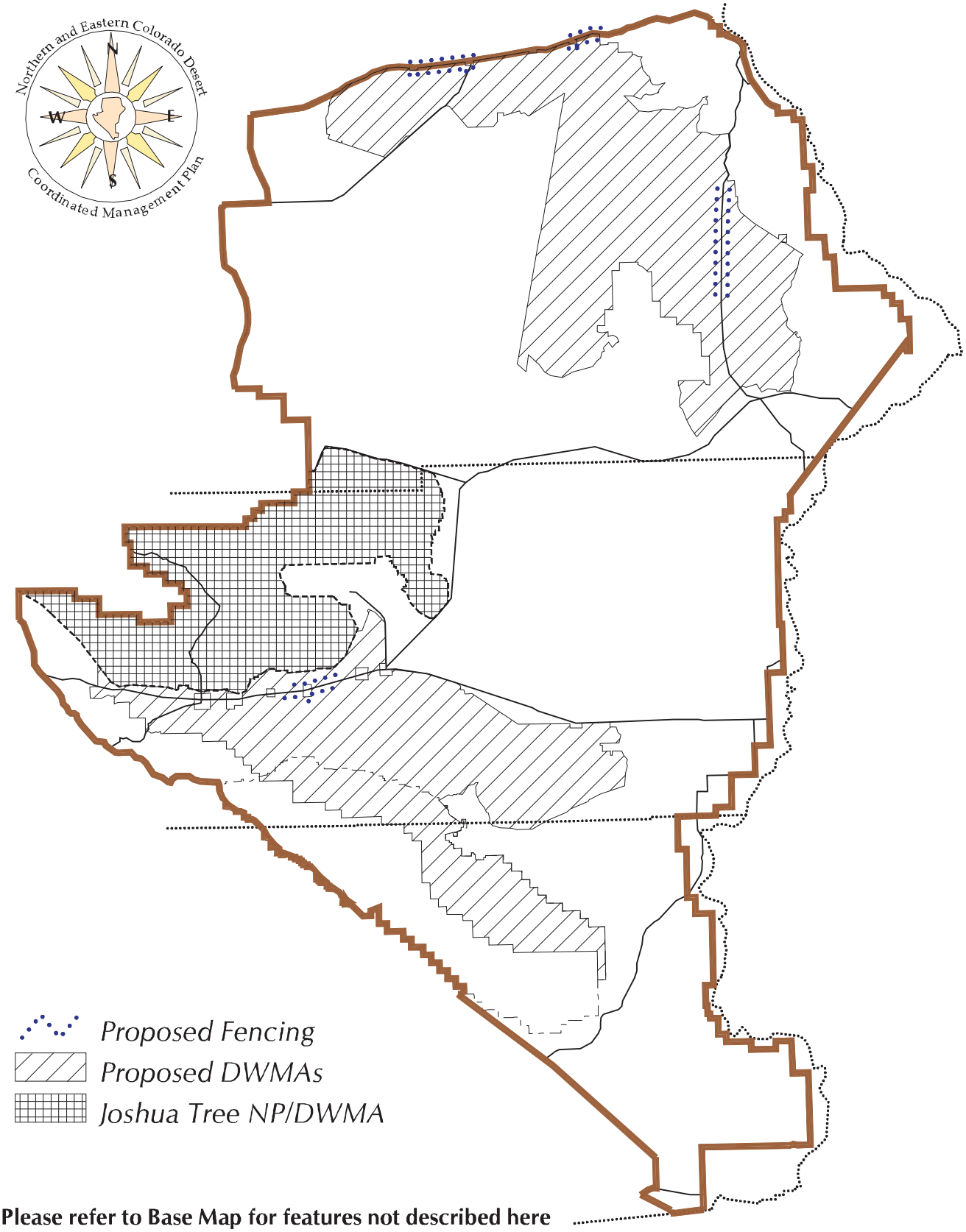
Please refer to Base Map for features not described here

May 30, 2002

Map 2-15

Scale 1 : 1,120,000

Small DWMA B Alternative
Tortoise Fencing



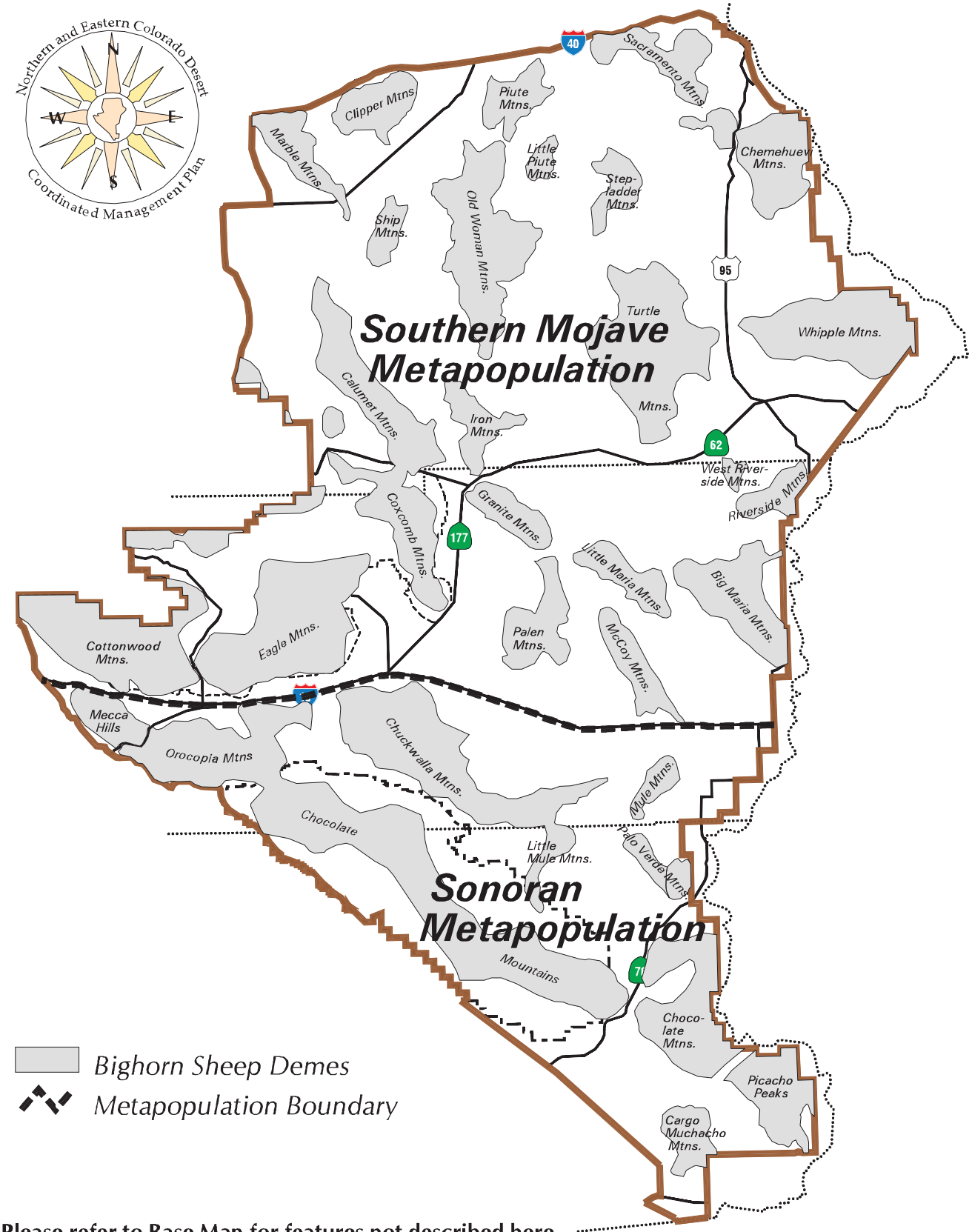
Please refer to Base Map for features not described here

May 30, 2002

Map 2-16

Scale 1 : 1,120,000

Bighorn Sheep Demes



Please refer to Base Map for features not described here

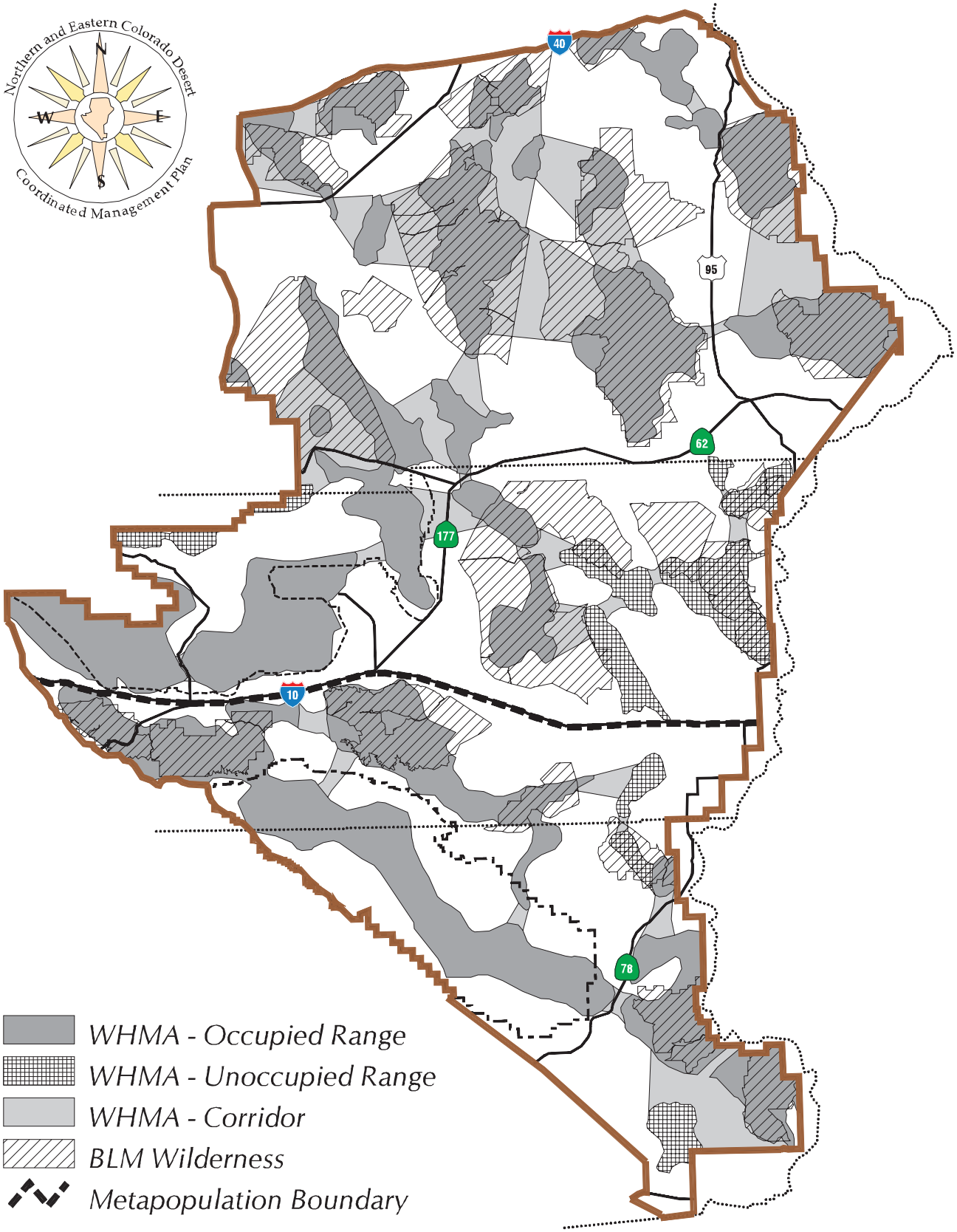
June 5, 2002

Map 2-17

Scale 1 : 1,120,000

Proposed Plan and Small DWMA A & B Alternatives

Bighorn Sheep WHMAs



Please refer to Base Map for features not described here

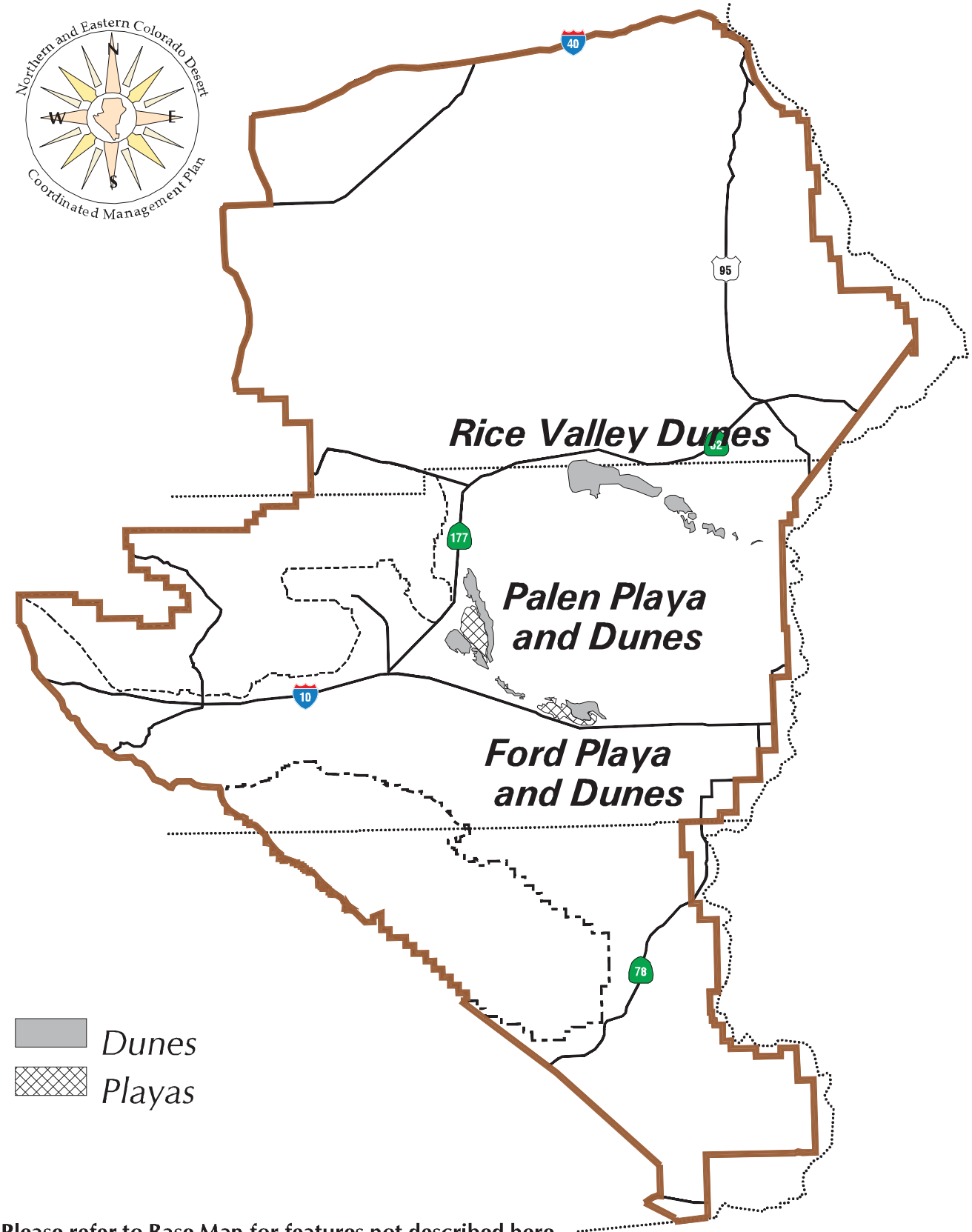
May 31, 2002

Map 2-18

Scale 1 : 1,120,000

Proposed Plan and Small DWMA A & B Alternatives

Dunes and Playa Closures (Area Designations for Motor Vehicle Access)



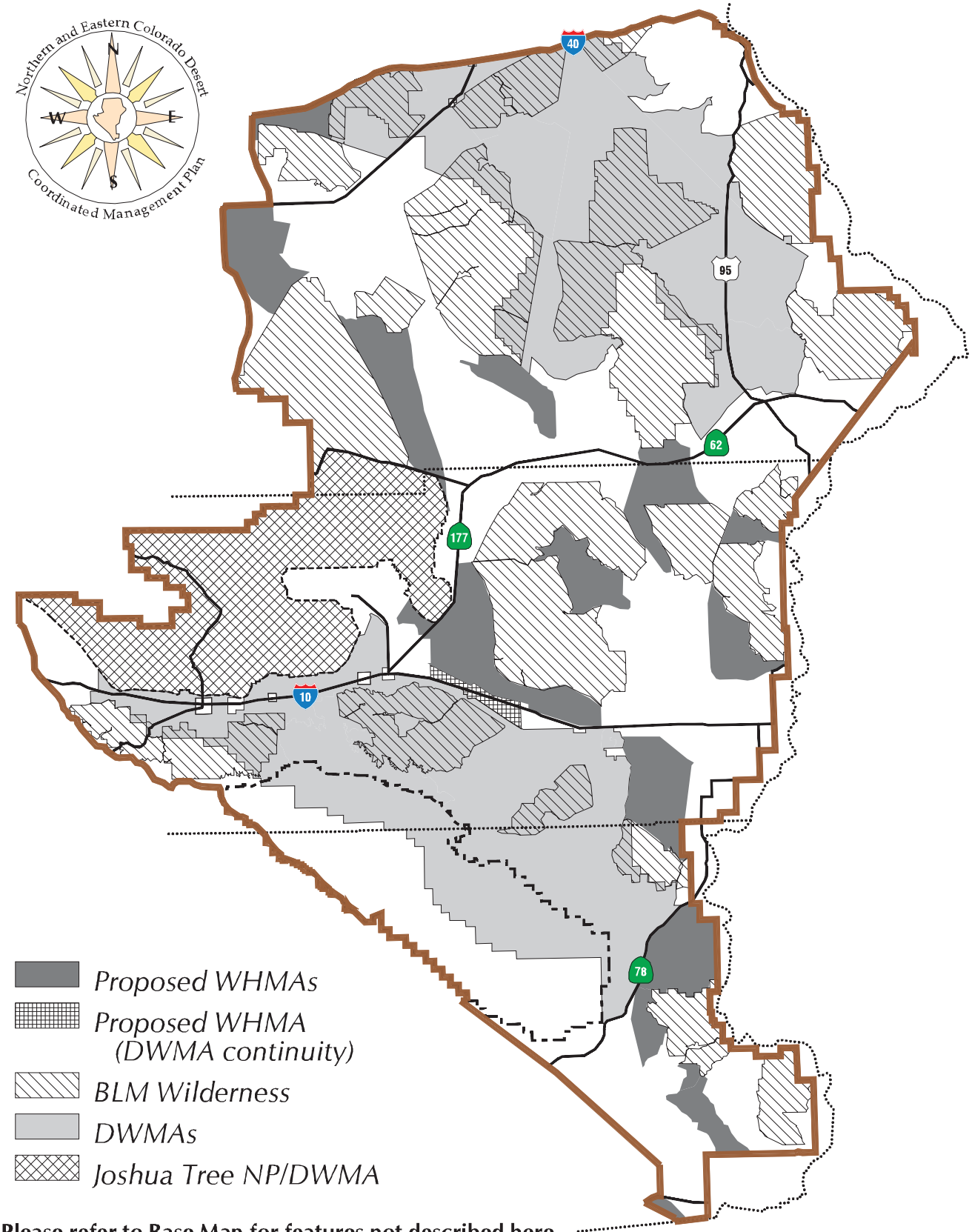
Please refer to Base Map for features not described here

May 31, 2002

Map 2-20

Scale 1 : 1,120,000

Proposed Plan
Multi-Species WHMAs



Please refer to Base Map for features not described here

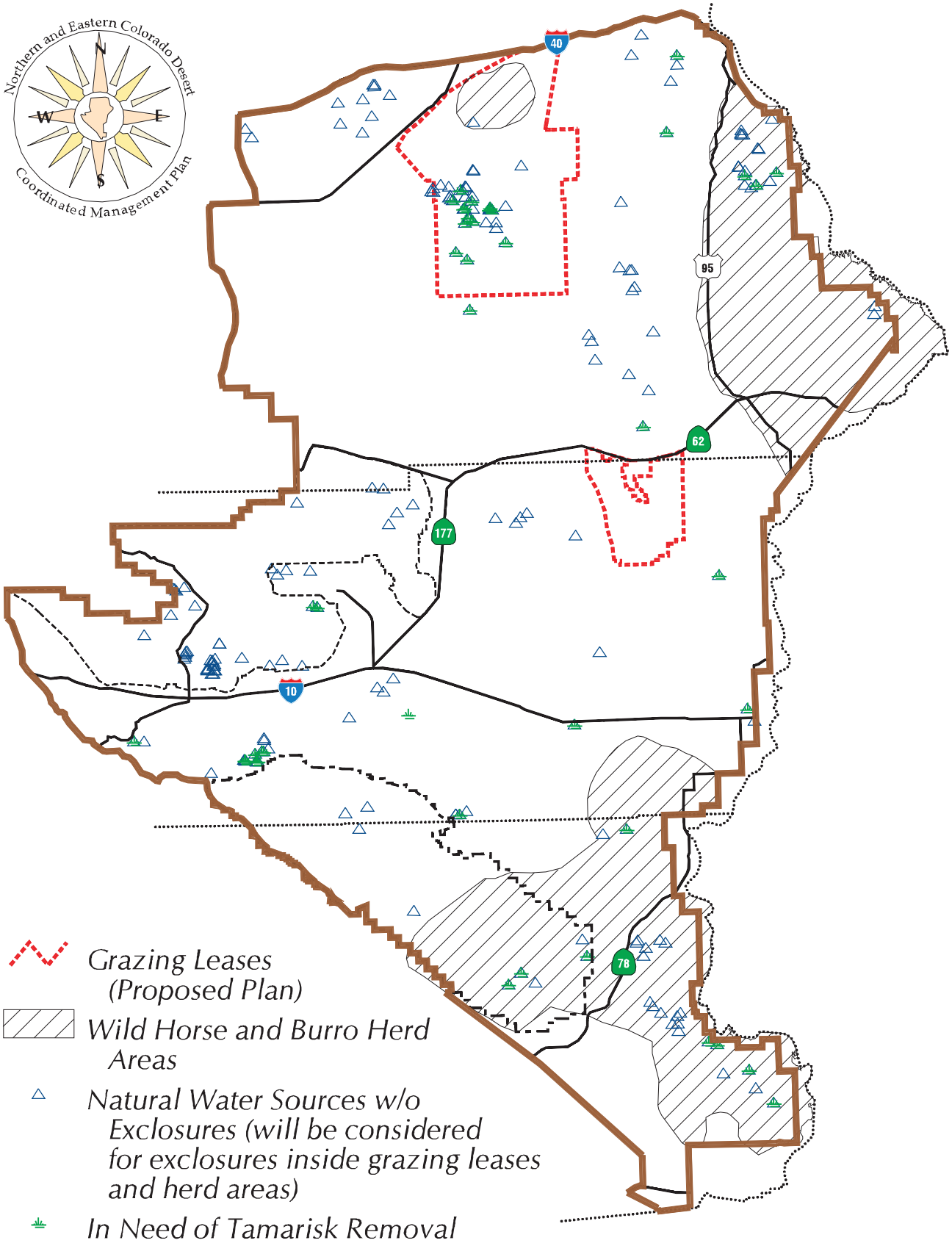
June 5, 2002

Map 2-21

Scale 1 : 1,120,000

Proposed Plan and Small DWMA A & B Alternatives

Springs and Seeps Improvements

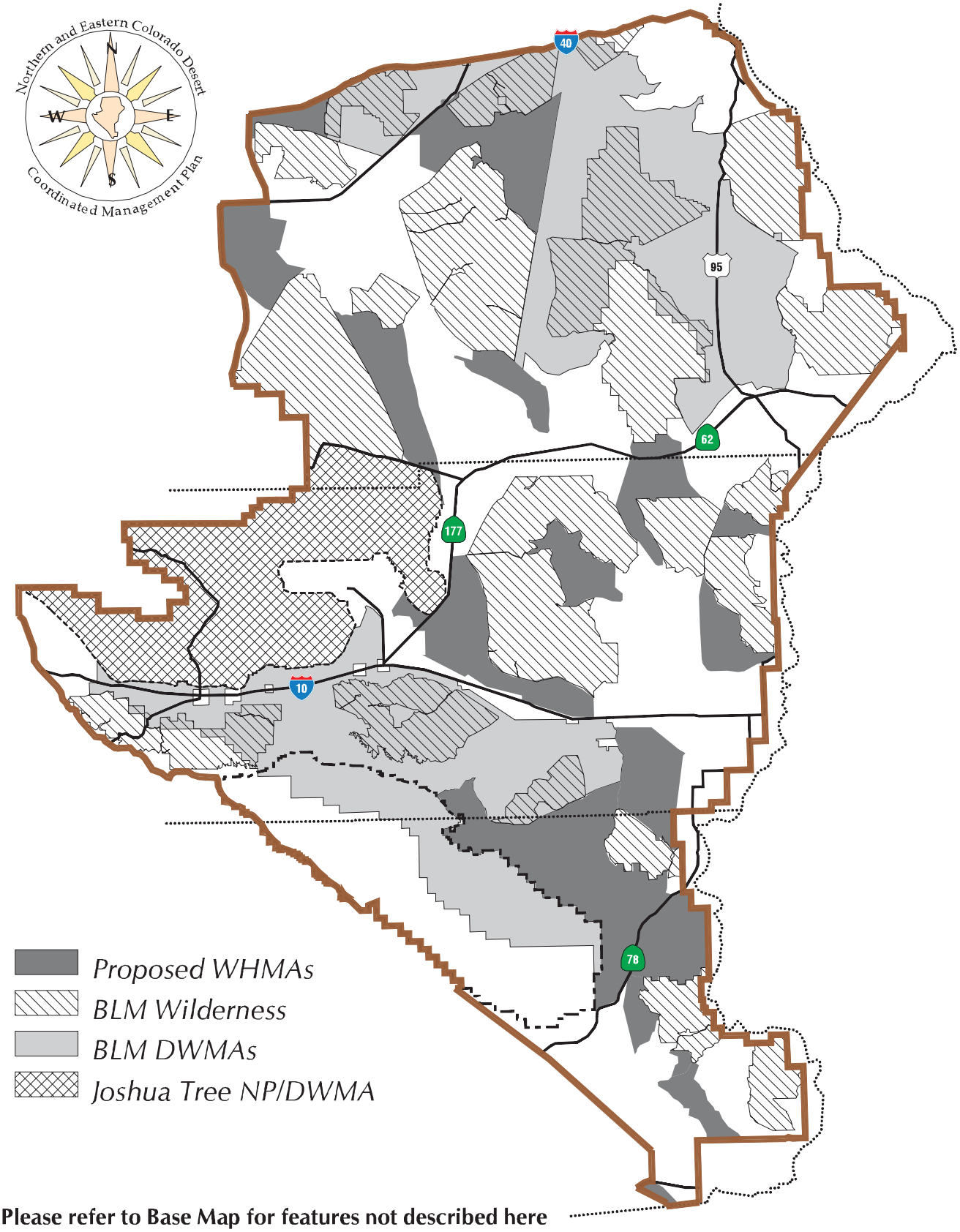


May 31, 2002

Map 2-22

Scale 1 : 1,120,000

Small DWMA A Alternative
Multi-Species WHMAs



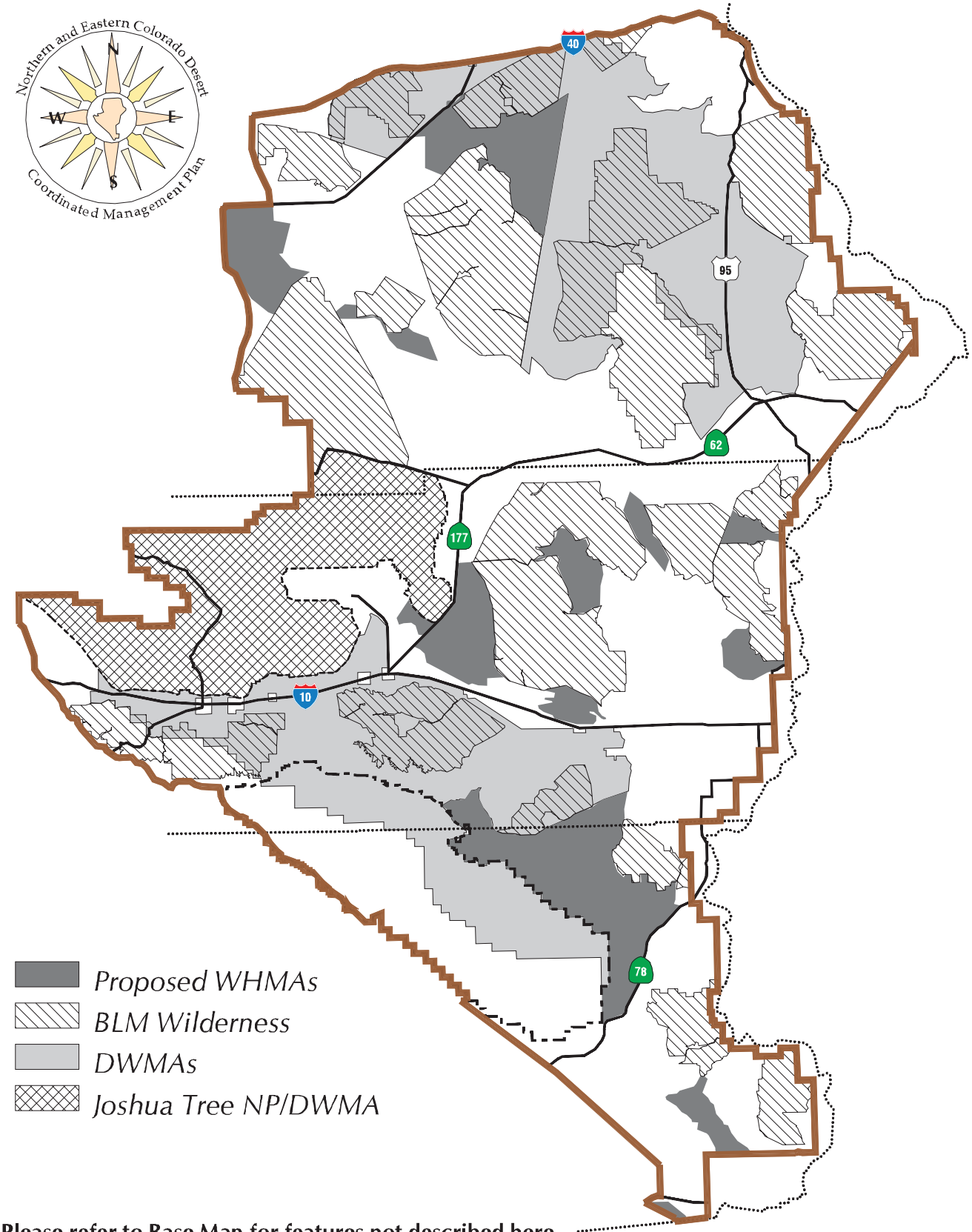
Please refer to Base Map for features not described here

May 31, 2002

Map 2-23

Scale 1 : 1,120,000

Small DWMA B Alternative
Multi-Species WHMAs



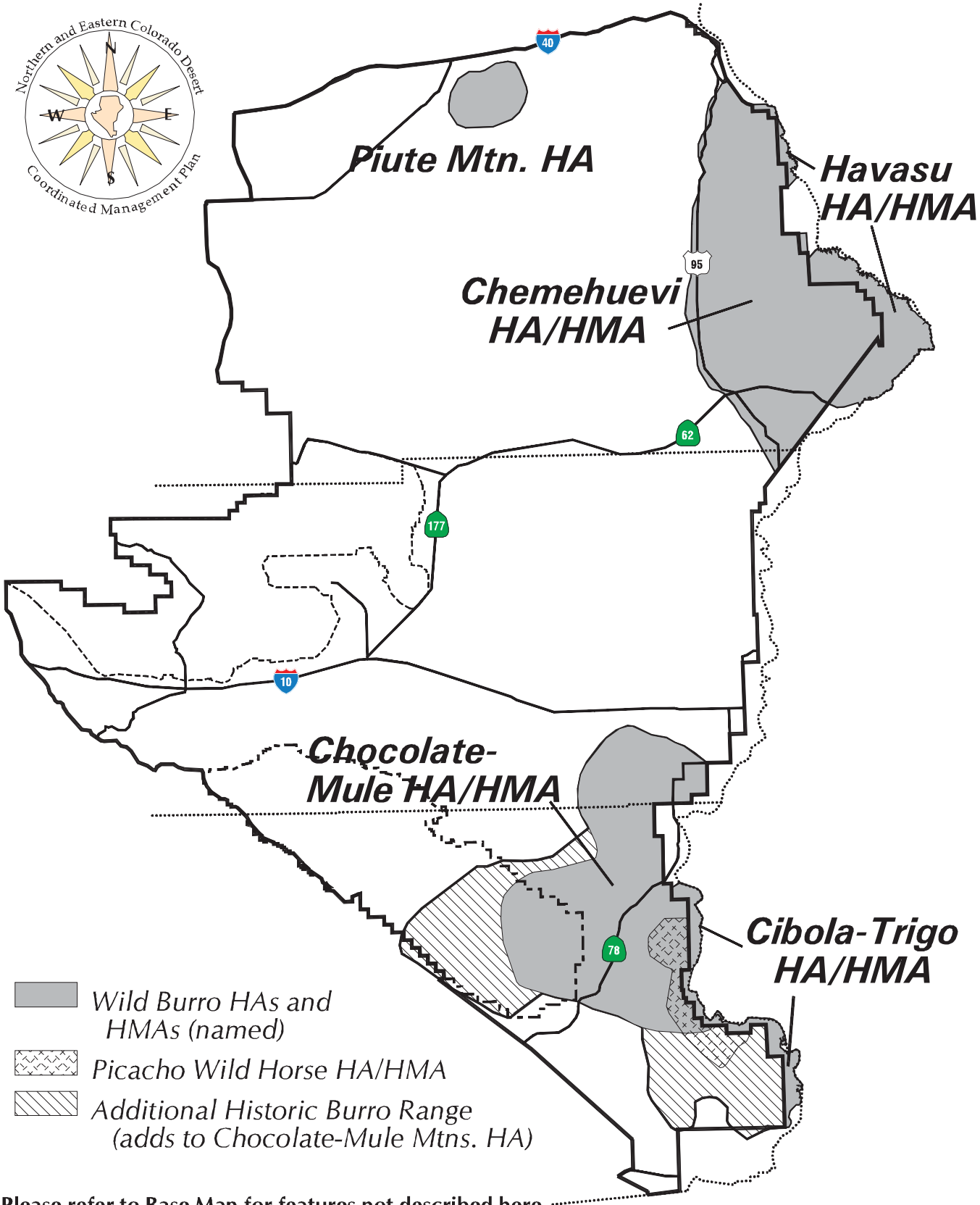
Please refer to Base Map for features not described here

June 5, 2002

Map 2-24

Scale 1 : 1,120,000

Current Wild Horses and Burros Management



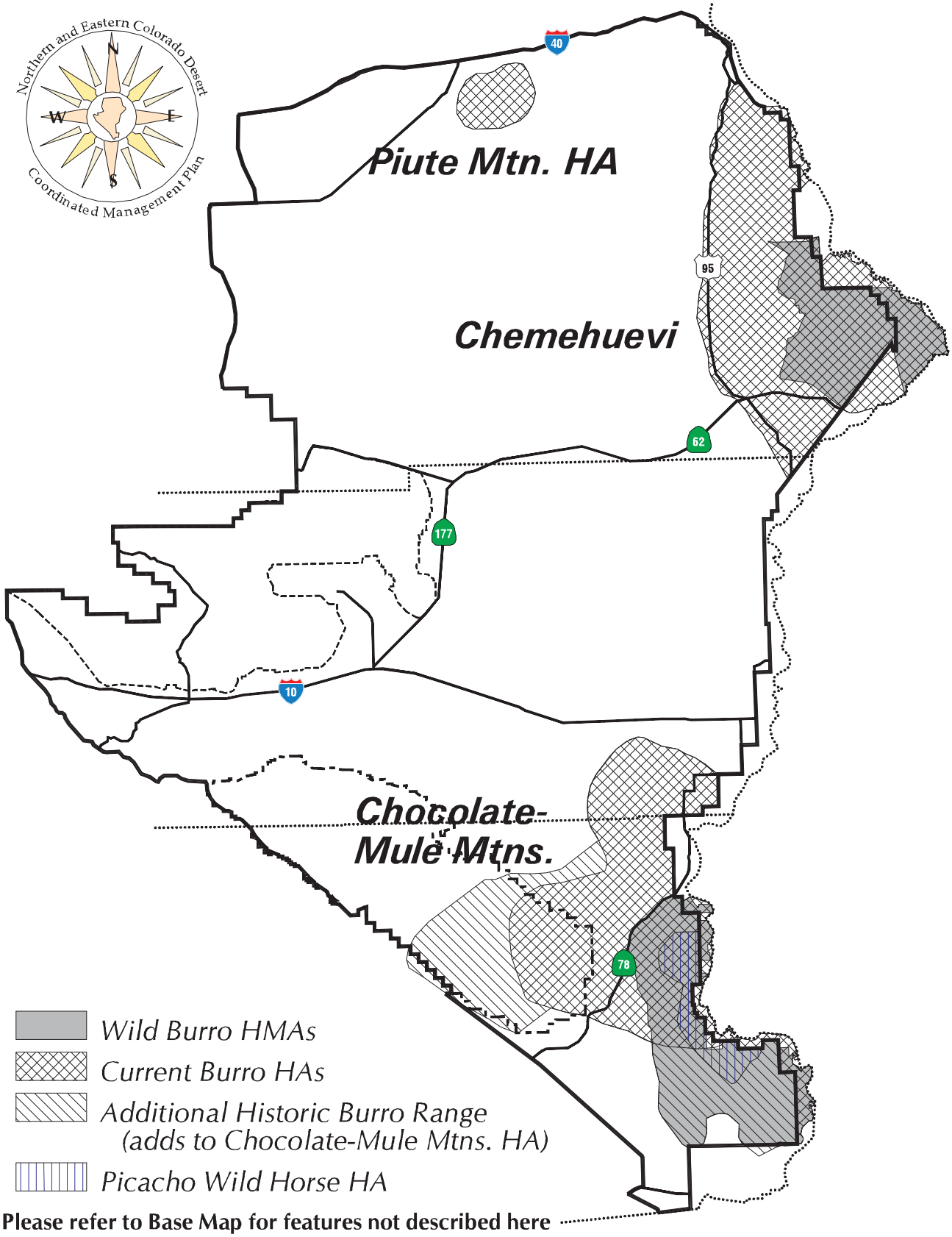
Please refer to Base Map for features not described here

May 31, 2002

Map 2-25

Scale 1 : 1,120,000

Proposed Plan
Wild Horses and Burros Management



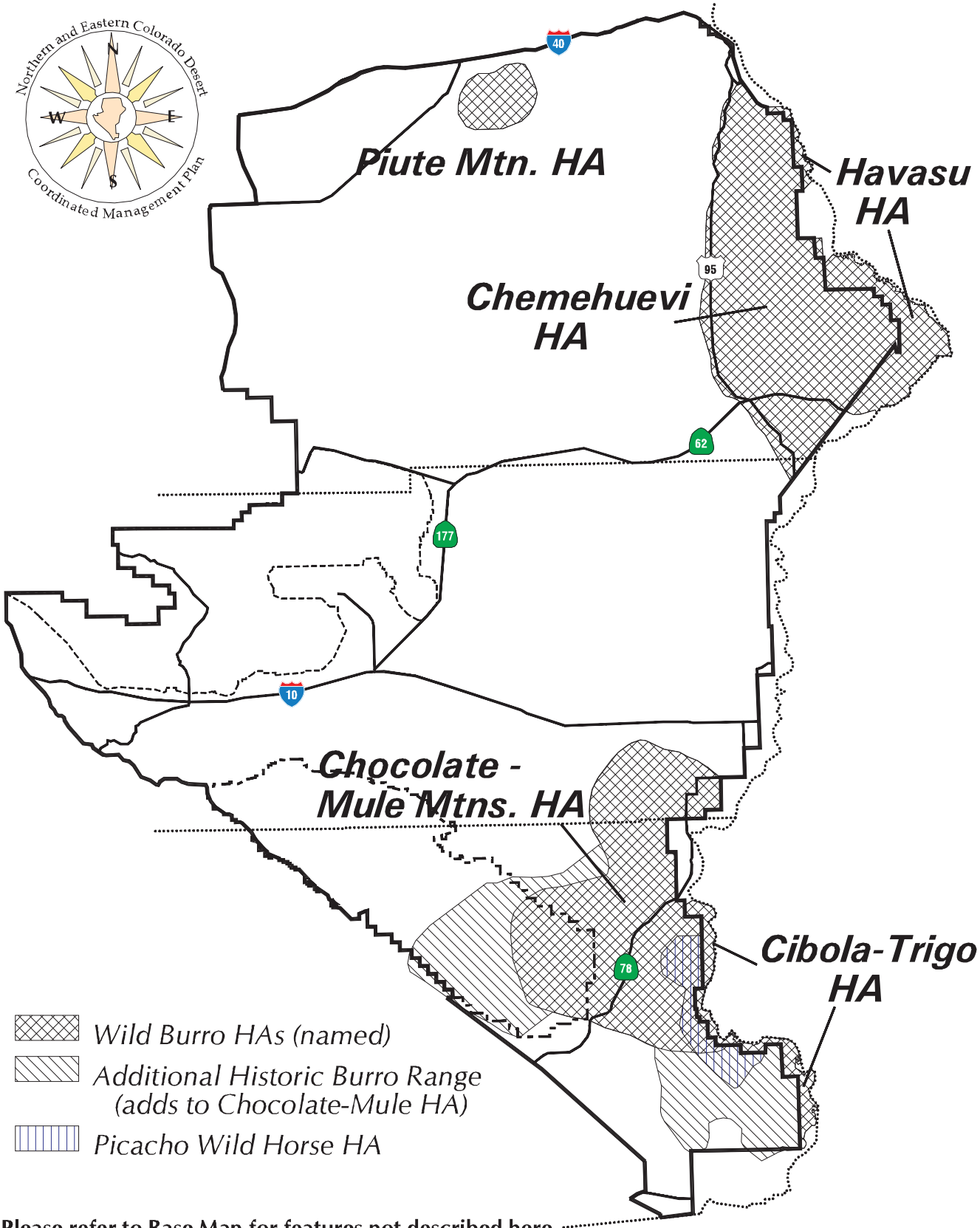
Please refer to Base Map for features not described here

May 31, 2002

Map 2-26

Scale 1 : 1,120,000

Small DWMA A Alternative
Wild Horses and Burros Management



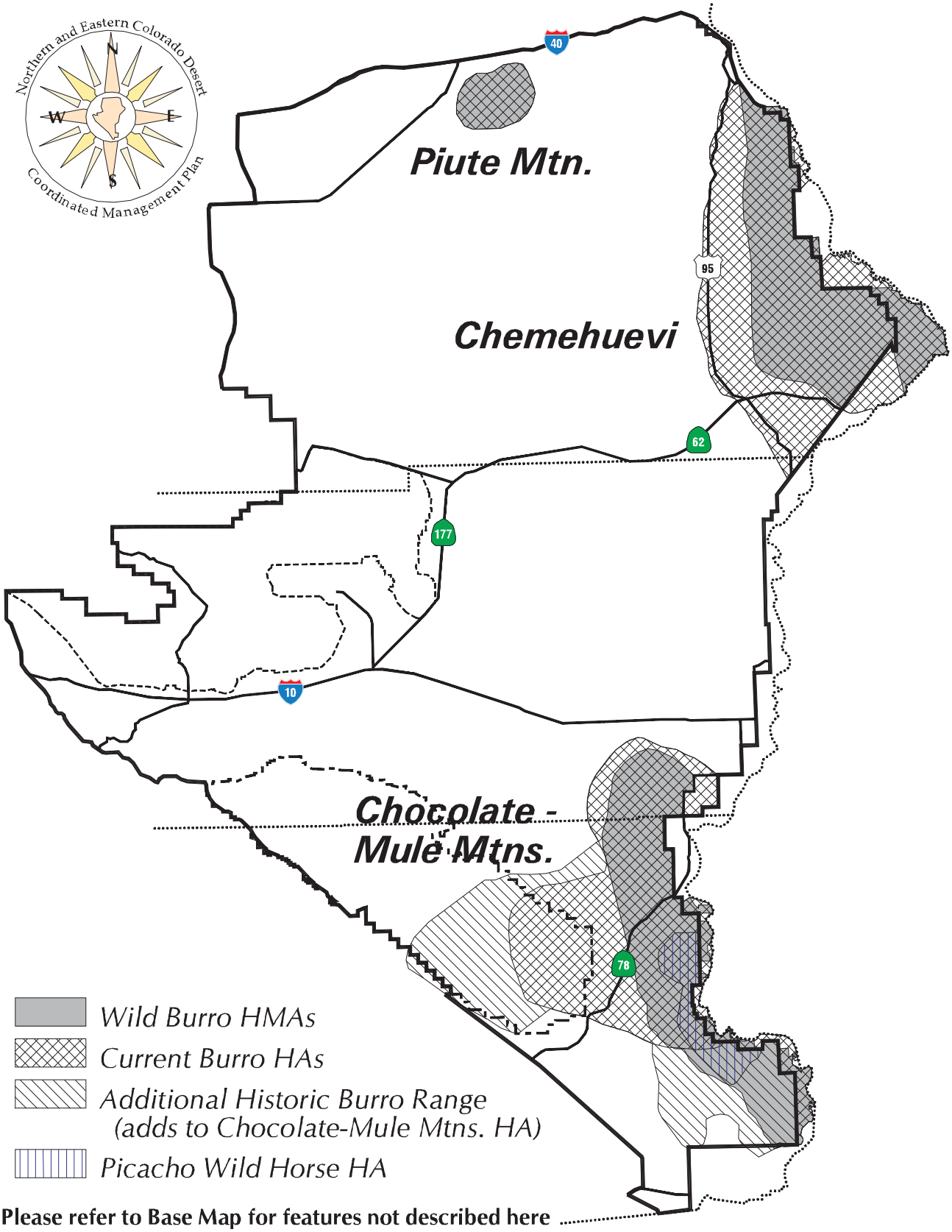
Please refer to Base Map for features not described here

May 31, 2002

Map 2-27

Scale 1 : 1,120,000

Small DWMA B Alternative
Wild Horses and Burros Management



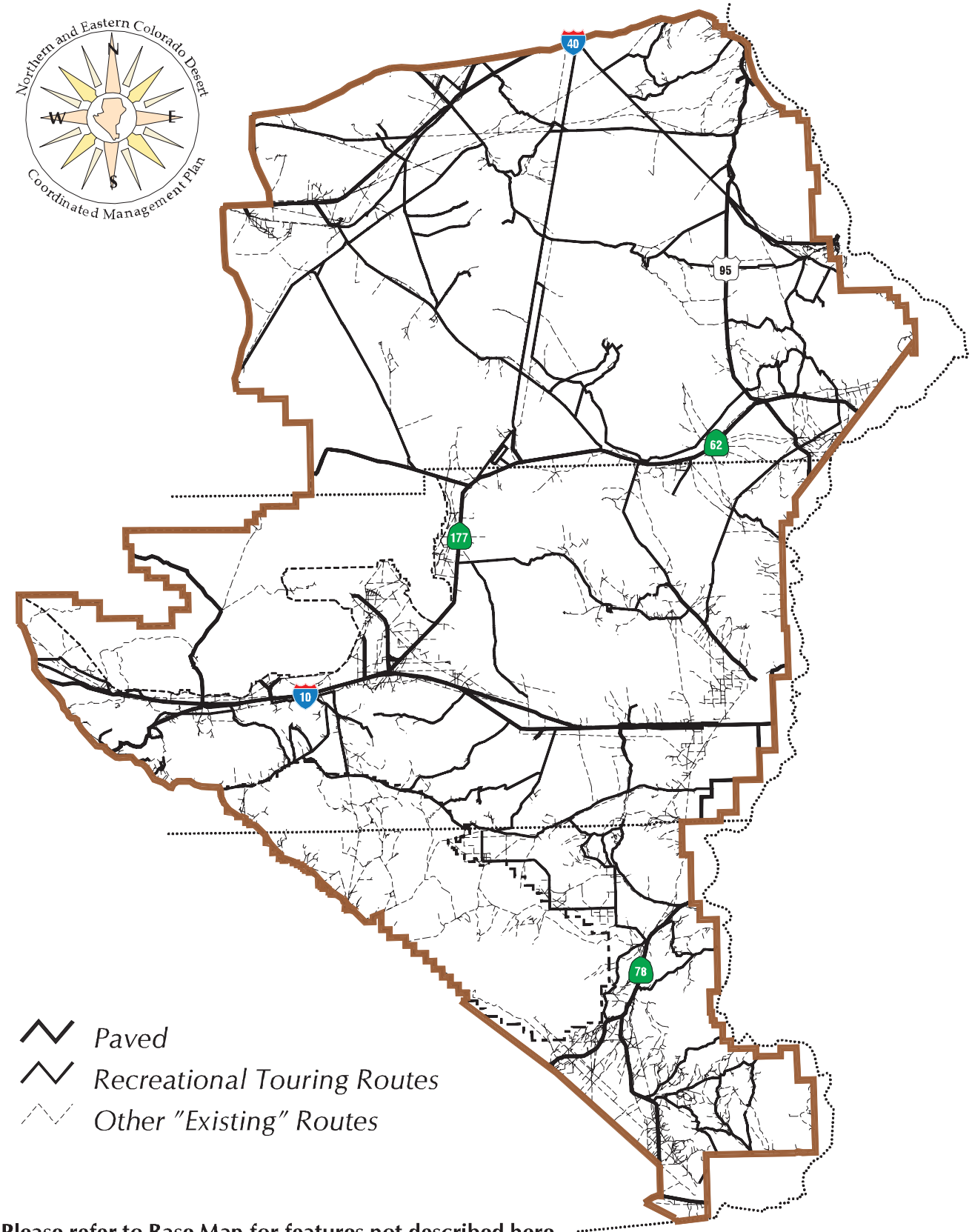
Please refer to Base Map for features not described here

May 31, 2002

Map 2-28

Scale 1 : 1,120,000

Current Routes of Travel Network



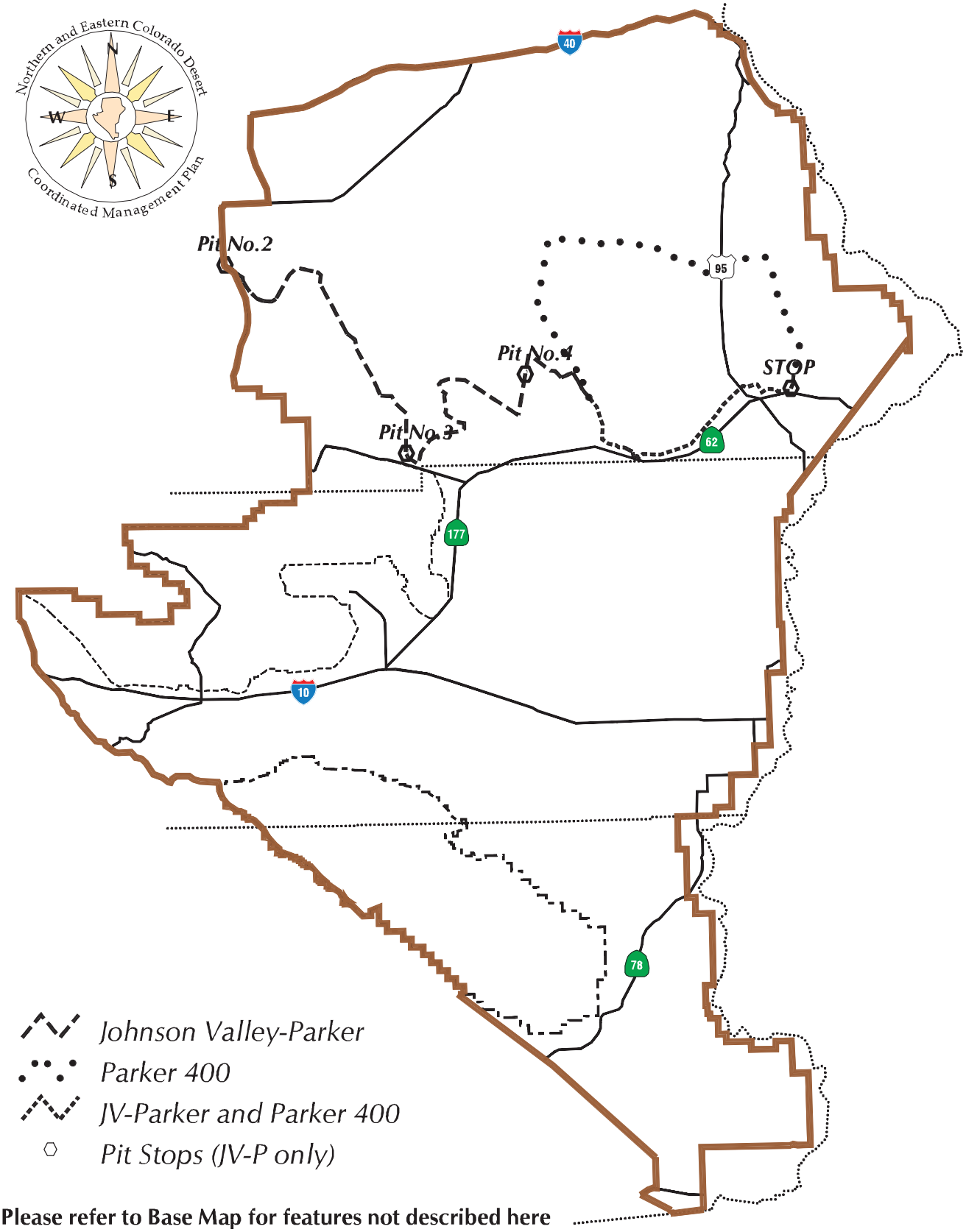
Please refer to Base Map for features not described here

May 31, 2002

Map 2-29

Scale 1 : 1,120,000

Current Competitive Recreation Routes



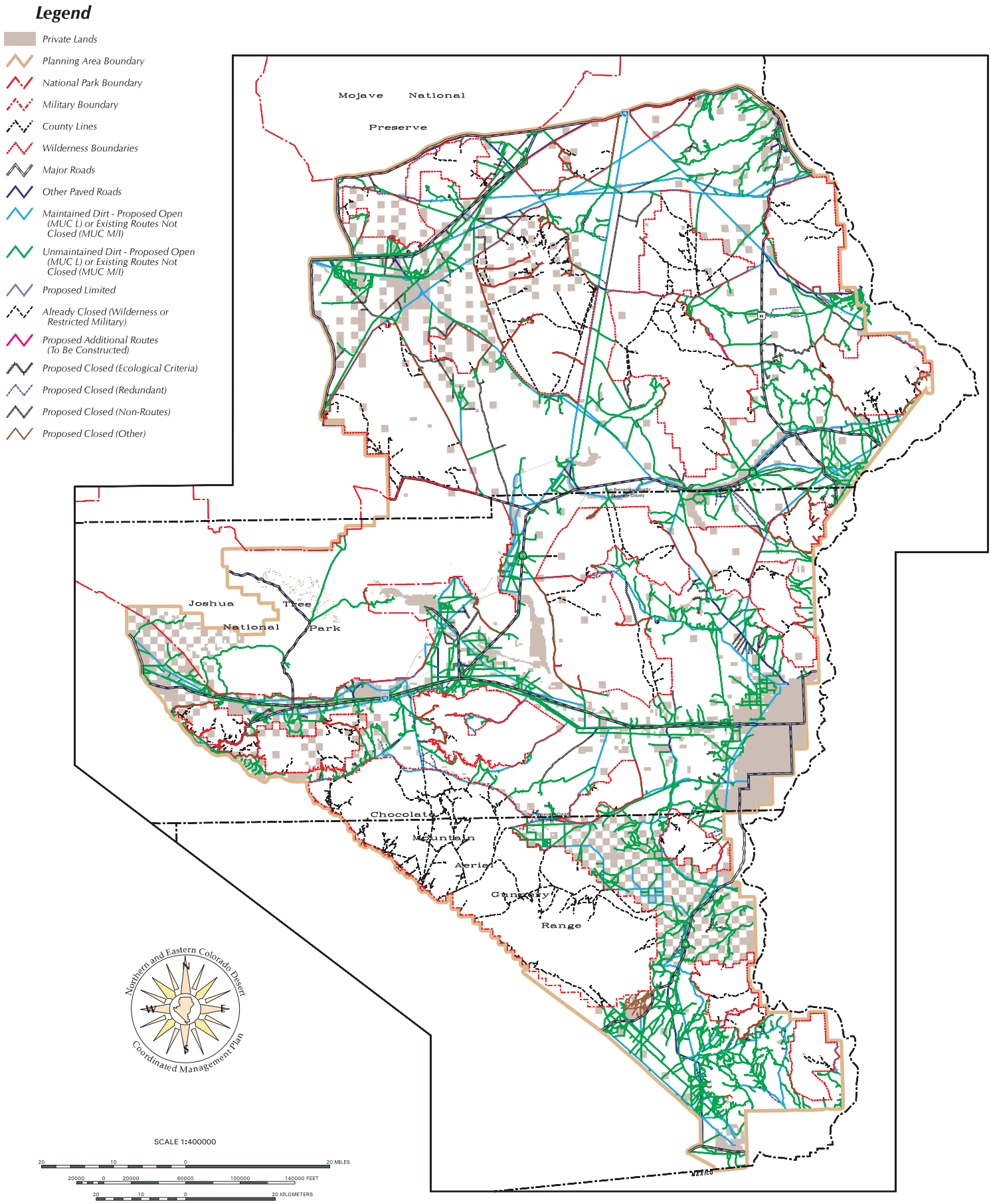
Please refer to Base Map for features not described here

May 31, 2002

Map 2-30

Scale 1 : 1,120,000

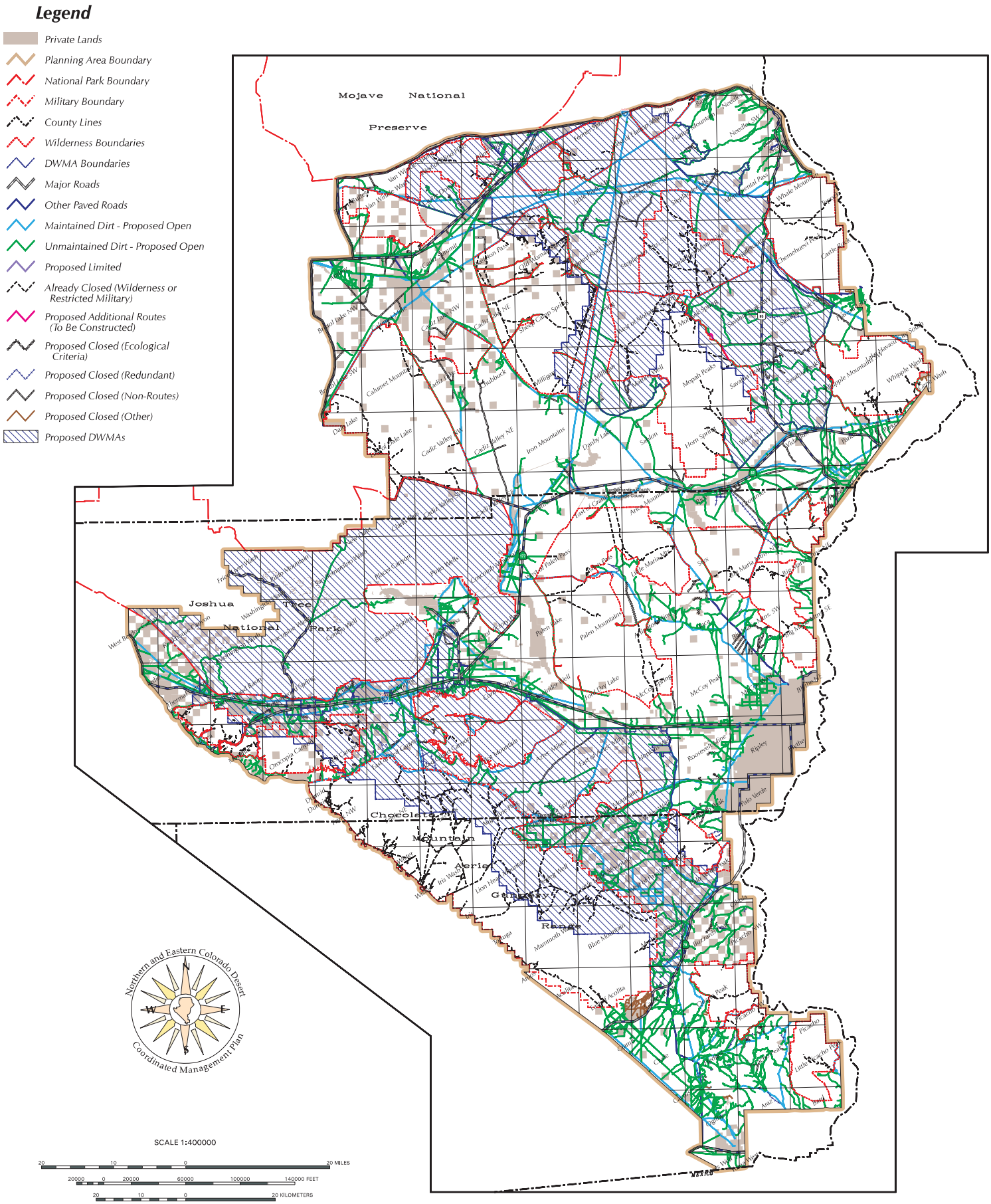
No Action Alternative
Route Designations



Map 2-31

Plotted by N. Pratini June 06, 2002

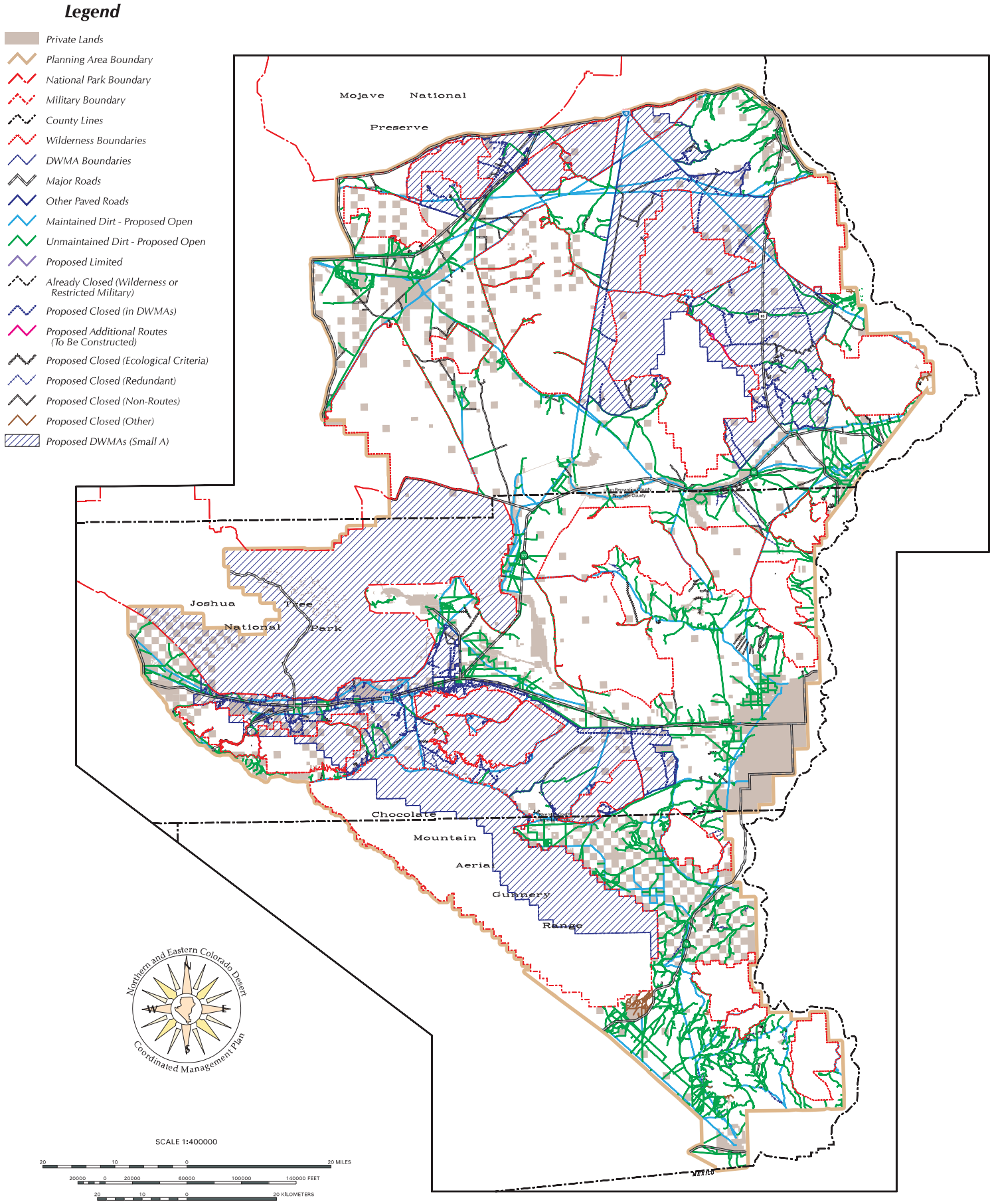
Proposed Plan
Route Designations (with 7.5min Quad Sheet Index)



Map 2-32

Plotted by N. Pratini June 06, 2002

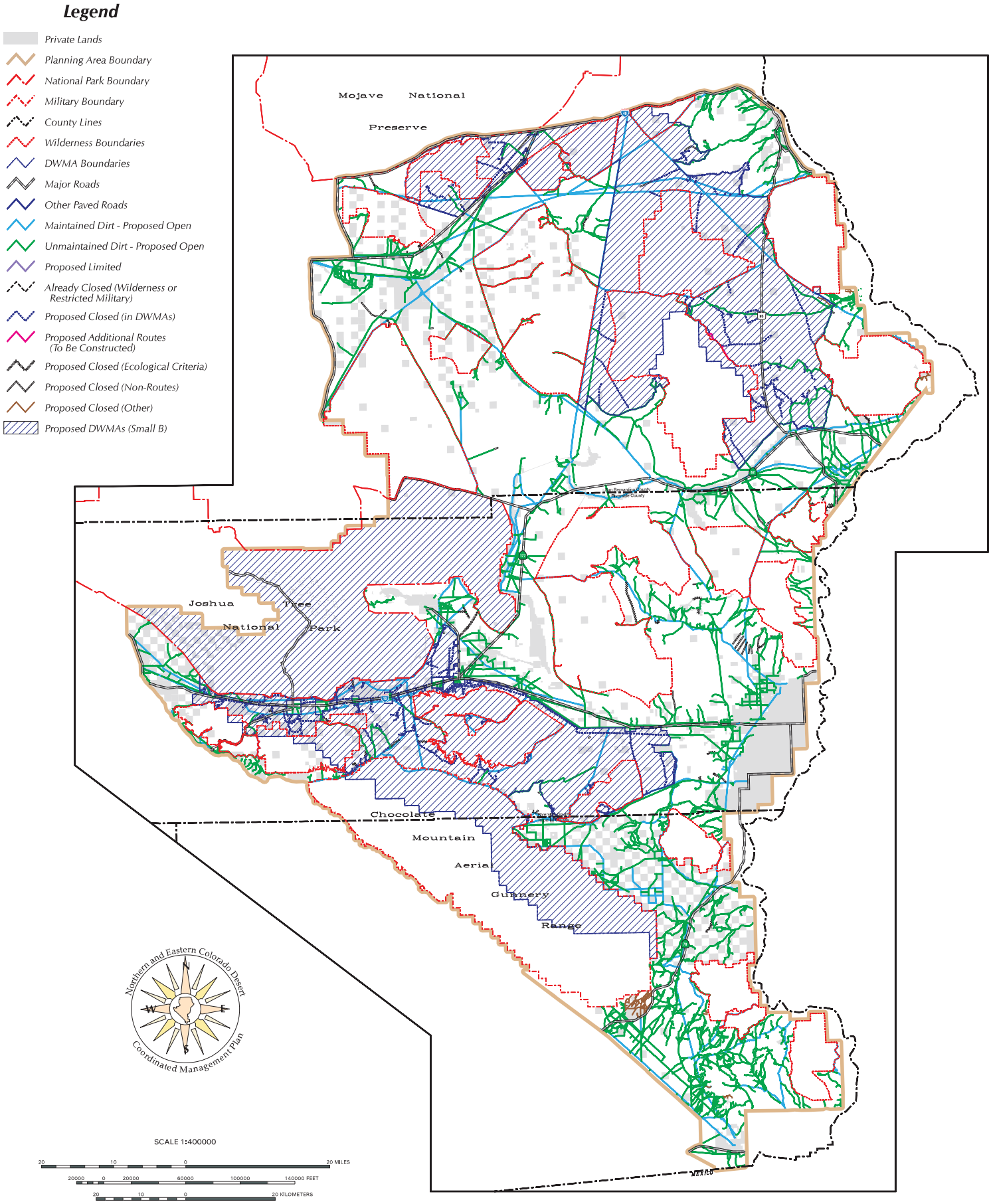
Small DWMA A Alternative
Route Designations



Map 2-33

Plotted by N. Pratini June 06, 2002

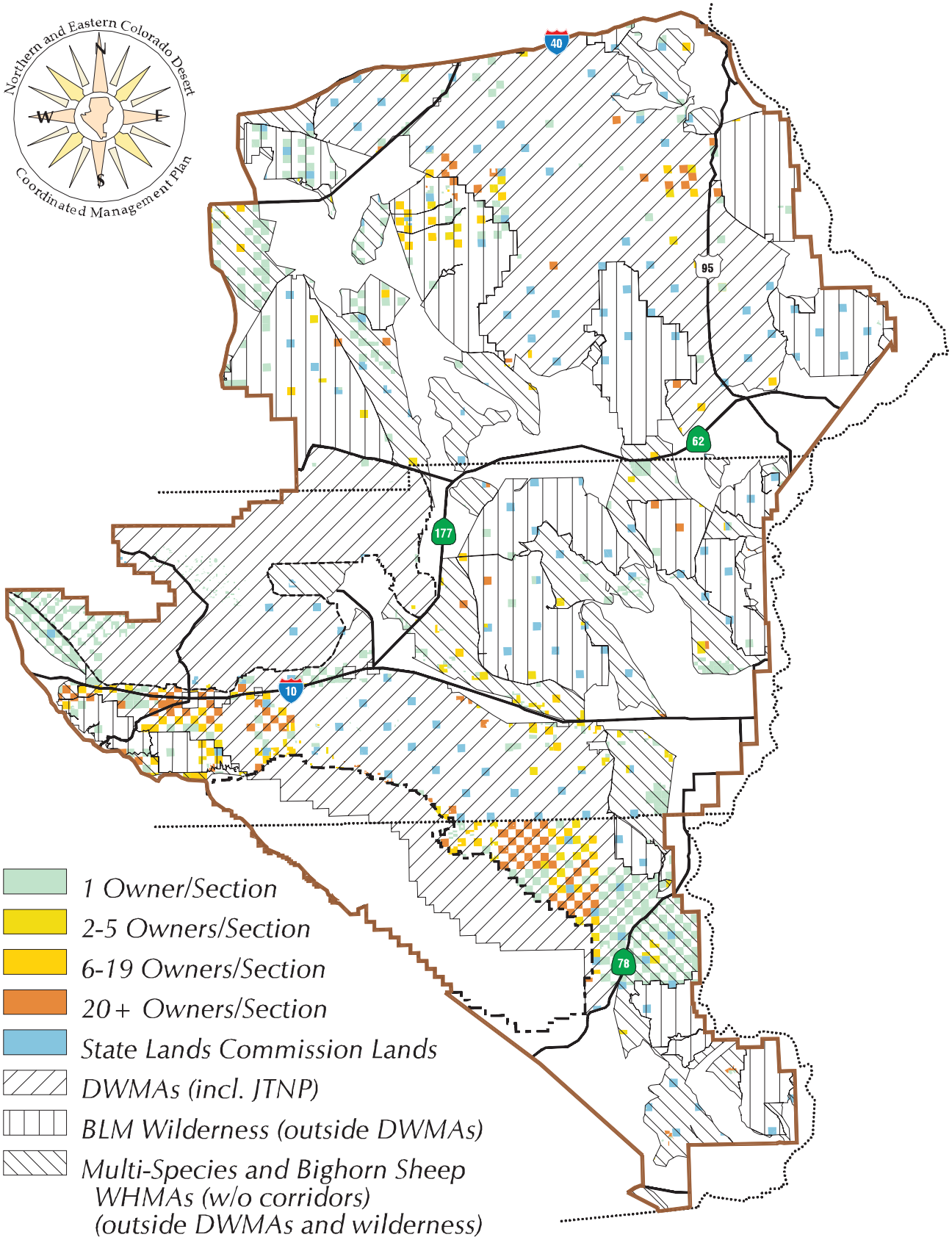
Small DWMA B Alternative
Route Designations



Map 2-34

Plotted by N. Pratini June 06, 2002

Proposed Plan
Acquire Habitat

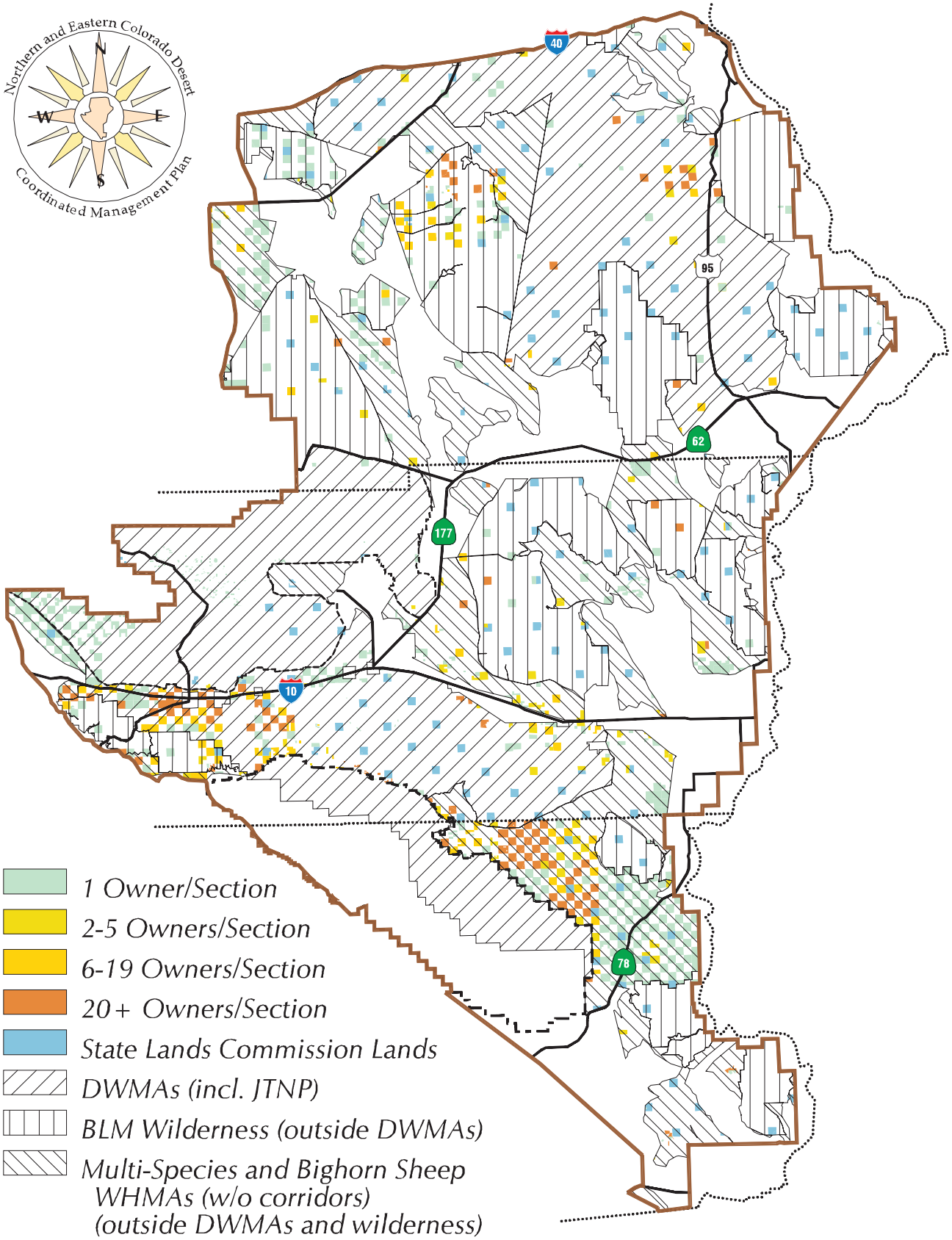


June 3, 2002

Map 2-35

Scale 1 : 1,120,000

Small DWMA A Alternative
Acquire Habitat

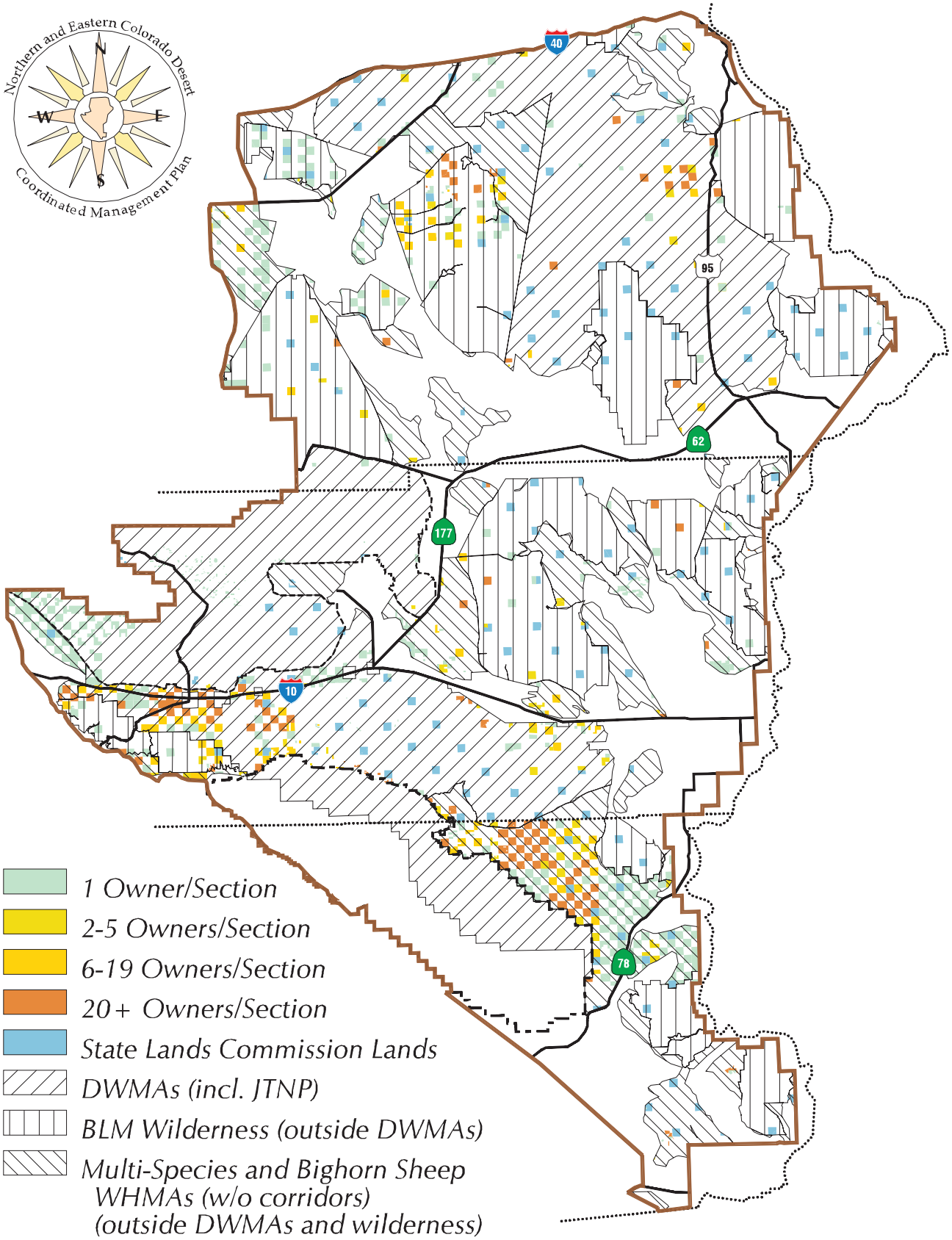


June 3, 2002

Map 2-36

Scale 1 : 1,120,000

Small DWMA B Alternative
Acquire Habitat

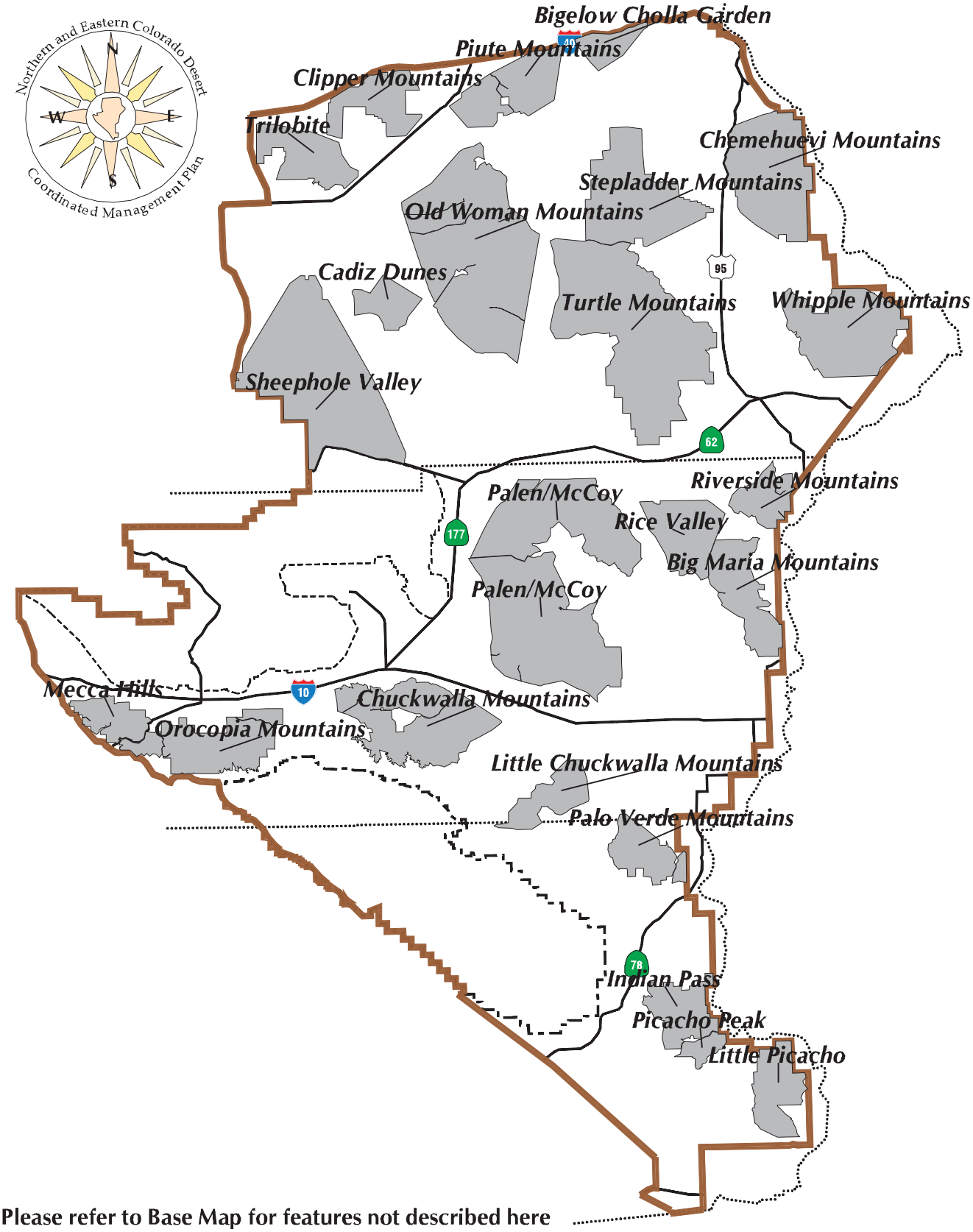


June 5, 2002

Map 2-37

Scale 1 : 1,120,000

BLM Wilderness Areas



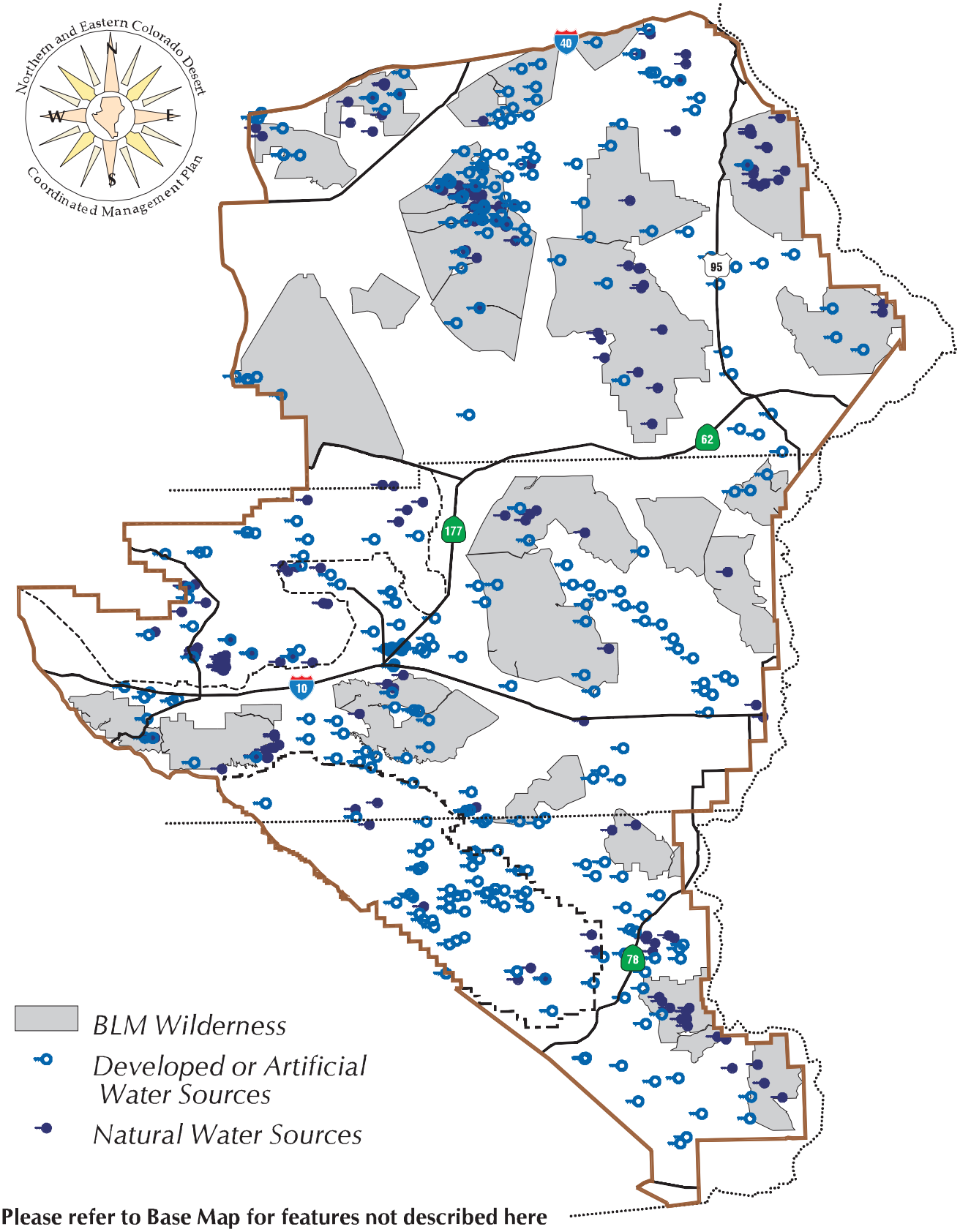
Please refer to Base Map for features not described here

June 5, 2002

Map 2-38

Scale 1 : 1,120,000

Existing Water Sources



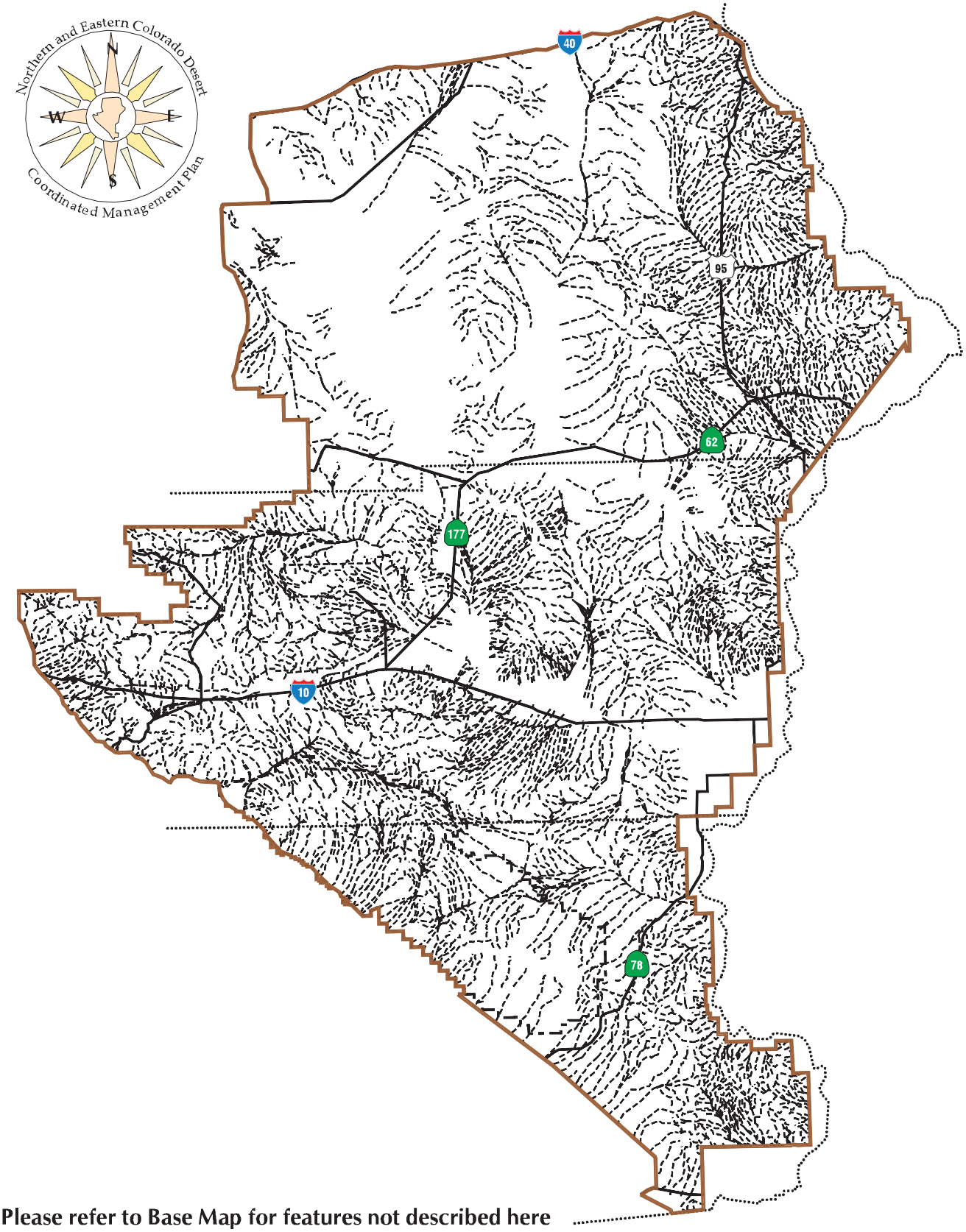
Please refer to Base Map for features not described here

June 3, 2002

Map 3-1

Scale 1 : 1,120,000

Drainages



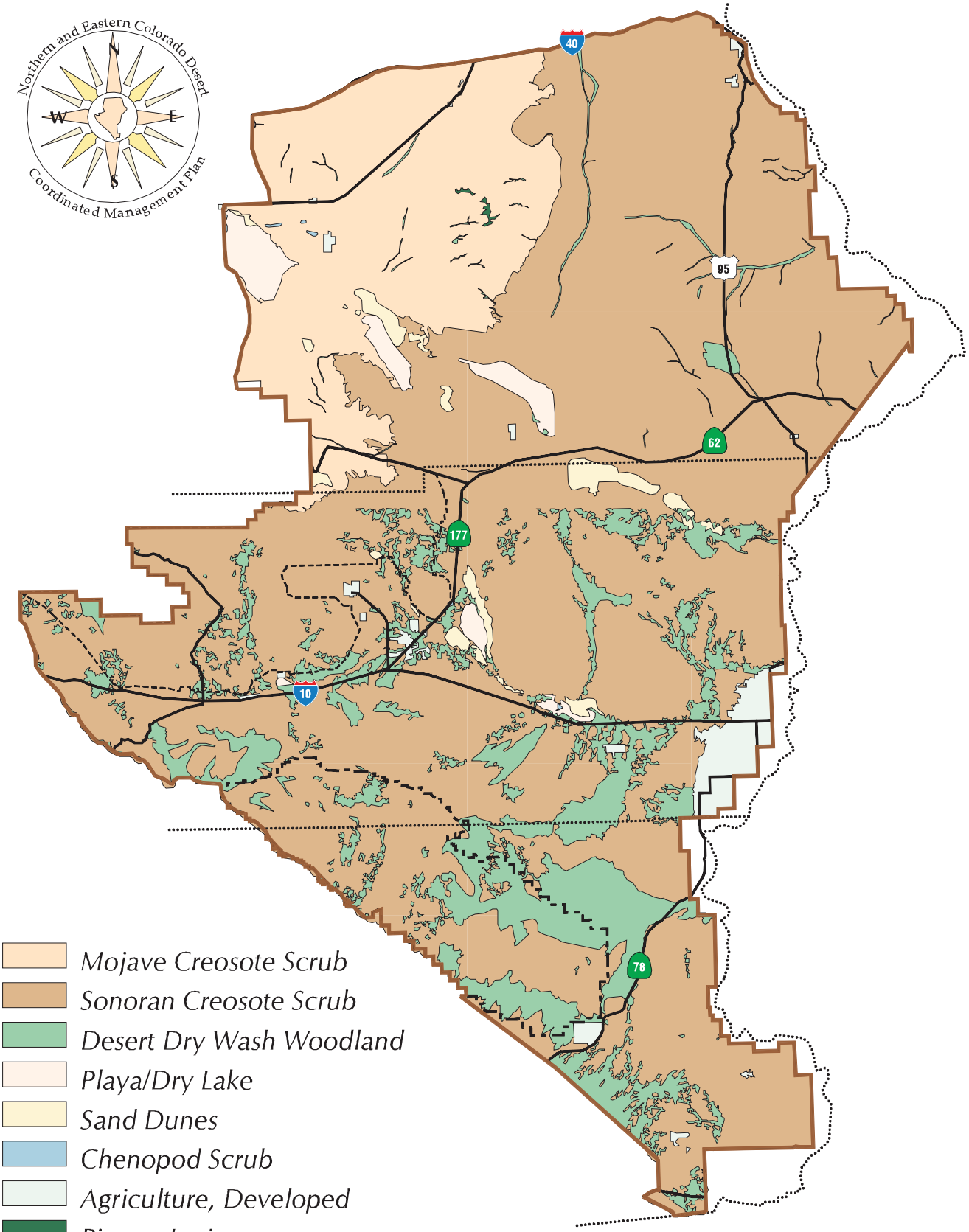
Please refer to Base Map for features not described here

June 3, 2002

Map 3-2

Scale 1 : 1,120,000

Plant Communities

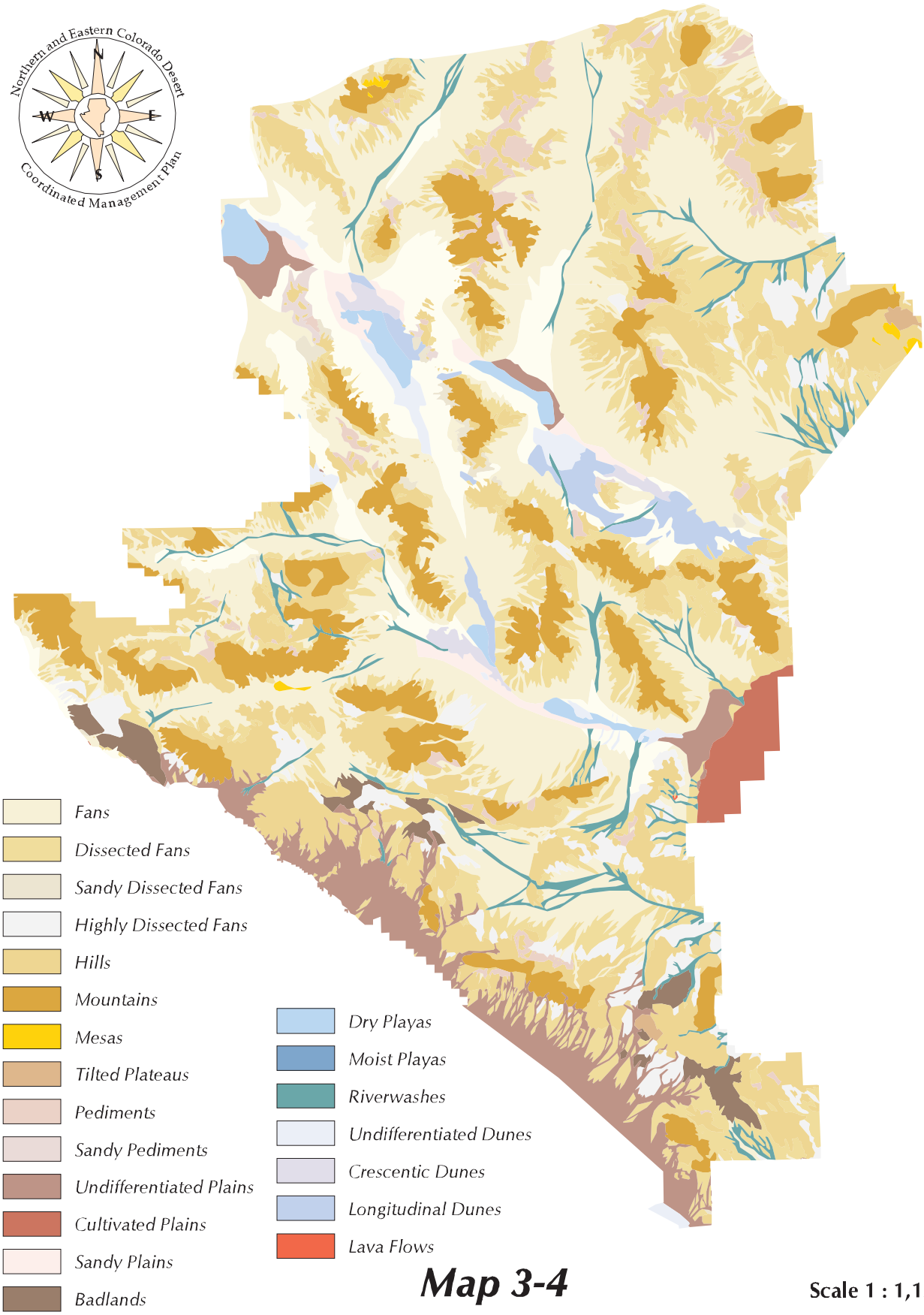


June 3, 2002

Map 3-3

Scale 1 : 1,120,000

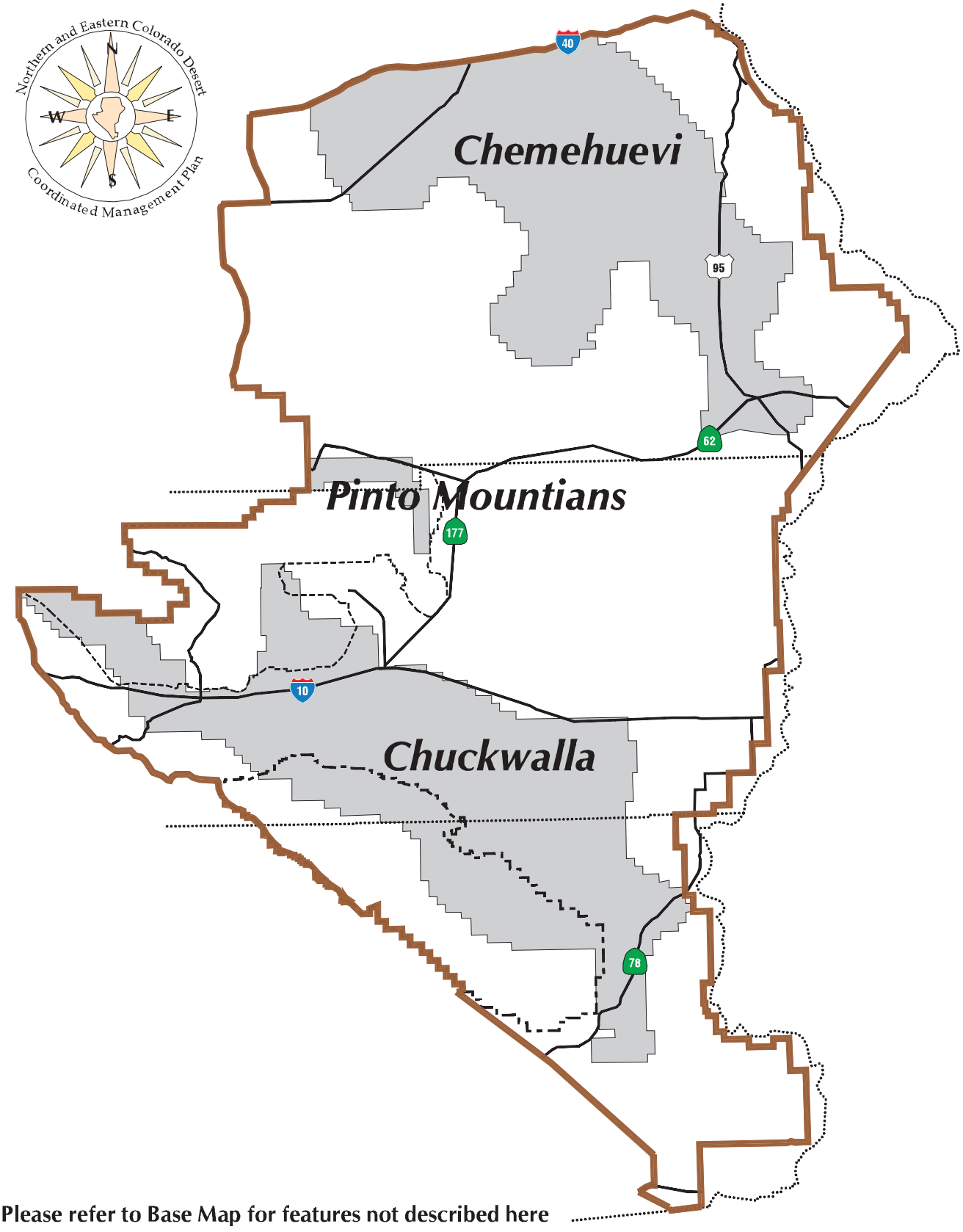
Landforms



Map 3-4

Scale 1 : 1,120,000

Desert Tortoise Critical Habitat



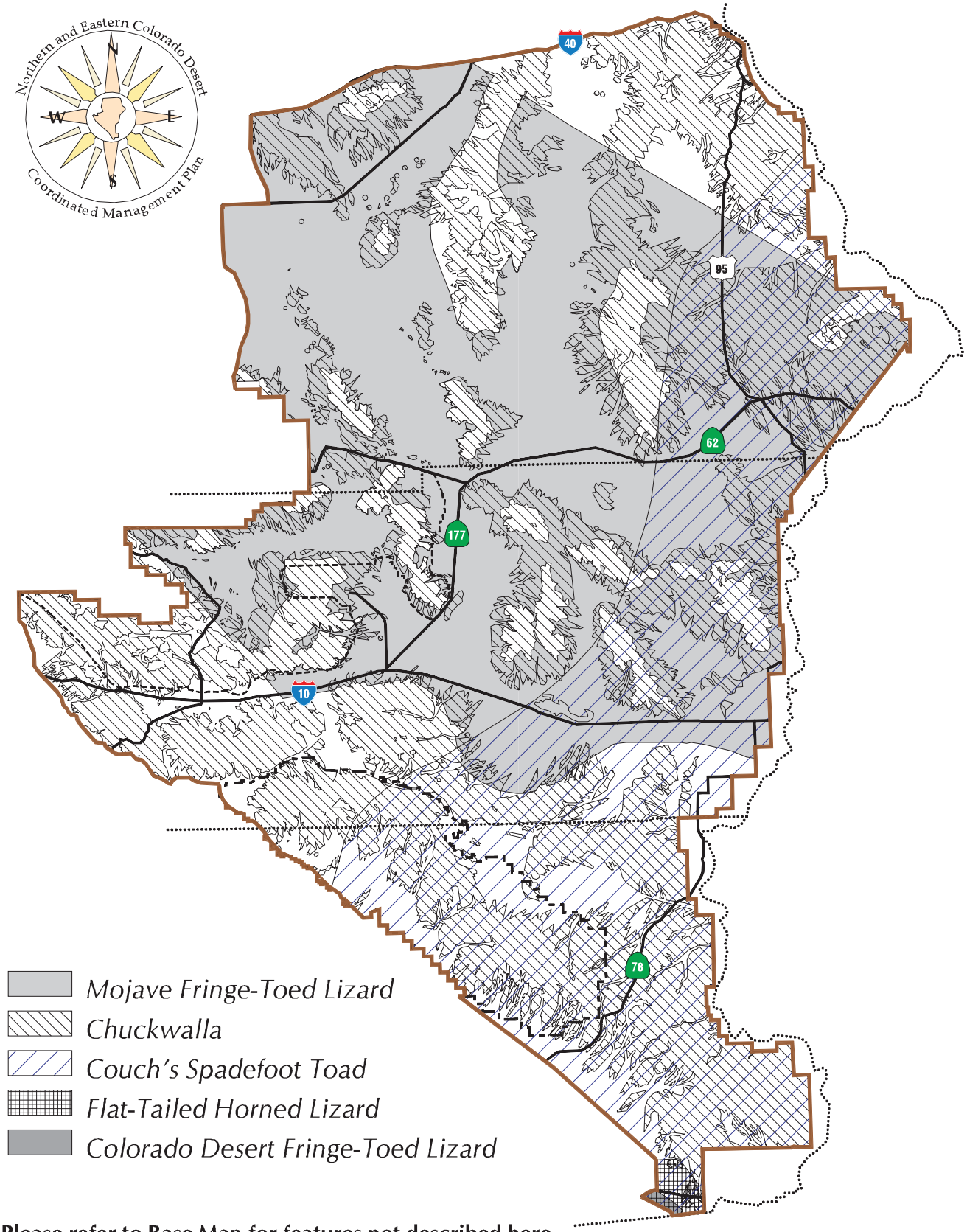
Please refer to Base Map for features not described here

June 3, 2002

Map 3-5

Scale 1 : 1,120,000

Special Status Species - Animals



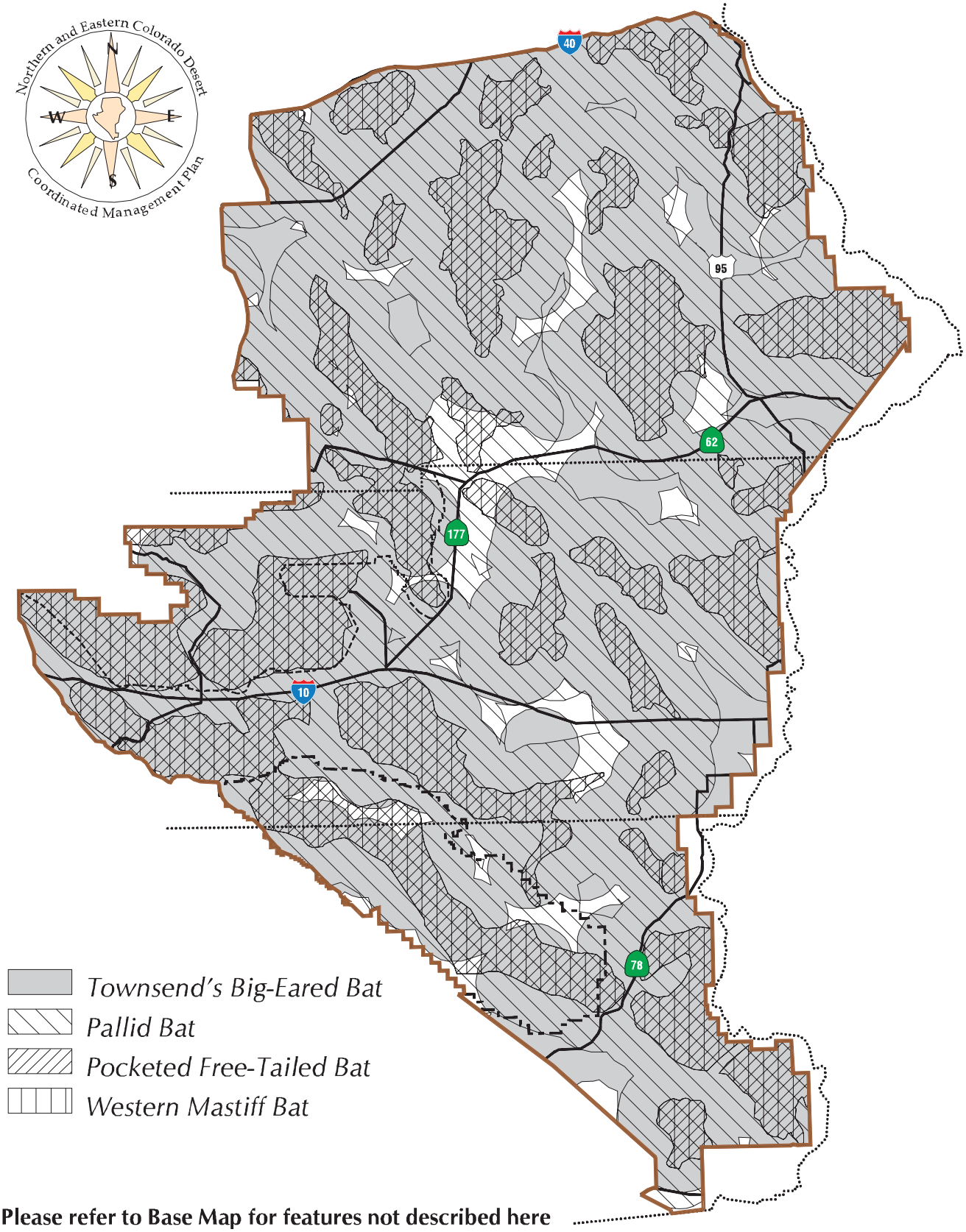
Please refer to Base Map for features not described here

June 3, 2002

Map 3-6a

Scale 1 : 1,120,000

Special Status Species - Animals



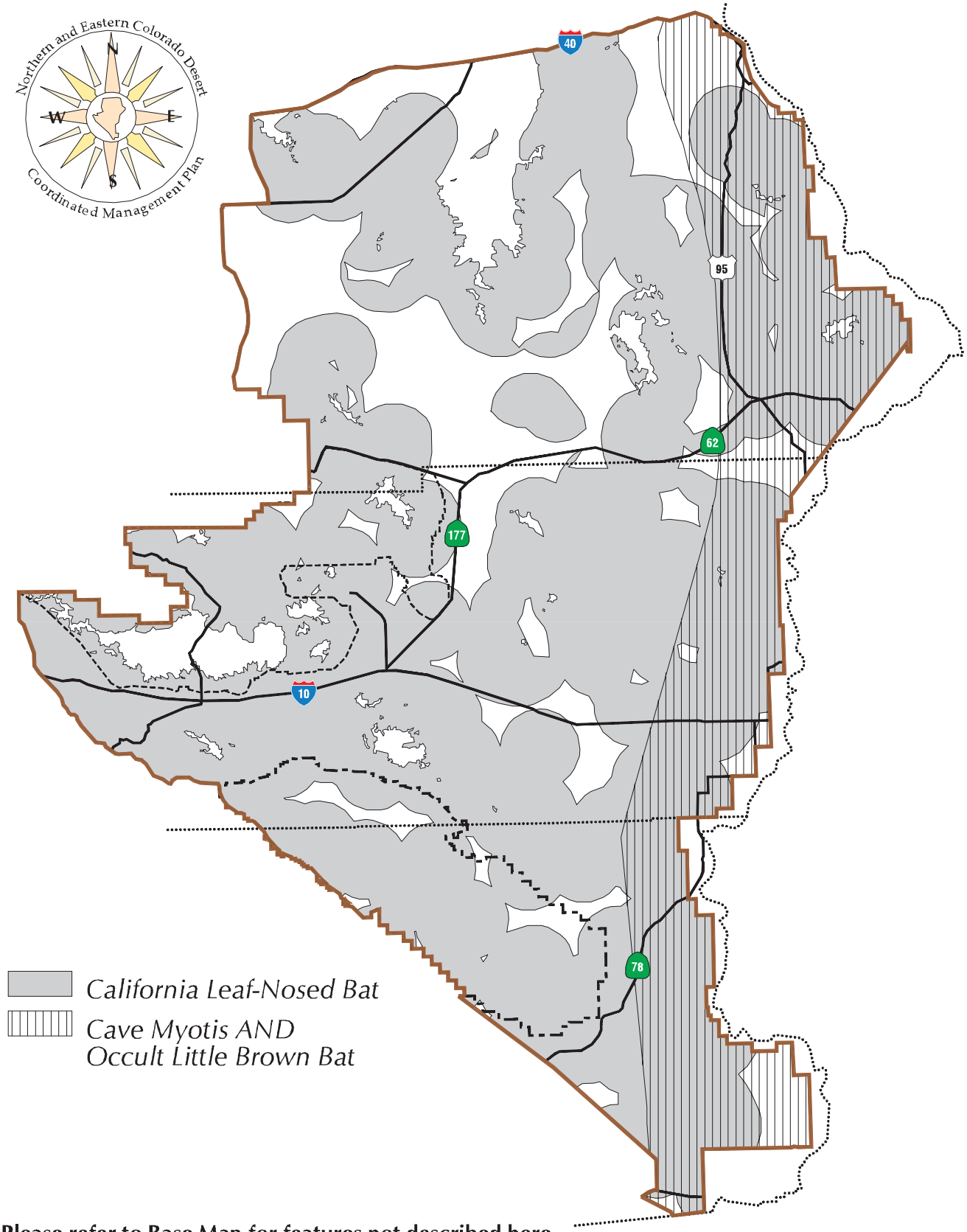
Please refer to Base Map for features not described here

June 3, 2002

Map 3-6b

Scale 1 : 1,120,000

Special Status Species - Animals



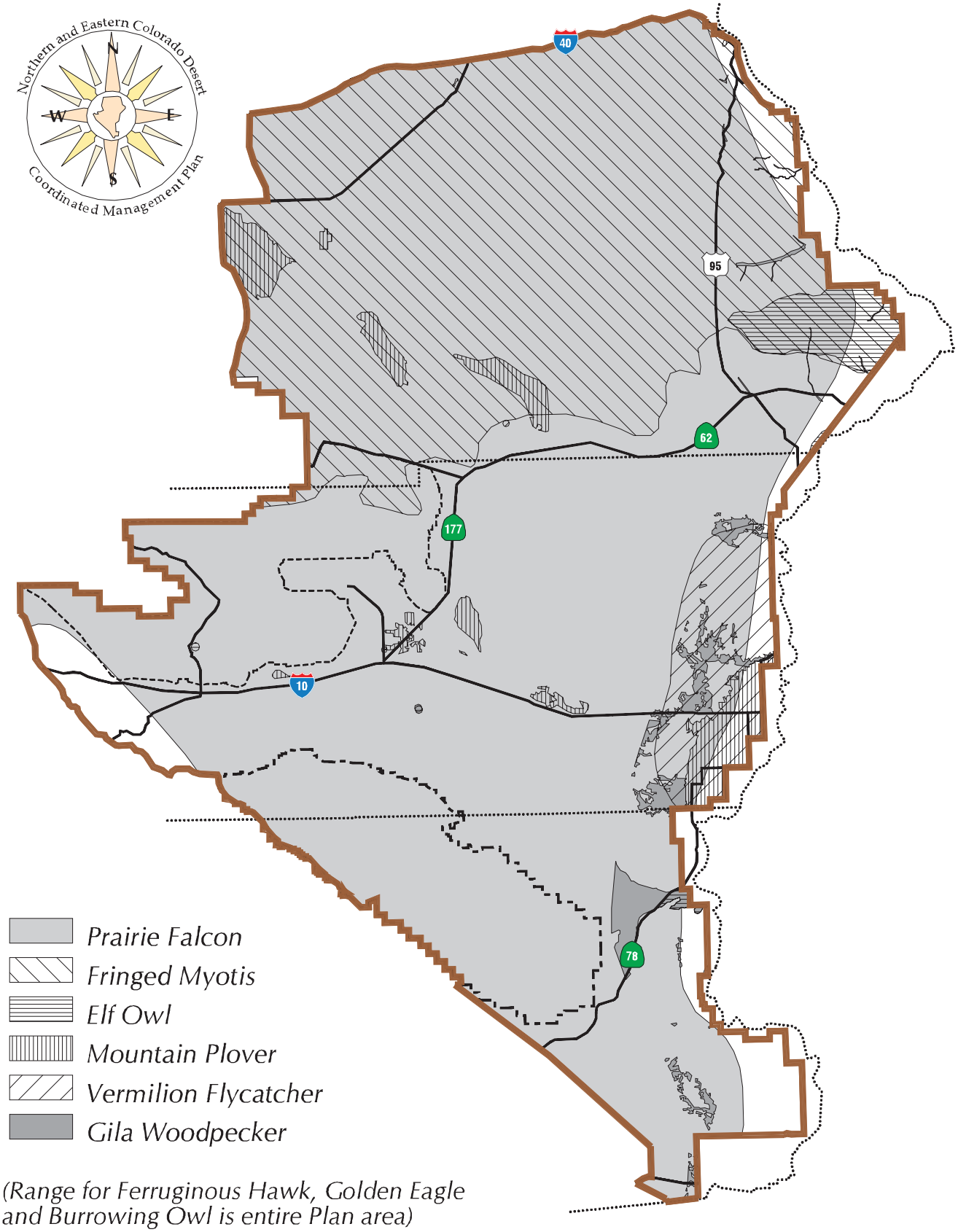
Please refer to Base Map for features not described here

June 5, 2002

Map 3-6c

Scale 1 : 1,120,000

Special Status Species - Animals



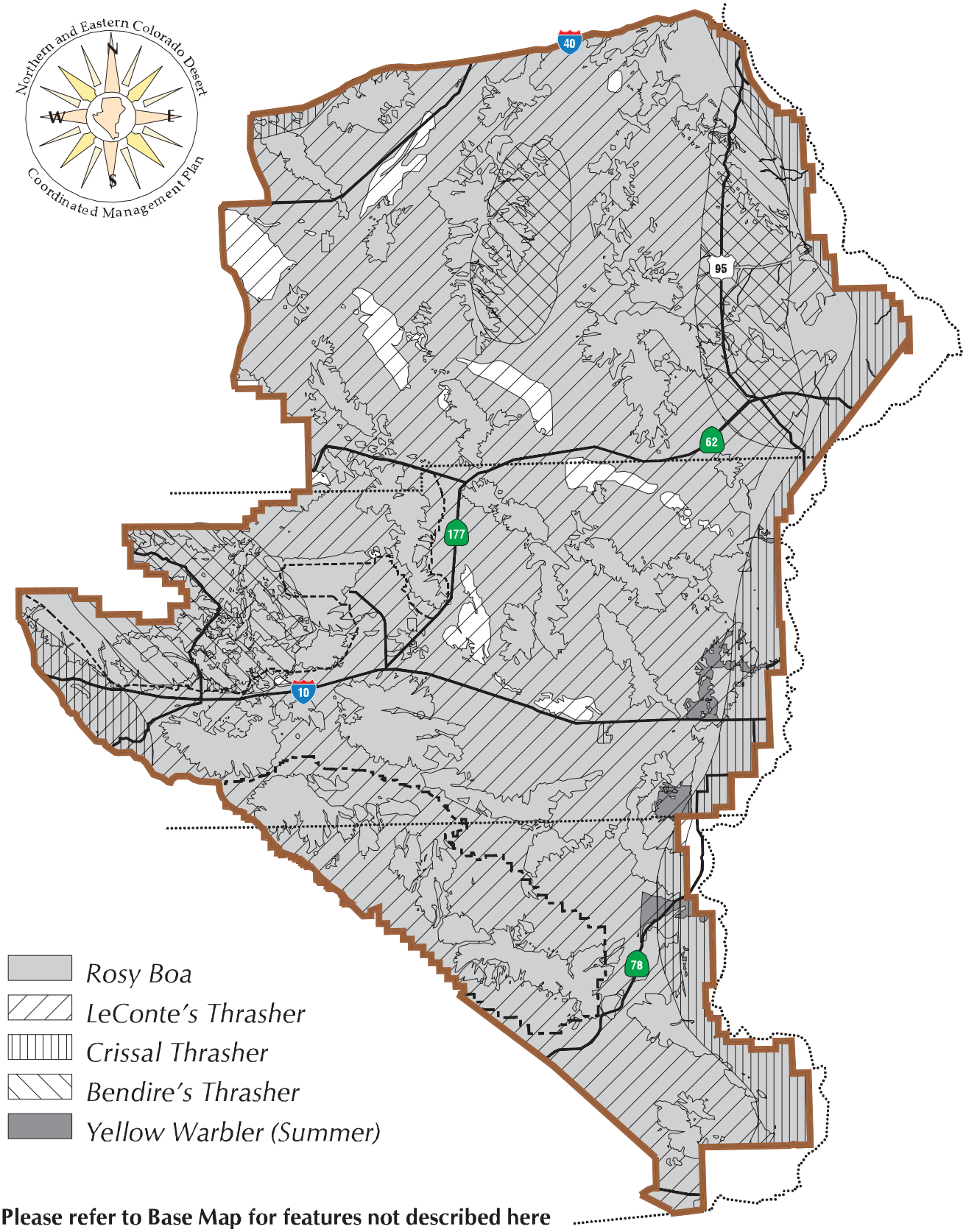
(Range for Ferruginous Hawk, Golden Eagle and Burrowing Owl is entire Plan area)

June 3, 2002

Map 3-6d

Scale 1 : 1,120,000

Special Status Species - Animals



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June 3, 2002

Map 3-6e

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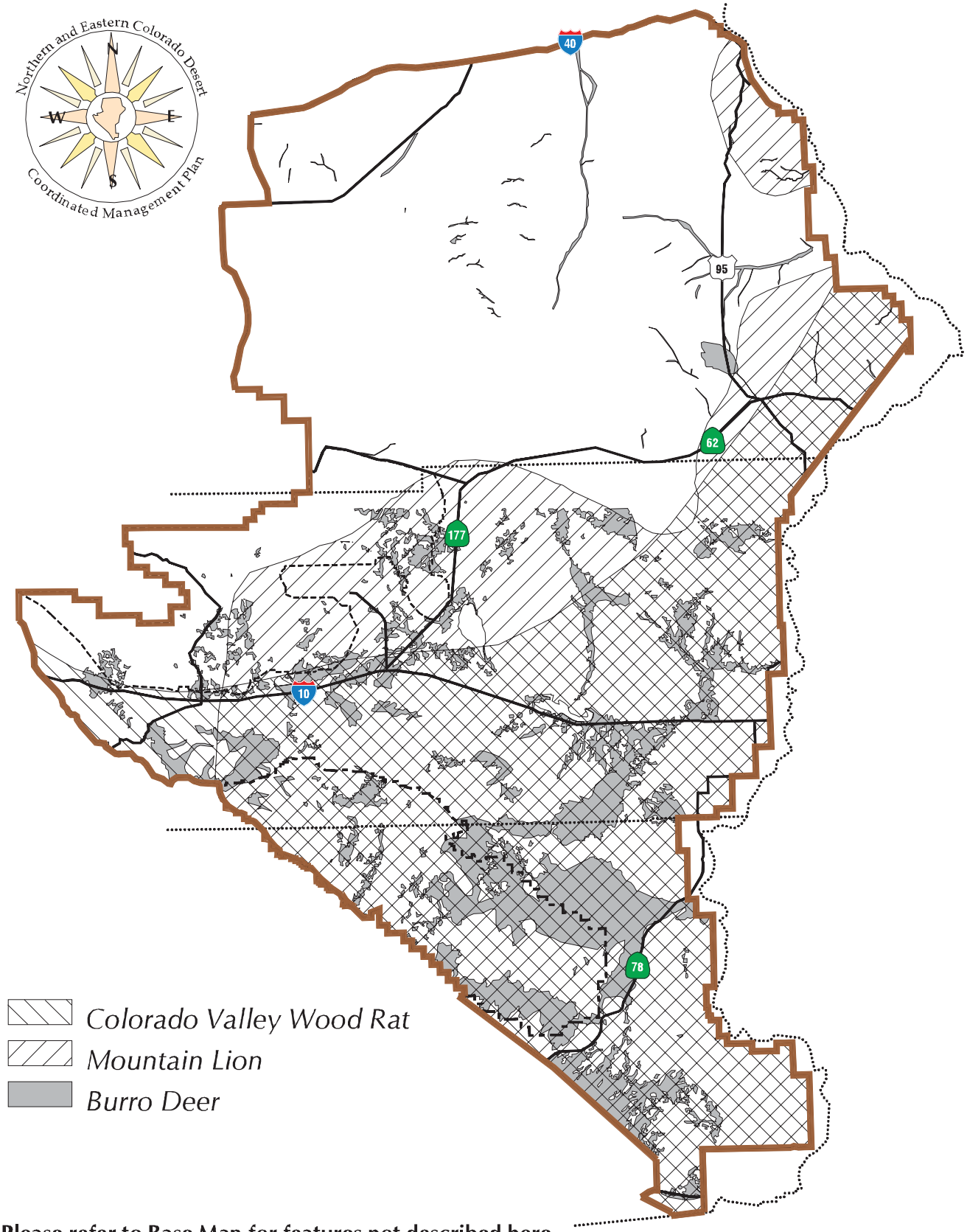
Special Status Species - Animals



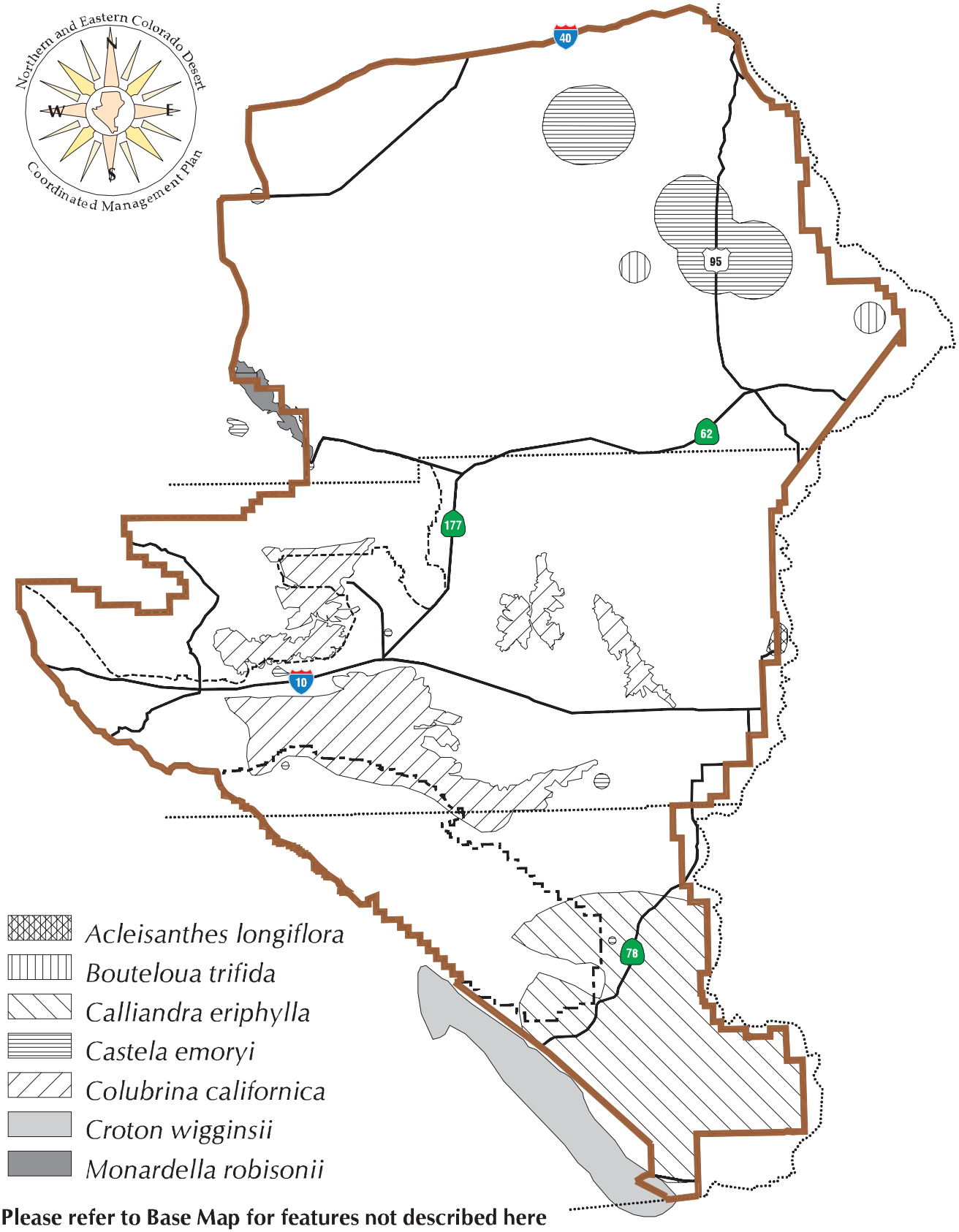
Please refer to Base Map for features not described here

June 5, 2002

Map 3-6f

Scale 1 : 1,120,000

Special Status Species - Plants



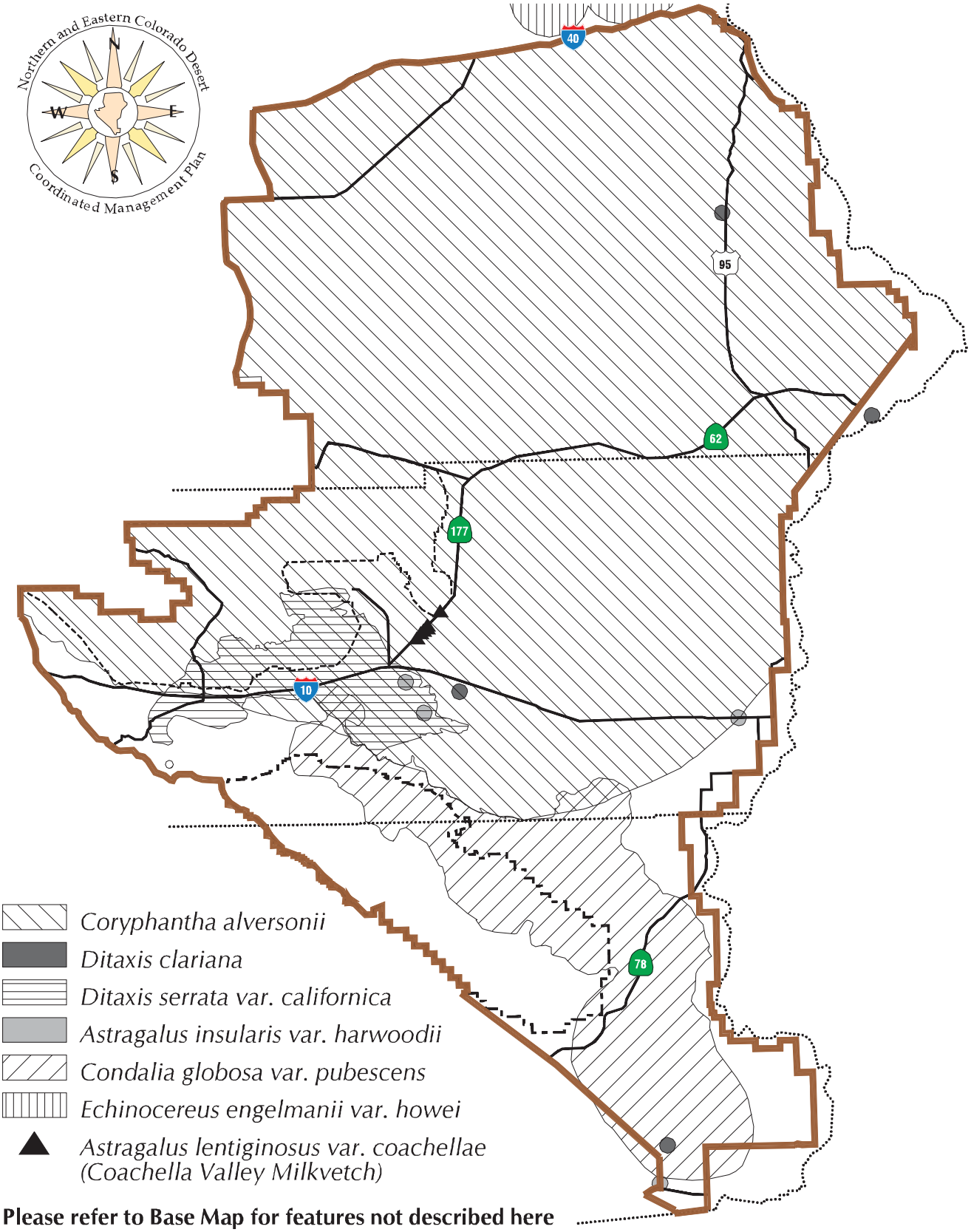
Please refer to Base Map for features not described here

June 3, 2002

Map 3-7a

Scale 1 : 1,120,000

Special Status Species - Plants



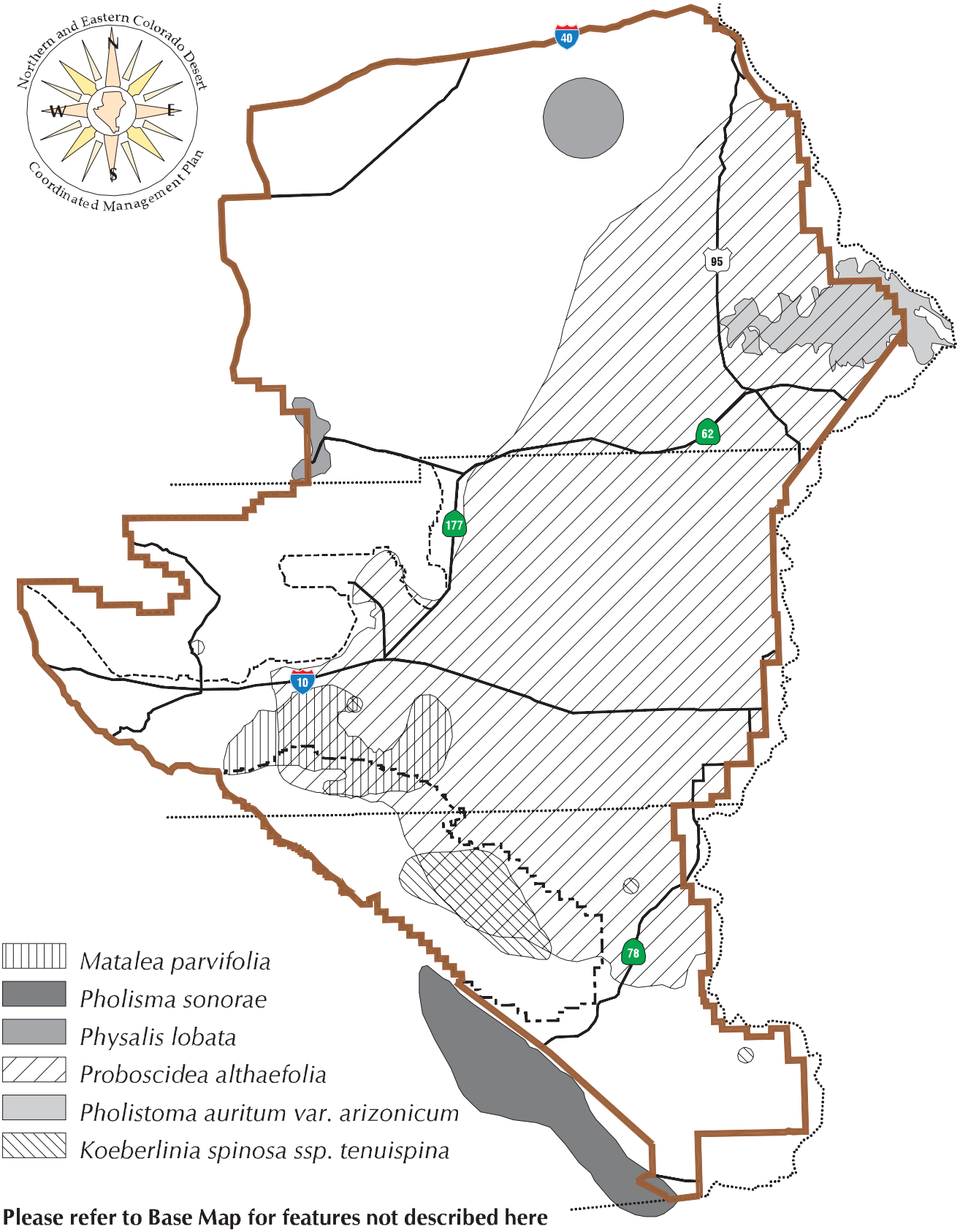
Please refer to Base Map for features not described here

June 3, 2002

Map 3-7b

Scale 1 : 1,120,000

Special Status Species - Plants



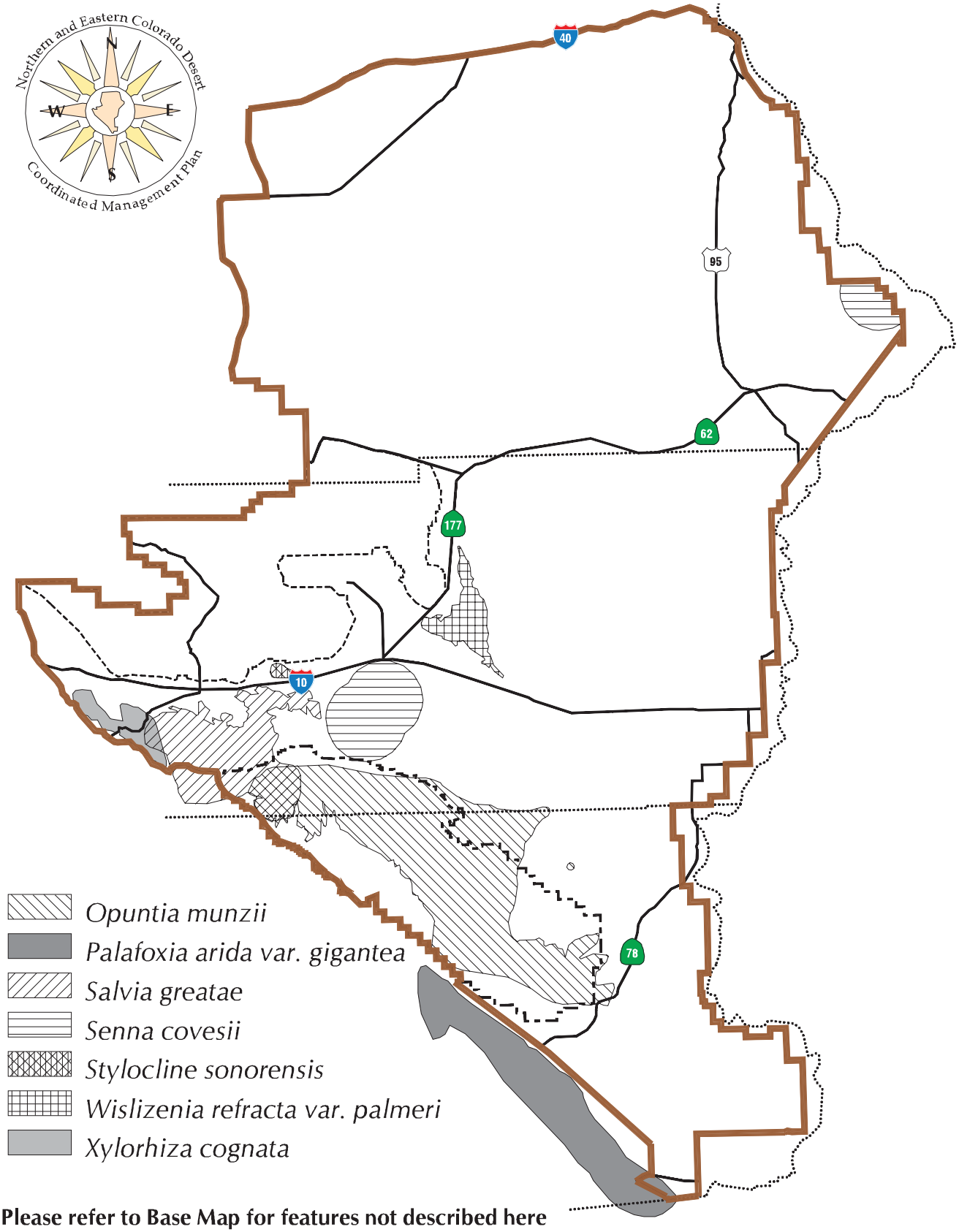
Please refer to Base Map for features not described here

June 3, 2002

Map 3-7c

Scale 1 : 1,120,000

Special Status Species - Plants



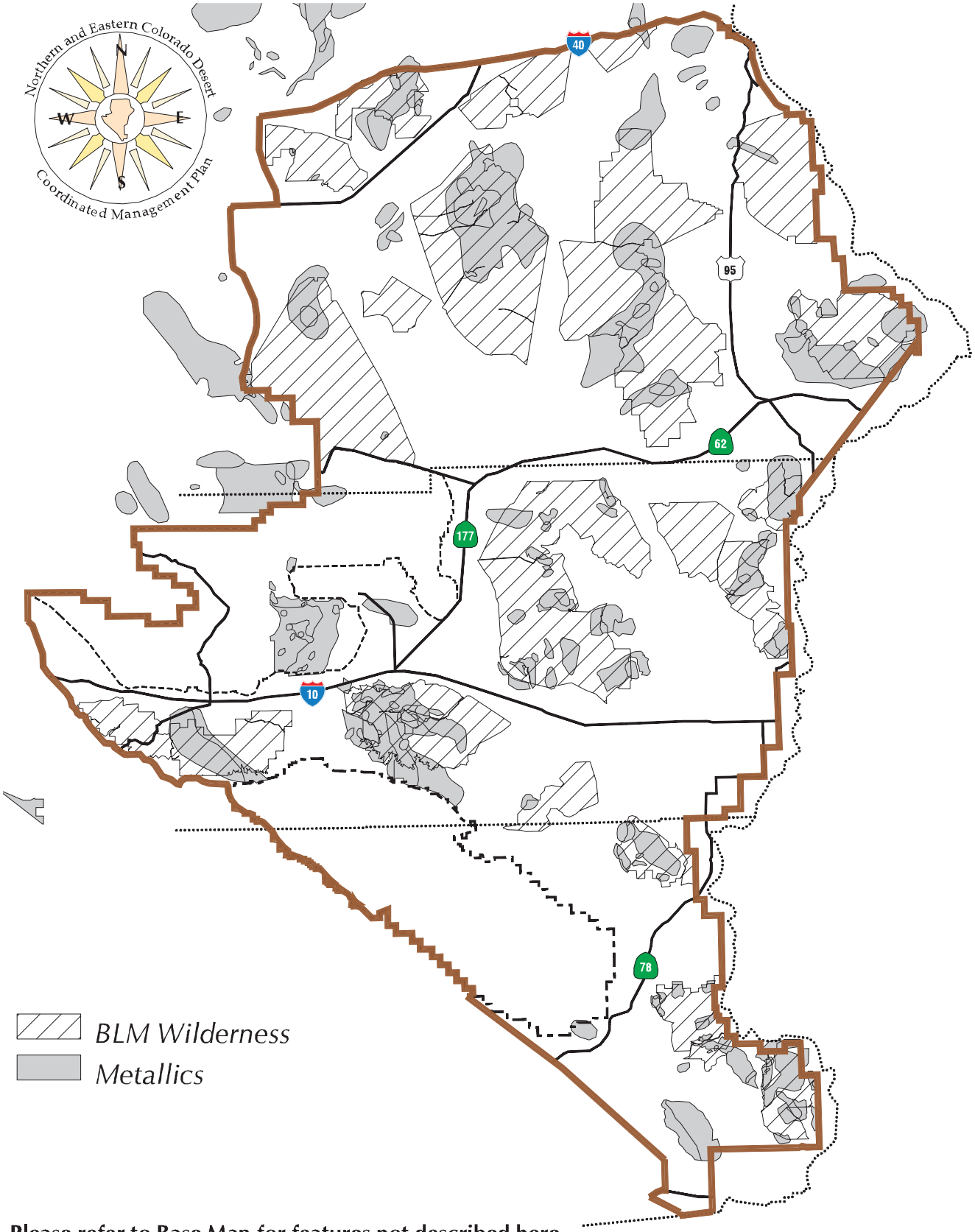
Please refer to Base Map for features not described here

June 5, 2002

Map 3-7d

Scale 1 : 1,120,000

Mineral Potential - Metallics



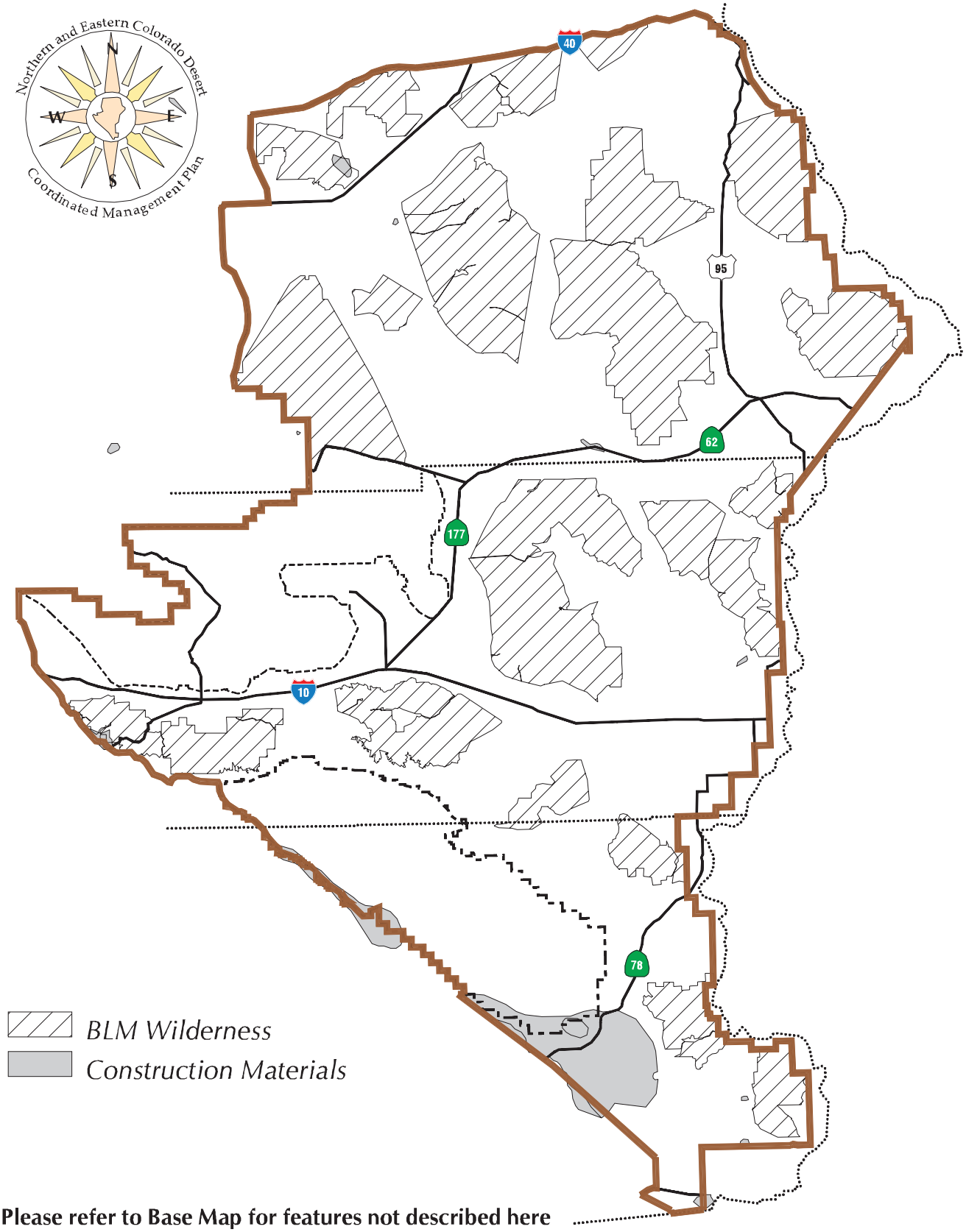
Please refer to Base Map for features not described here

June 3, 2002

Map 3-8

Scale 1 : 1,120,000

Mineral Potential - Construction



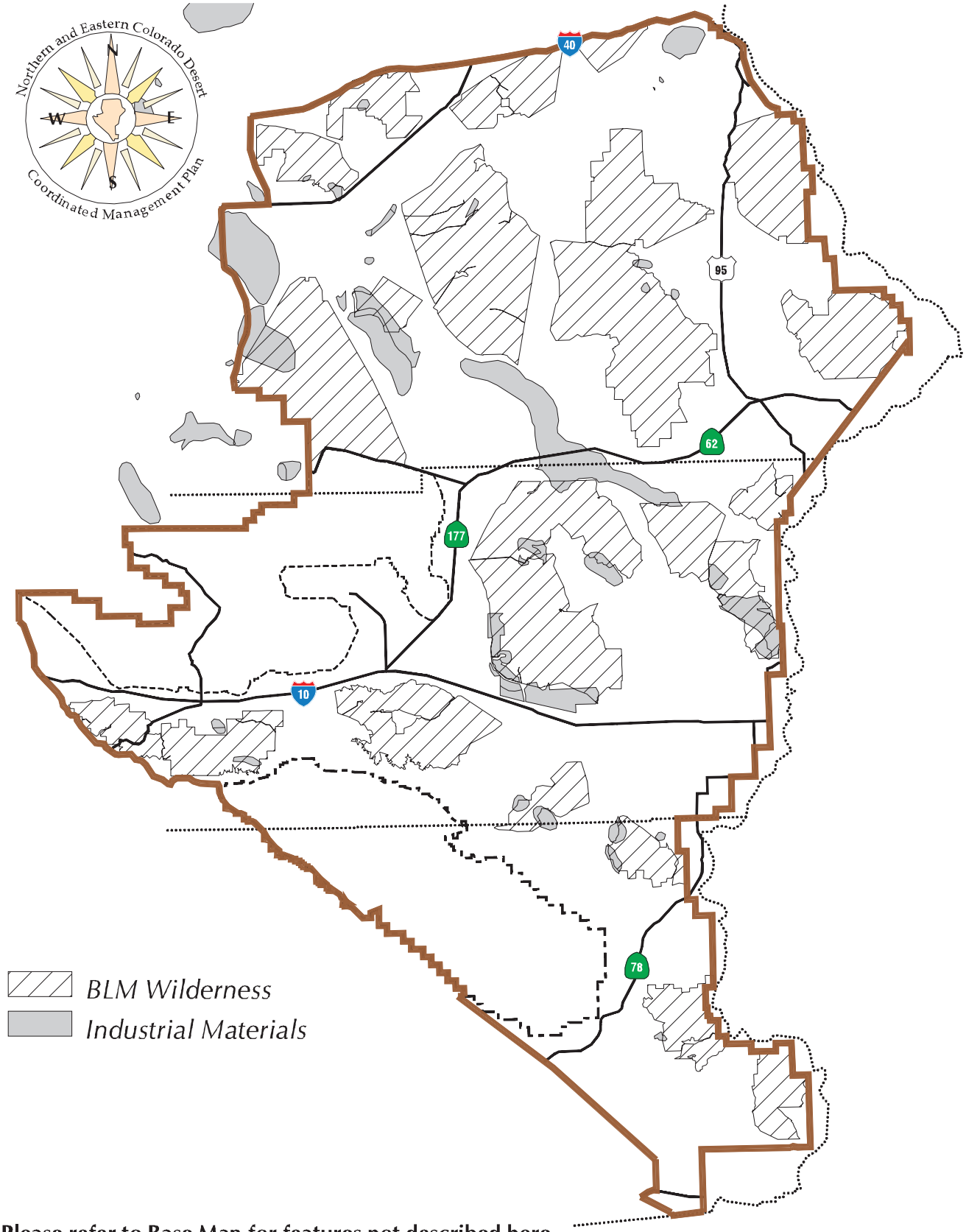
Please refer to Base Map for features not described here

June 3, 2002

Map 3-9

Scale 1 : 1,120,000

Mineral Potential - Industrial



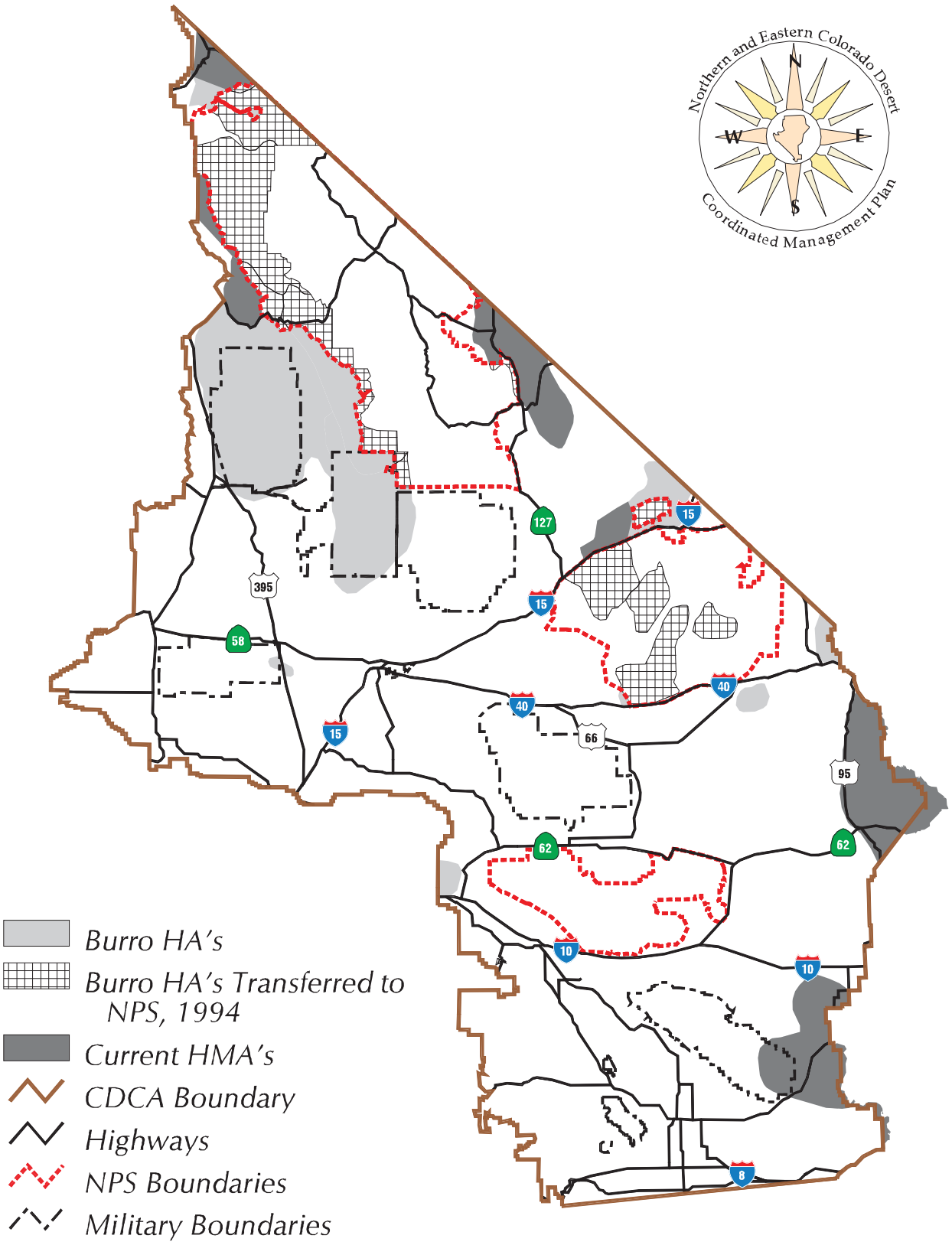
Please refer to Base Map for features not described here

June 3, 2002

Map 3-10

Scale 1 : 1,120,000

Current CDCA Burro Management

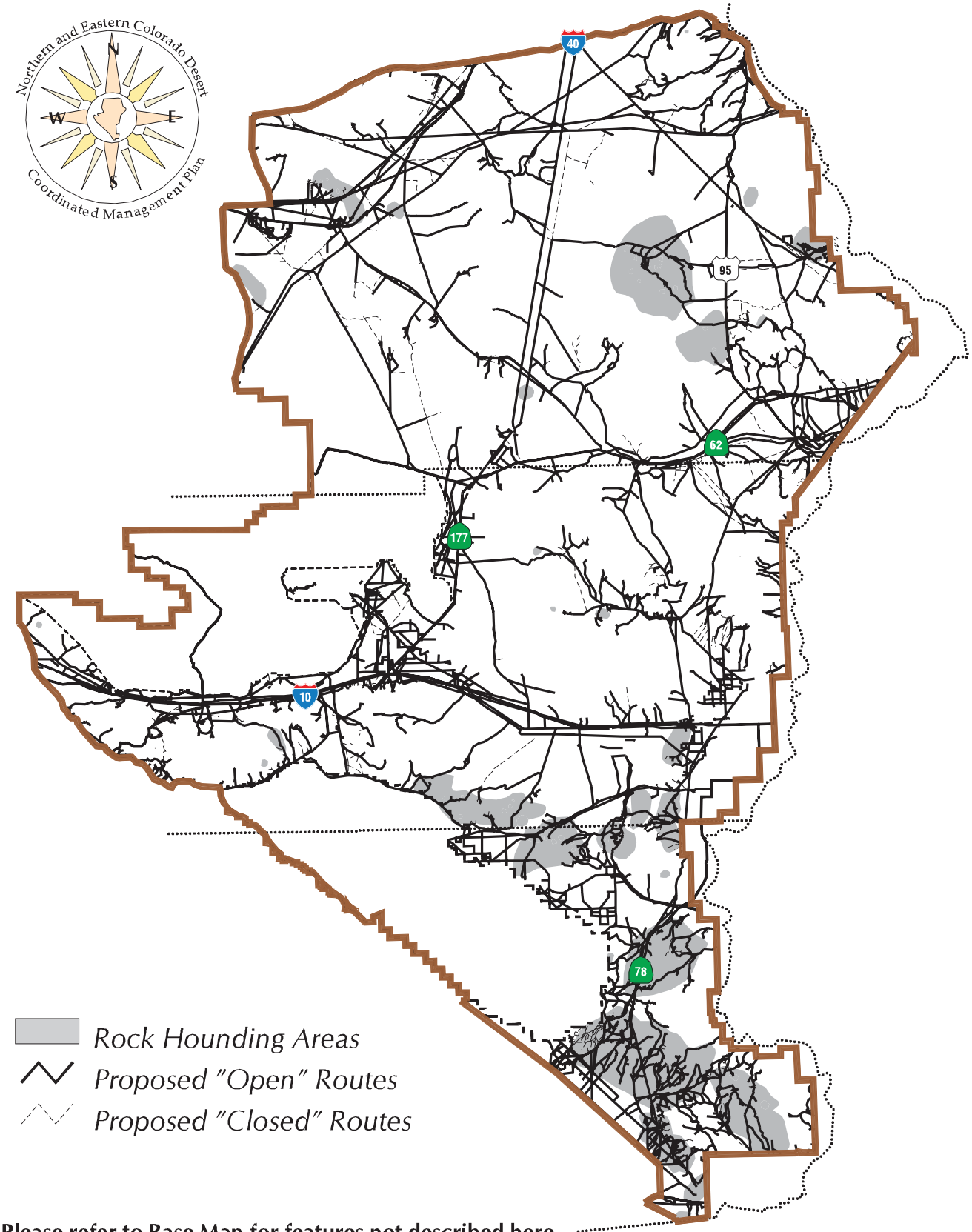


June 4, 2002

Map 4-1

Scale 1 : 2,700,000

Popular Rock Hounding Areas



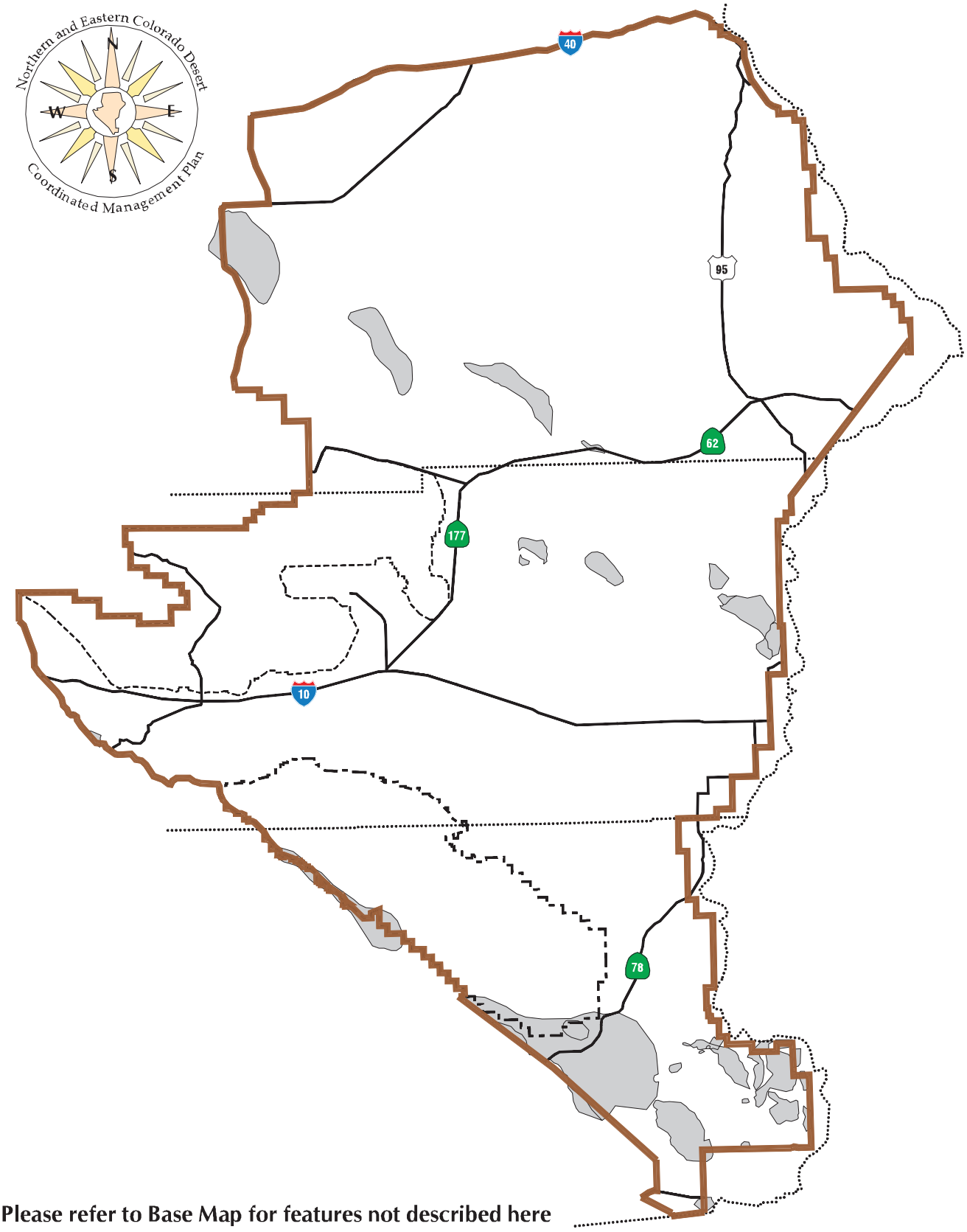
Please refer to Base Map for features not described here

June 3, 2002

Map 4-2

Scale 1 : 1,120,000

High Mineral Development Potential



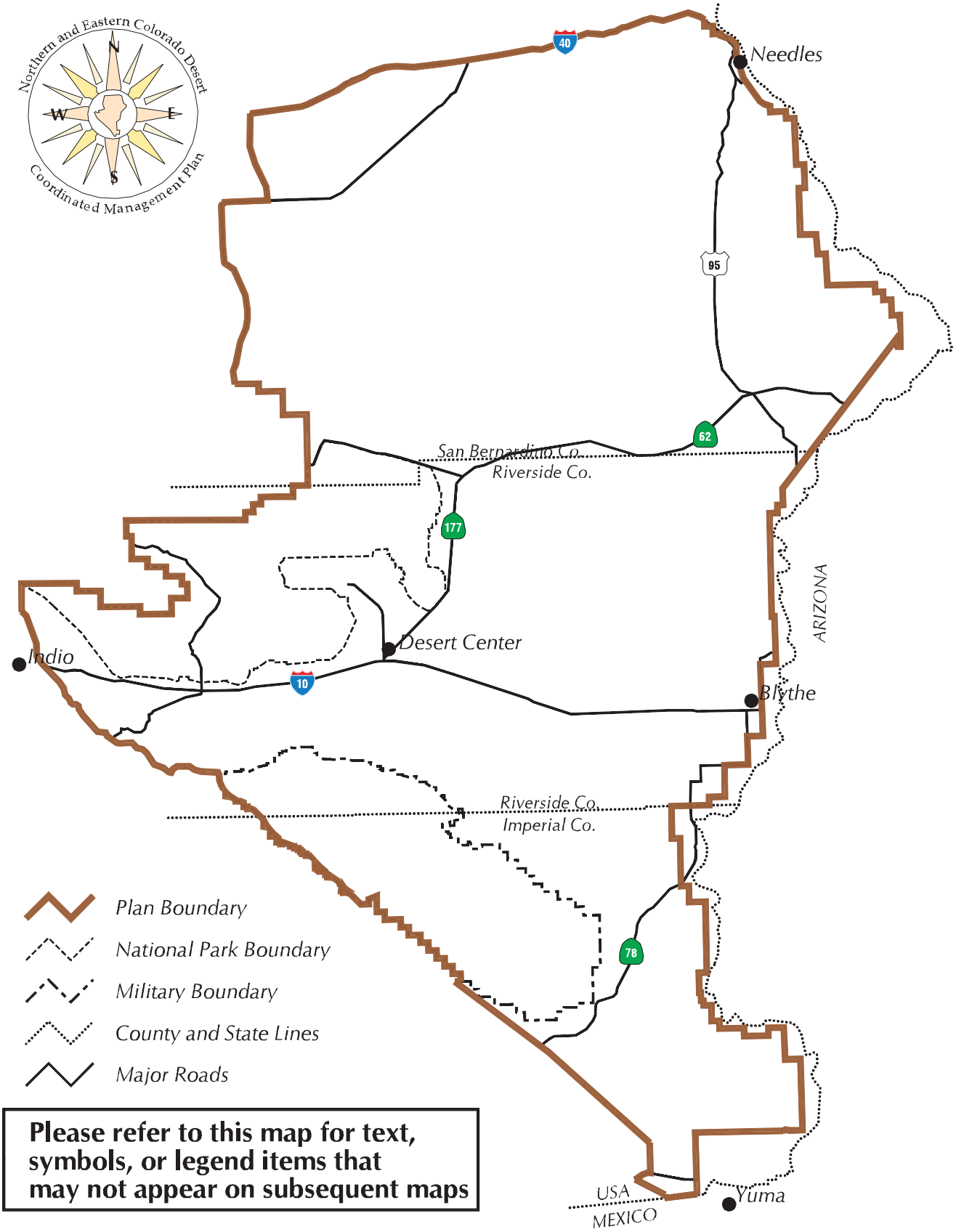
Please refer to Base Map for features not described here

June 3, 2002

Map 4-3

Scale 1 : 1,120,000

Base Map

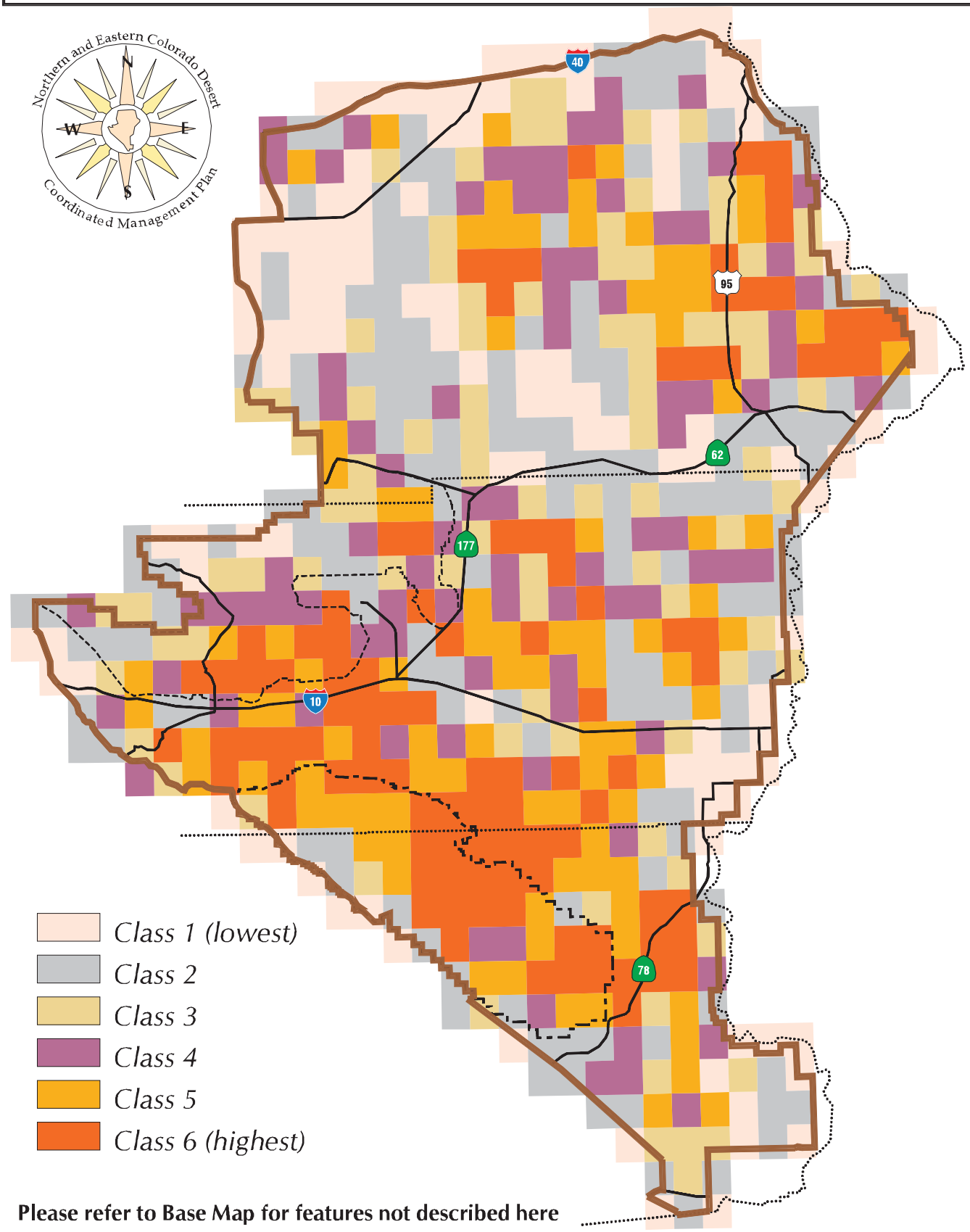


Please refer to this map for text, symbols, or legend items that may not appear on subsequent maps

June 5, 2002

Scale 1:1,120,000

Ecological "Hotspots" (Equal-Weighted Analysis)



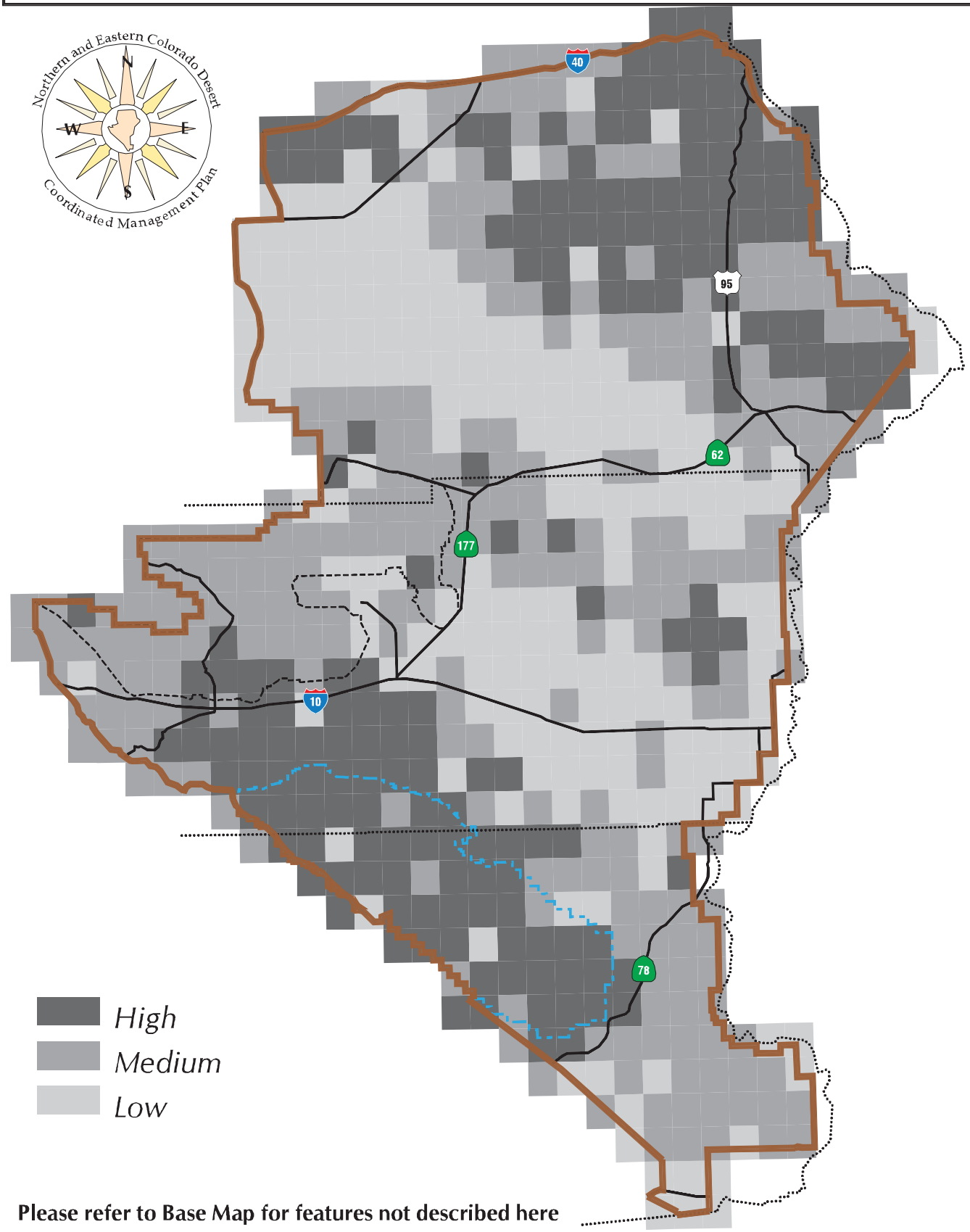
Please refer to Base Map for features not described here

June 3, 2002

Map H-1

Scale 1 : 1,120,000

Plant Species Richness



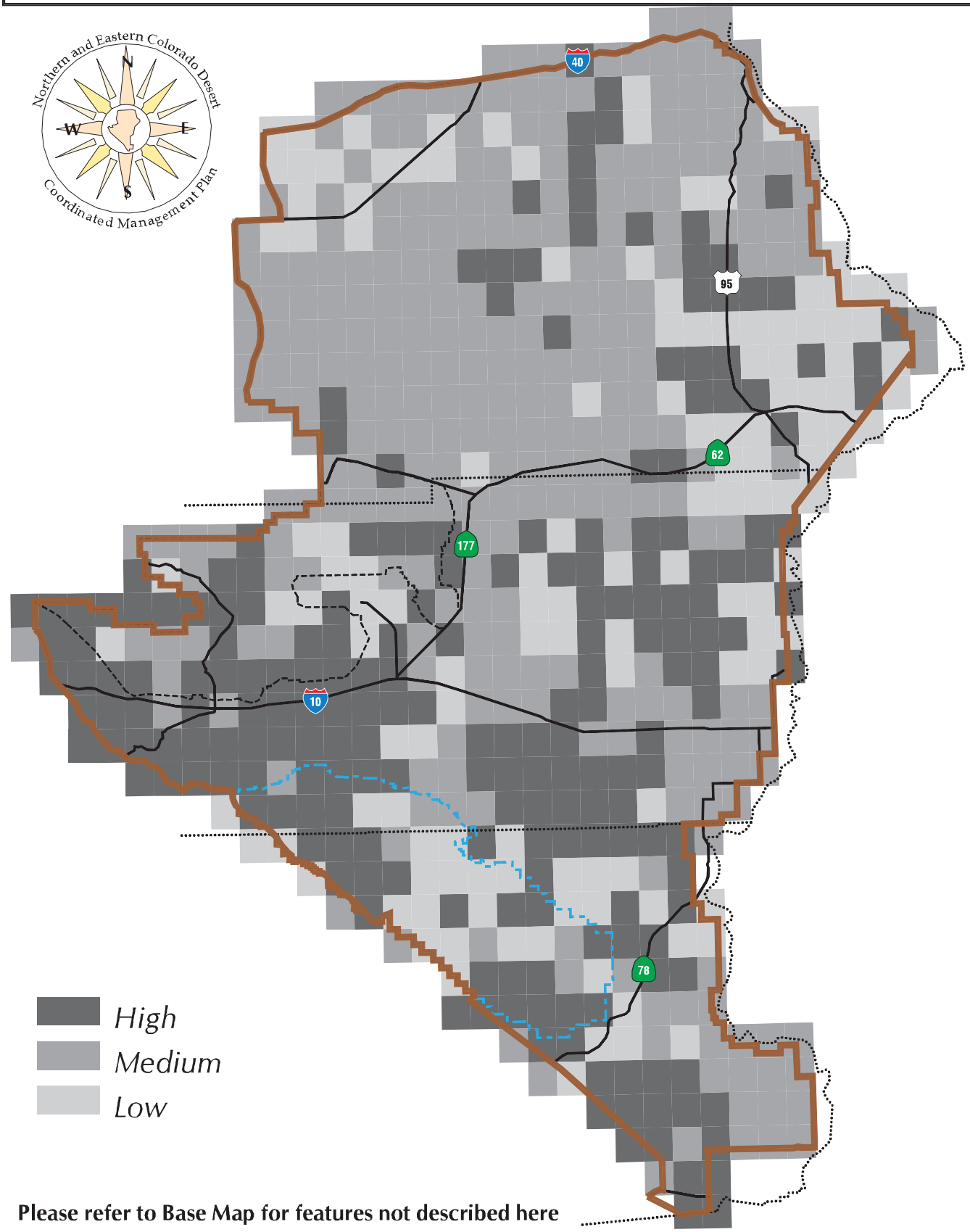
Please refer to Base Map for features not described here

June 3, 2002

Map H-2

Scale 1 : 1,120,000

Animal Species Richness



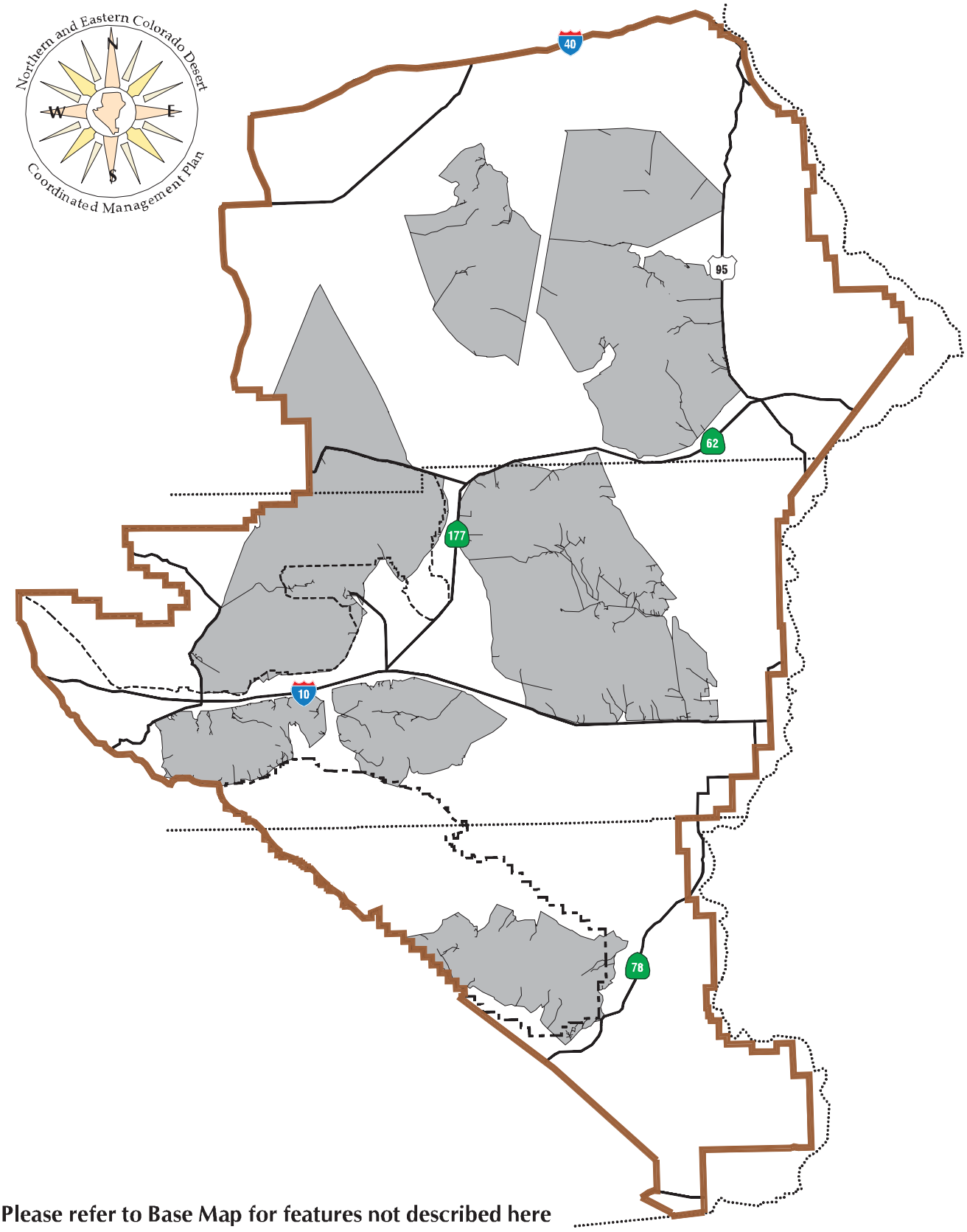
Please refer to Base Map for features not described here

June 3, 2002

Map H-3

Scale 1 : 1,120,000

Current Management
Largest Unfragmented Areas



Please refer to Base Map for features not described here

June 3, 2002

Map H-4

Scale 1 : 1,120,000

Appendix B
Standards and Guidelines

Background

Congress passed the Taylor Grazing Act in 1934 to direct occupancy and use of public rangelands to preserve natural resources from destruction or unnecessary injury and to provide for the orderly use, improvement, and development of rangelands. Since enactment of the Taylor Grazing Act, several studies and reports have identified problems on the western rangelands. The Public Rangelands Improvement Act (PRIA, 1978) identified that (1) rangelands are producing below their potential; (2) rangelands will remain in an unsatisfactory condition and some areas may decline further under present levels of funding; and (3) these unsatisfactory conditions present a high risk of soil loss; water loss; loss of, or threats to, fish and wildlife habitat; loss of forage for livestock and grazing animals; and unpredictable and undesirable long-term local and regional climatic and economic changes.

Resource conditions have improved since passage of PRIA, but many riparian areas continue to be degraded and are not functioning properly. The Director of the Bureau of Land Management requested the agency's National Public Lands Advisory Council to recommend ways to improve BLM's rangeland management program. In 1991, the Council commissioned a blue-ribbon panel of professional ecologists and rangeland managers who produced a report titled *Rangeland-Program Initiatives and Strategies*. Their report concluded that BLM's primary objectives should be to protect the basic components of rangelands: soil, water, and vegetation.

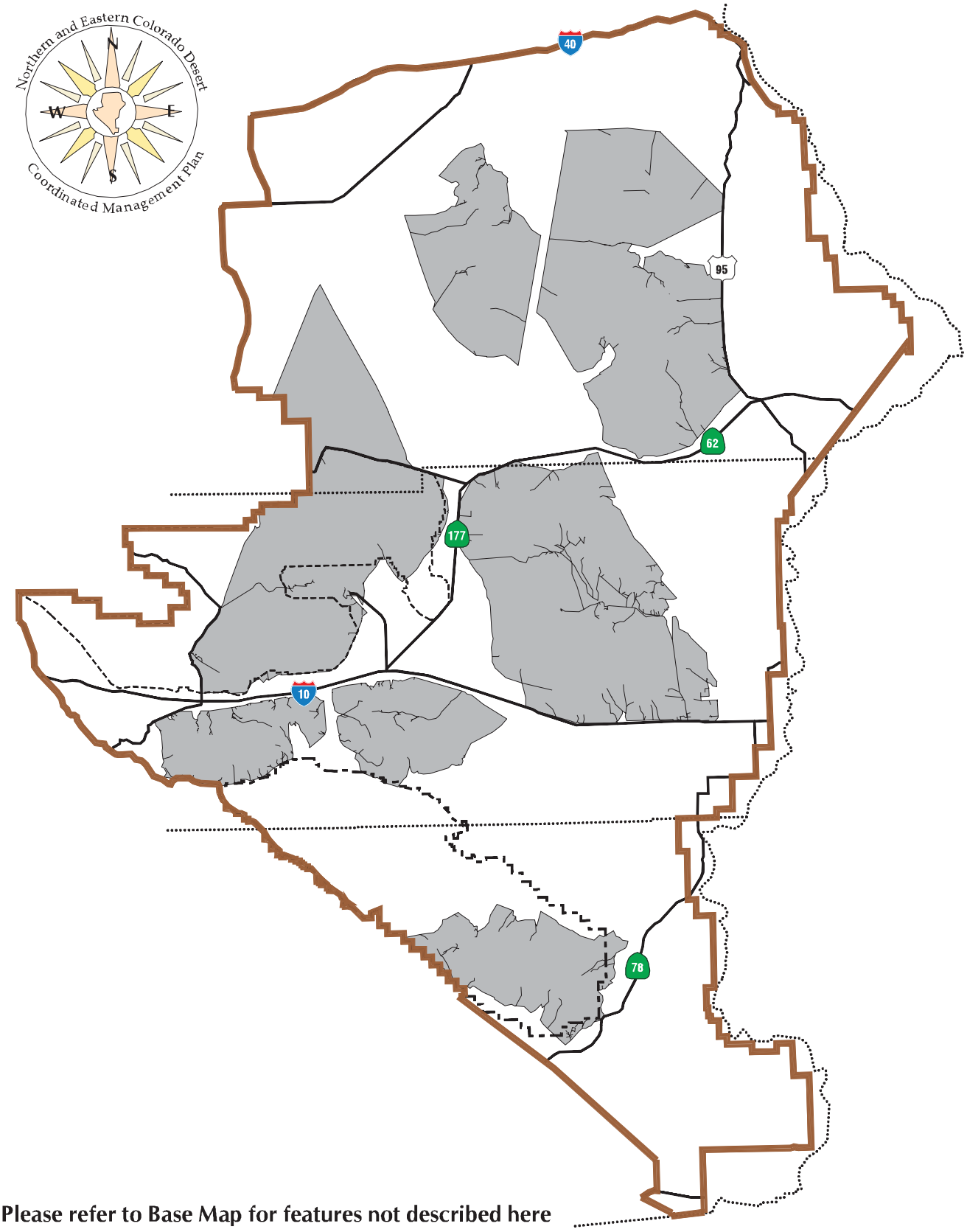
The BLM initiated a new effort in 1993 commonly referred to as "Rangeland Reform 94." The focus of this effort is to enhance the environmental health of public rangelands. This effort was assisted with the publication of *Rangeland Health: New Methods to Classify, Inventory, and Monitor Rangelands*, 1994. The report was published by the Committee on Rangeland Classification, Board of Agriculture, of the National Research Council. The report explained criteria and indicators of rangeland health, assessment practices, and inventory and monitoring requirements.

The "Rangeland Reform" initiative culminated in a national environmental impact statement to provide grazing management direction to improve ecological conditions while providing for sustainable development on the land. In 1995, the Secretary of the Interior developed new grazing regulations to implement needed changes in BLM's rangeland management program.

Purpose and Need

The "Rangeland Reform 94" effort resulted in the publication of a final rule for Grazing Administration of public lands, on February 22, 1995, that became effective August 21, 1995. Under the Code of Federal Regulations Title 43 Subpart 4108.2, the BLM State Director is required to develop state or regional standards and guidelines for grazing administration in consultation with BLM Resource Advisory Council (District Advisory Council), other agencies, and the public. The purpose of the standards, and guidelines is indicated from the following quotations from the Federal Register, Vol. 60, No. 35, page 9956, dated February 22, 1995:

Current Management
Largest Unfragmented Areas



Please refer to Base Map for features not described here

June 3, 2002

Map H-4

Scale 1 : 1,120,000

- The guiding principles for standards and guidelines require that State or regional standards and guidelines address the basic components of healthy rangelands.

- The Department intends that the standards and guidelines will result in a balance of sustainable development and multiple use along with progress towards attaining healthy, properly functioning rangelands.

- The Department believes that by implementing grazing-related actions that are consistent with the fundamentals of Subpart 4180.1 and the guiding principles of Subpart 4180.2, the long-term health of public rangelands can be ensured.

Fundamentals of Rangeland Health

In its report, the Committee for the National Research Council defined rangeland health as "the degree to which the integrity of the soil and ecological processes of rangeland ecosystems are sustained," and in particular those "ecological processes that are most important in sustaining the capacity of rangeland to satisfy values and produce commodities" (National Resource Council). The committee from the Council recommended "the determination of whether a rangeland is healthy, at risk, or unhealthy should be based on the evaluation of three criteria: degree of soil stability and watershed function, integrity of nutrient cycles and energy flow, and presence of functioning recovery mechanisms" (Ibid). When the factors of a healthy rangeland site are met then values and commodities will be conserved.

The grazing regulations under Title 43 of the Code of Federal Regulation, Section 4180, directs the authorized officer to ensure that the following conditions of rangeland health exist:

(a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and the timing and duration of flow.

(b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

(c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.

(d) Habitats are, or are making significant progress toward, being restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate, and other special status species.

Items (a) and (b) prescribe physical and biological characteristics of rangeland health. Items (c) and (d) describe legal requirements that will be met when healthy rangelands are properly functioning.

Attributes of Standards and Guidelines

The fundamentals of rangeland health, guiding principles for standards and the fallback standards address ecological components that are affected by all uses of public rangelands, not just livestock grazing. However, the scope of this final rule, and therefore the fundamental of rangeland health of part 4180.1, and the standards and guidelines to be made effective under part 4180.2, are limited to grazing administration (Federal Register).

The following are characteristics of standards and guidelines.

A standard is

- a criterion regarding a resource quality or quantity upon which a judgement or decision is based (e.g., a statement concerning expected ecosystem or rangeland health)
- measurable
- establishes parameters within which resources uses and management activities can be conducted
- has, or should have, observable indicators

A guideline

- describes a practice, prescription, method or technique used to ensure that grazing management activities meet standards
- is either a set of management practices from which one or more practices is selected; or is a specific, required management practice
- can be adapted or changed when monitoring or other information indicates the guidelines are not effective or a better means of meeting applicable standards exists

Standards and Guidelines--Constraints and Development

1. The standards for public land health apply to resource uses and activities undertaken on the public lands. The guidelines for livestock grazing apply only to livestock grazing management practices. Guidelines for activities other than livestock grazing are not proposed at this time; however, BLM intends to formulate additional guidelines in the future as opportunities present themselves.

2. The standards and the guidelines for livestock grazing are subject to the approval of the Secretary of Interior. Pending Secretarial approval, the National Fallback Standards and Guidelines apply.

3. The intent of the standards and guidelines is to ensure a balance of sustainable development and multiple use along with progress toward attaining healthy, properly functioning ecosystems.

4. The standards and applicable guidelines will be implemented through terms and conditions of permits, leases, and other authorizations or actions issued or undertaken in accordance with BLM's approved land use plans.

5. To the extent possible, implementation will be determined and applied through collaborative management approaches with other land owners, organizations, and agencies on a regional or watershed scale, or in relation to discreet land use plan units such as areas designated for OHV use as open, limited, or closed.

6. At a minimum, implementation will be coordinated in consultation with the affected permitees or lessees, the affected Indian tribes, the appropriate state agency, and the interested public.

7. BLM's grazing regulations require that "appropriate action" be taken when "existing grazing management practices or levels of grazing use . . . are significant factors in failing to achieve the standards and . . . guidelines." BLM will take corrective action as practicable for other management practices or uses not meeting the standards.

8. Some areas may require years to fully achieve the standards, due to natural factors such as climatic conditions, soils, presence of naturalized non-native plant species, and other related factors.

9. The values and demand for use of the public lands will continue to increase and be diverse.

10. BLM will not arbitrarily eliminate or unreasonably restrict an existing use otherwise allowable by law or regulation. In applying the standards and any applicable guidelines, BLM will emphasize a balanced approach to resource management, taking into account such factors as context and intensity of impacts; the opportunities for reclamation, restoration, or rehabilitation; and possible mitigation, including off-site mitigation.

Resource Advisory Council Direction

Under the February 22, 1995, rulemaking, the Secretary of the Interior called for the formation of Resource Advisory Councils (RACs) to advise the BLM about defining areas and developing standards and guidelines for those areas. The RACs will advise the BLM concerning preparation, amendment, and implementation of land use plans. The existing California Desert District Advisory Council (DAC) will serve as the California Desert District's Resource Advisory Council. The rulemaking directs the State Director to coordinate with Indian tribes, the pubic, and affected State and Federal agencies during development of standards and guidelines.

The staffs in areas once defined as the Bakersfield, Ukiah, and Susanville Districts coordinated on a state-wide planning effort called Rangeland Health Standards and Guidelines for California and Northwestern Nevada, Environmental Impact Statement to adopt regional standards for rangeland health and guidelines for grazing management on BLM-administered lands. The DAC chose not to initiate a new planning process for the express purpose of analyzing livestock standard and guidelines nor contribute staff to the statewide effort. The Council preferred instead to develop standards for all public land uses through several ongoing planning efforts. In addition, they felt it would be more efficient to address standards at the Planning Area level instead of desert-wide, and the CDCA Plan primarily conforms to the fundamentals of rangeland health. These planning efforts include the Western Mojave Coordinated Management Plan, Northern and Eastern Mojave Planning Effort, Coachella Valley Habitat Conservation Plan, Northern and Eastern Colorado Desert

Coordinated Management Plan, and Plan Amendment for the South Coast Resource Management Plan and the Eastern San Diego Area Plan.

The DAC is actively involved in development of Standards for Public Land Health and Guidelines for Grazing Management. Early in the process a subcommittee was formed to develop a proposal for standards and guidelines. The standards have been developed and are listed in the Proposed Plan. Upon completion of the Northern and Eastern Mojave Planning Effort the State Director will submit a set of standards and guidelines for approval by the Secretary of the Interior. Adoption of the regional standards will occur when the Secretary concurs. Until adoption of the regional standards, the fallback standards and guidelines or existing planning and activity plan guidance will be used, dependent upon which one more closely matches the fundamentals of rangeland health.

At a minimum, State or regional guidelines must address the following:

1. Maintain or promote adequate amounts of vegetative ground cover, including standing plant material and litter, to support infiltration, maintain soil moisture storage, and stabilize soils;

2. Maintain or promote subsurface soil conditions that support permeability rates appropriate to climate and soils;

3. Maintain, improve, or restore riparian-wetland functions including energy dissipation, sediment capture, groundwater recharge, and stream bank stability;

4. Maintain or promote stream channel morphology (e.g. gradient width-depth ratio, channel roughness, and sinuosity) and functions appropriate to climate and landform; and maintain or promote the appropriate kinds and amounts of organisms, plants, and animals to support the hydrologic cycle, nutrient cycle, and energy flow;

5. Promote the opportunity for seedling establishment of appropriate plant species when climate conditions and space allow;

6. Maintain, restore, or enhance water quality to meet management objectives (e.g., meeting wildlife needs);

7. Restore, maintain, or enhance habitats to assist in the recovery of Federal threatened or endangered species;

8. Restore, maintain, or enhance habitats of Federal Proposed, Category 1 and 2 Federal candidate, and other special status species to promote their conservation;

9. Maintain or promote the physical and biological conditions to sustain native populations and communities;

10. Emphasize native species in the support of ecological function; and

11. Incorporate the use of non-native plant species only in situations in which native species are not available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health.

Regional Standards for Public Land Health[1]
Recommended by The
California Desert District Advisory Council

Soils

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, geology, landform, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor, and provide a stable watershed.

As indicated by:

- Canopy and ground cover are appropriate for the site
- A diversity of plant species with a variety of root depths is present
- Litter and soil organic matter are present at suitable sites
- Microbiotic soil crusts are maintained
- Evidence of wind or water erosion does not exceed natural rates for the site
- Hydrologic and nutrient functions maintained by permeability of soil and water infiltration are appropriate for precipitation

Native Species

Healthy, productive and diverse habitats for native species, including special status species (Federal T&E, Federal proposed, Federal candidates, BLM sensitive, or California State T&E, and CDD UPAs) are maintained in places of natural occurrence.

As indicated by:

- Photosynthetic and ecological processes continue at levels suitable for the site, season, and precipitation regimes
- Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment
- Plant communities are producing litter within acceptable limits
- Age class distribution of plants and animals are sufficient to overcome mortality fluctuations
- Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events
- Alien and noxious plants and wildlife do not exceed acceptable levels
- Appropriate natural disturbances are evident
- Populations and their habitats are sufficiently distributed to prevent the need for listing special status species

[1] Past and current assessments are an integral part of evaluating these standards.

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water, function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained.

As indicated by:

- Vegetative cover will adequately protect banks and dissipate energy during peak water flows
- Dominant vegetation is an appropriate mixture of vigorous riparian species
- Recruitment of preferred species is adequate to sustain the plant community
- Stable soils store and release water slowly
- Plant species present indicate soil moisture characteristics are being maintained
- There is minimal cover of invader/shallow-rooted species, and they are not displacing deep-rooted native species
- Shading of stream courses and water sources for riparian dependent species is maintained
- Stream is in balance with water and sediment being supplied by the watershed
- Stream channel size and meander is appropriate for soils, geology, and landscape
- Adequate organic matter (litter and standing dead plant material) is present to protect the site and to replenish soil nutrients through decomposition

Water Quality

Water quality will meet State and Federal standards including exemptions allowable by law.

As indicated by:

- Dissolved oxygen levels, aquatic organisms, and plants (e.g., macro invertebrates, fish, and algae) indicate support of beneficial uses
- Chemical constituents, water temperature, nutrient loads, fecal coliform, and turbidity are appropriate for the site or source
- Best Management Practices will be implemented

Air Quality

Air quality will meet State and Federal standards including exemptions allowable by law.

- Best Management Practices will be implemented.

Regional Guidelines for Grazing Management Recommended by The California Desert District Advisory Council

Resource conditions of each allotment will be routinely assessed to determine if Public Land Health Standards are being met. In those areas not meeting a Standard, monitoring processes will be established if they do not presently exist to monitor indicators of health until the Standard or resource objective has been attained. Activity plans for other uses or resources that overlap an allotment could have prescribed resource objectives that may further constrain grazing activities, e.g., ACEC. In an area where a Standard has not been met, the results of monitoring the modification or implementation of grazing management actions will be reviewed annually. During the final phase of the assessment process, the determination will schedule the next assessment of resource conditions. Livestock trailing network, grazed plants, livestock facilities, and animal waste are expected impacts in all grazing allotments and will be considered during analysis of the assessment/monitoring process. To attain Standards and resource objectives, the best available science will be used to determine appropriate grazing management actions. Cooperative funding and assistance from other agencies, individuals, and groups will be sought to collect prescribed monitoring data for indicators of each Standard.

- Facilities are to be located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland functions.

- The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.

- Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs, addits, and seeps) will be modified so PFC and resource objectives can be met, and incompatible projects will be modified to bring them into compliance. The BLM will consult, cooperate, and coordinate with affected interests and livestock producer(s) prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities are to be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives.

- Supplements will be located well away from wetland systems.

- Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.

- Grazing management practices are to meet State and Federal water quality standards. Impoundments (stock ponds) and troughs that have a sustained discharge yield of less than 200 gallons per day to surface or groundwater are excepted from meeting State drinking water standards per SWRCB Resolution Number 88-63.

- In the California Desert Conservation Area all wildfires in grazing allotments will be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk), prescribed burning may be used as a tool for restoration on a case by case basis. Prescribed burns may be used as a management tool for chaparral plant communities in the South Coast Region, where fire is a natural part of the regime.

- When climatic conditions and space allow, seedling establishment of native species will be promoted.

- Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.

- During prolonged drought, range stocking will be reduced to scientifically based carrying capacity, based on climatic conditions. Livestock utilization of key perennial species on year-long allotments will be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.

- Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals will be recorded and evaluated for future control measures. Methods and prescriptions will be implemented, and an evaluation will be completed to ascertain future control measures.

- Habitats will be restored, maintained, or enhanced to assist in the recovery of Federally listed threatened and endangered species and to promote the conservation of special status species including Federal proposed, Federal candidates, BLM sensitive, or California State T&E to promote their conservation.

- Grazing activities will support biological diversity across the landscape, and native species and microbiotic crusts are to be maintained.

- Experimental and research efforts will be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.

- Based on Holechek's (et al., 1998) work or the best available scientific information, livestock utilization level of key perennial species of the Mojave Desert (range type) will not exceed 40 percent on ranges that are grazed during the dormant season and are meeting standards. Rangelands that are grazed during the active growing season and are meeting standards will not exceed 25 percent utilization of key species. The utilization range between 25 and 40 percent is for those forage species with a proper use factor that will allow consumption up to and between 25 and 40 percent otherwise lower use limits will prevail. Until modified with new information, utilization of general range types will be prescribed for grazing use as described in the following table.

Utilization Guidelines for Different Range Types in the CDD (adapted from Holechek et al. and Holechek 1991)				
Average Annual Precipitation		**Percent Use of Key Species for Moderate Grazing[a]**	**Range Types**	**Reference**
cm.	**in.**			
10-20	4-8	25-35	Salt desert shrub land	Hutchings and Stewart 1953; Cook and Child 1971
20-30	8-12	30-40	Semidesert grass and shrubland	Valentine 1970; Paulsen and Ares 1961; Martin and Cable 1974; Holechek 1991
20-30	8-12	30-40	Sagebrush grassland	Pechanec and Stewart 1949; Laycock and Conrad 1981
25-100	10-40	50-60	California annual grassland	Hooper and Heady 1970; Bartolome et al. 1980; Rosiere 1987
40-127	16-50	30-40	Mountain shrub land	Pickford and Reid 1948; Skovlin et al. 1976
40-127	16-50	30-40	Oak woodland	Pieper 1970
23-40	9-16	30-40	Pinyon-juniper woodland	Pieper 1970

[a] Rangelands in good condition and/or grazed during the dormant season can withstand the higher utilization level. Those in poor condition or grazed during active growth should receive the lower utilization.

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Appendix C

Livestock Grazing Prescriptions

The following prescriptions are summarized from the applicable terms and conditions in the 1994 Biological Opinions for sheep and cattle grazing.

Prescriptions for Sheep Grazing Activities in Desert Tortoise Habitat

1. Turnout of sheep shall not occur until production of 200 pounds air dry weight (ADW) per acre of ephemeral forage is available. The lessee shall remove sheep from an area of use or the entire allotment if ephemeral forage production falls below 200 pounds ADW per acre.

2. No grazing is authorized except as approved through grazing application. All herders shall have a copy of the current use authorization in their possession and a copy posted at the herder's camp site. When sheep are trailed outside of the allotment, all herders are required to have a copy of the trailing authorization in their possession.

3. A band of sheep is limited to no larger than 1,000 adult sheep with an approximately equal number of lambs.

4. Sheep are to be widely scattered or in a loose pattern when grazing through an area, and grazing sheep are to move through an area only once during the grazing season.

5. Sites where sheep are bedded and watered shall be changed daily. Bedding or watering sites are to be at least one quarter mile from any previous site. Sheep are to be watered on or adjacent to existing dirt roads (within 25 feet) or existing disturbed or open areas cleared of shrubs from past uses.

6. Stopping and parking of vehicles, and vehicular camping along routes of travel, is limited to within 50 feet of all routes, except in OHV open areas, in multiple-use Class "L" and "M" as described in the California Desert Conservation Area Plan.

7. A herder's camp site or camp trailer shall not remain in the same location for more than seven days. Establishment of a camp shall be at least one mile from any previous camp location. To eliminate or reduce scavenging of trash by desert tortoise predators, trash and garbage shall be removed from each camp site each day and no trash or garbage shall be buried at the camp site. All sheep carcasses within 300 feet of a road shall be removed. Sheep carcasses are to be removed from anywhere in OHV open areas, and permission from the authorized officer is required to remove dead sheep within a wilderness.

8. Within 15 days of the close of the authorized grazing period, the lessee shall submit to the field office a BLM-supplied map to delineate areas of daily grazing use within the allotment.

Prescriptions for Cattle Grazing Activities in Desert Tortoise Habitat

1. Utilization of key perennial forage species shall not exceed 40 percent in the Lazy Daisy Allotment. No averaging of utilization data among perennial key forage species or key areas shall occur. When utilization approaches authorized limits in any key area, steps shall be taken to redistribute or reduce cattle use for that key area. Monitoring of perennial vegetation such as utilization and trend would occur with methods detailed and prescribed in BLM manuals, handbooks, and plans. Grazing use will be managed to improve trends for native perennial and annual plants where site potential permits. Galleta grass shall be a key forage species wherever it is found.

2. Cattle shall be evenly dispersed throughout their area of use, and herding shall be limited to shipping and animal husbandry practices. Grazing use shall be managed according to grazing regulations, allotment management plans, CDCA Plan, and the current biological opinion. Feeding of roughage, such as hay, hay cubes, or grains to supplement forage quantity is prohibited. Grazing use shall be curtailed to protect perennial plants during severe or prolonged drought. These steps may include removal of cattle or, where feasible, turning off water at troughs (especially when livestock are not present) to reduce adjacent grazing use.

3. All cattle carcasses found within 300 feet of any road shall be removed and disposed of in an appropriate manner, and no prior notification to the BLM is necessary if off-road vehicle use is required, but permission from the authorized officer is required to remove animals within wilderness.

4. The authorization to use temporary, non-renewable perennial forage above permitted grazing use shall be for no longer than three-month increments in non-DWMA desert tortoise habitat.

5. Authorization for ephemeral forage (annual grasses and forbs) in non-DWMA desert tortoise habitat shall occur when 230 pounds or more by air dry weight per acre of ephemeral forage is available. Ephemeral production data shall be collected if requests are made for ephemeral grazing use. Any cattle authorized to use ephemeral forage shall be removed from an area or the allotment whenever the threshold for curtailing ephemeral grazing is reached.

6. Nine Mile Canyon Well in the Lazy Daisy Allotment shall be developed to draw cattle away from the DWMA. Construction and maintenance of range improvements in tortoise habitat are limited to existing and proposed facilities listed in this plan and as detailed in biological opinions 1-6-92-F-17 and1-8-94-F-17. All proposed range improvements would receive NEPA and FWS review as needed. For all construction, operation, and maintenance of range improvements involving land disturbance in desert tortoise habitat the following requirements apply:

   A. Surface disturbance during construction of range improvements shall occur on previously disturbed sites and shall be minimized whenever possible. Routine vehicle use shall be limited to existing roads and disturbed areas, and off-road vehicle activity shall be held to a minimum. Construction of new roads shall be minimized. Construction of new or replacement facilities shall be carried out only from October 15 to March 15, unless specifically authorized due to safety or emergency considerations. After completion of the project, the disturbed soil shall be blended and contoured into the surrounding soil surface.

To reduce attraction of desert tortoise predators, debris and trash created during construction or maintenance of a facility will be removed immediately.

B. Range improvement construction, operation, and maintenance shall be modified as necessary to avoid direct impacts to desert tortoises and their burrows e.g., construction of fences or pipelines near tortoise burrows shall be avoided. All proposed range improvement projects shall be designed and flagged to avoid impacts to tortoises and their burrows. Pre-construction desert tortoise surveys of project sites shall be conducted by a qualified biologist. Existing access and areas of disturbance shall be utilized when trenching a section of new pipe or during performance of maintenance. Any hazards to desert tortoises that may created, such as auger holes and trenches, shall be monitored by biological monitor at least twice daily for desert tortoises that become trapped. These hazards will be eliminated before workers leave the site.

C. Prior to land-disturbing activities, a field contact representative (FCR) will be designated to ensure compliance with protective measures stipulations for the desert tortoise and will be responsible for coordinating with the Service. A FCR will have the authority and responsibility to halt activities in violation of the Service stipulations.

D. Only authorized personnel are permitted to handle desert tortoises. If construction or maintenance of range improvements endangers the life of a desert tortoise, then authorized persons may move the animal a short distance away or hold the animal overnight to release it in the same area the next day.

E. All construction and maintenance workers shall strictly limit their activities and vehicles to areas flagged or cleared by persons authorized by the Service. When off-road use with equipment is required, the lessee is to notify the BLM two working days prior to construction or maintenance of a facility.

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Appendix D
Desert Tortoise Mitigation Measures

Introduction

These measures are intended to minimize the impacts of authorized actions or projects on desert tortoise and its habitat. In various wordings, they have been included in biological opinions issued by USFWS and in land-use decisions of BLM and others on Federal lands. Livestock grazing mitigation measures have not been reiterated due to their length and because they have been previously applied to the four allotments.

General Mitigation Measures

1. Designated Persons

In the following measures, a "Qualified Biologist" is defined as a person with appropriate education, training, and experience to conduct tortoise surveys, monitor project activities, provide worker education programs, and supervise or perform other implementing actions. The person must demonstrate an acceptable knowledge of tortoise biology, mitigation techniques, habitat requirements, sign identification techniques, and survey procedures. Evidence of such knowledge may include work as a compliance monitor on a project in desert tortoise habitat, work on desert tortoise trend plot or transect surveys, or other research or field work on desert tortoise. Attendance at a training course endorsed by the agencies (e.g., Desert Tortoise Council tortoise training workshop) is a supporting qualification.

An "Authorized Biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by USFWS and CDFG for this project. Name(s) of proposed Authorized Biologist(s) must be submitted to USFWS and CDFG for approval at least 15 days prior to anticipated need. The tortoise handling protocol is described in Attachment 2.

A "Field Contact Representative" (FCR) is defined as a person designated by the project proponent who is responsible for overseeing compliance with desert tortoise protective measures and for coordination with the agency compliance officer. The FCR must be on-site during all project activities. The FCR shall have the authority to halt all project activities that are in violation of these measures. The FCR shall have a copy of all tortoise protective measures when work is being conducted on the site. The FCR may be an agent for the company, the site manager, any other project employee, a biological monitor, or other contracted biologist."

2. Worker Training

All workers, including all participating agency employees, construction and maintenance personnel, and others who implement authorized actions shall be given special instruction. This instruction will include training on distribution, general behavior and ecology, protection afforded by State and Federal endangered species acts (including prohibitions and penalties), and procedures for reporting encounters, and the importance of following the protection measures. The education program may consist of a class or video presented by a Qualified Biologist. It is recommended that workers carry wallet cards with important information while in the field.

3. Compliance

The FCR shall oversee compliance and coordination with the authorizing agency. Compliance shall include conducting species surveys, proper removal of species from areas being impacted, assurance that a sufficient number of Qualified Biologists are present during surface disturbance, and that all conditions of the authorization are being met by proponent, contractors, and workers. The FCR shall have the authority to halt activities that are in not in compliance with the authorization.

Any incident occurring during project activities which is considered by the biological monitor to be in non-compliance with the mitigation plan shall be documented immediately by the biological monitor. The FCR shall ensure that appropriate corrective action is taken. Corrective actions shall be documented by the monitor. The following incidents shall require immediate cessation of the construction activities causing the incident, including (1) imminent threat of injury or death to a desert tortoise; (2) unauthorized handling of a desert tortoise, regardless of intent; (3) operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads, and (4) conducting any construction activity without a biological monitor where one is required (see Term and Condition 2.1). If the monitor and FCR do not agree, the Federal agency's compliance officer shall be contacted for resolution. All parties may refer the resolution to the Federal agency's authorized officer."

After completion of the project, the participating agency which authorized the project shall conduct a review to determine if the project proponent complied with the conditions of authorization. Corrective actions shall be required of the proponent where conditions have not been met.

4. Compensation

A mitigation fee based on the amount of acreage disturbed shall be required of proponents of new development. Within DWMAs (Category I) the lands delivered or equivalent fee shall be an amount that achieves a ratio of 5 acres of compensation land for every 1 acre disturbed. Outside DWMAs (Category III) the lands delivered or equivalent fee shall be an amount that achieves a ratio of one 1 acre of compensation land for every 1 acre disturbed. Funds may be expended as approved by the Management Oversight Group in 1991. Lands will be acquired or enhanced within the same recovery unit as the disturbance. CDFG may require additional fees for management of lands and for rehabilitation of lands.

5. Tortoise Seasonal Restrictions

To the extent possible, activities shall be scheduled when tortoises are inactive (November 1-March 15). Dual-sport (non-speed, trail-ride) events and non-emergency maintenance of roads are restricted to this season.

6. Pre-Construction Clearance Surveys

Pre-construction surveys shall be conducted to locate and remove desert tortoises prior to grading or actions which might result in harm to a desert tortoise or which remove tortoise habitat. The survey shall be conducted by an Authorized Biologist within 24 hours of the onset of the surface disturbance unless a tortoise-proof fence has been installed that would prevent re-entry of the animals.

7. Site Fencing and Hazard Removal

During the tortoise active season, March 15 - November 1, no overnight hazards to desert tortoises (e.g., auger holes, trenches, pits, or other steep-sided depressions) shall be left unfenced or uncovered; such hazards shall be eliminated each day prior to the work crew leaving the site.

Large or long-term project areas shall be enclosed with tortoise-proof fencing to keep desert tortoises out of the work area. The fencing shall be wire mesh with a maximum mesh size of ½" square fastened securely to posts. The wire mesh shall extend at least 18 inches above the ground and preferably about 12 inches underground. Where burial is not possible, the lower 12 inches shall be folded outward and fastened to the ground. Any gates or gaps in the fence shall be constructed to prevent entry of tortoises. The fencing shall be removed when restoration of the site is completed.

Temporary fencing shall be required around test sites where trenching or drill holes could trap animals or around other small, short-term projects where tortoises could move into the work area. Occasionally, seasonal restrictions and/or monitoring may be substituted to alleviate the need for fencing.

Fenced areas are to be cleared of tortoises by an Authorized Biologist prior to project activities.

8. Surface Disturbance

All surface disturbing activity shall be limited to the land area essential for the project. In determining these limits, consideration shall be given to topography, public health and safety, placement of facilities, and other limiting factors. Work area boundaries and special habitat features shall be appropriately marked to minimize disturbance. All workers shall strictly limit their activities and vehicles to the areas marked. All workers shall be trained to recognize work area markers and to understand equipment movement restrictions. Where possible, previously disturbed areas shall be used as worksites and for storage of equipment, supplies, and excavated material.

Blading of work areas shall be minimized to the extent possible. Pre-construction activity, such as removal of vegetation, shall occur in the presence of a Qualified Biologist. Disturbance of shrubs shall be avoided to the extent possible. Where shrubs must be disturbed, they shall be crushed rather than bladed or excavated.

Project maintenance and construction, stockpiles of excavated materials, equipment storage, and vehicle parking shall be limited to existing disturbed areas wherever possible. Should use of existing disturbed areas prove infeasible, any new disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows or vegetation, public health and safety, and other limiting factors. Special habitat features, particularly tortoise burrows, shall be flagged by the Qualified Biologist so that they may be avoided by installation equipment and during placement of poles and anchors.

9. Biological Monitor

For activities conducted between March 15 and November 1 in desert tortoise habitat, construction and operation activities shall be monitored by a Qualified Biologist approved by BLM. The Qualified Biologist shall be present during all activities in which encounters with tortoises may occur. The Qualified Biologist

shall watch for tortoises wandering into the construction areas, check under vehicles, examine excavations and other potential pitfalls for entrapped animals, examine exclusion fencing, and conduct other activities necessary to ensure that death or injuries of tortoises is minimized.

10. Refuse Disposal

All trash and food items generated by construction and maintenance activities shall be promptly contained and regularly removed from the project site to reduce the attractiveness of the area to common ravens and other desert predators. Portable toilets shall be provided on site if appropriate.

11. Dogs

Dogs shall be restrained either by enclosure in a kennel or by chaining to a point within the tortoise-proof exclosure if one has been constructed for the activity.

12. Ravens

Structures which may function as common raven nesting or perching sites are not authorized except as specifically stated in the appropriate BLM document. The proponent shall provide a graphic description of all structures to be erected on the site. Some actions are required to mitigate actual nesting on authorized structures, such as requiring the proponent to secure necessary permits to remove nests and to remove such nests in a timely fashion. USFWS does not (or rarely) authorize nest removal if birds are present in the nest, but does authorize nest removal after birds have left.

13. Motorized Access

Where possible, motor vehicle access shall be limited to maintained roads and designated routes. Where temporary access off a maintained road or designated route is permitted, a Qualified Biologist shall travel with each work crew to ensure that all desert tortoises and their burrows are avoided and that impact to the habitat is minimized. All vehicle tracks that might encourage public use shall be obliterated after temporary use.

Where access from a maintained road or designated route to a project's site is part of the approved development plan, length and location of the route shall be designed to minimize impact to the habitat. The amount of disturbed area shall be subject to the mitigation fee, and the route shall be designated "Limited Use" and not open to the public. The following requirements apply to vehicle use.

a. **Speed Limits**. Vehicle speed within a project area, along right-of-way maintenance roads and on routes designated for limited use shall not exceed 20 miles per hour. Speed limits shall be clearly marked by the proponent, and workers shall be made aware of these limits.

b. **Tortoises Under Vehicles**. Vehicles parked in desert tortoise habitat shall be inspected immediately prior to being moved. If a tortoise is found beneath a vehicle, the Authorized Biologist shall be contacted to move the animal from harm’s way, or the vehicle shall not be moved until the desert tortoise leaves of its own accord. The Authorized Biologist shall

be responsible for taking appropriate measures to ensure that any desert tortoise moved in this manner is not exposed to temperature extremes which could be harmful to the animal.

14. Route Maintenance and Surface Restoration

The following mitigation measures shall be implemented during all route maintenance and surface restoration projects:

a. **Heavy Equipment**. Operators of heavy equipment (such as road graders) shall be accompanied by a biological monitor who is a Qualified Biologist when working in desert tortoise habitat during the desert tortoise's active period (March 15 to October 31). The biological monitor shall walk **in front** of the equipment during its operation and shall function as the FCR and have the responsibility and authority to halt all project activity should danger to a desert tortoise arise. Work shall proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or the desert tortoise has been moved from harm's way by an Authorized Biologist. This measure does not currently apply to County or Caltrans road work on BLM land.

During the desert tortoise's inactive period (November 1 to March 15), an on-site monitor is not required. The operator shall watch for desert tortoises while using the equipment and shall have the responsibility for preventing harm to desert tortoises by proceeding only after hazards to the desert tortoise are removed or the desert tortoise is no longer at risk. Operators of light equipment used for trail maintenance and project leaders for surface reclamation actions shall watch for desert tortoises during all project activities. They shall have the responsibility for preventing harm to desert tortoises by proceeding only after hazards to the desert tortoise are removed or the desert tortoise is no longer at risk.

b. **Injury**. Should any desert tortoise be injured or killed, all activities shall be halted, and the Authorized Biologist immediately contacted. The biologist shall have the responsibility for determining whether the animal should be transported to a veterinarian for care, which is paid for by the project proponent, if involved. If the animal recovers, USFWS is to be contacted to determine the final disposition of the animal; few injured desert tortoises are returned to the wild.

c. **Report**. The equipment operator or Authorized Biologist shall keep a tally of all desert tortoises seen, moved, injured or killed during the project. Other required elements are (1) rating the effectiveness of required mitigation, (2) a breakdown of actual habitat disturbance, and (3) suggestions for improving mitigation.

d. **Water Ditches**. The equipment operator or Qualified Biologist shall inspect water ditches for desert tortoise burrows before moving or shoveling any soil. If a desert tortoise burrow is present, the water ditch shall be left undisturbed, if possible. The equipment operator shall inspect water ditches for desert tortoise burrows.

e. **Burrows**. If a burrow is occupied by a desert tortoise and avoidance of the burrow is not possible during road maintenance or reclamation activities, the Authorized Biologist shall make the final determination. Only an Authorized Biologist may excavate the desert tortoise, following established protocols.

f. **Grading**. To avoid building up tall berms that may inhibit desert tortoise movement, the operator should minimize lowering of the road bed while grading. Berms higher than 12 inches or a slope greater than 30 degrees shall be pulled back into the road bed. Where it is not feasible to meet these requirements, berms will be mitigated through such means as artificial breaching at washes, intersections, or ditch-outs for drainage with adequate spacing.

g. **Speed Limits**. The equipment operator shall watch for desert tortoises on the road whenever driving, transporting, or operating equipment. Driving speeds shall not exceed 20 miles per hour, and operating speeds should not exceed 5 miles per hour to allow for adequate visibility.

Special Mitigation for Specific Uses

15. Mineral Exploration and Development

In addition to mitigation measures described above for general mitigation, the following special mitigation measures shall apply to small mining operations and minor exploration and test drill holes in which the surface disturbance or area from which desert tortoises are to be removed is less than ten acres:

a. **Compliance**. A Qualified Biologist shall be on-site during the initial mining activity.

b. **Explosives**. If explosives are authorized, the BLM's field office biologist shall verbally consult with the appropriate USFWS office to determine what measures shall be required to reduce the potential to take desert tortoises. This measure may include:

(1) Seasonal restrictions upon the use of explosives;

(2) Temporary removal of desert tortoises from areas potentially at risk during detonation either directly from the explosion or by thrown materials. All handling and storage of desert tortoises for this purpose shall be conducted as described in Measure 3 by an Authorized Biologist.

(3) Covering of desert tortoise burrows to reduce impacts of flying materials.

16. Non-Competitive Recreational Events

The following measures shall apply to all vehicle-oriented, dual-sport, and other non-competitive trail events:

a. **Timing**. Events shall be held during the hibernation season for desert tortoises, generally considered to be between November 1 and March 1. Routes selected shall avoid impacting other special status plants and animal species. Any course flagging or markers shall be placed on the course not more than two weeks prior to the event and shall be removed within one week after conclusion of the event.

b. **Limits**. The event shall be restricted to designated routes and limited to 500 rider participants per event. Participants shall not exceed 30 miles per hour through Category I and II tortoise habitat. They shall be notified of this requirement at the beginning of the event and before the start of the event on any subsequent days. Racing shall be prohibited.

c. **Maps**. A map identifying the course shall be furnished to each entrant. The map shall clearly delineate maximum speed limits, authorized camp sites, and Conservation areas, and shall include a statement cautioning that travel beyond the edge of the roads into undisturbed habitat is strictly prohibited.

d. **Parking**. Vehicles shall be parked at the side of the road or areas devoid of any perennial vegetation. Any entrants who abandon the event must exit the course on designated routes or public roads.

e. **Camping**. Overnight camping shall be limited to existing campgrounds or designated camp sites capable of accommodating the group. Selected camping areas shall be surveyed by a Qualified Biologist prior to the event to determine if desert tortoise burrows or other special status plant or animal species are present.

f. **Trash**. Trash and food items shall be carried out by the participants. The event proponent shall be responsible for ensuring that trash and garbage are not left behind.

g. **Injury**. Injured tortoises found on the course shall be transported to an approved veterinarian (list provided to event organizers) at the earliest possible time. The proponent shall be responsible for the cost resulting from treatment of desert tortoises whose injuries resulted from the event.

h. **Clearance**. The entire course shall be swept by an Authorized Biologist within an hour before the event. In addition, an Authorized Biologist shall travel at the front of the event to ensure that the route is cleared of all desert tortoises. Desert tortoises found shall be moved approximately 100 feet off the course.

17. Competitive Events

These measures apply to organized off-highway vehicle events in designated vehicle open areas.

a. Organized event promoters and sponsors shall designate an FCR responsible for overseeing compliance with the special desert tortoise stipulations.

b. Prior to commencing the event, organized event promoters and sponsors shall provide event participants and spectators with the BLM's printed materials describing: the occurrence of the desert tortoise in the area, the status of the desert tortoise, prohibitions against take and the penalties associated with take, and methods being employed as a part of the event to protect the desert tortoise and its habitat.

c. Organized event promoters and sponsors that fail to comply with any of the special recreation permit stipulations shall be prosecuted to the fullest extent possible.

d. Trash containers used for race event shall be raven-proof. Trash and food items shall be promptly contained and removed from the area within 24 hours of completion of the event.

e. Participants who violate any special desert tortoise stipulation shall be disqualified from the event. Support team members that fail to comply with the stipulations shall result in disqualification of the associated rider(s). Anyone who accumulates three violations shall be barred from participating in any organized off-highway vehicle event for one year from the date of the third violation.

18. Utility Pipelines and Underground Cables

For construction and maintenance of all pipelines, fiber-optic lines, and other utilities requiring trenching, the following measures shall apply:

a. **Width**. Construction rights-of-way shall be restricted to the narrowest possible width.

b. **Exceptions**. All project construction and maintenance shall be restricted to the authorized right-of-way. If unforeseen circumstances require expansion beyond the right-of-way, the potential expanded work areas shall be surveyed for desert tortoises.

c. **Access**. Vehicular travel shall be limited to the right-of-way. Access to the right-of-way shall be limited to public roads and designated routes.

d. **Trenches**. Open trenches shall be regularly inspected by the Authorized Biologist at a minimum of once per day, and any desert tortoises that are encountered shall be safely removed. For small projects, escape ramps are sometimes required. The length of the trench left open at any given time shall not exceed that distance which will remain open for one week or less in duration. A final inspection of the open trench segment shall be made by the Authorized Biologist immediately prior to backfilling. Arrangements shall be made prior to the onset of maintenance or construction to ensure that desert tortoises can be removed from the trench without violating any requirement of the Occupational Safety and Health Administration.

e. **Maintenance**. Observations of desert tortoises or their sign during maintenance shall be conveyed to the field supervisor and a biological monitor. Employees shall be notified that they are not authorized to handle or otherwise move tortoises encountered on the project site.

f. **Compliance**. Sufficient Authorized and Qualified Biologists shall be present during maintenance or construction activities to assist in the implementation of on-site mitigation measures for the desert tortoise and to monitor compliance. The appropriate number of biologists will depend upon the nature and extent of the work being conducted and shall be stated in the right-of-way grant for each particular action, after consultation with the specific resource area office authorizing the action.

g. **Final Assessment**. The authorizing agency shall ensure that maintenance or construction activities are confined to the authorized work areas by means of a post-project assessment. The assessment may be conducted by the Authorized Biologist. If maintenance or construction activities have extended beyond the flagged work areas, the BLM shall ensure that the project proponent restores these disturbed areas in an appropriate manner.

h. **Restoration**. The proponent shall be required to restore disturbed areas in a manner that would assist re-establishment of biological values within the disturbed rights-of-way. Methods of restoration shall include, but not be limited to; road closure, the reduction of erosion, respreading of the top two to six inches of soil, planting with appropriate native shrubs, and scattering any bladed vegetation and rocks, where appropriate, across the right-of-way.

19. Power Transmission

The following mitigation measures shall be implemented during all construction and maintenance of transmission lines:

a. **Surveys**. When access along the utility corridor already exists, pre-construction surveys for transmission lines shall provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines shall follow standard protocol for linear projects.

b. **Access**. To the maximum extent possible, access for transmission line construction and maintenance shall occur from public roads and designated routes.

c. **Disturbed Areas**. To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites shall be sited in a manner that avoids desert tortoise burrows.

d. **Restoration**. Whenever possible, spur and access roads and other disturbed sites created during construction shall be recontoured and restored.

e. **Ravens.** All transmission lines shall be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company shall remove any common raven nests that are found on its structures. Transmission line companies must

obtain a permit from the USFWS's Division of Law Enforcement to take common ravens or their nests.

20. Fire Management

a. Federal land management agencies will assign an environmental specialist on all wildfires exceeding initial attack.

b. Before the beginning of each fire season, firefighters and support personnel will be provided with a briefing on tortoises and their habitat. This education program will focus on minimizing take of any listed species, particularly take due to vehicle use.

c. On-road travel speeds will be kept low to reduce take of desert tortoise.

d. Off-road vehicle travel will be restricted to the minimum necessary to suppress wildfires.

e. Individuals trained to recognize tortoises and their shelter sites will precede any vehicle traveling off-road.

f. Camps, staging areas, and helispots will be pre-surveyed for tortoises and burrows by the assigned environmental specialist. Camps will be established within previously disturbed areas whenever possible.

g. Some effects of suppression may require rehabilitation action (e.g., surface disturbance from dozers).

h. Some burned areas may require monitoring and follow-up treatment to promote return of native species and discourage exotic species.

Project Reporting

For each project on which the consultation is to be applied, the BLM will transmit a reporting form (Attachment 1) to the appropriate USFWS field office at least 30 days prior to authorizing the activity. If there is no response after 30 days, the project may be approved.

Each Field Office will report to the California Desert District Office the actual acres disturbed, the number of tortoises moved, and the number of tortoises killed within 30 days of the completion of each project covered under this consultation. The California Desert District Office will report annually on these projects to the Ventura and Carlsbad field Offices of USFWS.

The BLM's California Desert District maintains a tabular and GIS record of all compensation acquisitions.

Attachment 1

Reporting Form

(on following pages)

REPORT ON PROPOSED ACTION TO BE COVERED BY THE PROGRAMMATIC CONSULTATION ON ACTIVITIES RESULTING IN SMALL DISTURBANCES OF DESERT TORTOISE HABITAT IN THE CALIFORNIA DESERT

Authorization may not be issued until USFWS has 30 days for review and comment. For actions in Inyo, Kern, Los Angeles, and transmontane San Bernardino Counties, send to USFWS, Field Office Supervisor, 2493 Portola Road, Suite B, Ventura, CA 93003. For actions in Riverside, Imperial, and cismontane San Bernardino Counties, send to USFWS, Carlsbad Field Office Supervisor, 2730 Loker Avenue West, Carlsbad, CA 92008. ** Send a copy to BLM California Desert District T&E Coordinator.

Name of Project: _____ BLM Case File No.: _____

Type of Activity: _____

BLM Contact:_____ Date of Preparation:_____

Location of Activity: Base Meridian ___ Township ___ Range ___ Section ___

General locality: _____
_____

BLM Field Office: _____
or other jurisdiction: _____

Tortoise Critical Habitat Unit: _____
Tortoise Recovery Unit: _____
BLM Tortoise Habitat Category (I, II, III): _____

Brief description of project (include site photographs, topographic map of location, and proposed construction dates):
_____
_____
_____
_____
_____
_____
_____
_____
_____

Stipulations to be applied (list specific stipulation numbers from biological opinion):
_____

Attachment 2

Handling of Desert Tortoises

Only an "Authorized Biologist" (see Measure 1) shall handle a desert tortoise. No handling activities shall begin until an Authorized Biologist is approved. Authorization for handling shall be granted under the auspices of the Section 7 consultation. BLM Field Office Biologists are authorized to handle tortoises in accordance with these measures.

If a tortoise or clutch of eggs is found in the project area, to extent practical, activities shall be modified to avoid harm or injury to it. If activities cannot be modified, the tortoise or clutch shall be moved from harm's way the minimum distance possible within appropriate habitat to ensure its safety from death, injury, or collection. The Authorized Biologist is allowed some discretion to ensure that survival of each relocated tortoise or clutch is likely.

In handling desert tortoises, the Authorized Biologist shall follow the techniques for handling in "Guidelines for Handling Desert Tortoise During Construction Projects" (LaRue 1994). Desert tortoises moved shall be marked for future identification in the event that a dead tortoise is found later in the project area.. An identification number using the acrylic paint/epoxy covering technique shall be placed on the fourth left costal scute as described the Handling Protocol. A 35-mm slide of the carapace, plastron, and the fourth costal scute shall be taken.

No notching of scutes or replacement of fluids with a syringe is authorized.

The Authorized Biologist shall maintain a record of desert tortoises handled. This information shall include:

1. The location (narrative and map) and dates of observations
2. General condition and health of the tortoise, including injuries and state of healing and whether the animal voided its bladder
3. location moved from and to
4. Diagnostic markings (e.g., scute markings)
5. Slide photograph of each tortoise handled

Encounters with listed species shall be reported to the FCR. The FCR shall maintain a record of all listed species encountered during project activities. Information recorded shall be the same as that for animals that were handled.

Upon locating dead, injured, or sick individuals of a listed species, the Federal land management agency must be notified immediately. The agency must make or verify initial notification to the Service's Division of Law Enforcement at (310) 297-0062 in Torrance, California, within three working days of its finding. The Service's Field Office within whose area of responsibility the specimen is recovered shall also be notified (Carlsbad: 619-431-9440; Ventura: 805-650-9845). The agency must make written notification within five calendar days and include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. Care must be taken in handling sick or injured animals to ensure treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

The Federal land management agency in that area shall endeavor to place the remains of intact listed species with educational or research institutions holding the appropriate State and Federal permits per their instructions. If such institutions are not available or the animal's remains are in poor condition, the information noted above shall be obtained and the carcass left in place. If the animal is a desert tortoise, the carcass shall be marked in a manner that would not be toxic to other wildlife to ensure that it would not be re-recorded in the future. Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Animals injured by project activities should be transported to a qualified veterinarian. Should any treated animals survive, the appropriate Service field office should be contacted regarding the final disposition of the animals.

Appendix E
Desert Restoration

Many new ideas for restoring desert habitats are being developed. Their implementation should improve restoration, both qualitatively and temporally, on a general basis and for sensitive areas as well. A comprehensive and long-term effort is in progress through the efforts of the Desert Restoration Task Force (DRTF), a committee to the Desert Managers Group. This committee has developed a planning and methods publication on the subject. Over the years, the Desert Managers Group will also play an important support role regarding monitoring and research proposals, in the form of improving site planning, applications and priorities. An important point to make is that restoration is a developing science. Tried and tested site planning and application techniques will be used, but experimentation will also be encouraged to advance the science. There are too many considerations and variables to "cook-book" restoration by species and habitat, so the purpose of this appendix is to convey a degree of thought and common actions developed by the DRTF so that the reader gets an idea about what to expect and visualize when restoration is discussed. In the final analysis, it will be left to case by case field applications (i.e., by project) to evaluate the needs and specify actions, expense, and priorities for restoration.

The NECO Science Panel, which met on November 12, 2001, indicated that disturbance is not entirely a negative ecological condition. Wash, wind, tectonic, fire, and other violent natural forces cause disturbance in addition to what humans create. Variables to consider in restoration may include the amount, location, nature, and effects of disturbance and other constraints. Disturbance is one of several natural ecological processes. Disturbances which pose serious problems that do not lend themselves to a "construction" solution and are not addressed here, include disease, unnatural change to fire regime, and exotic plants. The challenge to land managers in dealing with disturbance is to develop restoration protocols for human-caused disturbance that are need/goal defined, are cost effective, consider situation context and other constraints, and leave sites in conditions that approximate natural disturbance and restoration. To meet this mandate, decision makers must apply site planning and review a variety of technical applications.

Site planning and restoration considerations may include:

1. **Special Status Species**

    - listed, proposed for listing, sensitive
    - species-habitat relationships that apply.

2. **Plant Community**

    - common, rare
    - site quality

3. **Management Goals**

    - general management goals

- special management goals (e.g., DWMA, WHMA, species and sensitive habitats). This consideration is critical and can make the difference between a minimally necessary and special needs restoration and cost.

4. **Ecological Processes**

- determine the preexisting condition, distribution of species and habitats
- most important to restore and that humans can effect
- commonly considered are soil, hydrologic, wind functions, movement of animals, sources and movement of seed.

5. **Conservation Principles**

- patch size (fragmentation)
- cover stories
- corridors
- habitat conversion to exotic species

6. **Site Context**

- site in area of habitat
- site in the range(s) of species
- site quality
- cumulative situation, if any, of this site, with others of a permanent/temporary disturbance nature

7. **Site Analysis/Pre-existing Site Condition** - constraints and objectives

- Topography, Slope, Aspect
- Landforms (e.g.,washes, desert pavement, sand systems)
- Surface and Subsurface Soils
- Vegetation
- Subsurface organic matter
- Surface texture/micro-habitat: organic debris, soil, sand, rock texture

8. **Constraints**

- Can approximate original topography be achieved?
- Is compaction a problem?
- Historic use patterns
- Are materials on hand to recreate original surface texture?
- Are there uses to prevent or that could impair restoration efforts?
- Time
- Cost

9. **Common applications** (not for all situations)

    - Grading (topography, landform, microtopography, surface texture)
    - Replacing topsoil
    - Increasing soil moisture through mulching surface or subsurface (non contaminated with chemicals or weed seeds), imprinting, pitting
    - Treating compacted soils
    - Capturing and holding seeds through imprinting and pitting
    - Seeding (seed treatment) with locally gathered/commercially available seed
    - Individual plantings/Irrigation (costly, uncommon)
    - Erosion control
    - Plant salvaging/replanting
    - Exotic plants control
    - Maintenance measures

10. **Monitoring Program**

    - Contingency measures

11. **Success Criteria**

    - Tied to bonding and bank release

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Appendix F
Public Education Program from the California Statewide Desert Tortoise Management Policy

Introduction

[The following is from Chapter VIII, "Public Education Program," of the *California Statewide Desert Tortoise Management Strategy*, which was signed by the BLM California State Director and Director of the California Department of Fish and Game in October 1992. This abbreviated version contains the entire introduction and all planned actions. Details such as lead responsibility, target year, and estimated cost for each action have been deleted. Some of the actions have been completed, some have not, and some are on-going.]

Bureau policy as stated in "Desert Tortoise Habitat Management on the Public Lands: A Rangewide Plan" (Spang *et al*. 1988) is that each state shall embark on an aggressive public education program concerning tortoise populations and habitats to promote compliance with State and Federal laws and to reduce unnecessary mortality. As the first step in this campaign, the Rangewide Plan requires development of a desert tortoise public education plan in each state.

The California Department of Fish and Game and U.S. Fish and Wildlife Service play key roles in managing and protecting desert tortoise populations and habitat. The assistance of these agencies will be required to implement an effective public education program. The participation of other State and Federal agencies with jurisdiction over tortoise habitat will be important as well.

In addition to government agencies, several private organizations share concern for the desert tortoise and have valuable expertise. The Desert Tortoise Council, Desert Tortoise Preserve Committee, and California Turtle and Tortoise Clubs have been very active in assisting agencies with public education by developing brochures and slide presentations, leading public tours, developing signs and kiosks, and holding public forums and conferences.

Close cooperation among all of these agencies and organizations will enhance any efforts to benefit desert tortoises through increased public education. The following plan is built upon the proposition that the agencies can positively impact public knowledge of and behaviors toward the desert tortoise.

Objectives

The specific objectives of the public education plan are as follows:

- increase public awareness of the need to protect desert tortoises and their habitat on California's Public Lands
- increase public knowledge of State and Federal laws and regulations protecting desert tortoises
- educate the public regarding their role in protecting tortoises and tortoise habitat

- modify social behavior in a manner that benefits desert tortoise populations and their habitat
- increase public knowledge of and support for agency actions to benefit desert tortoises and their habitat

Strategy A: Enhance public knowledge of desert tortoises (e.g., their evolution, life cycle, and habitat needs), stressing the need for their protection.

Action 1: Support efforts of museums, zoos, and other public institutions to develop permanent desert tortoise exhibits.
Target audience: General public, including schoolchildren.
Action 1-a: Continue support of the San Bernardino County Museum's effort to develop a desert tortoise exhibit.
Action 1-b: Offer support to the California Living Desert Museum in Bakersfield by providing assistance and brochures for their desert tortoise exhibit.
Action 1-c: Offer support to the Living Desert Reserve in Palm Desert in operating their outdoor interpretive program involving a live-tortoise exhibit.
Action 1-d: Offer support to the Mojave Narrows Regional Park in Victorville in developing an outdoor interpretive program involving a live-tortoise exhibit.

Action 2: Develop a portable desert tortoise exhibit primarily for use in museums throughout Southern California.
Action 2-a: Design and produce the portable exhibit.
Action 2-b: Seek exhibit space at local museums.
Action 2-c: Circulate exhibit to area museums and provide necessary maintenance.

Action 3: Develop tortoise displays for Federal and State agency offices.
Action 3-a: Construct a tortoise display for the Bureau's California Desert Information Center in Barstow.
Action 3-b: Explore other opportunities and encourage other agencies (e.g., State Parks, Regional Parks, National Monuments) to develop desert tortoise exhibits and displays within their visitor centers.

Action 4: Develop educational packets for use in classrooms.
Action 4-a: Complete desert tortoise segment of Bureau's California natural resources videotape series and distribute to schools statewide.
Action 4-b: Develop and print coloring books for elementary students.
Action 4-c: Produce educational posters for classrooms.
Action 4-d: Design and produce desert tortoise stickers for children.
Action 4-e: Develop a teacher's handbook for their use in teaching units about the desert tortoise.
Action 4-f: Develop a desert tortoise game for elementary students and make it available for incorporation into Project Wild materials.

Action 5: Work with university/media/corporate sponsor(s) to develop a quality video on desert tortoises for release to network, local, and cable television stations.

Action 6: Encourage media feature coverage of desert tortoises and their environment.

Strategy B: Educate the public regarding their role in protecting wild desert tortoise populations and their habitat.

Action 7: Develop an informational reference book for agency information desks, rangers, and wardens.

Action 8: Produce informational brochures and leaflets for distribution to the general public and targeted audiences.

Action 8-a: Develop a general informational brochure describing what the public can do to assist the desert tortoise. The brochure will target a general public for distribution at county fairs, desert information outposts, agency offices, rest areas/truck stops, and to captive tortoise permittees.

Action 8-b: Develop a general informational brochure aimed toward schoolchildren for distribution at school presentations or as part of the teaching unit in Strategy A.

Action 8-c: Develop a series of brochures targeted toward specific users of the Desert (e.g., OHV users, sheepherders, hunters and shooters, and campers); illustrate their potential role in helping the tortoise.

Action 9: Design and erect a new sign at the Desert Tortoise Natural Area; include in the sign appropriate behavior messages and offer an "800" telephone number for information on tortoise adoption.

Action 10: Design, produce, and distribute desert tortoise posters with protection message.

Action 11: Work with CalTrans to design and install separate, free-standing, interpretive kiosks with desert tortoise protection information at highway rest areas.

Action 12: Develop and produce print media, radio, and television public service announcements for distribution throughout Southern California.

Action 13: Review tortoise information in the Bureau's Desert Access Guide series and other agency publications/maps for possible revision or inclusion.

Action 14: Develop and produce portable displays for use at county fairs, shows, agency offices, shopping malls, etc.

Action 15: Develop a brochure/leaflet for distribution to tortoise permittees explaining the problems with unauthorized release of captive tortoises into wild populations.

Action 16: Encourage involvement of individuals, interest groups, students, Scouts, etc., in volunteer projects which benefit desert tortoises.

Strategy C: Increase public knowledge of State and Federal regulations protecting desert tortoises and modify public behavior to benefit tortoises.

Action 17: Develop a brochure explaining Federal listing of the desert tortoise and its effects.

Action 18: Include regulatory information in other publications/products outlined above.

Action 19: Develop and publish a flyer for distribution by rangers and wardens stressing appropriate behavior while in desert tortoise habitat.

Action 20: Publicize law enforcement actions and court-imposed penalties for offenders.

Strategy D: Increase public knowledge of and support for agency actions benefitting desert tortoises.

Action 21: Provide accurate, timely, and detailed information to media in advance of actions through news releases, fact sheets, media tours, press conferences, media packets, etc.

Action 22: To develop broad-based support for management actions, maintain close cooperation among agencies and private organizations benefitting tortoises to keep them apprised of and involved in decision-making.

Action 23: Update existing slide programs and possibly convert them to videotape for use in presentations to interest groups, California Desert Information Center visitors, local/county/state/federal officials, and at county fairs.

Action 24: Develop a series of 5-10 minute slide programs or videos relating agency efforts to protect tortoise populations and habitat. Topics might include the following:

- Disease control
- Raven predation and control
- Habitat acquisition
- Vehicle use in sensitive tortoise habitat
- Tortoise population trends and study plot data

The videos might target agency employees, interest groups, or the general public.

Action 25: Make presentations at professional symposia.

Appendix G
Limitations on Cumulative New Surface Disturbance

It is proposed that cumulative new surface disturbance on lands administered by Federal and State agencies within Desert Wildlife Management Areas (DWMAs) shall be limited to 1 percent (or, alternatively, 3 percent). The amount that may be disturbed will be apportioned among the various participating agency jurisdictions.

Rationale

The limit of 1 percent on cumulative surface disturbance is intended to show a high level of commitment to conservation of natural habitats. It is expected to accommodate the needs of those activities that must occur in a DWMA. Among these are communication sites, maintenance of existing and construction of new utilities in designated utility corridors, and mining. It is anticipated that retaining 99 percent of what is presently in natural condition will be sufficient for maintaining viable populations of all species that are dependent upon the DWMA; conserving lesser amounts might be arguable. The commitment to limiting cumulative disturbance is an alternative to the prohibition on specific classes of activities based merely on our ability to prohibit them rather than on such factors as their expected level of occurrence and size, their need, or their public value.

Specifics

Surface disturbing activities are those that result in elimination of perennial plant cover over an area. Elimination may result from blading or otherwise destroying plant roots and severely disturbing soil structure, or it may be less severe in the form of crushing of above-ground plant parts. The localized effects of new corrals or livestock watering sites will be considered surface disturbing, but general grazing will not be. Burned areas will not be included under the cumulative limitation.

Surface disturbing activities will be recorded on 7.5-min. topographic maps and entered into a GIS database as they are permitted. Unauthorized disturbances will also be entered as they are discovered. Disturbances on private lands may also be recorded but will not be limited to 1 percent cumulative disturbance. It would be useful to have existing surface disturbance digitized from baseline aerial photos; new aerial photos could be periodically (e.g., every 5 years) analyzed to determine the full extent of unauthorized disturbance.

Lands acquired by an agency will be considered added to the base in their condition at the time of acquisition. That is, disturbance present on the parcel at the time of acquisition will not be added to the cumulative new disturbance.

If an interstate highway or state highway is widened and creates new surface disturbance in a DWMA, the new disturbance will not be covered by the cumulative limit if highway fencing is added. The fencing will result in increased animal populations along the highway due to decreased wildlife mortality on the road. In addition, there may be a decrease in raven populations as roadkills supporting ravens are reduced. [Raven populations are at elevated levels due to human-related factors, and ravens are known to be preying heavily on some species (e.g., desert tortoise).]

As disturbed lands are restored, they will be subtracted from the cumulative total of disturbed lands. No criteria are set for what would be considered as adequate restoration for a particular site. The adequacy of restoration will be determined on a case-by-case basis jointly by the BLM and USFWS and does not require full reestablishment of habitat to its pre-disturbance state. However, little if any focus on adequacy evaluation will occur until substantial progress is made. A point at which serious evaluation might occur is described as follows:

> Perennial plants are present in densities and sizes so that impacts are substantially unnoticeable in the area as a whole and so that the area provides food and shelter for key wildlife species. More specifically, each species in a suite of the most dominant perennial plants prior to disturbance should be reestablished to at least 40 percent of its original density (i.e., number of plants/hectare) and at least 30 percent of its original total cover. The dominant perennial plants are any combination of perennial plants, which formerly accounted cumulatively for at least 80 percent of relative density[1]. There will be no less than two dominant perennial species. The presence of exotic species may become a factor.

The criteria are aimed at restoring both the productivity and the visual aspect of the vegetative community. The specific levels specified in the criteria are those judged to be sufficient to render the impact unnoticeable and the area productive for wildlife in terms of food and shelter. At these levels, soil condition is generally suitable for growing plants, and annual plant cover is usually present. The use of only perennial plant cover in the criteria allows calculation of the restoration requirement in any year and in any season. The use of specific numbers allows the restoration requirements to be known prior to the disturbance, and the restoration success to be judged at any time. It should be noted that some important plants, such as Joshua trees, which are important as an overstory plant but are not dominant, would not be required. Such plants could be required as additional mitigation on a project-by-project basis, but they would not be used to judge restoration for the purposes of reducing the cumulative disturbance. Annual plants are difficult to use in evaluating restoration progress because (1) the number of species is very high, (2) identification is difficult, and (3) the presence of a given species is highly variable from year to year based on factors (e.g., rainfall) unrelated to habitat restoration. The criteria do not preclude the possibility that annual weeds may be present or even prevalent

[1]For example, if perennial plants A, B, and C have relative densities of 70, 13, and 12 percent, respectively, restoration could take place with species A and either (or both) of species B or C.

Appendix H
Species and Habitat Modeling and Development of Management Areas

Introduction

This appendix describes the development of various biological resources and proposed management maps and areas:

- Natural Communities (plant or vegetation communities)
- Plant and Animal species occurrence
- Plant and Animal richness
- Ecological values ("Hot Spots")
- Desert Wildlife Management Areas (DWMAs) for the desert tortoise
- Bighorn Sheep Wildlife Habitat Management Areas (WHMAs)
- Multi-species Wildlife Habitat Management Areas (WHMAs)

Items I through IV below indicate that, to a considerable degree, the characterization of biological resources and values in the Planning Area is based in modeling. Models are not as precise as exact data, but for the most part such data do not exist and would be extremely costly and time consuming to obtain. However, given the nature of issues and current and foreseeable uses in the Planning Area, it is felt that the sophisticated models described in this appendix serve as adequate basis for management proposals and impacts analyses.

Natural Communities

The beginning point was the vegetation map produced for the California GAP Analysis project by University of California at Santa Barbara. For NECO, the Sonoran and Southwest Eco-region maps from GAP were combined. These coverages were created from photo-interpretation of 1990 satellite imagery and supplemented by large-scale maps, photographs, and some field visits. The minimum mapping unit was 100ha (250 acres) for upland sites and 40ha (100 acres) for wetland sites; the mapping scale was 1:100,000.

Since much of the planning analyses and plan development were going to be dependent upon the habitat map, it was decided to put considerable time and effort into improving the accuracy and resolution of the GAP map, particularly for the sensitive habitat types. This was accomplished through several means: NPS surveys of small areas, additional analyses of satellite imagery, use of orth.-photo quads, consultation with knowledgeable ecologists, and an extensive accuracy assessment survey.

First, the GAP map was simplified by collapsing some of the Holland dominant community types into categories we considered useful for our purposes (12 total). Then, known Alkali Playas and Sand Dune areas were flown by helicopter and a global positioning system (GPS) unit was used to define their outlines. This information was incorporated into the simplified GAP map. Other features, such as Hayfield Lake and some Desert Dry Wash Woodlands, were digitized from additional satellite imagery, orthophotos, and hand drawings on quad sheets from the helicopter surveys. The minimum mapping unit for the sensitive habitats was 16ha.

A botanist from the Palm Springs FO was able to do more refined supervised classifications of satellite imagery to identify areas of Desert Dry Wash Woodland, a feature under-represented in the original GAP maps. Due to reflectance differences in the vegetation, this technique could only be applied to the southern half of the Plan area (south of Highway 62). This raster (30m cell) data set was then combined with the vector coverage after using clustering and smoothing techniques in ARC/INFO GRID.

To quantify the accuracy of the original GAP map, an extensive field verification effort was undertaken by teams of staff and volunteers in the winter of 1996/97. The seven most extensive vegetation types were chosen for sampling (Non-Native Grassland, Sonoran, Mojave, and Chenopod Scrub, Desert Dry Wash Woodland, Sand Dunes, and Playas). A statistician from CDFG provided the guidance to determine the number of points needed in each vegetation type to achieve our goals, following a procedure outlined in Congalton (1991). These numbers depended in part on the level of confidence we had in our existing map (more points were assigned in Chenopod Scrub and Non-Native Grassland) and also in part on the confidence level we wanted for our final result (higher for Desert Dry Wash Woodlands, Sand Dunes, and Playas). Total area of each type was also taken into account. The total number of points needed was determined to be 855. The appropriate number of points were randomly assigned to polygons of the seven selected vegetation types throughout the Plan area using ARC/INFO.

A list of point ID's and their coordinates was generated and used by the surveyors to locate the points in the field with GPS units. Points that were too remote to visit on foot were flown by helicopter. Each site visited on foot was surveyed with a triangular transect 0.5mi on each side. Several types of habitat data were recorded on the transects, including a list of perennial plant species. These lists were used to define the plant community at each site (surveyors did not know the predicted community type for the site).

As a final step, the results of the Accuracy Assessment (AA) were used to further refine the Natural Communities map. As expected, the polygons originally coded Non-Native Grassland were actually mostly Sonoran Creosote Scrub, and much of the Chenopod Scrub areas were reclassified as Mojave Creosote Scrub. Another interesting result was a westward shift in the boundary between Mojave and Sonoran Creosote Scrub. These and other adjustments to the map used the defined community type at the AA points, along with orthophotos (where available) and the expertise of botanists. While it was not possible to quantify the accuracy of the final map, we feel it was a significant improvement over the original version.

Further details on any of these steps are available upon request.

Plants and Animal Species List and Occurrence

Predicted occurrence was mapped for each species of concern (except some plants about which too little is known) utilizing a combination of CDFG range maps, points of known occurrence, specific species models, and professional judgement of participating biologists. These maps have not been assessed for accuracy.

The list of Special Status Species includes species that are known to occur in the planning area and are either listed, had special status designations by DFG, BLM, or the FWS, or were considered to be representative of the area. Species were removed from an initial list if there were occurrences in the area, but no recent siting, or was thought to be a migrant, or mistaken for another subspecies (e.g., Bell's vireo). The list was

developed through a series of meetings of the NECO wildlife team, noted in Chapter 7. At any point in the planning process list revisions were made by the wildlife team based on newly acquired information.

Plant and Animal Richness

Plant and animal richness maps were derived from site visits to approximately 600 of the 850 AA points noted above (Natural Communities mapping). Predictions of which species might occur at any point was made using the Wildlife Habitat Relationship Program (WHR) developed for California. Numbers were interpolated within each major habitat type across the planning area. The maximum number of species was then determined on a quarter quad (1/4 of a 7.5' topographic sheet) basis. The number of species ranged from 22 to 140 with a mean of 99.

Ecological values ("Hot Spots")

The input layers to this model were considered to represent features in the ecosystem that contribute to its ecological functioning either in terms of representativeness, rarity, umbrella species, or impacts. Thirteen layers were created for this exercise. There were two layers on species richness (one for vertebrates and one for plants), four layers for sensitive species (known locations and predicted distributions of plants and vertebrates), one layer each for habitat heterogeneity, bighorn sheep, desert tortoise density, special habitats, water sources and insect "hotspots", and a composite layer of different types of landscape fragmentation.

The unit of analysis was the Quarter Quad (QQ) - one quarter of a USGS 7.5min quad sheet. There are 633 QQs in the Plan area, each containing a little less than 10,000 acres. The decision to use the Quarter Quad as the analysis unit was a balance between manageability (processing time for complex analyses), the scale of source data, and the desired level of detail.

The ecological "hotspots" model was created by assigning values to cells of the input layers and combining them in different ways. Each input layer was classified into approximately equal numbers of "high", "medium", and "low" QQs (break points were usually ½ the standard deviation on each side of the mean). QQs containing values below a certain threshold were classified as "none". The results of the 14 analyses described above were grids of QQ cells, each ranked as either high, medium, or low. The characterization of high, medium, or low was determined by the data within the coverage. Scores for each QQ were determined by assigning 3 points to highs, 2 points to mediums, and 1 point to lows and adding the number of points in each QQ. Fragmentation values were assigned inversely (high fragmentation received 0 points, medium 1, low 2, and none 3), the assumption being that fragmentation takes away from the value of an area. The analysis was run three times with different weights applied to selected coverages depending upon what conservation emphasis was being analyzed. The first analysis applied **equal** weight to all the coverages. The second was weighted toward species **richness** - the two coverages on vertebrate and plant richness were weighted double relative to the rest (highs had a value of 6, mediums a value of 4 and lows a value of 2). The third analysis applied a higher weight to species **rarity**. First, the species distribution map of sensitive animal species was weighted according to the following criteria:

Widely distributed/locally uncommon species = 1
Widely rare species = 2
Species endemic to plan area = 3

A second layer was developed with springs and seeps receiving a weight of 1.5 and all other waters a weight of 1. These two new layers, as well as the sensitive habitats layer, were then weighted double and added to the original coverages.

The general pattern for areas of high biological diversity were very similar in all three analyses, with 94-98 percent correspondence between any two. This result was not unanticipated and confirmed similar results by Dueler and Noss (1990). The results of the equal weight analysis are shown in Map H-1.

Designation of Desert Tortoise Desert Wildlife Management Areas (DWMAs)

The boundaries of the large and small DWMAs generally or specifically follow those for critical habitat, but are adjusted on two bases:

1. to follow roads as much as possible for greater manageability, and
2. to exclude areas of low natural occurrence and high use values

Small DWMAs exclude more uses than large DWMAs. Excluded uses are grazing, mining, recreation, private-public checkerboard lands, and areas with higher densities of roads.

DWMAs also overlay portions of CMAGR and BLM wilderness areas. All of JTNP is a DWMA.

Designation of Bighorn Sheep WHMAs

The Bighorn Sheep Wildlife Habitat Management Areas (WHMAs) include all areas designated as Bighorn Sheep habitat. These habitat areas include transient and permanent habitat, movement corridors, relocation areas, and currently unoccupied habitat. These areas were mapped during a NECO workshop of several Bighorn Sheep biologists in June of 1997.

Unlike the Multi-Species WHMAs, the Bighorn Sheep WHMAs overlap all other management zones, including Tortoise DWMAs and BLM Wilderness areas.

Approach for Designating Multiple-Species Wildlife Habitat Management Areas (WHMAs)

After reviewing the considerable body of existing literature on reserve design (see Scott and Sullivan, 1999, for a review) the wildlife team chose to adapt a method outlined in Bedward et al. 1992. This approach takes into account unsuitable areas, land protection "costs", species/ feature protection targets, and existing protected areas. Each step depends on the previous, so ordering is very important.

Two alternative protection goals were identified: one providing "low risk" to species/habitats, with generally 80 percent or more of species habitats in the conservation zone, and one providing "high risk" to species/habitats, with a target of at least 50 percent in the conservation zone. "Risk" is of course difficult to define, and "low" and "high" are used only for comparative purposes. Not all protection targets are exactly 50 percent or 80 percent (see Table H-1 and Appendix N tables).

The "conservation zone" is essentially the aggregate of the following management areas: existing restricted areas (JTNP, CMAGR, and BLM wilderness areas), proposed DWMAs, and WHMAs. Multi-species WHMAs address all the special status species as well as the general diversity of species and habitats.

The 80 percent conservation zone coverage is the basis for the Proposed Plan Large DWMA and the Small DWMA--A Alternatives and the 50 percent coverage for the Small DWMA--B Alternative. Unlike the Bighorn Sheep WHMAs, the system of Multi-species WHMAs is only complimentary to the other elements of the conservation zone. With this in mind, the 80%/50% species/habitats coverages described above refer to the entire conservation zone, not just the Multi-species WHMAs.

The steps used to create the Multi-Species WHMAs were as follows:

Step 1. Identify existing protected areas

In all cases we started with:

- BLM Wilderness
- CMAGR
- NPS
- Unique Plant Assemblages (UPAs)
- Proposed tortoise DWMAs
- Existing biological ACECs

Step 2. Perform GIS overlay analyses

The GIS overlay analyses were to identify percent coverage in the protected areas listed in Step 1 ("GAP" analysis) for species, habitats, and features; then compare to target protection levels (see Table 1); then design WHMAs to correct for "under-representedness."

First, we selected a set of features to be "nuclei" for WHMAs, then added others according to an assigned priority until the target representation levels were attained (see below). Priorities were chosen based upon goals agreed to at previous NECO Wildlife Team meetings and from the March 1998 workshop (listed in bold). Several important ecological features were identified during the March 1998 workshop and were also assigned target protection levels.

Where several units of the same priority level were available, the decision to add was based on (in order): (1) most distant from the areas listed in Step 1 (this was to establish the "nuclei"); (2) consideration of not only absolute distance but latitudinal and longitudinal variation (**representation, diversity**); (3) adjacency to the above "nuclei" (**contiguity**), within existing large fragments (Map H-4) (reduce fragmentation); (4) connectivity to other protected areas (movement corridors, buffers for changing conditions); (5) avoidance of areas with "high" current or predicted disturbance (based on surgace disturbance analyses); and (6) consideration of exotic plants (**focus protection where the fewest have been identified**).

"50%" Alternative

Units of the following features were added until their target was reached (if feasible)--generally 51 percent of a species or habitat distribution (see Table H-1). Units are 1/4 of 7.5min USGS quads [QQs] or habitat polygons. Several of these, such as ecological "hotspots," are a result of GIS modeling and will be described in a separate Appendix. The features added and their order of addition were:

1. *highest ecological "hotspot" QQs (Map H-1) (of 6 classes)
2. *highest plant species richness QQs (Map H-2, H-3) (of 3 classes)
3. *highest habitat heterogeneity QQs (of 3 classes)
4. next highest ecological "hotspot" Qqs
5. highest animal species richness QQs (of 3 classes)
6. sensitive plant communities (in order of under-representedness)
7. other plant communities (if any are under-represented)
8. natural water sources
9. next highest ecological "hotspot" Qqs
10. highest combined sensitive animal ranges QQs (3 classes)
11. highest combined sensitive plant ranges QQs (3 classes)
12. insect hotspots
13. next highest plant species richness Qqs (Map H-X)
14. next highest habitat heterogeneity Qqs
15. under-represented plant and animal species, in order of their distance below target protection levels.

* These first three will be the "nuclei" because they best represent overall biological and physical diversity, and plant richness is our best indicator of vegetation diversity

"80%" Alternative

Units were added until their target was reached (if feasible)--generally 80 percent of a species or habitat distribution (see Table H-1). The features added, their order of addition, and the decision rules were the same as for A) above.

Step 3. Look at the product so far

This step was to double check for units in unsuitable areas or refine to achieve reserve design goals of contiguity, connectedness, etc.

Step 4. Refine boundaries to be manageable (roughly), then re-run GAP analyses.

Step 5. Check to see where targets have not been met

Where targets have not been met, the are added to WHMA system where necessary or feasible (for example, many species have a considerable portion of their distribution on private lands). This step also checks for efficiency--are some features *over*-represented? Steps 4 and 5 are repeated as necessary.

Step 6. Look at the features represented in each area and consider management options.

Should some be ACECs (stronger management options)? Could some just be designated "closed" to driving without calling them WHMAs (i.e. playas)? Could some be managed through Plan-wide habitat actions or "point" management?

Table H-1. Target Protection Levels

		Percent in "Conservation Zone"	
		Proposed Plan / Large DWMA Alternative and Small DWMA-- A Alternative	**Small DWMA-- B Alternative**
Ecological Hotspots	Class 6	100	75
	Class 5	95	75
	Class 4	95	75
Habitat Type	Dunes	80	51
	Playas	80	51
	Chenopod Scrub	80	51
	Microphyll Woodland	80	51
	Pinyon-Juniper	100	75
	Sonoran Scrub	75	51
	Mojave Scrub	75	51
	Springs	100	80
Insect Hotspots		80	51
Species	Pallid Bat	90	75
	Western Mastiff Bat	100	100
	California Leaf-Nosed Bat	90	75
	Couch's Spadefoot Toad	90	51
	Chuckwalla	80	51
	Mojave Fringe-Toed Lizard	80	51
	Desert Rosy Boa	80	51
	Pocketed Free-tailed Bat	80	51
	Townsend's Big-eared Bat	80	51
	Colorado Valley Woodrat	80	51
	Mountain Lion	80	51

		Percent in "Conservation Zone"	
		Proposed Plan / Large DWMA Alternative and Small DWMA-- A Alternative	**Small DWMA-- B Alternative**
Species	Prairie Falcon	60	51
	Elf Owl	100	75
	Gila Woodpecker	100	75
	Vermilion Fly Catcher	80	51
	Bendire's Thrasher	80	51
	Crissal Thrasher	80	51
	LeConte's Thrasher	80	51
	Yellow Warbler	80	51
	Cave Myotis	100	100
	Fringed Myotis	100	100
	Angel Trumpets	75	51
	Borrego Milkvetch	75	51
	Saguaro	75	51
	Harwood's Milkvetch	75	51
	Red Grama Grass	75	51
	Crucifixion Thorn	75	51
	Fairy Duster	75	51
	Los Animas Snakebush	75	51
	Spiny Abrojo	75	51
	Wiggin's Croton	75	51
	California Ditaxis	75	51
	Glandular Ditaxis	75	51
	Howe's Hedgehog Cactus	80	51
	Foxtail Cactus	80	51

		Percent in "Conservation Zone"	
		Proposed Plan / Large DWMA Alternative and Small DWMA-- A Alternative	**Small DWMA-- B Alternative**
Species	Crown of Thorns	75	51
	Spearleaf	75	51
	Robison's Monardella	80	51
	Munz's Cholla	80	51
	Sand Food	80	51
	Arizona Pholistoma	75	51
	Lobed Ground Cherry	75	51
	Desert Unicorn Plant	75	51
	Orocopia Sage	80	51
	Cove's Cassia	75	51
	Mesquite Neststraw	75	51
	Jackass Clover	75	51
	Mecca Aster	30	51
	Ribbed Cryptantha	75	51
	Wiggin's Cholla	75	51
	Whitemargined Beardtongue	80	51

Appendix I
Science Panel Reports

During the course of developing the NECO Plan, two reviews were conducted to obtain an independent science review of the conservation biology basis for the plan. The reviews were developed through the University of California, Riverside--Center for Conservation Biology. It is important to note that the charge for each review included a focus on the science basis--not the wisdom of policy--behind proposed plan decisions (i.e., the management of species and habitats). The first review occurred mid-point in developing the DEIS and was helpful in completing the DEIS. The second review followed the release to the public of the DEIS and has been helpful in DEIS review and developing the FEIS. The two review reports follow.

First Science Panel Review, completed November 1998

Report to the Northern and Eastern Colorado Desert Management
Richard Crowe, chair, BLM

Science Panel Review Committee

(Chair) Michael F. Allen, Center for Conservation Biology
James Reichman, National Center for Ecological Analysis and Synthesis
Oliver Ryder, Center for the Reproduction of Endangered Species
John Rotenberry, UCR-Natural Reserve System
Edith Allen, State of California Cooperative Extension

Acknowledgments

Fred Edwards, Center for Conservation Biology

Goal

To evaluate the Conservation Science that will be used to underpin the NECO plan.

Meeting times

Tuesday 10 November 1998 to Thursday 12 November 1998

NECO public scoping issues

- Desert tortoise recovery
- Management of other species
- Designation of routes of travel –open, closed, limited
- Land tenure adjustment
- Access to resources and red tape in getting use authorizations
- Wild Burros along the Colorado river

Questions asked of the Panel to respond to

1. How well have we done and are there serious gaps in gathering and analyzing data: quality, completeness, substance, detail, accuracy, methods, and intended uses given the nature and scope of the decision that we need to make?

2. How well have we done in providing an ecosystem basis to planning--i.e., the incorporation of information about species, habitats, and ecological processes?

3. What conservation principles are suggested given the nature of values, issues, and the management situation and the need for alternative plans (or management solutions)?

4. Can the panel offer monitoring and research design and priorities insight, including siting research natural areas given the nature of the planning situation and the certainty of limited future funding?

Report of the Panel

1. How well have we done to date in gathering and analyzing data?

The data on vertebrate species have been gathered is very good. Inevitably, some species and locations will be missed, but it is unlikely that more species distribution data will alter any important conclusions. The data are organized and summarized using GIS into well-presented GAP models for richness and important species. The key now is not to spend more time on distributions, but to concentrate on Ecosystem Processes (see below). Generally, we see no need to generate major new data layers, with two exceptions: the distribution of exotic species and the addition of a soils map. These relate to key processes, (see 3 below).

2. Can you recommend further short-term analyses or studies?

We define short-term data sets as those that can be generated in weeks to months. Most data gathering exercises will not result in more useful information at this time. There are many studies on behavior that can be extrapolated from other sites such that few short-term experiments will be particularly useful.

We do recommend that efforts be undertaken to combine data layers to better localize activities of concern. Examples can include:

- Development of point maps of tortoise locations
- Development of point maps for bighorn sheep sightings
- Overlay these with postulated habitat distributions.

From these, an understanding can develop of the real migration activity, and assess migration processes (e.g., dispersed versus corridor migration). The plan should include corridors for movement or if the animals are likely to percolate through the environment. The patterns of land protection will vary greatly depending on these patterns.

Secondly, we explicitly recommend more interagency communication for the plan development. This particularly includes:

- with the West Mojave, NEMO, Arizona Fish and Wildlife (for the tortoise) and Cal Fish and Game (for the sheep).
- with the various government entities in the region. This will help to overlay patterns of development with the distribution of organism protection.

A third analysis that should be undertaken is to evaluate the map scales especially for critical or listed species. In particular, different organisms require different scaling units. The feeding habitat of a species may have a very tight edge depending on topography or vegetation. However, its migration may be diffuse (with no well-defined edge) or may be along a specific corridor (which may have a well-defined edge). Understanding these patterns may be critical to placing different use patterns (see example below). These will also help evaluate critical processes affecting species. For example, knowing the edges will allow one to determine what perturbations subdivide populations. A dirt road may not affect a hawk but will a tortoise if it is sharply graded.

Once those edges are determined, size frequency analyses using different polygon sizes of the distributions of key species can be determined. These will provide insights into how human activities are likely to affect individual populations.

An example is to assess fragmenting activities, such as roads, highways, canals etc. Do these intersect habitat polygons and how? Size frequency estimates of current populations will provide insights into the habitat quality and persistence. The size frequency of polygons might also be used to develop a minimum population size analysis and a spatial prediction of sizes necessary to maintain those sizes. An example is two roads. One will cross through the middle of the habitat of a critical species. The second only goes along the edge. The first road divides the population into two metapopulations each with a lower survival probability. The second road may not have any effect.

Upon completion of these activities, roads that are redundant or crossing critical ranges should be eliminated or not built. Roads edging those same locations may be acceptable.

3. How well have we done in providing an ecosystem-based approach to planning?

Managers and ecologists often define ecosystem differently. In managerial approaches, an ecosystem approach is largely the management of larger areas and is habitat focused. For ecologists, an ecosystem is the interaction of organisms with their abiotic and biotic environment. It is a process-based discipline. From an ecosystem scientist's perspective, ecosystem processes are largely missing from this plan. A true ecosystem approach would be appropriate. This would allow processes such as migration, survival of droughts, woodland hydrology, sand movement, and climatology to be intimately incorporated into decision making. These are scale dependent.

While we do not recommend focusing on describing or modeling processes such as net primary production, nutrient cycling, many ecosystem processes directly relate to the biota and can form the basis of a management strategy.

Particular processes that should be evaluated are:

- Disturbance. These range in scale from the diggings of tortoises to disease, fire and climate change. These also include anthropogenic perturbations. Those human disturbances that are similar in space and time to natural disturbances may not have a major effect as organisms can adapt to these. Those outside of natural scales are likely to be devastating. For example, some mining activities and some roads may resemble flooding events. Increasing fuel loading coupled with increases in exotic weed seed brought in along some roads may result in fire, a widespread disturbance that these organisms are likely not adapted to.

- Disease. Diseases are devastating, particularly to local wildlife. However, we know little of the dynamics of disease. Is this a naturally recurring process, or only recently introduced. Why and how does it spread?

4. What conservation principles can be used to guide selection and design of management zones?

There are important principles that can be used to guide work. However, these sometimes will be (or seem) contradictory. Existing guides and development of minimum population viability models could be helpful.

Fragmentation is clearly a critical process for this region. Agency scientists should review concepts related to fragmentation. Two issues stand out, however. On one hand, the bigger the reserve, the better. This comes from the knowledge that as a habitat is fragmented, the population is split. That makes both populations more susceptible to extinction. Thus, the larger the reserve for any critical species, the better.

Over the longer term, fragmentation also reduces gene flow. Genetic change is critical to the long-term survival of a species. As fragmentation splits populations, these can no longer exchange genes and retain the array of genetic material necessary to survive large-scale environmental change.

However, should one then make a single large reserve? The qualifier is that a single area is also more susceptible to a single catastrophic event. A single hurricane or fire could devastate a single preserve. Further, a single reserve can serve to increase the incidence of the spread of disease. As both the bighorn sheep and the desert tortoise are affected by disease, maintaining multiple populations, some of which interact minimally, is also important. This is a function of finding and maintaining multiple sites where viable populations can be maintained.

We recommend careful evaluation of minimum viable population models and assessment of their applicability to the differing areas.

In this vein, many potential suitable habitats are found to be unoccupied. These are often deleted from consideration. However, many of these species exhibit metapopulation characteristics, that is, they exist in separated populations and only occasionally intermix. As one metapopulation becomes extirpated because of disease or catastrophic disturbance, another will eventually migrate to that location and re-establish a new metapopulation. Elimination of "unoccupied" habitats should be carefully considered.

The migration of critical species must be known. The importance of corridors must be considered and the possible species using corridors and the locations of those must be documented. That brings out the need for point distributions of sightings as opposed to polygon GAP-type analyses.

However, many species likely also do not move across the landscape in corridors, they simply diffuse across a landscape. Those individuals encountering obstacles largely die, and a few individuals may percolate across the hostile region. Knowing the migration pattern is essential to protecting migration routes and, if necessary restoring stopover locations.

Biodiversity is a topic that is widely touted. Use of GAP models is a common activity. The development of the GAP analysis was a valuable set of information. However, biodiversity *per se* is not necessarily the goal. It is the maintenance of critical species and of native organisms that make the ecosystem function in a predictable, desirable manner. The introduction of exotic species can increase diversity but, over a longer time, these species can alter nutrient cycling or standing dead material that facilitates detrimental processes, such as fire or increasing secondary compounds detrimental to the native animals.

These processes clearly demonstrate the need for an iterative reserve design. That is, upon placement of a suite of reserves, the populations need to be monitored and new locations protected or created as more data become known or change through time. This is classical adaptive management. Most models assume equilibrium conditions. However, we know that these ecosystems are not in equilibrium. Non-equilibrium successional models and metapopulation models must be incorporated into and adaptive management strategy.

We view restoration as an essential management concept. While it does not necessarily serve as a viable mitigation approach, it can become important for creating migration stopover points, or reconstructing habitats already destroyed. Further, in an adaptive management strategy, restoring some habitats in what are found to be critical areas will be essential for specific habitats. The mechanisms of restoration, using succession theory, in particular, initial succession models and restoring soil and hydrological functions will become essential. These areas can be expanded in future evaluations.

5. How can we include flexibility?

An adaptive management strategy is absolutely critical to the plan. We recommend 2 specific steps:

First, protect large areas including currently unoccupied habitats.

Second, take an adaptive management approach; use management decisions as experiments.

Protecting as much existing habitat using current reserves and new lands as they are available is important to extant populations. However, it is crucial to remember that if these species are to be de-listed, they must increase, meaning must expand into currently unoccupied areas.

We strongly encourage having research scientists and managers partner in all reserve design, management strategies, and monitoring (we view this a long-term research). These data can be valuable in pointing directions for changes of management strategies and for formulating theory useful for future management

decisions. This is useful for managers. Research scientists can provide input to making the sampling strategies that are statistically powerful thereby helping in planning and in developing new theory. For both, thresholds are poorly understood. These need to be addressed, prioritized, and utilized in future decisions both here and elsewhere.

This must include careful data collection, management, and archival of all monitoring data. Further, we recommend the following data sets in the monitoring schemes:
For tortoises:

- Population Structure. These must include life tables, with an age structure robust enough to develop models of population growth or decline.
- Epidemiology. These must derive from the population structure models to assess if there are susceptible ages or conditions. These should be specifically addressed.

For bighorn sheep:

- Population Structure
- Migration Patterns

For habitats, monitoring must include not only "good" habitat. We understand little of the recovery of habitats in a successional or restoration context. However, if populations are to rebound, these relationships must be understood. We suggest that as mining operations end, or unnecessary roads are closed, that the operators, managers, and research scientists cooperatively develop recovery and monitoring plans to study success and failures (which are just as important to document as successes) of recovery plans. These should also incorporate appropriate frequency. Some parameters need annual monitoring, others shorter or longer. These need to be appropriately assessed.

Data management is essential. Information is not acceptable unless published in a peer-reviewed format. That is, it should stand to appropriate criticism.

Overall Concerns

Decision-making must become an iterative process. Science is not a one-time answer. As experiments and monitoring efforts occur, they generate new information that must be fed back into the management process. It is only through this approach that the value of science can truly be gained.

Information gained must stand public scrutiny; that is, it should be published in a peer-review format.

Research and monitoring costs should be a part of doing business. It should focus not only on “pristine” sites, but also on potential recovery and devastated sites to evaluate the opportunities for restoration. After all, the goal is to de-list species, which requires more, not less habitat. Linking potential sites with the UCR-NRS would be a valuable approach for developing comparisons and in developing a data management program.

The public, management agencies, local governments, and research scientists should interact in the process of plan development and in the continued monitoring and iterative management decisions. It is through this effort, public confidence can be improved, the management becomes scientifically based, and the theory necessary to manage these lands and others gained.

Second Science Panel Review, completed November 2001

Report to the Northern and Eastern Colorado Desert Management Group

Richard Crowe, Chair

Bureau of Land Management

From

Michael Allen, Director, Center for Conservation Biology
Season Snyder, Center for Conservation Biology
James Reichman, National Center for Ecological Analysis and Synthesis
John Rotenberry, UCR-Natural Reserve System
Edith Allen, State of California Cooperative Extension

Goal

Provide a review of the conservation science used to develop the NECO plan.

Abstract

This report contains comments from a review panel (members listed above) concerning the science used to develop a basis for plan analysis and management decisions. The science review panel recognizes the efforts of all parties to develop this ecosystem-based plan and strongly supports the objective of making a larger, integrated plan that focuses on connectivity and sustaining the biological resources of this region. The Northern and Eastern Colorado Desert plan was evaluated based on specific panel recommendations (published in Appendix I), as well as three general criteria: (1) clear scientific objectives; (2) good use of the available data and other resources; (3) employment of well-tested procedures for monitoring, modeling, and management planning. As a result, this report briefly outlines some of the key conservation initiatives currently incorporated into the plan, and provides additional comments concerning those issues from a scientific viewpoint. Lastly, remarks from the panel evaluation are focused on desert tortoise and bighorn sheep status, recovery and management plans, and overall concerns.

Overview

The goal of the Northern and Eastern Colorado Desert (NECO) planning activity is to create a broad-based, large land plan that integrates human and wildland resources into a single package. The ecosystem approach, considering multiple species and habitat management, is crucial to developing a sustainable ecosystem that supports critical populations. The Science Review Panel supports this larger scale approach. We recognize that Habitat Conservation Plans (HCPs) remain largely untested (Kareiva et al. 1999). However, the

alternative to a carefully constructed plan is individual litigations on small parcels. This approach can result in ungrouped, postage-size preserves, which are highly susceptible to local extinction events. A large-scale, multi-species planning effort provides a framework in which larger preserves and connections between preserves can be developed.

The NECO plan provides the structure on which a sustainable desert program can be based. However, science is always an incomplete and iterative process. New information is continually gained. This plan, as all conservation plans, allows take of sensitive species, and is based on incomplete science. Mechanisms for recognizing current limitations and for incorporating new information into an adaptive management strategy, are crucial for the ultimate success of the plan.

The Science Review Panel recognizes the immense efforts made by all participants in this process. The following specific suggestions are offered in an effort to improve the scientific underpinnings of the plan.

Specific Species Status

1. Desert Tortoise

Information concerning the federal listing status of the desert tortoise and the goals and objectives of undertaking a recovery plan within the NECO planning area are outlined in Chapter 2. The overall goal of the desert tortoise conservation strategy is to recover individual populations based on critical habitat management to ensure long-term viability. To achieve this goal, objectives are three-fold:

- Establish habitat best suited to support populations and provide connectivity.
- Implement management actions to address any conflicts with the habitat goals.
- Focus on efforts to reduce tortoise mortality from predation, disease, and anthropogenic disturbance.

Aside from the acreage of designated critical habitat within the NECO planning area, there is no scientific data in the plan to support the successful completion of conservation objectives. According to the plan, there are only 4 permanent study plots on Bureau of Land Management (BLM) land and approximately 11 in Joshua Tree National Park that have monitored trends in tortoise demography. In addition, surveys were not completed yearly across all plots and were conducted using different methodologies. It appears that some research on disease has been done in the planning area, but the effects of disease on population viability cannot be addressed without first knowing the size and age structure of susceptible populations.

The NECO plan should include:

- A more substantial review of literature published on the desert tortoise, not only for demographic and epidemiological information, but also for analysis of methods (e.g. censuses, surveys, mark-recapture) and models that may be used to achieve management/monitoring goals.
- General information on tortoise behavior published from other sites. This can be extrapolated and particularly useful in developing models.
- A plan for obtaining the necessary scientific data to fill gaps in knowledge about the species. This should be developed under the adaptive management section of the NECO plan.

2. Bighorn Sheep

Information concerning the management of bighorn sheep is outlined in Chapter 2 separately because of their unique habitat requirements and metapopulation structure. The bighorn sheep populations within the NECO planning area will be managed as two metapopulations containing two and four demes each. The overall goal of desert bighorn sheep conservation is to maintain genetic variation between metapopulations and demes through the maintenance of habitat connectivity. To achieve this goal, objectives are three-fold:

- Identify and protect *essential habitat*.
- Undertake restoration efforts within essential habitats if needed.
- Conduct sheep transplants to reestablish lost demes or augment demes if population numbers fall below 50 individuals.

The plan states that there are five existing BLM/CDFG habitat management plans already existing within the NECO area. An outline of the current California Division of Fish and Game (CDFG) plan includes augmentation, monitoring, new and improved water developments, and removal of Tamarisk. However, there was no reference to scientific methodology or any description of data collected thus far from the CDFG plan.

The NECO plan should include:

- Previous research documenting the successes and failures of sheep augmentation.
- Method of capture, monitoring (e.g. radio-collaring) or the potential use of captive breeding programs.
- The evaluation of social integration, genetic mixing, and additive habitat use in maintaining viable populations after transplant. There is no examination of these issues in the NECO plan.
- An assessment of *unique* habitat requirements for sheep. This means monitoring "good" habitats as well as "recovering" habitats utilized by sheep. If populations are to rebound, animals may need to use less optimal recovering or restored habitats surrounding or connecting current populations. These areas should be monitored as well. The ability of males to migrate between metapopulations and individuals to recolonize locally extinct areas is crucial to long-term survival. Although the plan includes protection of migration corridors, a great deal of information is still needed to understand migration processes, particularly dispersed versus corridor migration, and its relationship to habitat management and population recovery.

Recovery/Management Issues

1. Distribution Maps

The immediate development of distribution maps based on tortoise and bighorn sheep sightings can be particularly useful as an overlay to management units and to better localize areas and activities of concern. A distribution map overlay can show the areas at greatest risk to tortoise and sheep survival and will offer insight into the pattern of land protection needed to ensure viable populations.

2. Habitat Fragmentation

One particular area of concern is habitat fragmentation, which is discussed in numerous chapters, but cannot be fully addressed without first knowing the size of current populations and how fragmenting activities will intersect habitats. The use of population viability analysis (PVA) models incorporating habitat characteristics with demographic data can potentially provide guidance for designing management areas, assessing human impacts and environmental stochasticity, evaluating management options, and planning fieldwork efforts. Another strength of PVA is the application to multiple species habitat conservation. This is achieved by combining habitat suitability maps for special status species with weights based on threats to each species, and the contribution of habitat patches to the persistence of each species. For more detailed information on PVA see Akçakaya, H. R. (2000). In any case, data on populations (survival, reproduction, and dispersal) within the NECO planning area should be adequately assessed.

3. Vegetation and Soils Maps

Any models used in HCPs must be carefully evaluated using the best available geographic information, including vegetation and soils maps. Two important considerations are:

1. Distribution of organisms with respect to soil texture and topography

   The feeding habitat of a species may be tightly constrained by topography and/or vegetation. Knowing these edges may be critical to placing different use patterns on areas containing one or more species with special status. For instance, soil series and topographic maps can be useful in assessing the potential impacts of erosion from human activities (as covered in the plan) and natural catastrophic events (not addressed in the plan, e.g. flooding) that eliminate populations. Although there is adequate attention given to soil quality issues, there is no soils/topographic map included in the plan. However, we recognize that areas exist in the plan that do not have a soils map or much in terms of descriptive geologic information. Generating soils maps should be a priority communicated to the Natural Resource Conservation Service.

2. Habitat degradation by spread of exotic plant species

   Invasive species are discussed in Chapters 3 and 4. They are also included in Table 5-1 on monitoring, invasive species removal, and restoration; and in photographs. But the magnitude of the weed problem is not adequately discussed. The potential for a future serious weed problem is especially not addressed. The section on Vegetation Management takes the outdated viewpoint that removal of cattle followed by natural succession will return the vegetation to its former state. There are no literature citations in this section, yet there is recent literature (some cited elsewhere) showing that the "Clementsian" model of succession does not work in the Mojave Desert. The discussion needs to include the concept of vegetation type conversion and potential for future spread of weeds. Only tamarisk is considered as a serious problem in the vegetation management section, but annual invasives that reduce native species occurrence and promote fire should also be considered. The White Paper at the end of this Appendix, written for NECO, deals with this topic.

In addition, distribution maps of exotic plants could provide insight into the interactions between disturbance and invasion (e.g. fire, nitrogen oxides (NOx), and exotics) that ultimately lowers habitat quality. Although the NECO plan addresses some *general* detrimental effects of exotic invasions, the plan should elaborate on and stress the management of exotic species. As a start, including a list of those aggressive species currently found on site should be a high priority. Furthermore, climate models show desert converting to grassland in many parts of the NECO range (IPCC 1998). Broad-scale climate change affects vegetation structure and subsequently ecosystem processes (e.g. productivity, fire regime, nutrient cycling).

4. Ecosystem Processes

A brief section on ecosystem processes in Chapter 4 should be improved. This section includes only the importance of plant and animal dispersal. The concept of ecosystem health could be introduced here (rather, it is explained in the appendix by referring to the Federal Register). This concept is important, as the NECO planning area has certain ecosystem processes that must be considered. These include the potential for increased weed invasion; the relationship of weed invasion with air pollution, fragmentation, and fire; landscape-scale hydrology (especially of microphyll woodlands, upland washes, and springs and seeps); and erosion (especially sand dune movement). Air pollution may increase in the future, causing increased nitrogen deposition. This will increase productivity of exotic annuals, further promoting a rapid turnover in the fire cycle. Summarizing these processes in a section on ecosystem health would help to focus monitoring and research efforts.

5. Adaptive Management

An adaptive management approach is *critical* to the success of the NECO plan. The plan outlines four possible alternatives with various objectives and strategies for management of species, habitats, and ecosystem processes. Actions considered under each management strategy are detailed and thoughtful, and they have the potential to generate a great deal of data useful to the fields of ecology, restoration, and conservation biology. However, these alternatives should include strategies that relate adaptive management to monitoring and research. To accomplish this, the NECO plan must include methods for obtaining research funding to develop and implement alternatives (i.e. modeling, corridor monitoring, ecosystem management). Research funding for Research Natural Areas (RNA) have been delayed until there is an overall plan for all the desert areas. Regardless, baseline data need to be collected soon, as the desert will be subject to rapid change in air quality, habitat fragmentation, and weed invasion. We encourage planning for monitoring and research, including RNA's, as soon as possible.

Lastly, monitoring activities must be conducted in a manner similar to research experiments. Data must be carefully collected (standardized), managed, and archived. Scientists need to interact with management agencies and local governments to ensure adequate monitoring and data collection (short and long-term). Results could thus be generated efficiently, saving time and resources.

Overall Concerns

1. Monitoring

The NECO plan contains a great deal of biological and ecological information. Chapter 5 (Monitoring) provides a list of questions concerning the distribution, demographics, disease, and habitat requirements of special status species that need to be answered. These questions are also prioritized, such that high priority tasks are implemented first and some low priority tasks may never be accomplished. It is not clear, however, what methods were used to rank the importance of each question, or what organization was responsible. It seems as though there should be some examination of the primary threats to species on global versus local scales. This may affect the priority status of certain tasks.

The plan states that in NECO, much of the decision making are based on models, but there is no clear indication of which models (other than GAP, currently used) will be used to manage the site. Predictive occurrence, successional models and species-habitat values are *mentioned,* but there is no discussion of any data sets to be explicitly applied to or tested with these models. This modeling information would be useful from a scientific standpoint, especially because data generated from these models should be peer reviewed and stand to appropriate criticism.

The questions outlined in Chapter 5 are very complex and may be difficult and time consuming to address. Furthermore, it is unclear how the answers to such questions will be used to develop adaptive management strategies. One suggestion is that questions be simplified by focusing on specific hypotheses (in the context of adaptive management), therefore, experiments can be designed and hypotheses tested using the appropriate science. The small section on the purpose of monitoring should include details of an adaptive management strategy. The goals for population monitoring need to be clearly stated. Monitoring data used in models, especially in PVA, can be used to modify several aspects of the plan strategy.

Lastly, consideration should be given to monitoring NOx and ozone. There is currently only one AQMD monitoring site in the planning area (in Joshua Tree National Park), but there is a potential for future increases in air pollution as urban/suburban development increases.

2. Measuring Success

How will success of the NECO plan be measured? This is a fundamental issue underlying science, land use, and planning decisions. Will success be judged from the bottom up (science) or the top down (planning)? In terms of science, is success measured by the maintenance of populations and habitats, or by de-listing special status species and improving habitat quality? Success must also be defined prior to any restoration effort. Approaches to restoring plant and animal communities will vary depending on the goals to restore ecosystem structure, function, or both. The restoration of ecosystem function has long been overlooked due to the complexity of ecological processes. However, recent efforts show that transplanting entire communities or amending natural resources (e.g., soil organic amendments) can enhance restoration and mitigation. The NECO plan should consider defining success as it relates to each management endeavor.

A strength of the NECO plan is interagency involvement. Collaboration of local, state, and federal agencies, interest groups, and academia can aid in the collection of additional or new data to improve databases and

models. Public education plans are impressive and described in great detail in Appendix F. To further improve public outreach, educational websites containing biological and ecological descriptions of species and habitats could be particularly interesting, especially if conservation strategies, management goals, and research updates were included.

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White Paper

Invasive Weeds in the Northern and Eastern Colorado Desert Planning Area

submitted to Richard Crowe, Bureau of Land Management

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Exotic, invasive weeds are fast becoming one of the land management problems in California desert landscapes. This is no less a problem in the northern and eastern Colorado desert planning area, where tamarisk and arundo have invaded riparian areas, and annual grasses and forbs from North Africa and the Middle East have invaded the uplands. A detailed survey of abundance and occurrence of invasive weeds is not available, but there appear to be few areas of the desert, disturbed or undisturbed, where they do not occur at all. A brief history and distribution of several abundant species follows, and concluding statements about management options.

Several species of tamarisk (*Tamarix* spp.) were introduced to the US as ornamentals and for erosion control in the early 1800's. By the 1940s tamarisk was abundant in the Colorado River drainage, and in smaller desert drainages in the 1960s (de Gouvenain 1996). Arundo, or giant reed (*Arundo donax*) was also originally introduced for erosion control, and has more recently spread through drainages (Bell 1997). The spread of these two riparian species, in addition to purposeful planting, has been by natural flooding and seed or rhizome dispersal, and possibly by bird dispersal to isolated springs (Neill 1985, Bell 1997). Although anthropogenic disturbance is frequently cited as the cause of weed invasion, riparian areas have natural disturbance regimes caused by flooding and fluctuating water levels. Tamarisk and arundo are apparently able to take advantage of these disturbances and regenerate more rapidly than native species, as they have replaced native species along thousands of miles of riparian areas in the Western U.S. These two perennial plants are considered problems because they use large quatities of water, they occupy habitat that can no longer be occupied by native plants, and they often do not provide the same high quality habitat for native animals (Kerpez and Smith 1987, bell 1997).

The dominant annual invaders on the uplands include Mediterranean split grass (*Schismus barbatus*), red brome (*Bromus madritensis* ssp *rubens*), storksbill (*Erodium*, several species, but especially *E. cicutarium*), and Tournefort's mustard (*Brassica tournefortii)*. Cheatgrass (*Bromus tectorum*) occurs in abundance at higher elevations and more northern latitudes. With the exception of Tournefort's mustard, all of these were in the desert in the 1940's, although they were inabundant in any one area at that time (Oscar Clark, University of California Riverside, pers. comm.). Tournefort's mustard is currently spreading in the desert, probably moving northward from original introduction sites in northern Mexico (Richard Minnich, UCR, pers. comm.). These were likely introduced accidentally by movement of livestock, forage and crop seed from the Old World to the New World.

A number of disturbances may have caused the spread of annuals in the desert, including domestic grazing, roads, off-road vehicle driving, and agriculture (Brooks 1998). Cattle grazing has been demonstrated as an effective mechanism for spreading weed seed (Malo and Suarez 1995). In a study of the relationship of weed

invasion to disturbance in the West Mojave Desert, Brooks (1998) showed that storksbill abundance was most highly correlated with the presence of dirt roads. However, red brome abundance was correlated with fire frequency.

Fire was historically infrequent in the desert, but has become more frequent with the spread of annual grasses (Brown and Minnich 1986, Brooks 1998). The annual grasses form a continuous litter layer during the long dry season that allows fire to spread from shrub to shrub, creating large scale fires. Previously fires were probably more constrained in area, as there was no fuel to spread a fire across the desert. Thus the grass invasion has caused a positive feedback loop--an increasing fire cycle in a shrubland vegetation type that can establish only slowly under the best of conditions, but cannot reestablish at all with frequent fires.

The exotic grasses may also compete with native species, decreasing the establishment of native plants. The removal of exotic grasses caused an increase in native annuals during a wet growing season, suggesting that the exotics are responsible for a decrease in diversity of native species (Brooks 1998). This is the first unequivocal evidence that the exotics compete with and reduce the success of the native species in the desert. The study shows that the preservation of native species diversity may depend upon controlling exotic weeds.

Another factor that may be responsible for the spread of exotic annuals is soil fertility. Brooks (1998) studied the effects of fertilizing with N and P on exotic annuals, and learned that the exotics had proportionally greater biomass with N fertilizer than the native species. This suggests that exotic annuals will be more abundant in more fertile soils. It also suggests that anthropogenic nitrogen deposition may be a cause of increased weeds in some parts of the desert. Nitrogen deposition in southern California originates primarily from nitrogen oxides created by automobile exhaust. Nitrogen deposition is especially high in the cities of coastal California where it may be causing weed invasion in native shrublands (Allen et al. 1997). However, nitrogen is also increasing in the desert (EPA 1996), and may also be related to weed invasion in some areas.

The control of weeds once they have invaded an area is expensive and time consuming, and currently impossible for some species. Tamarisk and arundo are constrained to moist areas of the desert, and have been successfully removed by hand cutting plus herbicides in limited areas (e.g., Saltcedar Management Workshop 1996, citation for arundo). The removal of exotic annual grasses and forbs from the uplands will be more difficult, and currently no efforts are known for the desert. Certainly the first approach for managers is to understand what causes weed invasion, and control these disturbances in areas that currently do not have large populations of weeds. The reduction of off-road driving, maintenance of roadless areas, and reduced grazing should allow lands that are largely dominated by native species to remain so. However, this is a hypothesis to be tested with observations of weed populations over time.

The research needs for weed management include knowing where they are currently abundant throughout the Colorado desert. Certain kinds of soils, such as very coarse (gravelly or stony) or nutrient poor soils, may preclude invasions by annuals, and these areas may not be threatened. In addition, we need to know what human disturbances will promote weed invasion so that these disturbances may be controlled in designated areas deemed important for conservation of native species. We need a better understanding of what native species will be impacted by weeds, and which will not. Research on cost effective weed control strategies for exotic annuals is also a need. Certain areas that are impacted by weeds may need to be restored, especially if species of special concern are nearby. Overall, a landscape scale approach to weed management is needed, coupled with an understanding of the ecology and management of individual species.

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Appendix J
Monitoring of Desert Tortoise and Ecosystem Elements in the Northern and Eastern Mojave Planning Area

Desert Tortoise Population Monitoring

Permanent Study Plot Methodology

In the 1970's, tortoise population studies were conducted on 47 plots. The method was to survey the sites intensively, locating all living tortoises and shell remains. In the early years, survey times of 15, 30, and 60 days were tested. Plot sizes of 1-2 square miles were used. For analysis of population trends, tortoise measurements are collected, and the sex is recorded. Shell remains are collected to derive minimum mortality and causes of death.

In the early 1980's, 15 of the 47 plots were selected by BLM as permanent study plots to be surveyed on a 4-year cycle. Four of these permanent study plots are located in the Northern and Eastern Colorado Desert Planning Area. The Upper Ward Valley and Chemehuevi Wash plots are in the Northern Colorado Desert Tortoise Recovery Unit, and the Chuckwalla Valley and Chuckwalla II plots are in the Eastern Colorado Desert Recovery Unit. Current methodologies involve two 30-day consecutive surveys (60 days total) of each plot; age-specific population estimates for each plot are computed using a modified Lincoln Index method. A description of the plot survey methods and the methods of analysis can be found in Turner and Berry (1984). Table J-1 shows the years the four plots have been surveyed.

Table J-1. List of desert tortoise permanent study plots in the Planning Area and the years surveyed

Study Plot Name	Years Surveyed
Upper Ward Valley	1980, 87, 91, 95
Chemehuevi Wash	1979, 81, 88, 92, 96
Chuckwalla Bench	1979, 82, 88, 90, 92
Chuckwalla Valley II	1980, 87, 91

The monitoring plots have provided valuable information on various demographic factors. Analysis yields such information as population density and trend, size-specific sex ratios, age structure, mortality rates, survivorship rates, and causes of mortality.

Until 1994, surveys and analyses of the permanent study plots were conducted by the BLM for the three plots on BLM-administered lands. In 1995, responsibility for these surveys was transferred to the Biological Research Division of the U. S. Geological Survey. In the past few years, funding for these surveys has been inconsistent.

In Joshua Tree National Park (JTNP), a permanent study plot was first surveyed by John Barrows (Barrows Plot) in Pinto Basin in 1978. He used the standard 60-day survey protocol. From 1991-1996, the Barrows Plot was visited yearly at sporadic intervals to register the number of tortoises; these surveys were not 60 days in length. Areas surveyed ranged from 1 square kilometer to 1 square mile in size. About 10 other plots scattered throughout the Park and of varying sizes have been surveyed on an experimental basis (pers. comm., Jane Rodgers, vegetation specialist, JTNP).

In the early 1990's, the permanent study plot methodology came under criticism primarily because (1) the plot locations were not selected randomly but in relatively undisturbed locations; (2) the low number of plots does not adequately represent the variation present over the expanse of tortoise habitat; (3) there has been inconsistent funding resulting in variation in the 4-year sampling period; (4) there is an invalid assumption that tortoises do not enter or leave the study plot during the entire spring study period; (5) different size classes are not equally detectable; and (6) tortoise above-ground activity may not be 100 percent in poor forage years and is not constant throughout the 60-day sampling period (Tracy, undated).

Despite the criticisms of this monitoring methodology, it has 20 years of history and has provided a tremendous amount of research material. This has resulted from collections of shells, measurements of burrows, measurements of tortoises, notes on predators and human uses, and other data besides counting tortoises. The Desert Tortoise Recovery Plan suggests that a new methodology giving more reliable trend information be developed to supplement but not replace the permanent study plots.

Distance Sampling Methodology

A number of alternative methods for measuring population density and, hence, determining trends in density have been examined in the field (Tracy undated). The selected technique for monitoring desert tortoise trends on a recovery unit basis is a stratified distance-sampling/above-ground detection methodology. In this method, each recovery unit is divided into homogeneous strata. The strata represent areas where (1) vegetation, soil, and topography are such that tortoises are everywhere equally visible, and (2) all tortoises are engaged in similar activity throughout the stratum at any given time. For the latter assumption, it is especially critical that the proportion active above ground is similar throughout the stratum. A separate survey is to be performed in each stratum.

In 1997 several teams of biologists met to delineate strata in the various recovery units. Strata were delineated only for areas of potential long-term management (i.e., Desert Wildlife Management Areas [DWMAs] as described in the Desert Tortoise Recovery Plan). The Northern and Eastern Colorado Desert Team delineated nine strata for the Eastern Colorado Desert Recovery Unit (Chuckwalla DWMA and Joshua Tree DWMA) and nine strata for the Northern Colorado Desert Recovery Unit (Chemehuevi DWMA). The total for all six recovery units was 47 strata; this number may need to be reduced to lower program costs.

The proposed methodology is conducted with two teams, one team (Team A) searching a strip transect for tortoises, and one team (Team B) assessing the proportion above ground using radio telemetry. For Team A, a system of permanent line transects is positioned randomly in the stratum. Each transect is 4 km in length. Each transect is searched by 2-3 observers in a strip 10 meters on each side of the line. The area near the line must be searched thoroughly. For each tortoise sighted, the distance from the tortoise to the line is recorded. From these data a distance-detection function is constructed. This function is then used to estimate

the number of tortoises above ground in the strip transect. A simple multiplication yields an estimate of the number of tortoises present above ground in the entire stratum. (Anderson and Burnham, undated)

Team B uses radio-telemetry equipment to relocate tortoises which have been previously radio-tagged. About 25 tortoises must be relocated in each strata. From the relocation sightings, an above-ground proportion is determined. This proportion is then used to correct the estimate from Team A to give a total estimate for the number of tortoises in the DWMA. (Anderson and Burnham, undated)

In 1999, a rangewide tortoise monitoring coordinator will be selected. This coordinator will move the trend monitoring program forward aggressively in subsequent years. Dr. Kristin Berry of the U. S. Geological Survey will continue to manage permanent study plot assessments and data analysis for the California Desert.

Integrated Ecological Monitoring

Plans are underway for development of a California desertwide ecological monitoring program. This program is being developed under direction of the Desert Managers Group. The goal of the program is to evaluate ecosystem functions and resource sustainability in the California Desert; specific objectives will be developed in 1999 and 2000. The elements of the program can be grouped into three areas:

1. **Early Warning**. This monitoring will give managers a comprehensive view of how the ecosystem is changing over time, especially in response to a range of human effects.

2. **Compliance**. This monitoring will indicate whether agency efforts are meeting various mandated responsibilities (e.g., recovery of endangered species).

3. **Diagnosis**. This monitoring will assess the effects of specific management actions, in particular their impacts on resources.

Under current plans, a regionwide monitoring coordinator will be selected in 1999. In 2000, a list of vital signs indicating ecosystem health will be identified, a range of alternative methodologies will be defined, monitoring sites will selected, thresholds of acceptable change will be established, and a data management system will be established.

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Appendix K
Johnson Valley to Parker Motorcycle Race EIS (1980)

The following information is a highlight of the event design and required mitigation from the indicated EIS.

1. One annual running in October or November sponsored by the Checkers Motorcycle Club of the American Motorcycle Association. The event originated in the 1950s and has been conducted on various alignments over the years.

2. Type of event: point to point, mass start.

3. Length: 235 miles total, from Johnson Valley Off-Highway Vehicle Recreation Area to finish east of Vidal Junction (178 miles on roads, 42 miles on old race alignment, 15 miles new disturbance).

4. Three alternative segments are noted. NECO includes the environmentally preferred alternative

5. Johnson Valley Off-Highway Vehicle Recreation Area Area contains the start area and first 20 miles of race so waves of riders "funnel" down to an acceptable width for remainder of alignment.

6. Start: 2 waves with 400 participants in each wave for a total of 800 participants.

7. Four pits, each of about one acre or less at intervals of 40-50 miles. Access to pits is by highway and other non-race course roads.

8. Few spectators (and spectator issues) anticipated. All spectators are required to park in, and confine activities to, defined areas and not engage in indiscriminate vehicle free-play.

9. Course width is 200 feet (100 feet either side of centerline), reduced for points/areas of sensitive resources to 10-25 feet in places. Approximately a 30-foot width of the course, including sections on roads, is most heavily used with reduced use and disturbance outboard from centerline.

10. Additional requirements not specified here include details about course marking of standard and sensitive areas, event administration, legal aspects of permitting, and safety.

11. Wet conditions: event must be canceled or postponed.

12. Sensitive areas: protected through routing, barriers, flagging, reduced speeds.

13. Rehabilitation: sponsor is required to grade roads and restore unacceptable damage.

14. Monitoring: required to ensure anticipated execution and proper event administration, identify need for damage restoration.

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Appendix L
Route Inventory Process

Each BLM field office was responsible for conducting an inventory of 100% of all routes within its respective boundaries. The objective was to complete an inventory of *routes*, not vehicle tracks. In some instances, there is not a clear distinction between a route and multiple sets of vehicle tracks, thereby necessitating "interpretation" of the circumstances while in the field. A determination as to whether the surface evidence of prior vehicle use is significant per definition of "existing" routes in the CDCA Plan, as amended, was required.

Also, many routes within the planning area that were established many years ago and have appeared on various maps no longer receive any apparent use as evidenced by the occurrence of substantial natural reclamation. Since the degree of natural reclamation varies from one location to another, the individual conducting the field inventory had to determine if the route was sufficiently visible such that it could be reasonably followed without destroying vegetation or deviating from the course. If not, the route would be considered as a "non-route" and would be noted as such during the inventory process.
"Non-routes" are defined as follows:

> Non-routes are previously-existing routes which have been substantially reclaimed by the forces of nature. Some of these non-routes are delineated as existing routes on the most recent versions of 1:24,000 USGS maps. Nevertheless, an on-the-ground survey revealed that such routes (1) cannot be located due to complete or near-complete reclamation, (2) are intermittently visible thereby encouraging intermittent cross-country travel where evidence of the route disappears, and/or (3) have been revegetated to the extent that, although visible, travel upon them would involve the crushing of substantial vegetation (destruction of natural features).

Although an attempt was made to inventory 100 percent of the routes within the NECO planning area, it is likely that some routes were overlooked. In addition, given the occasional interpretation required to distinguish multiple sets of vehicle tracks from legitimate routes of travel, or in ascertaining if natural reclamation has sufficiently obscured a route such that it is now considered a "non-route," not everyone may agree on the determination.

To ensure that the inventory reflects the existing situation, the public was requested in 1996 to review the route inventory maps and submit comments as to the completeness of the inventory. Opportunity to review the maps was afforded up to release of the draft NECO Plan. Few comments were received; based on those comments, some revisions to the route inventory occurred.

Route Inventory Process by Field Office

El Centro Field Office

The route inventory for the NECO Plan began with a series of maps that had been developed over the last 15 years as the El Centro Field Office worked on the route designation process; designation decisions were made over that period for a limited number of routes. With these maps in hand, a team of volunteers was sent to

the field in 1995 to identify routes that had not been delineated. The newly-identified routes were digitally recorded with Geographic Positioning System (GPS) instrumentation and transferred into ARC/INFO, a software program for managing computerized spatial data. At the same time, routes appearing on previous versions of inventory maps were either recorded with GPS instrumentation by the field team or digitized by field office staff. The field team also surveyed these routes for present condition and location. Routes that had disappeared due to lack of use were noted. Routes exhibiting changes to alignment due to wash shifts or erosion problems were "GPSed" and updated in ARC/INFO.

Subsequent to public review of the route inventory in 1996, additional field surveys in specific locations were undertaken in 1997 to augment the inventory with routes that had been overlooked during previous inventory efforts. In refining the inventory further, additional corrections were made in 1999 upon identification of “non-routes” previously ascertained as existing routes.

Palm Springs-South Coast Field Office

As in El Centro, the process of route inventory began prior to initiation of the NECO Plan. The previously developed but incomplete inventory was the basis for undertaking an intensified effort for the Plan. With the use of GPS instruments, the Palm Springs-South Coast Field Office staff returned to the field to reevaluate existing route locations as well as augment the inventory upon discovery of unmapped routes. The GPS instruments were used to determine route locations through recordation of point coordinates directly onto maps; point data was not digitally stored in the GPS units for transfer to ARC/INFO. Based on field information, clean-copy route inventory maps at the 1:24,000 scale were developed. Route locations were digitized from these maps for incorporation into the data base.

Needles Field Office

Unlike the El Centro and Palm Springs-South Coast Field Offices, the Needles Field Office did not begin the NECO Plan route inventory effort with a base inventory other than as appears on USGS quadrangles. In 1994, the inventory effort began with a full-time volunteer along with field office staff collecting route location data with GPS instruments. The objective was to drive every route within the planning area and digitally record their locations. "Non-routes" were digitized from maps at the 1:24,000 scale.

Appendix M
Artificial Water Sources for Bighorn Sheep, Deer, and Other Wildlife

Background

Over the past 40 years, several designs of artificial water sources, or drinkers, have been used for both small and large animals. The effectiveness of these designs, their varying costs, and their difficulties to operate and maintain are described as follows.

- **Small animal "guzzlers."** Primarily for upland game birds, these guzzlers use small-area catchments to catch and direct rainwater that falls over a few hundred square feet of concrete or asphalt to a tank of a few hundred gallons. Many of these are still in place and operational. Due to their small capacity, they tend to dry up in periods of drought. Most have been modified to prevent entrapment and death of the desert tortoise. Few if any of these have been built in the last 20 years.

- **Large animal drinkers.** For large animals, primarily for bighorn sheep and desert mule deer, the traditional design has involved a complex of features: water flow catchment in a wash, a pipeline to a set of fiberglass tanks, and a valve-based drinker. They hold a few thousand gallons of water. These drinkers were usually built on the sides of mountains in rocky areas. Dozens of them were built, and most are still operational. They require significant time and expense to maintain and rebuild. Helicopters are often required for site access for building or rebuilding. The valve involves moving parts that can fail, either preventing the water from entering the tanks or draining all the water at once. Tanks have collapsed and killed sheep. These water sources may also dry up in prolonged drought.

- **Windmills with troughs.** Providing water primarily for large animals, about nine of these are in place in the Sonoran Desert. They require considerable maintenance and, due to their high profile, are subject to vandalism. They are shallow in depth and have dried up in the last two years.

- **Natural water catching/holding rock tanks (tenajas).** In very rocky areas of the Sonoran Desert, existing tenajas have been enhanced with steps and dams to allow access for bighorn sheep and deer. Water capacity is usually limited, and helicopter water drops have been required in times of drought.

- **Underground drinkers.** Developed and implemented in the last several years, the underground drinker has several times more water storage capacity than any other design, and it is less expensive to install and maintain. Also, since it is almost entirely underground, it imposes less visual intrusion than other designs. The design includes steps for large animal access and a roughened, straight-line ramp for small animal access. With slight variations for special situations, the underground drinker has been used exclusively in the Sonoran Desert for the last 10 years and is the standard design proposed in this Plan. The underground drinker is described in the remainder of this appendix.

The Underground Drinker

Design

The underground drinker design is shown in Figures M-1 and M-2. Photo M-1 shows a complete drinker at a desert location.

Location Consideration

- For bighorn sheep, proposed new drinker locations are generally at the toes of mountain slopes. Having water at this location forces sheep to travel through more forage area to access water. It also provides ease of access and removal from wilderness areas as much as possible.

- For deer, proposed new drinker locations are in deer habitat, normally below the elevation of wilderness areas.

- Table M-1 shows the number of proposed drinkers in BLM wilderness areas.

Water Spacing

- The basis for spacing is recent research, which indicates that bighorn sheep and deer forage away from water to about three miles, depending upon the time of year.

- The number of waters proposed would introduce bighorn sheep and deer to the maximum amount of new forage. This would achieve goals of increasing population number and viability.

Installation

- Access is via existing roads or, more commonly, navigable washes. When access is by navigable wash, all vehicle tracks are brushed out upon completion and departure.

- Installation can be completed in two days.

- Installation equipment involves two or three pickup trucks and a backhoe.

- Installation disturbance area for the tank/drinker is 15' x 60', and for the pipeline it is about 50' x 2'. The tank entrance is not visible to the casual observer from more than 150 feet, especially if the tank is placed behind shrubs or rocks or against a hill. A 6" x 15' dam of native rocks and concrete is also built across a wash swale (about 3'-10' wide) to catch and direct water. Nearly all facilities are below ground, as shown in the drawing and photo. The tank entrance and dam are the only features above ground or visible. If any of the tank sits out of the ground, artificial rocks are built to hide it. All soil disturbance is brushed out as a final step.

Operation and Maintenance

- Access and brush out are the same as for installation.
- Duration of stay is a few minutes to an hour to inspect and perform minor work.
- At nearly all existing underground drinker sites, no major repairs or water hauling have been required to date.
- Frequency of visit is usually one visit per year.
- Equipment usually consists of one 4 x 4 vehicle, either an SUV or a pickup.

NEPA and Tiering

The Plan includes a programmatic proposal for waters for the Sonoran Metapopulation with no installation priority distinction. (A proposal for new drinkers in the Southern Mojave Metapopulation will be made at a later date when CDFG initiates planning for this area.) Waters have been generally located on 7½' USGS topographic maps and entered into GIS. Waters will receive two levels of NEPA review:

1. NECO includes analysis of general biological need/effects including effects on wilderness values.
2. Waters will be built over a long period of time at the rate of about four to six per year, receiving the second NEPA review the year of or prior to funds being requested/received. Subsequent NEPA review will tier from NECO and address specific siting and subjects such as visibility, wilderness, access route, vandalism, cultural values, and any deviation from approximate location and typical design. Drinkers proposed any given year will represent the highest priority at the moment. On an annual basis all waters in a given metapopulation will be proposed and addressed in a NEPA document in one batch and include a verification of need as originally proposed in NECO. Verification will include population status, trend, results of monitoring, and how the proposal for that year would address population needs.

Figure M -1. Underground Drinker Design

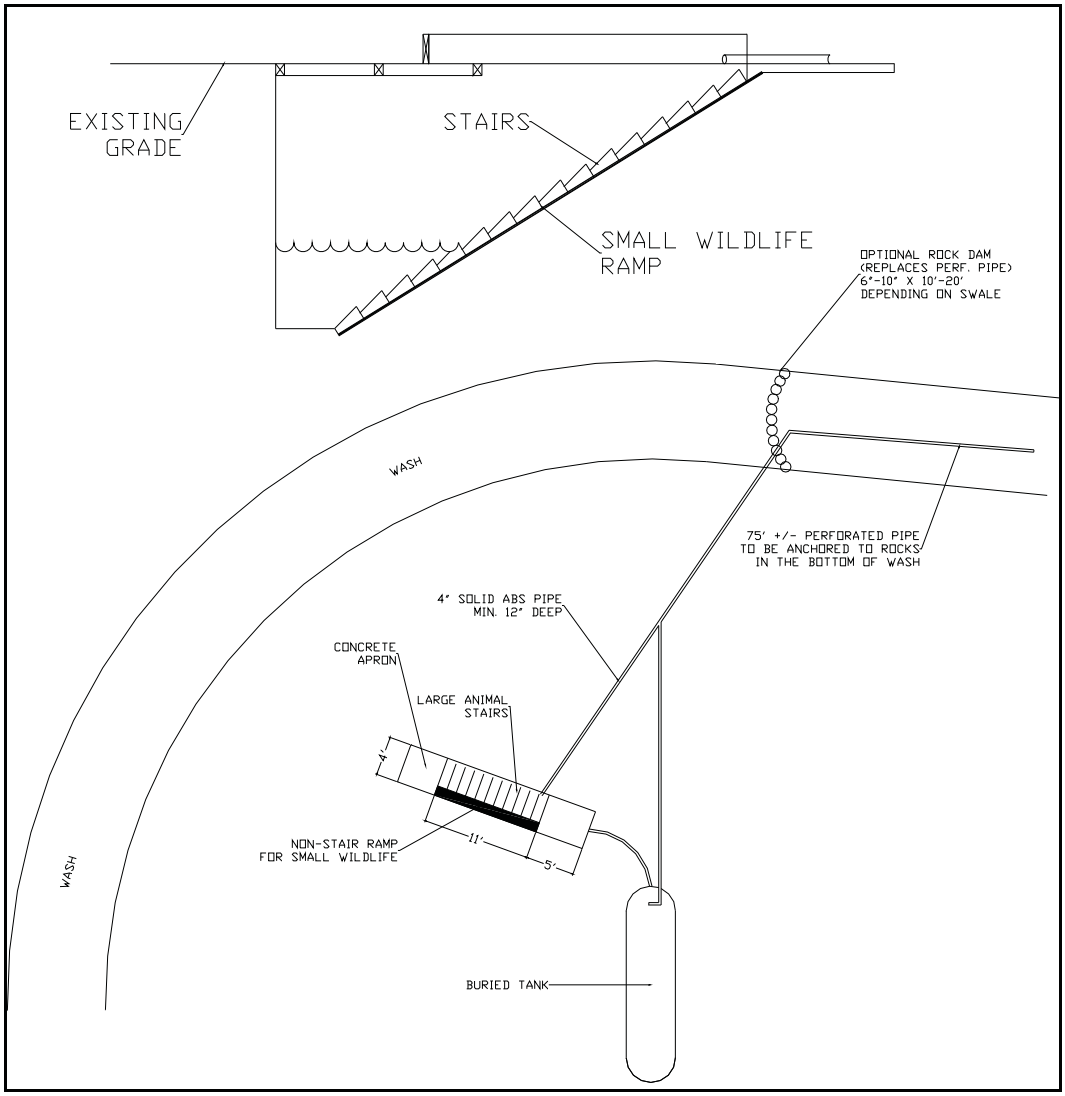

Figure M-2. Underground Drinker Exclosure

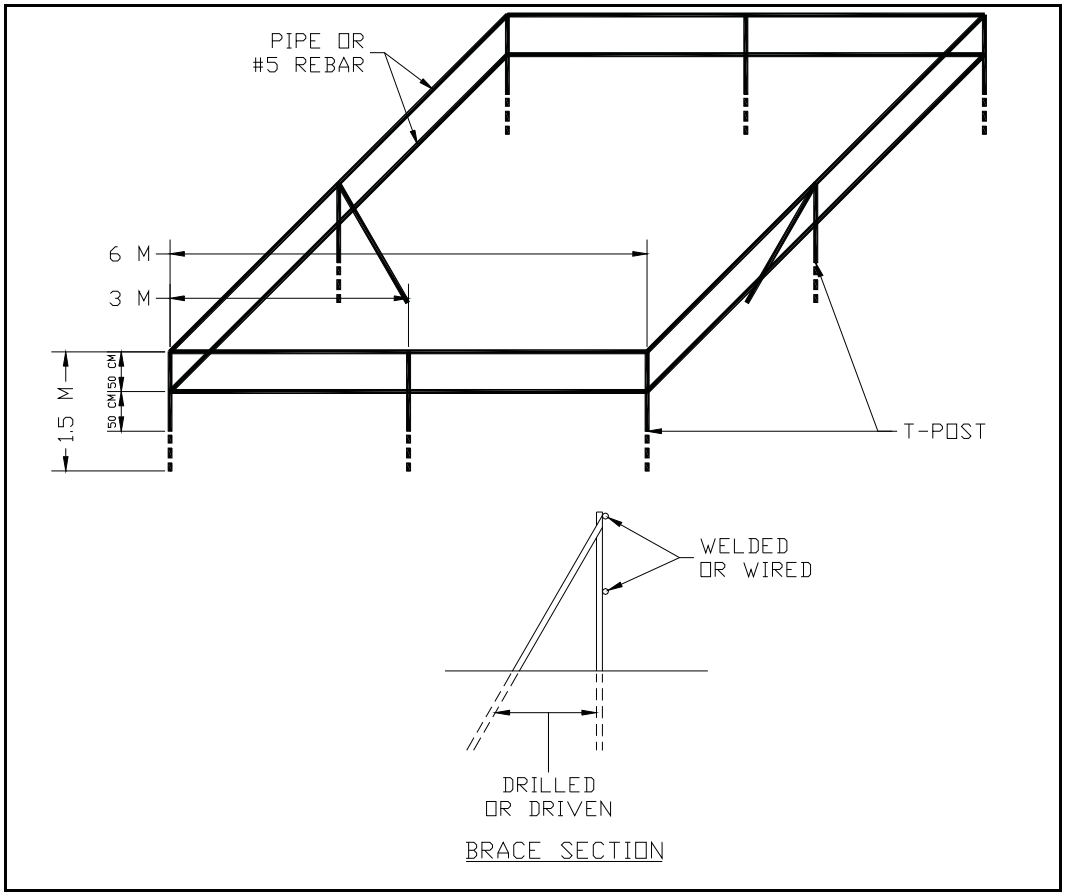

Photo M-1. Underground Drinker (Sonoran Desert Plant Community Scrub)

Table M-1. Proposed Underground Drinkers in BLM Wilderness Area

Wilderness Area to be Served	Number of Proposed Underground Drinkers[a]			
	Deer Only	Bighorn Sheep Only	Deer and Bighorn Sheep	Total
Chuckwalla Mountains	0	2 (2)	3 (0)	5 (2)
Indian Pass	0	7 (2)	1 (0)	8 (2)
Little Chuckwalla Mountains	0	0	1 (1)	1 (1)
Little Picacho	0	2 (2)	1 (0)	3 (2)
Orocopia Mountains	0	4 (2)	0	4 (2)
Palo Verde Mountains	2 (0)	0	0	2 (0)
Picacho Peak	0	0	1 (1)	1 (1)
Total	2 (0)	15 (8)	7 (2)	24 (10)

[a] The number in parentheses (#) is the number of drinkers authorized at this time. The remainder of the indicated drinkers may be constructed only with further justification, i.e., if additional biological information is provided. (See Chapter 2, sections 2.3.1 and 2.3.6.)

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Appendix N
Wildlife History and Wildlife/Plant Tables

The first part of this appendix contains life histories or species accounts for special status wildlife species. These descriptions provide additional information not included in Chapter 3. The second part is a set of management analysis tables for all special status species. These support various descriptive and effects analysis statements contained in Chapters 3 and 4.

Desert bighorn sheep (*Ovis canadensis* subspecies *nelsoni*)

Desert bighorn rams often reach 220 lbs and have large, thick, curved horns. Ewes weigh about 130 lbs and have slender, slightly curved horns. Their hooves have a hard outer edge and a spongy center that provides good traction even on sheer rock.

Desert bighorn sheep occur in small herds usually of about ten animals. They are active during the day, feeding in the early morning and late afternoon in steep, open habitats with low-growing vegetation. They prefer green, succulent grasses, forbs, and shrubs in varying proportions due to seasonal availability and species present.

In some studies, abundance and distribution were directly related to availability of free water. However, bighorn sheep may use moisture in forage or consume barrel cactus (*Ferocactus* spp.) when there is no access to surface water. The highest potential for water stress is during the hot, dry parts of the year from mid-June to mid-September.

The reproductive period, or rut, begins in June with most of the breeding occurring from July through September. Groups of ewes occupy a home range and are visited by traveling rams. Lambing occurs from January to April. Ewes usually seek out a precipitous slope with an unobstructed view and shelter to give birth.

Disease has been a major factor in bighorn subpopulation losses in some areas. Other impacts include competition for forage and water with burros and livestock, predation, and loss of critical lambing and foraging habitat.

Desert bighorn sheep is a BLM California Sensitive Species and a State Fully Protected Species and a Game Species.

Burro deer (*Odocoileus hemionus eremicus*)

Burro deer eat foliage from various riparian and microphyll woodland trees, such as willow, palo verde, and ironwood. Various other shrubs complete the diet depending on the season.

Major threats to burro deer are loss of habitat to agricultural development, urbanization, and tamarisk infestation along the Colorado River and, at least in the 1980's, drowning in the Coachella Canal.

Burro deer is a State Game Species.

Mountain Lion (*Felis concolor*)

Within the Planning Area mountain lion are restricted to the southern Colorado Desert from Joshua Tree National Park south and west to the Colorado River. They are found in very low numbers primarily in the mountains and wash systems in Imperial County. Burro deer, the primary prey, are known to spend the hot summer and fall in riparian areas along the Colorado River and in dense microphyll woodlands near the Coachella Canal. In winter and spring they move up major washes north from the Coachella Canal and west from the Colorado River. Presumably mountain lions respond to these movements. It may be that mountain lions in the Planning Area are merely transient individuals wandering out of other areas and not part of a resident population of mountain lions.

Mountain lions are active year-round. They forage mostly at night and commonly seek daytime cover in caves and thickets. They are generally solitary animals, but young will stay with their mother until sometime in their second year. Males generally hold a large territory containing ranges of several females. Other, non-breeding males are transient over a wide area. Individuals may move seasonally in pursuit of their primary prey, which is deer. When available, they also eat other large mammals, such as burros, bighorn sheep, coyotes, rabbits, rodents, and skunks. Mountain lions apparently do not require drinking water.

Habitat fragmenting factors, such as Interstate Highways (especially Interstate 10) and aqueducts (especially the Coachella Canal), that affect the distribution and movements of burro deer are probably important to the distribution of mountain lions in the Planning Area. Deer populations along the Colorado River have declined as tamarisk has replaced native riparian vegetation; mountain lion numbers have probably declined with this primary prey.

The mountain lion in the Planning Area is sometimes referred to as Yuma puma (f.c. browni). Under that name it is a State Species of Special Concern.

California leaf-nosed bat (*Macrotus californicus*)

California leaf-nosed bats occur in the deserts of California, southern Nevada, Arizona and south to northwestern Mexico. In California, they are now found primarily in the mountain ranges bordering the Colorado River Basin, with some records occurring as far west as the Eagle Mountains. In California, surveys showed about 20 maternity colonies and about the same number of winter roosts (Map 3-4c Appendix A). The two largest roosts (each sheltering 1500 bats in winter) are in mines in extreme southeastern California. Almost all known roosts are in warm mines.

California leaf-nosed bats occur in lowland desert habitat in California in close proximity to desert wash vegetation. They are dependent on either caves or mines for roosting habitat. All major maternity, mating, and overwintering sites are in mines or caves.

Due to restrictive temperature requirements, California leaf-nosed bats seek out mines that provide roost temperatures of approximately 80°F. In the Colorado River Basin, all known winter roosts are in geothermally-heated mine workings, and the areas used by the bats may be over a half-mile underground.

California leaf-nosed bats can be distinguished from all other western bat species by a combination of large ears, grey pelage, and an erect, leaflike projection from the tip of the nose. They forage primarily in desert washes, generally within one to three miles of the roost. They feed primarily on diurnal insects, such as moths, butterflies, grasshoppers, and katydids which they glean off surfaces. Although they can echolocate, they appear to forage utilizing hearing and vision. They do not drink water.

Females congregate in large (usually 100-300 bats) maternity colonies in the spring and summer. Within the larger colonies, clusters of five to 25 females will be associated with a single male that defends the cluster against intruding males. Large male roosts may also form. The single young is born between mid-May and early July. Maternity colonies disband once the young are independent in late summer. In the fall, males aggregate in display roosts and attempt to attract females. They do not hibernate or migrate.

The primary factors responsible for the declines are roost disturbance, the closure of mines for renewed mining and hazard abatement, and the destruction of foraging habitat. The combination of limited distribution, restrictive roosting requirements, and the tendency to form large, but relatively few colonies make this species especially vulnerable.

California leaf-nosed bat is a BLM California Sensitive Species and a State Species of Special Concern.

Occult little brown bat (*Myotis lucifugus* subspecies *occultus*)

Occult little brown bat is a medium-sized myotis that is difficult to distinguish from other *Myotis* species. In California, they are associated with desert riparian vegetation along the Colorado River. Females form large maternity roosts. Although males have been found associated with colonies in late summer, they are not present when the females are rearing a single young. They forage close to water and riparian vegetation, primarily on flies, moths, beetles, bugs, and other small flying insects.

They have a relatively limited distribution from the southwestern United States to central Mexico. In California, they are known from only a few localities along the Colorado River between Needles and Yuma (Map 3-4c Appendix A). The only maternity colony in California was located under a bridge near Blythe until 1945 when the bridge was demolished. It was the largest maternity colony ever known for this species. The species has not been seen in California since 1969. Occult little brown bats are probably extirpated from California, even though the species is the most common bat in the U.S.

In addition to destruction of its major roost site in California, the loss of riparian vegetation to agriculture and tamarisk along the Colorado River may also be a factor in the species' decline.

Occult little brown bat is a State Species of Special Concern.

Cave myotis (*Myotis velifer*)

Cave myotises are relatively large bats that occupy desert scrub, desert succulent shrub, microphyll woodland, and desert riparian habitats along the Colorado River (Map 3-4c Appendix A). They roost primarily in caves and mines but have also been found in buildings and under bridges. They tolerate high summer roost temperatures. The humidity in the caves is always high and often there is standing or running water present.

They form large colonies in excess of 1000 individuals. Mating occurs in the fall and winter with a single young being born in June or July. Migrating out of the area during winter, the cave myotis appears to return to the same summer roost sites year after year.

Cave myotis feed on a variety of flying insects with a large portion of their diet consisting of moths and beetles. They forage over open water close to riparian vegetation in the Colorado River floodplain. They may fly considerable distances to feeding areas. Water for drinking is required.

Most historic records in California are from abandoned mines in the Riverside Mountains. The mines that once housed these large colonies no longer have them. Up to the 1950's, very large colonies were present in these mines from early April through August. Despite extensive survey work in the Planning Area over the past 25-30 years, there are currently only two known maternity roosts for cave myotis along the Colorado River: one with approximately 300 animals, and the other about 200. A mine in the Cargo Muchacho Mountains and a mine in the Riverside Mountains have large deposits of cave myotis guano, but surveys in 1993 showed none and few bats, respectively, at these sites.

The loss of extensive native vegetation to agriculture and tamarisk along the Colorado River may explain the dramatic declines of this species in California. The use of pesticides in the agricultural areas could have reduced the prey base and/or poisoned the bats.

Cave myotis is a BLM California Sensitive Species and a State Species of Special Concern.

Fringed myotis (*Myotis thysanodes*)

Fringed myotises are widespread in much of the West. They occur irregularly throughout the State primarily in pinyon-juniper woodlands, coniferous forests, and oak woodlands, except in the Central Valley and the deserts, where it is known from only a few places. In the Planning Area, only two roosts in the Old Woman Mountains have been found; one of these is a significant maternity roost (Map 3-4d Appendix A).

Fringed myotises are named for a row of stiff hairs along the bottom of the interfemoral membrane. They roost in caves, mines, buildings, and crevices. They eat primarily beetles, but also moths, spiders, and grasshoppers foraging mostly at night over open habitats or over streams, lakes, or ponds. Foraging flight is slow, and they may use wings and tail membranes to capture their prey. They require drinking water.

Maternity colonies form in the spring in caves, mines, or crevices. A single young is born in the late spring or summer. In the fall, they may migrate a short distance to a suitable winter hibernaculum.

Closure of mines could disturb the few desert sites known for the species. They are easily disturbed at roosting sites.

Fringed myotis is a BLM California Sensitive Species.

Pallid bat (*Antrozous pallidus*)

Pallid bats are known from Cuba, Mexico, and throughout the southwestern and western United States (Map 3-4b Appendix A). Population trends are not well known, but there are indications of decline. Urbanization, destruction of old buildings, disturbance in caves and old mines, and eradication as a pest are threats to the species.

Pallid bats are a large, long-eared bat readily distinguished from all other California bats by a combination of large size, large eyes, large ears, light tan coloration, a pig-like snout, and a distinctive skunk-like odor. Pallid bats occur in a number of habitats, including coniferous forests, nonconiferous woodlands, brushy terrain, rocky canyons, open farm land, and deserts. They roost primarily in rock crevices, but commonly in old buildings, under bridges, in caves and old mines, and in hollow trees.

Pallid bats are intolerant of roost temperatures above 40° C, and they often occupy roosts that offer a varied temperature regime. They are very sensitive to disturbance at the roost, and upon disturbance they will generally retreat or abandon the roost. Nevertheless, their loyalty to a chosen roost (particularly buildings, mines, and bridges) is generally high.

Pallid bats forage primarily on large arthropods caught on the ground or gleaned off vegetation. Between foraging bouts, pallid bats congregate in night roosts in mines, buildings, and under bridges.

Typical maternity colonies contain 30-70 animals, although colonies of several hundred have been found. Colonies form in the spring (March-May) and stay together until October. Females give birth to one or two young in early summer. They are not known to migrate, but presumably spend the winter hibernating close to their summer roosts.

Pallid bat is a BLM California Sensitive Species and a State Species of Special Concern.

Townsend's big-eared bat (*Plecotus townsendii*)

Townsend's big-eared bats are distributed throughout the western United States. Recent surveys show marked population declines for this species in many areas of California (Map 3-4b Appendix A). A combination of restrictive roost requirements and intolerance of roost disturbance or destruction has been primarily responsible for population declines of Townsend's big-eared bats in most areas. The tendency for this species to roost in highly visible clusters on open surfaces, near roost entrances, makes them highly vulnerable to disturbance. Roost loss in California has usually been linked directly to human activity (e.g., demolition, renewed mining, entrance closure, human-induced fire, renovation, or roost disturbance). The loss of foraging habitat is also a probable factor in declines of populations in along the Colorado River, where the native floodplain community has been lost to agriculture and tamarisk infestation.

Townsend's big-eared bats are a medium-sized bat distinguishable by the combination of a two-pronged, horseshoe-shaped lump on the nose and large, rabbit-like ears. They occur in a wide range of habitats, but population concentrations occur in areas with substantial cavity forming rock (e.g., limestone, sandstone, gypsum or volcanic) and in old mining districts. They will also roost in old buildings, in tunnels, and under bridges.

Townsend's big-eared bats feed primarily on medium sized moths, but also consume other insects, such as beetles and flies. The proximity of good foraging habitat appears to be a determining factor in roost selection. In a recent survey in the Panamint Mountains, mines with suitable temperatures were occupied by maternity colonies only within 2 miles of a canyon with water.

Big-eared bats form maternity colonies in the spring varying in size from a dozen to several hundred animals. During this period, the females create densely-packed clusters (100 bats in a one-foot circle). Maternity clusters are always situated on open surfaces, often in raises in the ceiling just inside the roost entrance where warm outside air is trapped. Single pups are born between May and July. In the winter, cooler temperatures are required for hibernation sites, and the bats may move a short distance to caves or mines at higher elevations. In desert areas, old mines may contain from one to several dozen individuals.

Townsend's big-eared bat is a BLM California Sensitive Species and a State Species of Special Concern.

Pocketed free-tailed bat (*Tadarida femorosaccus*)

Despite only a limited number of records, pocketed free-tailed bats are known to occur in the desert from March through August, when they then migrate out of the area. They have an uneven distribution in the southwestern United States and Mexico. In California, they are found primarily in creosote bush and chaparral habitats in proximity to granite boulders, cliffs, or rocky canyons. Recent observations in California show that this species occurs at only isolated locations in the southern third of the State (Map 3-4b Appendix A).

Pocketed free-tailed bats tails extends beyond the edge of the interfemoral membrane. They roost primarily in crevices but occasionally in caves and old buildings and feed primarily on large moths, but will also consume crickets, grasshoppers, flying ants, beetles, froghoppers, and leafhoppers..

Rock climbing and pesticide spraying may be threats, but specific information is lacking.

Pallid bat is a State Species of Special Concern.

Western mastiff bat (*Eumops perotis*)

Historical records for the western mastiff bat were primarily in southern California between the Colorado River to the coast, but populations are now known to occur throughout the State (Map 3-4b Appendix A). Current population trends are not known. They are found in a variety of plant communities, but they roost in cliff faces of granite, sandstone, or basalt. Unlike most other North American bat species that mate in the fall, free-tailed bats breed in the spring and give birth to a single young in early to mid-summer. Colonies generally contain fewer than 100 individuals, and, unlike other North American bats, adult males and females may roost together at all times of the year. They move relatively short distances seasonally, but do not undergo prolonged hibernation.

Western mastiff bats have a free tail extending beyond the edge of the interfemoral membrane and large bonnet-like ears extending forward over the eyes. With a two-foot wingspan, they are the largest bats in California.

In California, western mastiff bats feed primarily on moths, but also eat beetles and crickets. They have been observed foraging at all hours of the day and up to 1,000 feet above the ground. They are strong, fast fliers and can cover an extensive foraging area in an evening. The species has been heard in open desert, at least 15 miles from the nearest possible roosting site.

Potential threats to the roosting and foraging habitat of western mastiff bats include urban expansion, rock climbing, blasting, vandalism, extermination for pest control, and pesticide spraying. These large, noisy bats are vulnerable to the hysteria which often surrounds bat colonies.

Western mastiff bat is a BLM California Sensitive Species and a State Species of Special Concern.

Colorado Valley Woodrat (*Neotoma albigula venustra*)

The range of Colorado Valley woodrat is from southern Nevada, southeastern California, northeastern Baja California, to western Arizona (Map 3-4c Appendix A). Historically, the range of the Colorado Valley woodrat appears to have changed little, even though portions of the range are lost to agriculture and urban development.

Colorado Valley woodrats (California subspecies of White-throated woodrat) are found in a variety of habitats including low desert, pinyon-juniper woodlands, and desert-transition chaparral. Areas such as washes where organic debris gathers are particularly attractive. They are often found where prickly pear cactus and mesquite occur. In rocky areas, they prefer using crevices in boulders for cover and nest sites.

In the hottest part of the year, water-rich cacti constitute 90% of the diet, even though it is toxic to most mammals. In areas with few cacti, Mojave yucca and then juniper are the most important food sources.

Colorado Valley woodrats are active at night, and during the day they retire into rock crevices or nests made from a variety of materials including cholla, sticks, remains of cactus fruits, bones, leaves, and trash. Nests are used for raising young, food storage, protection from predators, resting, protection from extreme weather, and sleeping. Successive generations may inhabit the same nest. When rock crevices are used for the nest site the woodrat places sticks, cacti and other objects in the fissure and runways. Dens are occupied by many species of arthropods, such as moths, crickets, bugs, harvestmen, and spiders, and a variety of animals, such as desert banded gecko, side-blotched lizard, zebra-tailed lizard, shrews, mice, and rabbits. Runways radiate from the nest and are often lined with cholla joints.

Timing of breeding varies geographically. Litter size is usually two, with a maximum of three young. They are active year-round and have no seasonal movements. They are solitary, occupy one den, and do not have territories. They are preyed upon by owls, coyotes, foxes, and snakes.

The most important threats are the loss of habitat and reduction in habitat quality by removal of nest material such as cactus and woodland. Habitat quality could be reduced by fires or conversion to exotic annuals.

The Colorado Valley woodrat is a State Species of Special Concern.

Mountain Plover (*Charadrius montanus*)

Mountain plovers do not breed in California, but they winter from northern California south to north-central Mexico and east to central Texas. In California they are found in the Central Valley, Antelope Valley, San Jacinto Valley, Imperial Valley, and Palo Verde Valley (Map 3-4d Appendix A). They begin to arrive on their wintering grounds in southern California in October. On their wintering grounds plovers forage for ground insects in loose flocks ranging from 2 to over 1,000 birds. Individuals change flocks and foraging areas frequently during the winter. Mountain plovers run or freeze from perceived harm rather than fly. Most individuals head northward between mid-February to mid-March. Migratory routes are unknown.

Mountain plovers are a medium-sized shorebirds with undistinguished plumage. Mountain plovers inhabit grasslands, alkali shrubland, and, especially in and near the Planning Area, freshly plowed, burned, or harvested agricultural fields. They favor habitats that have been burned or grazed areas and have abundant mammalian burrows and soils that are heavy, saline/alkaline, clays.

The breeding distribution is contracting, and the total population is reportedly down 63 percent since 1966. Population declines are probably not due to losses on the wintering grounds as some studies have shown that overwintering survival rates are high and the species is adaptable to non-native habitats.

The Mountain Plover is proposed for Federal listing as an endangered species.

Golden eagle (*Aquila chrysaetos*)

Golden eagles are the largest raptor in the Planning Area. They forage over rolling foothills and valleys and nest on cliffs in mountainous terrain (Map 3-4e Appendix A). Golden Eagles are found throughout North America. They are uncommon, permanent residents throughout the State, but they are most common in Southern California. In the NECO Planning Area only a few eyries are known.

They eat mostly rabbits, hares, and rodents, but they occasionally take snakes and other vertebrates as opportunity arises. They need open grassland or low shrub-land for foraging. They hunt by soaring, perching, or quartering during the day.

Some golden eagles migrate through the NECO Planning Area in Spring and Fall. Some may winter in and near mountains. A few nest in the NECO Planning Area. Nests, referred to as eyries, are usually on secluded cliffs with overhanging ledges. The large platform of sticks at the eyrie may be used for many years. Usually two young are raised in late spring and early summer.

The major threat is disturbance at the eyrie, especially in the early stages of nesting.

Golden eagle is a State Species of Special Concern and is protected by the Bald Eagle Protection Act.

Ferruginous hawk (*Buteo regalis*)

Ferruginous hawks do not breed in California. They migrate from their breeding grounds in the plains of Canada and the U. S. south to wintering grounds in eastern Colorado and western Kansas to southern Texas. They winter in very low numbers throughout the West. They are known to migrate through California in September and April. They overwinter in very small numbers from mid-October to mid-March in the lower Colorado River Valley , Yuha Basin, West Mesa, and the agricultural areas of Imperial Valley (Map 3-4e Appendix A).

Ferruginous hawks are large, broad-winged raptors. They are usually found in grasslands or sparse brushlands and use high, lone trees and power poles for perching. In winter they are found in desert scrub, the fringes of pinyon-juniper woodlands, grasslands, pastures, fallow winter croplands, and playas.

Ferruginous hawks hunt from high perches or by flying low over open terrain. They spend more time on the ground foraging than other hawks. They eat mostly small mammals, particularly rabbits and hares, ground squirrels, and mice, but also some birds, reptiles and insects.

Ferruginous hawk is a State Species of Special Concern.

Prairie Falcon (*Falco mexicanus*)

Prairie falcons breed throughout the arid West from southern Canada to central Mexico. The overall distribution appears to be stable. In the 1970's 35 eyries were found within the California Desert District with approximately 12 in the Planning Area. It is unknown whether these eyries are currently occupied.

Prairie falcons are uncommon residents and migrants of open grassland, savannah, and desert scrub habitats. They are found in areas of the dry interior where cliffs provide secure nesting sites. In the desert they are found in all vegetation types, though sparse vegetation provides the best foraging habitat (Map 3-4d Appendix A).

They prey mostly on small mammals, birds, and reptiles hunting mostly in the early morning and late afternoon except when feeding nestlings or when prey is scarce. During the nesting season, they typically forage within 6 miles of the nest.

The pair arrives on the territory by March. Typically the nest site or *eyrie* is on a sheer cliff with an overhanging ledge and a broad vista overlooking a hunting area. Nestlings hatch by early May and fledge by mid-June. The young begin to disperse in June and July and by early August fledglings have moved to wintering grounds. Within the Planning Area it is not known to what extent they move seasonally, but wintering populations in the Planning Area are larger than breeding populations.

Historic impacts have included eggshell thinning from pesticide residues, conversion of habitat to agriculture, robbing of eyries by falconers, and shooting.

Prairie falcon is a State Species of Special Concern.

Elf owl (*Micrathene whitneyi*)

The elf owl breeding range extends from southwestern California east to Texas and south into Mexico. Historically, the elf owl was found along the lower Colorado River and at oases as far west as Cottonwood Springs in Joshua Tree National Park (1940-1970) and Corn Spring (latest in 1994) in the Chuckwalla Mountains. Currently, its California range is only along the Colorado River from just north of Needles to Imperial Dam. Most of the suitable riparian habitat has been cleared for agriculture or lost to tamarisk since the mid-1970's.

Elf owls migrate from Mexico in the spring, arriving on their nesting territories in mid-March. Eggs are laid in May and early June with a clutch size of usually three eggs. The male feeds the female from the time of pair formation, at the end of March, until the young are half-grown. In August, they leave for the wintering grounds in Mexico.

Elf owls are very small, measuring only 5-6 inches tall. They are very rare in California and occur only in spring and summer along the Colorado River Valley (Map 3-4d Appendix A).

Elf owls are found at springs and riparian thickets where there is moderately tall, old and decaying cottonwood, mesquite, and willow trees and in saguaro. Elf owls are absent in tamarisk thickets that now predominate along the Colorado River. They nest only in tree cavities excavated by woodpeckers (commonly Gila woodpeckers and ladder-backed woodpeckers in California).

Elf owls prey primarily on large arthropods, such as moths, crickets, beetles, and scorpions and occasionally small lizards and snakes. Elf owls hunt at night from a perch or by hovering over the ground. Perches are located over open vegetation or grassland and are usually moderately-tall cottonwood, sycamore, willow, mesquite, or saguaro.

Elf owls are probably limited by nest site availability and may be out-competed by the introduced European starling for nest cavities. Starlings are highly aggressive and are known to evict other species from their nests. It has been hypothesized that more than one pair of elf owls may be needed in a subpopulation to mob predators or nest competitors.

The loss of mature, riparian habitat is the most important reason for this species' decline. Habitat loss has consisted of clearing and flooding for agriculture and water management and invasion by tamarisk. Frequent fires have also reduced suitable habitat and increased tamarisk.

The elf owl is State-listed as an endangered species.

Burrowing owl (*Speotyto cunicularia*)

Burrowing owls range from Texas west to California and from southern Canada south into Mexico. In northern climates they migrate south into the area in the winter. Burrowing owls were formerly common throughout much of California prior to the 1940's, but populations in central and southern California have declined in many areas due to agricultural development and urbanization. Little is know of the status of the

burrowing owl in the California desert. Concentrations probably occur in agricultural drainage ditches of the Planning Area, just as they do throughout the Imperial and Coachella Valleys (Map 3-4e Appendix A).

Breeding begins in early March and ends in August. Burrowing owls are one of the few terrestrial birds to use the burrows of mammals for their nests, even though they are capable of digging. They will also use rock crevices, pipes, culverts, and nest boxes when burrows are scarce. Pairs may stay together during an entire year hatching clutches averaging about five young. After the breeding season, secondary burrows may be used for cover and roost sites. During the winter, attachment to a particular burrow is reduced even more. Resident birds in the Planning Area probably stay year-round.

Burrowing owls are long-legged owls standing about 8 inches tall. They are active during the day and inhabit open, level landscapes, such as dry grasslands, deserts, sparse shrub-lands, and farmlands.

Burrowing owls feed mostly on insects and scorpions, but they also eat small mammals, lizards, birds, and carrion. They forage at dawn and dusk, and during the summer they will hunt at night. They may hunt from a perch, hover, hawk, dive, or hop after prey.

Threats to burrowing owls are habitat conversion and destruction of ground squirrel burrows. Other threats may be accumulated pesticides, direct mortality from ground squirrel poisons, roadside shooting, and burrow destruction from canal and road maintenance.

The burrowing owl is a BLM California Sensitive Species and a State Species of Special Concern.

Gila woodpecker (*Melanerpes uropygialis*)

Gila woodpeckers range from the extreme southeast of California through Arizona south into western Mexico. They were formerly found along the entire lower Colorado River and in cottonwood groves in Imperial Valley. Now the species is found only at scattered locations along the Colorado River from Needles to Yuma, and they have disappeared in the Imperial Valley, except for a few pairs in Brawley. Within the Planning Area, Gila woodpeckers were known to occur in desert riparian washes (microphyll woodland) extending from the Colorado River as far as one mile away, but they are currently known only from scattered groups on the riparian corridor of the Colorado River (Map 3-4d Appendix A). They are more widespread in Arizona.

Gila woodpeckers are large, very active, noisy birds. They are found in desert riparian and desert wash habitats; in particular, they prefer cottonwood-willow riparian, saguaro woodlands, and mesquite woodlands.

Gila woodpeckers are opportunistic omnivores. They have been recorded eating insects, mistletoe berries, cactus fruits, galls, bird eggs, and acorns. They will also forage at bird feeders and garbage dumps. They usually forage by gleaning from trunks and branches of trees.

Their breeding season begins in late March with a peak in April and lasts until July. Pairs are monogamous and may produce two broods in a year. They excavate nest cavities in trees, such as cottonwood, willow, mesquite, as well as saguaro. Nests, which are reused each spring, are vigorously defended against interlopers

such as elf owls, cactus wrens, flycatchers, kestrels, and starlings. They maintain spare cavities for roosting during the heat of summer. They are year-round residents.

Major threats to Gila woodpecker are loss of habitat to agricultural development, urbanization, and tamarisk infestation and competition with European starling for nest sites.

The Gila woodpecker is State-listed as an Endangered Species.

Vermilion flycatcher (*Pyrocephalus rubinus*)

Vermilion flycatchers are small flycatchers with the male having a brilliant vermilion-colored front and head. They live in large riparian areas with a high canopy and grassland under-story. They are sometimes found in parks and golf courses that have this same structure.

They typically perch on outer branches of trees or shrubs or tall herb stalks waiting for insects to fly by and then sallying out to catch them in mid-air. They frequently perch above water. Their diet consists almost entirely of flying insects.

Vermilion flycatchers are monogamous, and both parents care for the young. They build a cup nest at mid-story below the canopy. In the Planning Area, they nest regularly at Lake Tamarisk golf course and the residential area at Iron Mountain Pumping Plant (Map 3-4d Appendix A). Just outside the Planning Area, they nest in Covington Park in Morongo Valley and along the Colorado River near Blythe. They have been largely extirpated from former breeding areas in the Imperial and Coachella Valleys.

Habitat loss is the primary reason for declines in California. Nest parasitism by cowbirds may be a factor, also.

Vermilion flycatcher is a State Species of Special Concern.

Willow flycatcher (*Empidonax traillii*) and Southwestern willow flycatcher (*Empidonax traillii extimis*)

Willow flycatchers are found throughout most of the U.S. The southwestern subspecies nests in southern California, Arizona, New Mexico, western Texas, and northwestern Mexico. Little is known about migration or wintering in the NECO Planning Area.

Willow flycatchers nest in thickets in riparian habitats with willows, arrowweed, baccharis, or tamarisk; they are not known to nest in the NECO Planning Area. They probably migrate through the Planning Area in small numbers to and from nesting areas in the Sierras. If so, they probably rest at springs and seeps or other riparian areas in the desert. Some willow flycatchers spend the winter in the Imperial Valley and perhaps also in the NECO Planning Area. It is not known which, if any, of the subspecies migrates through or winters in the desert.

Willow flycatchers are a small, rare, insectivorous bird of riparian woodlands. There are four subspecies in the U.S. The species is difficult to identify, so records may not reflect its actual abundance.

Willow flycatchers capture flying insects by making short sallies from an exposed perch. They typically forage in willow thickets or adjacent wetlands or riparian habitat, but today they are relegated to marginal riparian areas with exotic plants as dominants.

Southwestern willow flycatchers have declined precipitously throughout the southwest. Major causes for decline are the loss of riparian habitat to urbanization, agriculture, and tamarisk infestation. On the breeding grounds, brood parasitism by cowbirds is common.

The Southwestern willow flycatcher is a federally Endangered Species, and the willow flycatcher is a State-listed Endangered Species.

Bendire's Thrasher (*Toxostoma bendirei*)

Bendire's thrashers arrive in the breeding area from late March to early April. Some leave the breeding grounds by the end of July with others departing through August. They migrate to southern Arizona, southwestern New Mexico, or Mexico for the winter. Wintering individuals have also been observed at the Salton Sea, coastal California, Bard, and Lancaster.

The largest breeding area in California lies just east of Essex from the south side of the Piute Mountains to the center of the Old Woman mountains. It is disjunct from another large breeding area near Cima Dome. The Essex population area lacks Joshua trees, but has dense stands of Mojave yucca and other succulents. There are a few records of Bendire's thrashers from JTNP in the Planning Area.

Bendire's thrashers are medium-sized, migratory songbirds. They are highly localized in desert succulent scrub (especially yuccas, Joshua trees, and columnar cholla) or microphyll woodland with palo verde trees (Map 3-4e Appendix A). Firm, moderately compacted soils (not sandy or rocky) may be an important habitat factor. When startled, Bendire's thrashers flee by flying rather than running for cover as other thrashers do. When they do seek cover, they head for stands of thorny shrubs and cactus.

Bendire's thrashers feed primarily on the ground where they use their bill to peck, probe, and hammer in the soil. The diet is mainly insects and other arthropods, but they will also eat seeds and berries.

Bendire's thrasher is a BLM California Sensitive Species and a State Species of Special Concern.

Crissal Thrasher (*Toxostoma crissale*)

Crissal thrashers occur from southwestern Utah, southern Nevada, and southeastern California east to southern New Mexico and southwestern Texas and south into Sonora. They are found along the Colorado River Valley, but elsewhere in California populations are highly local and uncommon (Map 3-4e Appendix A). Crissal thrashers are also found in Milpitas Wash, Indian Wash, and Chuckwalla Bench and in the Chuckwalla Dune Thicket. Inventory data elsewhere are scant. Agricultural and urban development have greatly reduced the distribution in the Coachella and Imperial Valleys.

Crissal thrashers begin breeding activities as early as December, but nesting occurs primarily between February and June. Pairs mate for life and hold their territory year-round. They typically raise two broods in a year, and small family groups may be seen later in the year.

Crissal thrashers are medium-sized, resident songbirds. They occur along streams, rivers, and washes in dense thickets of mesquite, ironwood, catclaw acacia, arrowweed, and willow. Loose soils (not too firm or sandy) suitable for digging up insect prey may be a strong habitat factor.

Crissal thrashers forage on the ground under deep cover. They eat mostly insects, but will also eat snails, small vertebrates, and fruits. They use their long, strongly decurved bill to dig in the soil and to probe the litter for food. This is the shyest of desert thrasher species, and they typically run for cover.

Agricultural development, urbanization, and tamarisk invasion have greatly reduced numbers. The species is highly vulnerable to noise and other disturbances. Crissal thrashers can be parasitized by brown-headed cowbirds, but they will eject cowbird eggs from their nests.

Crissal thrasher is a State Species of Special Concern.

LeConte's Thrasher (*Toxostoma lecontei*)

Le Conte's thrashers are distributed from the Mojave Desert east into southern Utah and northern Arizona, and south into northern Mexico. A disjunct population occurred in the San Joaquin Valley, but most of that range has been lost to agricultural and urban development. Le Conte's thrashers are distributed throughout the Planning Area, but many areas with suitable habitat are unoccupied (Map 3-4e Appendix A).

Le Conte's thrashers are medium-sized, resident songbirds. They inhabit desert flats, washes, sandy alluvial fans, and open shrub-land with alkaline soils. Preferred habitat generally has cholla and saltbush, and there may be associations of creosote bush or Joshua tree. Landscapes are often flat or gently sloping.

Breeding activity begins in late January and continues into early June, with a peak from mid-March to mid-April. They are territorial, and the male actively pursues intruders. Preferred nest sites are in cholla or saltbush. Both sexes incubate and tend the young. They may produce three broods in some years. When startled Le Conte's thrashers run for cover. They are very wary of human presence.

Le Conte's thrashers feed on a variety of insects and other arthropods and occasionally on seeds and small vertebrates. The bulk of its diet is beetles, caterpillars, scorpions, and spiders. They mostly forage on the ground by probing and digging in the soil and litter with their long, strongly decurved bill.

LeConte's thrasher is a BLM California Sensitive Species and a State Species of Special Concern.

Yellow warbler (*Dendroica petechia*)

Yellow warblers formerly nested in the Colorado River Valley, but they no longer breed there or elsewhere in the Planning Area. They migrate commonly through the Planning Area near the end of March through mid-April and again in September and October (Map 3-4e Appendix A). These migrants will stop at any size

woodland or oases. Regularly spaced woodlands and oasis with open water for drinking are essential for migrants. A few yellow warblers spend the winter in the Planning Area. Found throughout the U.S., populations in the West have experienced severe declines. For example, they have been totally extirpated from the California side of the Colorado River Valley.

Yellow warblers are small, bright yellow, neotropical migrant songbirds. In the desert southwest, yellow warblers prefer riparian habitats dominated by cottonwoods, willows, alders, and other small trees. In the Planning Area, they are found in a variety of desert communities with an overstory, such as microphyll woodlands, mesquite hummocks, desert oases, and riparian woodlands.

Yellow warblers mostly feed on insects and spiders gleaned from the tree and shrub canopy. They also catch insects on the wing and occasionally eat berries.

Yellow warbler is a State Species of Special Concern.

Chuckwalla (*Sauromalus obesus*)

Chuckwallas occur throughout the Mojave and Colorado Deserts in California, Nevada, Utah, Arizona, and Mexico. They are found in appropriate habitat throughout the Planning Area (Map 3-4a Appendix A). Little is known about population size or trends. Primary threats to the species are from over collecting and destruction of habitat by collectors.

Chuckwallas are large, herbivorous lizards that inhabit rocky outcrops and lava flows. They escape from predators by entering rock crevices and inflating their bodies to wedge themselves firmly into place.

Chuckwallas prefer a variety of annual plants, flowers, and fruits, but commonly climb into shrubs to eat leaves. Feeding is most intense in March and April, but chuckwallas may be active all year in the Planning Area.

Social behavior is complex with large males possessing territories and harems within. Mating occurs from April to June, but reproduction is highly variable based on rainfall and food. They often bask on exposed rocks in the mornings and then forage throughout the day, resting in the shade as required.

The Chuckwalla has no special designations.

Colorado Desert fringe-toed lizard (*Uma notata*)

Colorado Desert fringe-toed lizards are found from northeast San Diego County southward through Imperial County, east to the Colorado River, and south into Baja California. Within the Planning Area they occur only in the extreme south adjacent to the Algodones Dunes (Map 3-4a Appendix A). Little is known about trends in population size or distribution.

Colorado Desert Fringe-toed lizards area medium sized, largely insectivorous lizards restricted to sand dunes with fine sand. They can be difficult to distinguish from other fringe-toed lizards in California. Fringe-toed lizards in general have numerous adaptations for a sand-dwelling lifestyle. The most notable adaptation is

the enlarged fringes on the third and fourth toes of the hind foot that enable them to achieve considerable speeds on the sand surface. Other adaptations for burying under the sand include a countersunk lower jaw, valved nostrils, and a flattened body.

Colorado Desert fringe-toed lizards eat a variety of insects, such as caterpillars, antlion larvae, bugs, grasshoppers, beetles, and ants. They also eat flowers, buds, leaves, and seeds and occasionally other lizards. They probably obtain all their water from their food.

They are active between March and October, with hibernation occurring between November and February. Daily activity patterns are highly temperature dependent. Adults usually mate in May, but will not reproduce if there is little food. Females usually deposit two (ranging from 1-5) eggs per clutch from late May until August. More than one clutch per year may be produced.

Their sandy habitats are fragile and have been heavily impacted by off-road vehicles. Their diving-under-sand escape response makes them particularly vulnerable to injury from off-road vehicles. Potential indirect impacts on habitat are associated with the disruption of ecosystem processes involving sand sources, wind transport, and sand corridors.

Colorado Desert fringe-toed lizard is a BLM California Sensitive Species and a State Species of Special Concern.

Mojave fringe-toed lizard (*Uma scoparia*)

Mojave fringe-toed lizards are found only in California and a small area of western Arizona, where they are restricted to dune habitats in the deserts of Los Angeles, Riverside, and San Bernardino Counties in California and La Paz County in Arizona. In the Planning Area they are known from the following areas: Bristol Dry Lake, Cadiz Dry Lake, Dale Dry Lake, Rice Valley, Pinto Basin, Palen Dry Lake, and Ford Dry Lake (Map 3-4a Appendix A). There is no information on population trends.
They are restricted to areas with fine sand including both large and small dunes, margins of dry lakebeds and washes, and isolated pockets against hillsides.

Mojave fringe-toed lizards are also a medium sized, omnivorous lizards restricted to sand dunes with fine sand. They are distinguishable from all other species of fringe-toed lizards by the presence of crescent-shaped markings on the throat. Adaptations and behaviors for living in sand dunes are similar to those described for the Colorado Desert fringe-toed lizard.

Mojave Fringe-toed lizards are omnivorous, feeding on dried seeds, flowers, grasses, leaves, insects, and scorpions. Food preference shifts seasonally according to availability.

Impacts are similar to those described for the Colorado Desert fringe-toed lizard.

Mojave fringe-toed lizard is a BLM California Sensitive Species and a State Species of Special Concern.

Flat-tailed horned lizard (*Phrynosoma mcallii*)

Flat-tailed horned lizards occur throughout the southern portion of the Colorado Desert from the Coachella Valley southward and eastward into Arizona and south into neighboring Sonora. Large portions of the historic range have been lost to inundation of the Salton Sea, urbanization, and agricultural development. Within the Planning Area, suitable habitat occurs only along the southern edge (Map 3-4a Appendix A). The subpopulation that occurs in the Planning Area is not in any of five Management Areas designated as part of an overall strategy to conserve the species. Despite considerable effort over the past 15 years, population sizes and trends are unknown due to difficulties in finding an effective population estimation procedure.

Flat-tailed horned lizards, like other horned lizards, have a flattened body shape with horns along the sides in rows and on the head. They are distinguishable from other horned lizards by a dark stripe down the back. They are extremely cryptic, blending into the soil of whatever color. They generally occur on sandy flats, hills, and badlands usually with creosote bush.

They feed almost exclusively on harvester ants, obtaining water from their prey. They forage actively or wait along ant trails or nest entrances.

Adults hibernate through the winter usually from mid-November to mid-February. Juveniles are active during most of the winter allowing them to continue growing to reproductive maturity. Females lay comparatively (to other horned lizards) small clutches of three to ten eggs in May. In favorable years they may deposit a second clutch in late summer. During the active season, flat-tailed horned lizards spend the night in shallow burrows or on the surface. During the day they may seek shelter in a burrow, under vegetation, or by wiggling below the soil surface.

Flat-tailed horned lizards use cryptic coloration and freezing to avoid danger. Sometimes they quickly bury themselves in loose soil by wiggling in a side-to-side movement.

The flat-tailed horned lizard is a federally proposed threatened species, BLM California Sensitive Species and a State Species of Special Concern.

Desert rosy boa (*Lichanura trivirgata*)

Although widely distributed, rosy boas are uncommon throughout their range. Desert rosy boas are found only in southeastern California and southeastern Arizona (Map 3-4e Appendix A). The most significant threats are from over collection for the pet trade and the destruction of habitat by collectors.
Desert rosy boas are medium sized snakes. They prefer a mixture of brushy cover and rocky soil, such as is found in desert canyons, washes, and mountains. Although not requiring water, they are often found near oases and permanent or intermittent streams.

The diet of rosy boas consists of small mammals and birds, which are killed by constriction. They forage over a wide area. When threatened, they may roll into a ball and hide their head among the coils.

Rosy boas are live-bearers of 3-12 young that are born in October or November. They are primarily nocturnal, but may be out in the evening or morning in the spring and may appear during the day. Most activity occurs in late spring to early or mid-summer. They hibernate in winter.

Desert rosy boa has no special designation.

Desert tortoise (*Gopherus agassizii*)

Desert tortoises are widely distributed in the desert: from as far north as Olancha south to the Mexican border and from the Colorado River west to near Lancaster. The Desert Tortoise (Mojave Population) Recovery Plan shows two major populations or *recovery units* in the Planning Area. These are the Northern Colorado Desert and Eastern Colorado Desert Recovery Units. The highest densities of tortoises are in Chemehuevi and Ward Valleys, on Chuckwalla Bench, and in JTNP. The USFWS has designated *critical habitat* for the desert tortoise (Map 3-5 Appendix A). Populations have declined precipitously in some parts of the range, such as Chuckwalla Bench. Causes for declines include habitat loss, diseases, excessive predation on young tortoises by ravens, collecting, shooting, highway and vehicle kills, and other factors.

Desert tortoises are found in a variety of habitats including desert scrub, Joshua tree woodland, and alkali desert scrub habitats. In California, the highest density populations occur in the creosotebush scrub habitat. They are most prevalent at elevations of about 1500 to 3000 feet.

Desert tortoises are the largest reptile found in the California desert; adults can grow to over 14 inches in length. When frightened, they withdraw almost completely within their shell, and most exposed surfaces are protected by tough skin or strong well developed scales.

Desert tortoises are herbivores and begin feeding shortly after they emerge from hibernation burrows in the spring. They eat primarily annual forbs, but perennial plants such as cacti and grasses are also important food items. Succulent plants are preferred and are an important source of water. As the season progresses succulent plants become less common, and tortoises begin eating more dried material. Another feeding period typically occurs in the fall after a short summer estivation underground.

Most tortoises do not begin breeding activities until 12-20 years old. Soon after they emerge from hibernation in the spring, male tortoises begin searching for mates, and breeding occurs soon after. Most eggs are laid in the late spring or fall typically at the mouth of a burrow. They hatch in about 90-120 days. Desert tortoises lay from 1 to 3 clutches of eggs per year.

The desert tortoise is a Federal Threatened Species (Mojave Population only) and State-listed Threatened Species.

Couch's spadefoot toad (*Scaphiopus couchi*)

The range of Couch's spadefoot extends from extreme southeastern California eastward through Arizona, New Mexico, Texas, and Oklahoma and southward into Mexico. In California, they occur in the Planning Area from Chemehuevi Wash south to the Ogilby area in Imperial County (Map 3-4a Appendix A).

Couch's spadefoot toads occur in a variety of vegetation types, including desert dry wash woodland, creosote bush scrub, and alkali sink scrub. The soil must be loose enough for the construction of burrows and capable of sustaining temporary ponds after summer thundershowers.

Couch's spadefoot toads are burrowing amphibians that spends the vast majority of their lives underground. A black, cornified, teardrop-shaped spade found on each hind foot is used for digging.

Couch's spadefoot toads are present on the surface for less than one month during years when there has been sufficient rainfall to allow for runoff ponds to form. They emerge and congregate at ponds, mate, lay eggs, eat, and perform all life sustaining functions within a brief period. They eat a variety of arthropods, such as termites, beetles, ants, grasshoppers, solpugids, scorpions, and centipedes. They are capable of surviving a year on a single, large meal of termites. Tadpoles are occasionally cannibalistic, but eat mostly invertebrates. If temperatures are right, eggs may hatch in less than a day, and tadpoles may metamorphose in as few as 7 days. Adults and young toads then go underground again for 10-11 months.

The population size is unknown. This species is of concern because (1) it has a small range in California; (2) populations are declining in other states; (3) it has a precarious life history; and (4) the capability of sites to impound runoff is easily destroyed. Road construction has created some pond habitat in Imperial County, but these are often subject to off-highway vehicle driving which can destroy soil impoundment capability. In addition to habitat disturbance, vehicles create noise similar to rainfall, resulting in emergence when conditions are not favorable. Vehicles may also crush vegetative debris which is essential as daytime cover.

The Couch's spadefoot toad is a BLM California Sensitive Species and a State Species of Special Concern.

Table N-1. For All Alternatives, Acres and Percent of Total of the Range (number of known sites for species indicated) of each Special Status Plant within JTNP, CMAGR, and BLM Wilderness

Special status plant	JTNP	CMAGR	BLM Wilderness
Angel trumpet			868 (41)
Harwood's rattleweed			3,096 (43)
Borrego milkvetch			
Coachella Valley milkvetch	1 site (33)		
Red grama			14,542 (91)
Fairyduster		60,383 (13)	77,342 (16)
Saguaro			8 sites (80)
Crucifixion thorn	491 (<1)	494 (<1)	27,740 (15)
Los Animas colubrina	65,301 (17)	26,527 (7)	127,135 (34)
Spiny abrojo		164,746 (25)	50,811 (7)
Wiggins'croton			
Winged cryptantha			
California ditaxis	78,608 (34)		52,428 (22)
Glandular ditaxis			944 (16)
Howe's hedgehog cactus			169 (37)
Foxtail cactus	489,172 (12)		1,392,949 (33)
Crown-of-thorns		90,263 (94)	1,536 (2)
Spearleaf	1,825 (1)	35,801 (24)	43,254 (29)
Robison's monardella			4,427 (93)
Munz' cholla		286,274 (86)	2,847 (1)
Wiggins' cholla			
Giant Spanish-needle			
White-margined beardtongue			
Sand food			
Arizona pholistoma			65,818 (69)

Special status plant	JTNP	CMAGR	BLM Wilderness
Lobed ground-cherry	4,785 (7)		13,722 (21)
Desert unicorn plant	3,222 (<1)	197,357 (7)	840,431 (31)
Orocopia sage		32,470 (29)	53,186 (47)
Coues' cassia		49 (<1)	61,143 (64)
Mesquite nest straw			
Jackass clover			39 (<1)
Mecca-aster			19,489 (78)

Table N-2. For the No Action Alternative, Acres and Percent of Total of the Range (number of known sites for species indicated) of each Special Status Plant within each BLM Multiple-Use Class

Special status plant	MUC C	MUC L	MUC M	MUC I	Unclassified
Angel trumpet			869 (41)		396 (19)
Harwood's rattleweed	2 (<1)	103 (1)	293 (4)		2,000 (28)
Borrego milkvetch		1 Site (25)	3 Sites 75)		
Coachella Valley milkvetch		2 Sites (66)			
Red grama	1,472 (9)				
Fairyduster	628 (1)	157,600 (33)	173,578 (37)	41 (<1)	
Saguaro	8 sites (80)	1 site (10)	1 site (10)		
Criucifixion thorn	1,705 (1)	103,331 (57)	46,769 (26)		
Los Animas colubrina	68,104 (17)	122,039 (32)	16,037 (4)	19,401 (5)	
Spiny abrojo	637 (<1)	279,124 (41)	177,304 (26)		
Wiggins'croton			3,932 (95)	192 (5)	
Winged cryptantha			1 site (100)		
California ditaxis	80,343 (35)	29,040 (13)	72,889 (31)	843 (<1)	
Glandular ditaxis		3,501 (58)	2,000 (33)		
Howe's hedgehog cactus			293 (63)		
Foxtail cactus	505,775 (12)	1,023,507 (25)	1,150,257 (27)	83,321 (2)	51,257 (1)
Crown-of-thorns		1,147 (1)	2,535 (3)		
Spearleaf	2,966 (2)	64,239 (43)	2,909 (2)		
Robison's monardella		310 (7)			
Munz' cholla		37,339 (11)	5,001 (2)		8 (<1)
Wiggins' cholla					2 sites (100)
Giant Spanish-needle			3,932 (95)	192 (5)	
White-margined beardtongue		2 sites (100)			
Sand food			3,932 (95)	192 (5)	

Special status plant	MUC C	MUC L	MUC M	MUC I	Unclassified
Arizona pholistoma	3,305 (4)	25,351 (27)	1,872 (2)		
Lobed ground-cherry	5,048 (7)	5,784 (9)	41,409 (63)		
Desert unicorn plant	18,982 (1)	841,611 (31)	695,499 (26)		96,217 (4)
Orocopia sage	1,379 (1)	16,457 (15)	7,751 (7)		49 (<1)
Coues' cassia	1,902 (2)	23,698 (25)	8,124 (8)		
Mesquite nest straw			3,670 (100)		
Jackass clover	216 (1)	8,131 (27)	21,524 (72)		
Mecca-aster	250 (1)	606 (2)	5,174 (21)		240 (1)

Table N-3. For No Action Alternative, Acres and Percent of Total of the Range (number of known sites for species indicated) of each Special Status Plant within four BLM grazing allotments

Special status plant	Lazy Daisy Cattle	Chemehuevi Cattle	Rice Valley Sheep	Ford Dry Lake Sheep
Angel trumpet				
Harwood's rattleweed				
Borrego milkvetch				
Coachella Valley milkvetch				
Red grama				
Fairyduster				
Saguaro				
Crucifixion thorn	28,138 (15)	85,370 (46)		
Los Animas colubrina				12 (<1)
Spiny abrojo				
Wiggins' croton				
Winged cryptantha				
California ditaxis				
Glandular ditaxis		1,661 (21)		
Howe's hedgehog cactus				
Foxtail cactus	332,886 (8)	135,595 (3)	85,55 (2)	49,681 (1)
Crown-of-thorns				
Spearleaf				
Robison's monardella				
Munz' cholla				
Wiggins' cholla				
Giant Spanish-needle				
White-margined beardtongue				

Special status plant	Lazy Daisy Cattle	Chemehuevi Cattle	Rice Valley Sheep	Ford Dry Lake Sheep
Sand food				
Arizona pholistoma		1,799 (2)		
Lobed ground-cherry	28,947 (41)			
Desert unicorn plant	5 (<1)	135,595 (5)	85,565 (3)	49,681 (2)
Orocopia sage				
Coues' cassia				
Mesquite nest straw				
Jackass clover				270 (1)

Table N-4. For All Alternative, Acres and Percent of Range of each Special Status Animal within JTNP, CMAGR, and BLM wilderness areas

Special Status Animal	JTNP	CMAGR	BLM Wilderness
Burro deer	40,113 (6)	131,824 (21)	68,551 (11)
California leaf-nosed bat	367,951 (9)	413,629 (10)	1,219,238 (29)
Occult little brown bat			347,313 (28)
Cave myotis			347,313 (28)
Fringed myotis	50,023 (2)		920,797 (43)
Pallid bat	489,253 (9)	453,750 (9)	1,553,070 (30)
Townsend's big-eared bat	474,842 (9)	399,600 (8)	1,531,435 (30)
Pocketed free-tailed bat	293,390 (15)	205,955 (11)	894,231 (46)
Western mastiff bat	293,390 (15)	205,955 (11)	894,231 (46)
Mountain lion	192,480 (6)	459,558 (15)	701,904 (23)
Colorado Valley woodrat	4,733 (<1)	459,581 (19)	560,128 (23)
Mountain plover			
Ferruginous hawk	489,253 (9)	459,581 (8)	1,586,393 (29)
Golden eagle	489,253 (9)	459,581 (8)	1,586,393 (29)
Prairie falcon	488,788 (9)	459,529 (9)	1,424,436 (28)
Elf owl	540 (<1)		71,904 (66)
Burrowing owl	489,253 (9)	459,581 (8)	1,586,393 (29)
Gila woodpecker			3,479 (4)
Vermilion flycatcher			48,317 (19)
Bendire's thrasher	219,074 (34)		139,390 (21)
Crissal thrasher	82 (<1)		199,304 (41)
LeConte's thrasher	244,555 (7)	297,969 (8)	834,714 (22
Yellow warbler			1,216 (3)
Chuckwalla	289,351 (10)	284,288 (10)	1,061,403 (38)
Colorado Desert fringe-toed lizard			

Special Status Animal	JTNP	CMAGR	BLM Wilderness
Mojave fringe-toed lizard	246,875 (9)		836,167 (29)
Flat-tailed horned lizard			
Desert rosy boa	485,698 (9)	459,579 (9)	1,570,953 (29)
Couch's spadefoot toad		351,516 (16)	428,837 (20)

Table N-5. For All Alternatives, Acres and Percent of range of each Special Status Animal within BLM utility corridors

Special Status Animal	Utility Corridor
Burro deer	92,683 (15)
California leaf-nosed bat	571,980 (14)
Occult little brown bat	267,324 (21)
Cave myotis	267,324 (21)
Fringed myotis	276,781 (13)
Pallid bat	664,443 (13)
Townsend's big-eared bat	669,134 (13)
Pocketed free-tailed bat	86,145 (4)
Western mastiff bat	86,415 (4)
Mountain lion	391,710 (13)
Colorado Valley woodrat	345,565 (14)
Mountain plover	20,249 (12)
Ferruginous hawk	730,817 (13)
Golden eagle	730,817 (13)
Prairie falcon	660, 950 (13)
Elf owl	3,873 (4)
Burrowing owl	730,817 (13)
Gila Woodpecker	61,390 (25)
Vermilion flycatcher	83,382 (13)
Bendire's thrasher	83,382 (13)
Crissal thrasher	97,095 (20)
LeConte's thrasher	597,094 (16)
Yellow warbler	16,936 (38)
Chuckwalla	229,796 (8)
Colorado Desert fringe-toed lizard	2,045 (52)

Special Status Animal	Utility Corridor
Mojave fringe-toed lizard	410,333 (14)
Flat-tailed horned lizard	15,647 (73)
Desert rosy boa	705,155 (13)
Couch's spadefoot toad	292,486 (14)

Table N-6. For No Action Alternative, Acres and Percent of Range of each Special Status Animal within four BLM livestock grazing allotments

Special Status Animal	Lazy Daisy Cattle	Chemehuevi Cattle	Rice Valley Sheep	Ford Dry Lake Sheep
Burro deer	5,462 (1)	6,317 (1)	8,110 (1)	5,355 (1)
California leaf-nosed bat	188,558 (5)	128,005 (3)	73,553 (2)	35,014 (1)
Occult little brown bat		110,571 (9)		
Cave myotis		110,571 (9)		
Fringed myotis	332,886 (16)	135,595 (6)		
Pallid bat	331,238 (6)	110,018 (2)	58,021 (1)	37,657 (1)
Townsend's big-eared bat	320,947 (6)	130,908 (3)	76,352 (2)	33,700 (1)
Pocketed free-tailed bat	125,644 (6)	2,643 (<1)	195 (<1)	13 (<1)
Western mastiff bat	125,644 (6)	2,643 (<1)	195 (<1)	13 (<1)
Mountain lion		18,597 (1)	30,570 (1)	44,196 (2)
Colorado Valley woodrat		50 (<1)	19,875 (1)	49,681 (2)
Mountain plover				5,269 (3)
Ferruginous hawk	332,886 (6)	135,595 (2)	85,565 (2)	49,681 (1)
Golden eagle	332,886 (6)	135,595 (2)	85,565 (2)	49,681 (1)
Prairie falcon	332,886 (6)	132,270 (3)	85,565 (2)	49,681 (1)
Elf owl		2,076 (2)		
Burrowing owl	332,886 (6)	135,595 (2)	85,565 (2)	49,681 (1)
Gila woodpecker		2,495 (3)		
Vermilion flycatcher				
Bendire's thrasher	120,733 (19)	84,454 (13)		
Crissal thrasher		12,159 (3)		
LeConte's thrasher	243,170 (7)	113,218 (3)	85,014 (2)	49,669 (1)
Yellow warbler		345 (1)		

Special Status Animal	Lazy Daisy Cattle	Chemehuevi Cattle	Rice Valley Sheep	Ford Dry Lake Sheep
Chuckwalla	127,107 (5)	75,227 (3)	8,719 (<1)	5,021 (<1)
Colorado Desert fringe-toed lizard				
Mojave fringe-toed lizard	166,577 (6)	100,421 (4)	85,515 (3)	49,669 (2)
Flat-tailed horned lizard				
Desert rosy boa	329,019 (6)	135,595 (3)	74,595 (1)	39,201 (1)
Couch's spadefoot toad		120,735 (6)	47,532 (2)	31,150 (1)

Table N-7. Acreage and the Percent of Range of each Special Status Animal within the Burro Herd Management Areas for Proposed Plan

Special Status Animal	Chemhuevi HMA	Chocolate-Mule Mountain HMA
Burro deer	1,140 (<1)	13,902 (2)
California leaf-nosed bat	105,282 (2)	151,079 (4)
Occult little brown bat	111,652 (9)	202,492 (16)
Cave myotis	111,652 (9)	202,492 (16)
Fringed myotis	90,308 (4)	0
Pallid bat	110,819 (2)	202,492 (4)
Townsend's big-eared bat	111,652 (2)	202,492 (4)
Pocketed free-tailed bat	68,462 (4)	129,793 (7)
Western mastiff bat	68,462 (4)	129,793 (7)
Mountain lion	101,412 (3)	202,492 (7)
Colorado Valley woodrat	89,818 (4)	202,492 (8)
Mountain plover	0	0
Ferruginous hawk	111,652 (2)	202,492 (4)
Golden eagle	111,652 (2)	202,492 (4)
Prairie falcon	67,148 (1)	116,436 (2)
Elf owl	68,462 (63)	5,241 (5)
Burrowing owl	111,652 (2)	202,492 (4)
Gila woodpecker	1,143 (1)	12,432 (13)
Vermilion flycatcher	0	0
Bendire's thrasher	908 (<1)	0
Crissal thrasher	55,127 (11)	119,597 (24)
LeConte's thrasher	22,386 (1)	70,868 (2)
Yellow warbler	781 (2)	5,928 (13)
Chuckwalla	101,696 (4)	188,658 (7)
Colorado Desert fringe-toed lizard	0	0

Special Status Animal	Chemhuevi HMA	Chocolate-Mule Mountain HMA
Mojave fringe-toed lizard	78,429 (3)	0
Flat-tailed horned lizard	0	0
Desert rosy boa	111,652 (2)	202,492 (4)
Couch's spadefoot toad	106,942 (5)	202,531 (9)

Table N-8. For Proposed Plan, Acres and Percent of Range of each Special Status Animal within the large DWMAs, Multi-species WHMA, and Conservation Zone

Special Status Animal	DWMAs	Multi-species WHMA	Conservation zone
Burro deer	303,642 (48)	73,352 (12)	513,297 (81)
California leaf-nosed bat	1,291,171 (31)	402,080 (10)	3,224,558 (77)
Occult little brown bat	214,315 (17)	184,859 (15)	728,582 (58)
Cave myotis	214,315 (17)	184,859 (15)	728,582 (58)
Fringed myotis	831,112 (39)	154,368 (7)	1,649,352, (77)
Pallid bat	1,606,983 (31)	486,187 (9)	3,944,952 (76)
Townsend's big-eared bat	1,540,602 (30)	497,905 (10)	3,863,242 (75)
Pocketed free-tailed bat	457,567 (23)	102,432 (5)	1,660,526 (85)
Western mastiff bat	457,567 (23)	102,432 (5)	1,660,526 (85)
Mountain lion	838,096 (28)	324,075 (11)	2,164,855 (72)
Colorado Valley woodrat	789,319 (32)	260,981 (11)	1,727,468 (71)
Mountain plover	1,276 (1)	86,586 (53)	87,862 (54)
Ferruginous hawk	1,684,893 (30)	537,474 (10)	4,101,826 (74)
Golden eagle	1,684,893 (30)	537,474 (10)	4,101,826 (74)
Prairie falcon	1,675,471 (32)	513,747 (10)	3,908,004 (75)
Elf owl	30,270 (28)	5,133 (5)	97,903 (89)
Burrowing owl	1,684,893 (30)	537,474 (10)	4,101,826 (74)
Gila woodpecker	30,151 (32)	37,863 (41)	71,156 (77)
Vermilion flycatcher		50,278 (20)	98,577 (40)
Bendire's thrasher	272,200 (42)		590,609 (90)
Crissal thrasher	15,937 (3)	70,025 (14)	283,274 (58)
LeConte's thrasher	1,294,512 (35)	458,359 (12)	2,710,761 (73)
Yellow warbler	7,141 (16)	21,837 (49)	30,193 (68)
Chuckwalla	870,417 (31)	175,100 (6)	2,240,497 (80)

Special Status Animal	DWMAs	Multi-species WHMA	Conservation zone
Colorado Desert fringe-toed lizard		3,905 (98)	3,905 (98)
Mojave fringe-toed lizard	765,204 (26)	376,885 (13)	1,989,552 (69)
Flat-tailed horned lizard		4,127 (19)	4,127 (19)
Desert rosy boa	1,676,985 (31)	422,418 (8)	3,960,332 (74)
Couch's spadefoot toad	680,859 (32)	242,663 (11)	1,492,695 (69)

Table N-9. For No Action and Proposed Plan Alternatives, Average number of Miles of Road (not including navigable washes) per square mile in the Range of each Special Status Animal

Special Status Animal	Mi. of road/mi.^{2}
Burro deer	.947
California leaf-nosed bat	.624
Occult little brown bat	.813
Cave myotis	.813
Fringed myotis	.519
Pallid bat	.601
Townsend's big-eared bat	.616
Pocketed free-tailed bat	.251
Western mastiff bat	.251
Mountain lion	.642
Colorado Valley woodrat	.725
Mountain plover	.433
Ferruginous hawk	.609
Golden eagle	.609
Prairie falcon	.600
Elf owl	.463
Burrowing owl	.609
Gila woodpecker	1.381
Vermilion flycatcher	.794
Bendire's thrasher	.486
Crissal thrasher	.764
LeConte's thrasher	.768
Yellow warbler	1.469
Chuckwalla	.404

Special Status Animal	Mi. of road/mi.^{2}
Colorado Desert fringe-toed lizard	.269
Mojave fringe-toed lizard	.661
Flat-tailed horned lizard	.588
Desert rosy boa	.613
Couch's spadefoot toad	.689

Table N-10. Acres and Percent of Range of each Special Status Animal in the areas where all navigable washes are open to vehicles for the Proposed Plan

Special Status Animal	Open washes
Burro deer	163,372 (26)
California leaf-nosed bat	464,406 (11)
Occult little brown bat	100,064 (8)
Cave myotis	100,064 (8)
Fringed myotis	192,522 (9)
Pallid bat	546,292 (11)
Townsend's big-eared bat	541,776 (11)
Pocketed free-tailed bat	123,981 (6)
Western mastiff bat	123,981 (6)
Mountain lion	381,856 (13)
Colorado Valley woodrat	359,830 (15)
Mountain plover	133 (< 1)
Ferruginous hawk	574,898 (10)
Golden eagle	574,898 (10)
Prairie falcon	574,898 (10)
Elf owl	15,120 (14)
Burrowing owl	574,898 (10)
Gila woodpecker	27,733 (30)
Vermilion flycatcher	0
Bendire's thrasher	93,193 (14)
Crissal thrasher	5,209 (1)
LeConte's thrasher	458,526 (12)
Yellow warbler	7,136 (16)
Chuckwalla	271,173 (10)
Colorado Desert fringe-toed lizard	

Special Status Animal	Open washes
Mojave fringe-toed lizard	237,261 (8)
Flat-tailed horned lizard	
Desert rosy boa	568,887 (11)
Couch's spadefoot toad	337,776 (16)

Table N-11. For Small DWMA--A Alternative, Acres and Percent of Range of each Special Status Animal within the small DWMAs, Multi-species WHMA, and Conservation Zone

Special Status Animal	Small DWMAs	Multi-species WHMA	Conservation Zone
Burro deer	183,438 (29)	194,278 (31)	516,716 (81)
California leaf-nosed bat	1,056,014 (25)	624,995 (15)	3,252,178 (77)
Occult little brown bat	183,552 (15)	209,620 (17)	728,510 (58)
Cave myotis	183,552 (15)	209,620 (17)	728,510 (58)
Fringed myotis	696,600 (33)	242,675 (11)	1,649,887 (77)
Pallid bat	1,318,663 (25)	740,491 (14)	3,972,852 (77)
Townsend's big-eared bat	1,254,336 (24)	752,499 (15)	3,891,307 (76)
Pocketed free-tailed bat	397,450 (20)	148,283 (8)	1,665,395 (86)
Western mastiff bat	397,450 (20)	148,283 (8)	1,665,395 (86)
Mountain lion	652,160 (22)	502,430 (17)	2,171,462 (72)
Colorado Valley woodrat	622,166 (26)	439,743 (18)	1,753,846 (72)
Mountain plover	1,276 (1)	86,586 (53)	87,862 (54)
Ferruginous hawk	1,384,216 (25)	803,976 (15)	4,129,727 (74)
Golden eagle	1,384,216 (25)	803,976 (15)	4,129,727 (74)
Prairie falcon	1,374,793 (27)	780,402 (15)	3,935,903 (76)
Elf owl	30,264 (28)	5,157 (5)	97,920 (89)
Burrowing owl	1,384,216 (25)	803,976 (15)	4,129,727 (74)
Gila woodpecker	2,608 (3)	65,358 (70)	71,175 (77)
Vermilion flycatcher	76 (<1)	50,186 (20)	98,577 (40)
Bendire's thrasher	210,305 (32)	32,274 (5)	590,970 (90)
Crissal thrasher	10,414 (2)	74,609 (15)	283,215 (58)
LeConte's thrasher	1,042,711 (28)	685,335 (18)	2,735,798 (74)
Yellow warbler		28,995 (66)	30,211 (68)
Chuckwalla	728,996 (26)	292,296 (10)	2,245,281 (80)
Colorado Desert fringe-toed lizard		3,906 (98)	3,906 (98)

Special Status Animal	Small DWMAs	Multi-species WHMA	Conservation Zone
Mojave fringe-toed lizard	666,738 (23)	449,005 (16)	1,992,348 (69)
Flat-tailed horned lizard		4,128 (19)	4,128 (19)
Desert rosy boa	1,379,546 (26)	685,795 (13)	3,988,232 (74)
Couch's spadefoot toad	489,832 (23)	421,508 (20)	1,491,024 (69)

Table N-12. Acres and Percent of Range of Special Status Species Plants within large DWMAs, Multi-species WHMAs, and total Conservation Zone (sightings points used in absence of predicted range)

Special status plant	DWMAs	Multi-Species WHMA	Conservation Zone
Angel trumpet	0	587 (28)	1,824 (87)
Harwood's rattleweed	3,999 (56)	234 (3)	4,233 (59)
Borrego milkvetch	0	1 points (25)	3 points (75)
Coachella Valley milkvetch	0	3 points (50)	4 points (67)
Red grama	1,984 (12)	0	15,997 (100)
Fairyduster	68,136 (14)	90,528 (19)	352,009 (74)
Saguaro	1 point (8)	1 point (8)	10 points (83)
Crucifixion thorn	176,004 (98)	935 (1)	179,536 (100)
Los Animas colubrina	232,888 (61)	0	377,209 (99)
Spiny abrojo	391,063 (58)	84,058 (12)	577,275 (70)
Wiggins'croton	0	4,059 (99)	4,059 (99)
Winged cryptantha	0	0	1 point (50)
California ditaxis	137,792 (59)	0	221,641 (95)
Glandular ditaxis	3,956 (66)	0	3,956 (66)
Howe's hedgehog cactus	0	0	165 (36)
Foxtail cactus	1,213,808 (29)	412,767 (10)	3,423,587 (82)
Crown-of-thorns	69,081 (71)	0	96,979 (100)
Spearleaf	140,947 (94)	0	148,494 (99)
Robison's monardella	0	0	4,722 (98)
Munz' cholla	175,312 (52)	0	333,207 (99)
Wiggins' cholla	0	0	0
Giant Spanish-needle	0	4,059 (99)	4,059 (99)
White-margined beardtongue	0	0	0
Sand food	0	4,059 (99)	4,059 (99)

Special status plant	DWMAs	Multi-Species WHMA	Conservation Zone
Arizona pholistoma	23,296 (25)	0	94,722 (100)
Lobed ground-cherry	51,624 (78)	0	65,902 (100)
Desert unicorn plant	1,025,543 (38)	338,776 (13)	2,147,928 (80)
Orocopia sage	48,050 (43)	0	110,860 (99)
Coves' cassia	71,751 (75)	0	94,664 (99)
Mesquite nest straw	3,421 (93)	0	3,421 (93)
Jackass clover	0	29,573 (99)	29,573 (99)
Mecca-aster	784 (3)	0	23,534 (97)

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Appendix O
Perspectives on Proposals for and Changes to Management Areas

The amount of land involved in plan proposals and changes to current management is indicated in various places in the chapters. However, the following statistical information is not so indicated, and it may be useful in discussing and analyzing the plan proposals and impacts. Agency acronyms are used in the tables.

Table O-1. Percent and acres of total planning area expressed in general land uses for BLM, JTNP, and CMAGR, by alternative

Agency Management Areas	Alternative			
	No Action**	Proposed Plan	Small DWMA--A	Small DWMA--B
BLM -- MUCs				
C (Wilderness)	29/1,601,740	29/1,584,545	29/1,584,545	29/1,584,545
L*	25/1,386,395	32/1,797,339	31/1,712,275	31/1,712,275
M*	25/1,398,912	19/1,022,980	20/1,108,043	20/1,108,043
I	2/83,466	1/62,909	1/62,909	1/62,909
Unclassified	2/126,374	2/130,349	2/130,349	2/130,349
JTNP	9/489,253	9/489,253	9/489,253	9/489,253
CMAGR				
Target areas	<1/2,813	<1/2,813	<1/2,813	<1/2,813
Non-target area	8/456,766	8/456,766	8/456,766	8/456,766

* MUC M is changed to MUC L in DWMAs
** In the No Action Alternative, Critical Habitat and existing HMP areas are used in place of DWMAs and WHMAs, respectively.

Table O-2. Percent and acres of total planning area expressed in general conservation zones, by alternative

Conservation Zones	Alternative			
	No Action**	Proposed Plan	Small DWMA--A	Small DWMA--B
Restricted Areas*	46/2,535,005	46/2,535,005	46/2,535,005	46/2,535,005
DWMAs (outside above)	21/1,180,991	19/1,054,227	14/785,234	14/785,234
WHMAs (outside above)	2/110,362	17/972,359	22/1,240,530	19/1,061,251
Remaining areas from all above to equal 100%	31/1,721,308	18/986,074	18/986,896	21/1,166,175

* Restricted Areas = JTNP, CMAGR, BLM wilderness
** In the No Action Alternative, Critical Habitat and existing HMP areas are used in place of DWMAs and WHMAs, respectively.

Table O-3. Percent and acres of distribution of BLM MUCs in WHMAs (BLM land only) and Remaining Areas (from Table O-2). Each group = 100%.

Conservation Zones	Alternative		
	Proposed Plan	Small DWMA--A	Small DWMA--B
WHMAs--Multi-Species & Bighorn Sheep			
MUC C (incl Bighorn Sheep, only)	37/1,107,331	36/1,107,762	38/1,107,657
MUC L	26/772,527	28/862,723	28/811,920
MUC M	15/442,085	17/528,889	15/427,866
MUC I	2/61,996	2/61,996	1/41,250
Remaining Areas			
MUC L	29/287,257	29/289,767	29/340,540
MUC M	59/579,940	59/578,168	58/679,190
MUC I	<1/913	<1/913	2/21,659

Table O-4. Acres of State Lands Commission lands to be acquired

Zone	Alternative		
	Proposed Plan	Small DWMA--A	Small DWMA--B
DWMAs	39,299	29,053	29,053
Wilderness Outside of DWMAs	26,674	27,937	27,937
Total	65,973	56,990	56,990

Table O-5. Percent of Bighorn Sheep metapopulations by Federal land management agency (including corridors)

Metapopulation	Alternatives: Proposed Plan, Small DWMA--A and B		
	BLM	JTNP	CMAGR
Sonoran	73	0	27
Southern Mojave	82	18	0

Table O-6. Percent of Bighorn Sheep metapopulations on BLM lands by MUC

MUC	Sonoran Metapopulation		Southern Mojave Metapopulation	
	Proposed Plan	Small A and B	Proposed Plan	Small A and B
C	45	45	58	58
L	44	42	29	28
M	11	13	12	13
I	0	0	<1	<1
Unclassified	<1	,1	<1	<1

Table O-7. Percent of Special Management Areas designated in CDCA Plan (shown on CDCA Plan Map No. 3) included in Conservation Zone--Proposed Plan

Special Management Areas (Y/N = was a management plan developed?)	Target Species or Habitat	% in Conservation Zone
ACECs		
56--Corn Spring (Y)	Habitat (oasis)	100
57--Chuckwalla Valley Dunes Thicket (Y)	Habitat	100
59--Chuckwalla Bench (Y)	Desert Tortoise/Habitat	100
Desert Lily Preserve (Y)	Desert Lily	100
Habitat Management Plans (HMPs)		
Bigelow Cholla (N)	Bigelow Cholla	100
W35--Fenner/Chemehuevi Valleys (N) W37--Chemehuevi Wash (N) W38--Whipple Mountain (Y) W39--Vidal Wash (N)	Desert Tortoise, other Habitat	85
No #--Marble Mountain (N)	Bighorn Sheep	45
No #--Sheep Hole Mountains (Y)	Bighorn Sheep	93
W45--Orocopia Mountains	Bighorn Sheep	85
W46--Eagle Mountains (N)	Bighorn Sheep	100
W47--Coxcomb Mountains (N)	Bighorn Sheep	92
W48--Granite-Palen Mountains (N)	Bighorn Sheep	89
W50--Rice Valley Dunes (N)	Habitat	99
W51--McCoy Wash (N)	Habitat	14
W52--Chuckwalla Bench (N)	Desert Tortoise	100
W53--Chuckwalla Mtns (Y)	Bighorn Sheep	98
W54--Ford Dry Lake (N)	Habitat	82
W55--Milpitas Wash (Y)	Habitat	99

Special Management Areas (Y/N = was a management plan developed?)	Target Species or Habitat	% in Conservation Zone
Habitat Management Plans (HMPs) continued		
W56--Palo Verde Mtns (N)	Saguaro Habitat	100
W58--Indian Wash (N)	Habitat	34
W59--Algodones Dunes	Habitat	28
Special Attention Areas		
W41--Cadiz Sand Dunes	Habitat	85
W57--Picacho Land and Wildlife Management Area	Habitat	90
Road Designation Restrictions		
W36--Stepladder Mtns	Teddy Bear Cholla Thicket	100
W49--Midland	Ironwood Thicket	80

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Appendix P
Boundaries of DWMAs and WHMAs

and Boundaries of areas within Large DWMAs
in which unspecified navigable washes are designated as open routes

General

With the sensitive nature and management emphasis placed on Desert Wildlife Management Areas (DWMAs), also designated as Areas of Critical Environmental Concern (ACECs), it is imperative that the public always know where these areas are and comply with applicable management requirements. Therefore, boundaries must be well defined--in narrative, on maps, and on the ground. The same need applies to the designation of navigable washes as open-on-an-area basis.

To increase manageability and to improve clarity for the public, selected boundaries are set to roads or existing restricted areas as much as possible; these are described below.

Where the boundary is one of the following features, the DWMA boundary is specified as indicated:

- Roads with rights-of-way: The DWMA boundary is the right-of-way boundary that is on the DWMA side of the right-of-way.
- Road not contained in a right-of-way: The DWMA boundary is 100 feet from road centerline to the DWMA side of the road.
- Park or BLM wilderness boundary (without associated road or other identifiable feature): The DWMA boundary is the park or wilderness boundary
- Land ownership: The DWMA boundary is a described section/township line
- Current desert tortoise critical habitat: The DWMA boundary is that line (in this case usually inside wilderness or other currently restricted areas) where the boundaries for those restricted areas are the more meaningful.
- Roads with six digit numbers (e.g., 690119) are the numbered routes on BLM's routes inventory.

Wildlife Habitat Management Area (WHMA) boundaries are as delineated on maps and in GIS. Appendix H provides details beyond what follows. In some places it is not possible to identify the boundary of a particular ground or demographic feature, and no other discussion is provided. The following general notes apply to most of the boundary segments:

- Wilderness and other agency boundaries
- Plant communities and species range limits
- Roads with rights-of-way: WHMA boundary is the right-of-way limit on the WHMA side of the right-of-way
- Roads without rights-of-way: WHMA boundary is 100 feet from the centerline of the road
- Land ownership: WHMA boundary is section line(s).

Large DWMA Boundaries

Joshua Tree National Park DWMA

DWMA boundary is the park boundary.

Chemehuevi DWMA

In the northwest part of the DWMA, beginning at the west intersection of Clipper Mountains Wilderness Area and Freeway I-40, the DWMA boundary runs as follows:

- south on west wilderness boundary to road 690119 (also a pipeline)
- west about 1.5 miles on inventoried road (690119) to its intersection with non-route 690126 (also a pipeline)
- east on non-route 690126 (also a pipeline), to its intersection with old Route 66
- northeast on old Route 66 to its intersection with road 690119 (also a pipeline)
- about 1.6 miles east on road 690119 (also a pipeline) to its intersection with a section line running between Sections 21-22, 27-28, and 33-34 of T7NR16E; and Sections 3-4 and 9-10 of T6NR16E
- south about 4 miles on above section line to its intersection with road 690200
- southeast on road 690200 to Old Woman Mountains Wilderness Area boundary, crossing the boundary on the same road trace to its intersection with the boundary of current tortoise critical habitat south through wilderness on the boundary of currently designated tortoise critical habitat to its intersection with a railroad (also wilderness boundary)
- south on railroad to its intersection with road 690228
- about 1 mile north on road 690228 to its intersection with road 690608
- northeast on road 690608 to its intersection with road 690609
- southeast on road 690609 to its intersection with road 690616
- northeast on road 690616 to its intersection with road 690622
- northeast, then southeast on road 69022 to Turtle Mountains Wilderness Area boundary
- north and west on wilderness boundary to its intersection with the boundary of currently designated tortoise critical habitat
- north, east, then south through wilderness on the critical habitat boundary to the intersection of wilderness boundary
- south on wilderness boundary to the southern-most intersection of wilderness boundary and road 690734
- south on road 690734 to its intersection with road 690609
- northeast on road 690609 to its intersection with U.S. Highway 95
- as road 690609 crosses (to east of) U.S. Highway 95, it changes to road 690742
- east on road 690742 to its intersection with road 690682
- north on road 690682 to its intersection with Whipple Mountains Wilderness Area boundary
- north on wilderness boundary to the intersection of two roads: 690519 and 690634
- north on road 690519 and wilderness boundary to its intersection with road 690510
- 1/10 mile northeast on 690510 to its intersection with road 690056 (also a power line)
- northwest on road 690056 to its intersection with Lake Havasu Road (a paved highway)

- east on Lake Havasu Road to its intersection with Chemehuevi Mountains Wilderness Area boundary
- north on wilderness boundary to its intersection with U.S. Highway 95
- north on wilderness boundary joint with U.S. Highway 95 to its intersection with road 690203 (also a pipeline)
- west on road 690203 to its intersection with road 690261
- 2/10 mile north on 690261 to its intersection with road 690119 (also a pipeline)
- west on road 690119 to its intersection with road 690257
- north on road 690257 to its intersection with road 690102
- north on road 690102 to its intersection with road 690246
- west on road 690246 to its intersection with road 690243
- west on road 690243 to its intersection with road 690056 (also a power line)
- northwest on road 690056 to its intersection with road 690085
- east on road 690085 to its intersection with road 690073
- west then north on road 690073 to its intersection with road 690064
- west on road 690064 to its intersection with Bigelow Cholla Garden Wilderness Area boundary
- north 1/10 mile on wilderness boundary to its intersection with current boundary tortoise critical habitat
- northwest on critical habitat boundary to its intersection with Freeway I-40
- west on I-40 to its intersection with Clipper Mountains Wilderness Area boundary, thence to the beginning of DWMA as described above but circumventing some lands around freeway exits along I-40 as follows (to the south side, only):

    - at Water Road the NW1/4 of Section 26 and the NE 1/4 of Section 27 of T9N, R19E
    - at Mountain Springs Pass the NE1/4 of Section 35 and NW1/4 of Section 36 of T9N, R18E
    - at Fenner the W1/2 of Section 3 and the E1/2 of Section 4 of T8N, R17E
    - at Essex Road the NE1/4 of Section 8 and the NW1/4 of Section 9 of T8N, R16E
    - an additional "cutout" exclusion in the DWMA has been provided for the town of Essex. The excluded area is W1/2, NE 1/4, and the NW 1/4 of the SE 1//4 of Section 31 of T8N, R17E.

Chuckwalla DWMA

In the northwest part of the DWMA, beginning at the intersection of the Joshua Tree National Park (JTNP) boundary and the section line between Sections 22 and 23 in T5S, R9E, the DWMA boundary runs as follows:

- east and north on the JTNP boundary to its intersection with road 660327
- east on road 660327 to its intersection with road 660326
- north on road 660326 to its intersection with road 660329
- north on road 660329 to its intersection with road 660334
- northeast on road 660334 to its intersection with road 660332
- south on road 660332 to its intersection with road 660333 (aka Kaiser Road)

- south on road 660333 to its intersection with Highway 177, south on Highway 177 to its intersection with I-10, excluding the following: S1/2 Section 22, W1/2 Section 26, and all of Section 27 of T5S, R15E.
- before continuing east on I-10 from its intersection with Highway 177, there are five "cutout" exclusions for freeway exits west of this point (from east to west):

    - at Eagle Mountain, W1/2 of Section 29, Section 30, N1/2 Section 31, NW 1/4 Section 32 of T5S, R15E
    - at Red Cloud, W1/2 of Section 6 and the NW1/4 of Section 7 of T6S, R14E and E1/2 Section 1 and NE1/4 of Section 12 of T6S, R13E
    - at Hayfield, S1/2 Section 5 and the N1/2 Section 8 of T6N, R13E
    - at Chiriaco Summit, all of Sections 9, 10, and 16
    - at Box Canyon Highway, all of sections 11, 12, 13, and 14

- continuing east along I-10 to Corn Springs Exit
- east and south of I-10 along the old highway alignment, now named Chuckwalla Road, to its intersection with I-10 at Ford Dry Lake Exit, excluding the SE1/4 of Section 33 and S1/2 of Section 34 of T6S, R19E
- east along I-10 to its intersection with Wiley Road, excluding the E1/2 of Section 32 and the W1/2 of Section 33 of T6S, R20E
- south on Wiley Well Road to its intersection with the Palo Verde Mountains Wilderness Area, excluding (west of Wiley Well Road) the private land of the Chuckwalla Prison area as follows: Section 16, Section 17, the E1/2 of Section 18, the NE 1/4 of the NW 1/4 of Section 18, and the W1/2 of NE 1/4 of Section 20
- east along wilderness boundary to its intersection with currently designated tortoise critical habitat
- south on critical habitat boundary (through wilderness) to its intersection with wilderness on the east side of Section 12 of T10S, R20E
- north and east on wilderness boundary to its intersection with road 670569
- south on road 670569 about three miles to its intersection with T670576 (Milpitas Road, a county maintained road)
- east on T670576 about one mile to its intersection with Highway 78
- south on Highway 78 to its intersection with the south boundary of T12S, R19E, the section line on the south side of Section 35
- west along the section line on the south side of Section 35 to its intersection with the boundary of the Chocolate Mountains Aerial Gunnery Range (CMAGR), also coincident with currently designated tortoise critical habitat
- north along the joint CMAGR-critical tortoise habitat boundary to their split, then, with no deviation from current critical tortoise habitat, northwesterly through:

    - CMAGR
    - Orocopia Wilderness Area
    - (part of) Mecca Hills Wilderness Area to the intersection of Mecca Hills Wilderness Area boundary and the north-south running section line that separates Sections 9 and 10 of T6S, R9E

- north for two miles from the above-noted intersection
- east for one mile along the section line on the north side of Section 3 of T6S, R9E
- north two and one-half miles on the section line that separates the following pairs of sections: 34 and 35, 26 and 27, and 22 and 23 of T5S, R9E, thence to the beginning of DWMA as described above at its intersection with Joshua Tree National Park.

Areas within Large DWMAs in which unspecified navigable washes are designated as open routes

In certain areas of the Chemehuevi and Chuckwalla DWMAs, in the Low Risk-Proposed Plan Alternative, all navigable washes are designated as open routes of travel. This is not the case within Joshua Tree National Park. In other portions of these two DWMAs in this alternative and for all DWMAs in other alternatives, this is not the case, and washes are designated as open routes of travel only on a specific, wash-by-wash basis (i.e., the same as for routes shown on the routes of travel inventory). See Map 2-10 Appendix A.

Joshua Tree National Park DWMA

There are no area basis designations.

Chemehuevi DWMA

Unspecified navigable washes are designated closed in the DWMA in most locations. In a few areas of the DWMA, all unspecified navigable washes are designated as open routes. These areas are as follows:

Essex-east of Old Woman Mountains area. Boundary, starting from the intersection of Clipper Mountains Wilderness Area and I-40:

- south on Clipper Mountains Wilderness Area eastern boundary to its intersection with non-route 690126 (also a pipeline)
- east on non-route 690126 (also a pipeline), to its intersection with a section line running between Sections 21-22, 27-28, and 33-34 of T7NR16E; and Sections 3-4 and 9-10 of T6NR16E
- south about 4 miles on above section line to its intersection with road 690200
- southeast on road 690200 to Old Woman Mountains Wilderness Area boundary
- northeast and southeast on wilderness boundary to its intersection with road 690054 (Metropolitan Water District's Ward Valley power line service road)
- north on road 690054 to its intersection with road 690228
- west on road 690228 to its intersection with road 690212
- west on road 690212 to its intersection with Piute Mountains Wilderness Area boundary
- west on joint road 690212 and wilderness boundary (past the wilderness gap
- staying on road 690212) to their intersection
- west on wilderness boundary to its intersection with road 690211 (aka Sunflower Springs Road)
- north on joint road 690211 and wilderness boundary to their intersection

- north on wilderness boundary to its intersection with Old National Trails Highway
- northeast on joint highway and wilderness boundary (past the wilderness gap staying on Old National Trails Highway) to their intersection
- north on Old National Trails Highway to its intersection with I-40
- west on I-40 (as described in Item 43 for Chemehuevi DWMA boundary, above) to its intersection with the Clipper Mountains Wilderness Area, thence to the beginning of this designation area

East Ward Valley and East Chemehuevi Valley areas: Boundary, all of DWMA east of road 690056. See Chemehuevi DWMA boundary description, above for more DWMA boundary details.

Savahia Peak area: Boundary, starting from the intersection of Highway 95 and road 690634:

- south on Highway 95 to its intersection with southern boundary of DWMA (road 690742
- east on road 690742 to its intersection with road 690682
- north on road 690682 to its intersection with Whipple Mountains Wilderness Area boundary
- north on wilderness boundary to the intersection of two roads: 690519 and 690634
- west on road 690634 to its intersection with road 690660
- west on road 690660 to its intersection with road 690634
- west on road 690634 to its intersection with Highway 95, thence to the beginning of this designation area

Chuckwalla DWMA

Unspecified navigable washes are designated closed in the DWMA in the following locations:

- Chocolate Mountains Aerial Gunnery Range
- all BLM wilderness areas
- most of current Chuckwalla ACEC
- north of I-10
- south of I-10 and northwest of Box Canyon Highway

In all other areas of this DWMA, unspecified navigable washes are designated open routes.

Small DWMA Boundaries

Joshua Tree National Park DWMA

DWMA boundary is the park boundary.

Chemehuevi DWMA

In the northwest part of the DWMA, beginning at the west intersection of Clipper Mountains Wilderness Area and Freeway I-40, the DWMA boundary runs as follows:

- south on west wilderness boundary to road 690119 (also a pipeline)
- west about 1.5 miles on inventoried road (690119) to its intersection with non-route 690126 (also a pipeline)
- east on non-route 690126 (also a pipeline) to its intersection with old Route 66
- northeast on old Route 66 to its intersection with Section 31 of T8N, R17E
- north along the west side of Section 31
- east along the north edge of Section 31 to its intersection with old Route 66
- northeast along old Route 66 to its intersection with the Piute Mountains Wilderness Area
- counterclockwise along the wilderness boundary, across the cherry stem gap (that divides the wilderness area) on road 690212, continuing counterclockwise along the wilderness boundary to its intersection with road 690061
- northeast on road 690061 to its intersection with road 690054
- south on road 690054 to its intersection with the railroad along the north side of Danby Dry Lake (in Section 16, T2N,R18E)
- south on railroad to its intersection with road 690228
- about 1 mile north on road 690228 to its intersection with road 690608
- northeast on road 690608 to its intersection with road 690609
- southeast on road 690609 to its intersection with road 690616
- northeast on road 690616 to its intersection with road 690622
- northeast, then southeast on road 69022 to Turtle Mountains Wilderness Area boundary
- north and west on wilderness boundary to its intersection with the boundary of currently designated tortoise critical habitat
- north, east, then south through wilderness on the critical habitat boundary to the intersection of wilderness boundary
- south on wilderness boundary to the southern-most intersection of wilderness boundary and road 690734
- south on road 690734 to its intersection with road 690609
- northeast on road 690609 to its intersection with U.S. Highway 95
- as road 690609 crosses (to east of) U.S. Highway 95, it changes to road 690742
- east on road 690742 to its intersection with road 690682
- north on road 690682 to its intersection with Whipple Mountains Wilderness Area boundary
- north on wilderness boundary to the intersection of two roads: 690519 and 690634
- north on road 690519 and wilderness boundary to its intersection with road 690510
- 1/10 mile northeast on 690510 to its intersection with road 690056 (also a power line)
- northwest on road 690056 to its intersection with Lake Havasu Road (a paved highway)
- east on Lake Havasu Road to its intersection with Chemehuevi Mountains Wilderness Area boundary
- north on wilderness boundary to its intersection with U.S. Highway 95
- north on wilderness boundary joint with U.S. Highway 95 to its intersection with road 690203 (also a pipeline)
- west on road 690203 to its intersection with road 690261
- 2/10 mile north on 690261 to its intersection with road 690119 (also a pipeline)
- west on road 690119 to its intersection with road 690257
- north on road 690257 to its intersection with road 690102
- north on road 690102 to its intersection with road 690246

- west on road 690246 to its intersection with road 690243
- west on road 690243 to its intersection with road 690056 (also a power line)
- northwest on road 690056 to its intersection with road 690085
- east on road 690085 to its intersection with road 690073
- west then north on road 690073 to its intersection with road 690064
- west on road 690064 to its intersection with Bigelow Cholla Garden Wilderness Area boundary
- north 1/10 mile on wilderness boundary to its intersection with current boundary tortoise critical habitat
- northwest on critical habitat boundary to its intersection with Freeway I-40
- west on I-40 to its intersection with Clipper Mountains Wilderness Area boundary, thence to the beginning of DWMA as described above but circumventing some lands around freeway exits along I-40 as follows (to the south side, only):

    - at Water Road the NW1/4 of Section 26 and the NE 1/4 of Section 27 of T9N, R19E
    - at Mountain Springs Pass the NE1/4 of Section 35 and NW1/4 of Section 36 of T9N, R18E
    - at Fenner the W1/2 of Section 3 and the E1/2 of Section 4 of T8N, R17E
    - at Essex Road the NE1/4 of Section 8 and the NW1/4 of Section 9 of T8N, R16E

Chuckwalla DWMA

In the northwest part of the DWMA, beginning at the intersection of the Joshua Tree National Park boundary and the section line between Sections 22 and 23 in T5S, R9E, the DWMA boundary runs as follows:

- east and north on the JTNP boundary to its intersection with road 660327
- east on road 660327 to its intersection with road 660326
- north on road 660326 to its intersection with road 660329
- north on road 660329 to its intersection with road 660334
- northeast on road 660334 to its intersection with road 660332
- south on road 660332 to its intersection with road 660333 (aka Kaiser Road)
- south on road 660333 to its intersection with Highway 177, south on Highway 177 to its intersection with I-10, excluding the following: S1/2 Section 22, W1/2 Section 26, and all of Section 27 of T5S, R15E.
- before continuing east on I-10 from its intersection with Highway 177, there are five "cutout" exclusions for freeway exits west of this point (from east to west):

    - at Eagle Mountain, W1/2 of Section 29, Section 30, N1/2 Section 31, NW 1/4 Section 32 of T5S, R15E
    - at Red Cloud, W1/2 of Section 6 and the NW1/4 of Section 7 of T6S, R14E and E1/2 Section 1 and NE1/4 of Section 12 of T6S, R13E
    - at Hayfield, S1/2 Section 5 and the N1/2 Section 8 of T6N, R13E
    - at Chiriaco Summit, all of Sections 9, 10, and 16
    - at Box Canyon Highway, all of sections 11, 12, 13, and 14

- (continuing east from item 7, above) east along I-10 to Corn Springs Exist
- east and south of I-10 along the old highway alignment, now named Chuckwalla Road, to its intersection with I-10 at Ford Dry Lake Exit, excluding the SE1/4 of Section 33 and S1/2 of Section 34 of T6S, R19E
- east along I-10 to its intersection with Wiley Road, excluding the E1/2 of Section 32 and the W1/2 of Section 33 of T6S, R20E
- south on Wiley Road to its intersection with road 660159 (aka Bradshaw Trail), excluding (west of Wiley Well Road) the private land of the Chuckwalla Prison area as follows: Section 16, Section 17, the E1/2 of Section 18, the NE 1/4 of the NW 1/4 of Section 18, and the W1/2 of NE 1/4 of Section 20
- west on road 660159 (aka Bradshaw Trail) to its intersection with road 660594
- east on road 660594 to its intersection with road 660588
- north on road 660588 to its terminus.
- north on a straight line (not possible to define on the ground) to the south terminus of road 660576 located about one half mile southeast of Chuckwalla Spring. This undefined connecting line is about 1.5 miles in length.
- north on road 660576 to its intersection with road 660581
- north on road 660581 to its intersection with road 660469
- west on road 660469 to its intersection with road 660159 (aka Bradshaw Trail)
- southeast on road 660159 to its intersection with the boundary of the Chocolate Mountains Aerial Gunnery Range (CMAGR)
- clockwise on the CMAGR boundary to its intersection with currently designated tortoise critical habitat
- northwest on critical tortoise habitat boundary through:

    - CMAGR
    - Orocopia Wilderness Area
    - (part of) Mecca Hills Wilderness Area to the intersection of Mecca Hills Wilderness Area boundary and the north-south running section line that separates Sections 9 and 10 of T6S, R9E

- north for two miles from the above-noted intersection
- east for one mile along the section line on the north side of Section 3 of T6S, R9E
- north two and one-half miles on the section line that separates the following pairs of sections: 34 and 35, 26 and 27, and 22 and 23 of T5S, R9E, thence to the beginning of the DWMA as described above at its intersection with Joshua Tree National Park.

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Appendix Q
Photos

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Photo # 1. Mojave Desert Scrub Natural Community (~350' above sea level)

Photo # 2. Mojave Desert Scrub Natural Community (~1000' above sea level)

Photo # 3. Sonoran Desert Scrub natural community.

Photo # 4. Sonoran Desert Scrub natural community (showing considerable alien plants intrusion in foreground)

Photo # 5. Desert Dry Wash Woodland natural community (Ironwood Trees)

Photo # 6. Desert Dry Wash Woodland natural community (Palo Verde trees)

Photo # 7. Playa natural community

Photo # 8. Sand Dunes natural community

Photo # 9. Desert Chenopod Scrub natural community

Photo # 10. Mojave Pinion and Juniper Woodland natural community

Photo # 11. Spring / Seep natural community

Photo # 12. Spring / Seep (Palm Oasis) natural community
(Corn Springs campground)

Photo # 13. Developed Land (Palo Verde Valley farmland)

Photo # 14. Tamarisk intrusion into riparian habitat

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Appendix R
Route Designation Summary and Tables

Basis of Route Designations

Route designations are based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands, in accordance with the criteria at 43 CFR 8342.1 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). Route designations apply only to BLM-managed public lands.

Routes Traversing More than One Map

The route numbers and corresponding designations appearing in the tables are linked to specific maps. Where a route traverses more than one map, the route's number and designation are repeated in the tables for each map, thereby resulting in a redundancy of route numbers and designations where applicable. If a route segment on one map is designated differently than the remainder of the route on another map, the tables reflect the difference from map to map. For example, if a segment of route 123 on map ABC is designated "open" while the remainder of the same route on the adjoining map is designated "closed," the tables reflect two different designations for the same route on a map-specific basis.

Spur Routes

Some spur routes depicted on the NECO maps are not assigned individual route numbers. Hence they are not individually designated "open,"" limited," or "closed." Other spur routes have been assigned numbers and are individually designated "open," "limited," or "closed." A spur route is one that diverges from another route and is of minimal length (often less than 1/10 of a mile). Where a spur route is not individually assigned a route number, it assumes the same designation as the route from which it diverges.

Table R-1. Summary of Route Designations and Number of Routes

Designation of routes on public lands / characterization of routes on non-public lands	Number of inventoried routes (does not include non-inventoried wash routes in "washes open zones" and "washes closed zones")
Open Routes (includes routes designated "open" on public lands and routes identified as open on non-public lands; route designations do not apply to non-public lands; this total does not include routes that are open for motorized-vehicle use in Joshua Tree National Park)	1,779

Designation of routes on public lands / characterization of routes on non-public lands	Number of inventoried routes (does not include non-inventoried wash routes in "washes open zones" and "washes closed zones")
Limited Routes (includes routes designated "limited" on public lands and routes identified as limited on non-public lands; route designations do not apply to non-public lands)	1 (partial) (the remainder of the route is designated "open" on public lands)
Closed Routes (includes routes designated "closed" on public lands and routes identified as closed on non-public lands; route designations do not apply to non-public lands; this total does not include routes that are closed to motorized-vehicle use in BLM wilderness, Joshua Tree National Park, and the Chocolate Mountains Aerial Gunnery Range)	368
Partially Closed Routes (includes routes for which a portion is designated "open" and the remainder is designated "closed" on public lands, and routes identified as partially open/closed on non-public lands; route designations do not apply to non-public lands)	85
Total	**2,233**

Table R-2. Summary of Route Designations, Mileage of Routes (Public Lands Only)

Designation of Unpaved Routes on Public Lands (672 miles of paved routes are available for use)	Mileage of Routes (does not include non-inventoried wash routes in "washes open zones" and "washes closed zones")
Open Unpaved Routes	**3,515**
Limited	**3**
Closed Unpaved Routes (this mileage does not include routes that are closed to motorized-vehicle use in BLM wilderness)	**513**
Total	**4,031**

Table R-3. Summary of Route Designation Revisions from Draft EIS to Final EIS

Revision		Number of routes	Portion of total number, % (not mileage)
Route Closures	open route to closed route	24	11.4
	open route to partially closed route	14	6.7
	partially closed route to closed route	1	0.5
	n/a (route not identified in the DEIS) to closed route	7	3.3
Route Openings	closed route to open route	42	20.0
	limited route to open route	4	1.9
	partially closed route to open route	21	10.0
	closed route to partially closed route	8	3.8
	n/a (route not identified in the DEIS) to open route	72	34.3
Other	closed route to closed route (different rationale or extent of closure)	10	4.8
	partially limited route to partially limited route (different rationale or extent of closure)	1	0.5
	partially closed route to partially closed route (different rationale or extent of closure)	6	2.8
Totals		**210**	**100**

Table R-4. Route Designation Codes

Designation code	Explanation of code
open	route is open in its entirety
open (partial)	a portion of the route is open; this designation applies to the segment of a route that is not partially limited or partially closed (see below)
open (pending)	new route to be developed upon completion of an environmental assessment; designation of "open" does not require a plan amendment
limitedz (partial)	access to a portion of the route is limited by season of use; a portion of the route is closed from June 1 to September 30 and open the remainder of the year
closed	route is characterized as a non-route and closed in its entirety
closed (partial)	route is characterized as a partial non-route, but only a portion of the route is closed
closedn	route is characterized as a partial non-route and closed in its entirety
closedn (partial)	route is characterized as a partial non-route, but only a portion of the route is closed
closedg	route is characterized as a redundant route and closed in its entirety
closedg (partial)	route is characterized as a redundant route, but only a portion of the route is closed
closedh	route is located within 1/4 mile of a significant bat roost and closed in its entirety
closedh (partial)	route is located within 1/4 mile of a significant bat roost, but only a portion of the route is closed
closedr	route is located within 1/4 mile of a prairie falcon or golden eagle eyrie and closed in its entirety
closedr (partial)	route is located within 1/4 mile of a prairie falcon or golden eagle eyrie, but only a portion of the route is closed
closedw	route is located within 1/4 mile of a natural or artificial water source and closed in its entirety
closedw (partial)	route is located within 1/4 mile of a natural or artificial water source, but only a portion of the route is closed
closedp closedz	route is closed for other reasons (e.g., locked gate prohibits access, route facilitates unauthorized access to adjacent non-public lands, etc.)
closedp (partial) closedz (partial)	a portion of the route is closed for other reasons (e.g., locked gate prohibits access, route facilitates unauthorized access to adjacent non-public lands, etc.)
n/a	route is not identified in the Draft EIS

Description of the Following Tables

Information in tables R-5 through R-8 is described as follows.

Table R-5, Route Designations, provides the following information:

- route number
- U.S. Geological Society (USGS) map (quadrangle) name (1:24,000 scale)
- route designation (see Table R-4 for an explanation of designation codes)
- BLM Field Office jurisdiction
- map number assigned to the inventory map that was released for public review in April 1996

Table R-6, Description of Closed Route Segments for Partially Closed Routes, provides the following information:

- route number of partially closed route
- description of closed route segment
- map number assigned to the inventory map that was released for public review in April 1996

Table R-7, Route Designation Revisions from Draft EIS (DEIS) to Final EIS (FEIS), provides the following information:

- route number
- U.S. Geological Society (USGS) map (quadrangle) name (1:24,000 scale)
- map number assigned to the inventory map that was released for public review in April 1996
- designation proposed in the DEIS (see Table R-4 for an explanation of designation codes)
- designation proposed in the FEIS (see Table R-4 for an explanation of designation codes)
- rationale for the revision

Table R-8, Map Relates, provides the following information:

- U.S. Geological Society (USGS) map (quadrangle) name (1:24,000 scale)
- USGS map (quadrangle) code
- BLM Field Office jurisdiction
- map number assigned to the inventory map that was released for public review in April 1996

Table R-5. Route Designations

Route No.	USGS Map Name	Designation	Field Office	Map No.
690061	Bannock	open	Needles	1
690063	Bannock	open	Needles	1
690064	Bannock	open	Needles	1
690065	Bannock	open	Needles	1
690066	Bannock	open	Needles	1
690086	Needles NW	open	Needles	2
690087	Needles NW	open	Needles	2
690088	Needles NW	open	Needles	2
690089	Needles NW	open	Needles	2
690090	Needles NW	open	Needles	2
690091	Needles NW	open	Needles	2
690092	Needles NW	open	Needles	2
690093	Needles NW	open	Needles	2
690001	Blind Hills	closedg	Needles	4
690177	Blind Hills	closed	Needles	5
690004	Blind Hills	closedg	Needles	5
690006	Blind Hills	closedg	Needles	5
690010	Blind Hills	closedg	Needles	5
690013	Blind Hills	closedg	Needles	5
690011	Blind Hills	closedn	Needles	5
690003	Blind Hills	open	Needles	5
690005	Blind Hills	open	Needles	5
690007	Blind Hills	open	Needles	5
690008	Blind Hills	open	Needles	5
690012	Blind Hills	open	Needles	5
690015	Blind Hills	open	Needles	5
690016	Blind Hills	open	Needles	5
690017	Blind Hills	open	Needles	5
690018	Blind Hills	open	Needles	5
690019	Blind Hills	open	Needles	5
690020	Blind Hills	open	Needles	5
690021	Blind Hills	open	Needles	5
690022	Blind Hills	open	Needles	5
690022	Fenner	closed (partial)	Needles	6
690023	Fenner	closedg	Needles	6
690008	Fenner	open	Needles	6
690024	Fenner	open	Needles	6
690025	Fenner	open	Needles	6
690026	Fenner	open	Needles	6

Route No.	USGS Map Name	Designation	Field Office	Map No.
690027	Fenner	open	Needles	6
690028	Fenner	open	Needles	6
690029	Fenner	open	Needles	6
690030	Fenner	open	Needles	6
690031	Fenner	open	Needles	6
690032	Fenner	open	Needles	6
690033	Fenner	open	Needles	6
690034	Fenner	open	Needles	6
690035	Fenner	open	Needles	6
690036	Fenner	open	Needles	6
690037	Fenner	open	Needles	6
690038	Fenner	open	Needles	6
690039	Fenner	open	Needles	6
690040	Fenner	open	Needles	6
690041	Fenner	open	Needles	6
690042	Fenner	open	Needles	6
690043	Fenner	open	Needles	6
690044	Fenner	open	Needles	6
690045	Fenner	open	Needles	6
690046	Fenner	open	Needles	6
690047	Fenner	open	Needles	6
690048	Fenner	open	Needles	6
690049	Fenner	open	Needles	6
690050	Fenner	open	Needles	6
690022	Fenner	open (partial)	Needles	6
690050	Fenner Spring	open	Needles	7
690052	Fenner Spring	open	Needles	7
690053	West of Flattop Mountain	closed	Needles	8
690052	West of Flattop Mountain	open	Needles	8
690054	West of Flattop Mountain	open	Needles	8
690055	West of Flattop Mountain	open	Needles	8
690056	West of Flattop Mountain	open	Needles	8
690057	West of Flattop Mountain	open	Needles	8
690058	West of Flattop Mountain	open	Needles	8
690059	West of Flattop Mountain	open	Needles	8
690060	West of Flattop Mountain	open	Needles	8
690061	West of Flattop Mountain	open	Needles	8
690081	Flattop Mountain	closed	Needles	9
690079	Flattop Mountain	closedn	Needles	9
690074	Flattop Mountain	closedw (partial)	Needles	9
690056	Flattop Mountain	open	Needles	9
690061	Flattop Mountain	open	Needles	9

Route No.	USGS Map Name	Designation	Field Office	Map No.
690062	Flattop Mountain	open	Needles	9
690063	Flattop Mountain	open	Needles	9
690064	Flattop Mountain	open	Needles	9
690066	Flattop Mountain	open	Needles	9
690067	Flattop Mountain	open	Needles	9
690068	Flattop Mountain	open	Needles	9
690069	Flattop Mountain	open	Needles	9
690070	Flattop Mountain	open	Needles	9
690071	Flattop Mountain	open	Needles	9
690072	Flattop Mountain	open	Needles	9
690073	Flattop Mountain	open	Needles	9
690075	Flattop Mountain	open	Needles	9
690076	Flattop Mountain	open	Needles	9
690077	Flattop Mountain	open	Needles	9
690078	Flattop Mountain	open	Needles	9
690080	Flattop Mountain	open	Needles	9
690082	Flattop Mountain	open	Needles	9
690083	Flattop Mountain	open	Needles	9
690084	Flattop Mountain	open	Needles	9
690085	Flattop Mountain	open	Needles	9
690099	Flattop Mountain	open	Needles	9
690074	Flattop Mountain	open (partial)	Needles	9
690904	Needles SW	closed	Needles	10
690087	Needles SW	open	Needles	10
690090	Needles SW	open	Needles	10
690091	Needles SW	open	Needles	10
690094	Needles SW	open	Needles	10
690095	Needles SW	open	Needles	10
690097	Needles SW	open	Needles	10
690098	Needles SW	open	Needles	10
690099	Needles SW	open	Needles	10
690100	Needles SW	open	Needles	10
690101	Needles SW	open	Needles	10
690102	Needles SW	open	Needles	10
690103	Needles SW	open	Needles	10
690901	Needles SW	open	Needles	10
690902	Needles SW	open	Needles	10
690903	Needles SW	open	Needles	10
690904	Needles	closed	Needles	11
690090	Needles	open	Needles	11
690099	Needles	open	Needles	11
690100	Needles	open	Needles	11

Route No.	USGS Map Name	Designation	Field Office	Map No.
690101	Needles	open	Needles	11
690102	Needles	open	Needles	11
690104	Needles	open	Needles	11
690105	Needles	open	Needles	11
690106	Needles	open	Needles	11
690107	Needles	open	Needles	11
690108	Needles	open	Needles	11
690109	Needles	open	Needles	11
690110	Needles	open	Needles	11
690111	Needles	open	Needles	11
690112	Needles	open	Needles	11
690113	Needles	open	Needles	11
690114	Needles	open	Needles	11
690115	Needles	open	Needles	11
690905	Needles	open	Needles	11
690117	Brown Buttes	open	Needles	12
690118	Brown Buttes	open	Needles	12
690119	Brown Buttes	open	Needles	12
690120	Brown Buttes	open	Needles	12
690121	Brown Buttes	open	Needles	12
690122	Brown Buttes	open	Needles	12
690123	Brown Buttes	open	Needles	12
690124	Brown Buttes	open	Needles	12
690131	Brown Buttes	open	Needles	12
690125	Van Winkle Wash	closed	Needles	13
690127	Van Winkle Wash	closed	Needles	13
690139	Van Winkle Wash	closed	Needles	13
690140	Van Winkle Wash	closed	Needles	13
690126	Van Winkle Wash	closed (partial)	Needles	13
690130	Van Winkle Wash	closedn	Needles	13
690119	Van Winkle Wash	open	Needles	13
690121	Van Winkle Wash	open	Needles	13
690123	Van Winkle Wash	open	Needles	13
690128	Van Winkle Wash	open	Needles	13
690131	Van Winkle Wash	open	Needles	13
690132	Van Winkle Wash	open	Needles	13
690133	Van Winkle Wash	open	Needles	13
690134	Van Winkle Wash	open	Needles	13
690136	Van Winkle Wash	open	Needles	13
690137	Van Winkle Wash	open	Needles	13
690138	Van Winkle Wash	open	Needles	13
690126	Van Winkle Wash	open (partial)	Needles	13

Route No.	USGS Map Name	Designation	Field Office	Map No.
690143	Castle Dome	closed	Needles	14
690152	Castle Dome	closed	Needles	14
690153	Castle Dome	closed	Needles	14
690154	Castle Dome	closed	Needles	14
690161	Castle Dome	closed	Needles	14
690163	Castle Dome	closed	Needles	14
690126	Castle Dome	closed (partial)	Needles	14
690159	Castle Dome	closed (partial)	Needles	14
690155	Castle Dome	closedn	Needles	14
690149	Castle Dome	closedz (partial)	Needles	14
690119	Castle Dome	open	Needles	14
690141	Castle Dome	open	Needles	14
690142	Castle Dome	open	Needles	14
690144	Castle Dome	open	Needles	14
690145	Castle Dome	open	Needles	14
690146	Castle Dome	open	Needles	14
690147	Castle Dome	open	Needles	14
690148	Castle Dome	open	Needles	14
690150	Castle Dome	open	Needles	14
690151	Castle Dome	open	Needles	14
690156	Castle Dome	open	Needles	14
690157	Castle Dome	open	Needles	14
690158	Castle Dome	open	Needles	14
690160	Castle Dome	open	Needles	14
690162	Castle Dome	open	Needles	14
690170	Castle Dome	open	Needles	14
690126	Castle Dome	open (partial)	Needles	14
690149	Castle Dome	open (partial)	Needles	14
690159	Castle Dome	open (partial)	Needles	14
690159	Danby	closed	Needles	15
690161	Danby	closed	Needles	15
690165	Danby	closed	Needles	15
690166	Danby	closed	Needles	15
690174	Danby	closed	Needles	15
690175	Danby	closed	Needles	15
690176	Danby	closed	Needles	15
690177	Danby	closed	Needles	15
690194	Danby	closed	Needles	15
690204	Danby	closed	Needles	15
690155	Danby	closed (partial)	Needles	15
690167	Danby	closed (partial)	Needles	15
690170	Danby	closed (partial)	Needles	15

Route No.	USGS Map Name	Designation	Field Office	Map No.
690173	Danby	closed (partial)	Needles	15
690013	Danby	closedg	Needles	15
690202	Danby	closedg	Needles	15
690011	Danby	closedn	Needles	15
690201	Danby	closedn	Needles	15
690021	Danby	open	Needles	15
690022	Danby	open	Needles	15
690119	Danby	open	Needles	15
690149	Danby	open	Needles	15
690156	Danby	open	Needles	15
690168	Danby	open	Needles	15
690169	Danby	open	Needles	15
690171	Danby	open	Needles	15
690172	Danby	open	Needles	15
690178	Danby	open	Needles	15
690179	Danby	open	Needles	15
690180	Danby	open	Needles	15
690181	Danby	open	Needles	15
690183	Danby	open	Needles	15
690184	Danby	open	Needles	15
690186	Danby	open	Needles	15
690187	Danby	open	Needles	15
690188	Danby	open	Needles	15
690189	Danby	open	Needles	15
690191	Danby	open	Needles	15
690192	Danby	open	Needles	15
690193	Danby	open	Needles	15
690195	Danby	open	Needles	15
690196	Danby	open	Needles	15
690197	Danby	open	Needles	15
690198	Danby	open	Needles	15
690199	Danby	open	Needles	15
690200	Danby	open	Needles	15
690203	Danby	open	Needles	15
690155	Danby	open (partial)	Needles	15
690167	Danby	open (partial)	Needles	15
690170	Danby	open (partial)	Needles	15
690173	Danby	open (partial)	Needles	15
690201	Essex	closed	Needles	16
690215	Essex	closed	Needles	16
690224	Essex	closed	Needles	16
690212	Essex	closed (partial)	Needles	16

Route No.	USGS Map Name	Designation	Field Office	Map No.
690044	Essex	open	Needles	16
690045	Essex	open	Needles	16
690046	Essex	open	Needles	16
690050	Essex	open	Needles	16
690119	Essex	open	Needles	16
690180	Essex	open	Needles	16
690181	Essex	open	Needles	16
690193	Essex	open	Needles	16
690203	Essex	open	Needles	16
690205	Essex	open	Needles	16
690206	Essex	open	Needles	16
690207	Essex	open	Needles	16
690208	Essex	open	Needles	16
690209	Essex	open	Needles	16
690210	Essex	open	Needles	16
690211	Essex	open	Needles	16
690213	Essex	open	Needles	16
690214	Essex	open	Needles	16
690216	Essex	open	Needles	16
690217	Essex	open	Needles	16
690218	Essex	open	Needles	16
690219	Essex	open	Needles	16
690220	Essex	open	Needles	16
690221	Essex	open	Needles	16
690222	Essex	open	Needles	16
690223	Essex	open	Needles	16
690212	Essex	open (partial)	Needles	16
690235	Little Piute Mountains	closed	Needles	17
690227	Little Piute Mountains	closedw	Needles	17
690230	Little Piute Mountains	closedw	Needles	17
690231	Little Piute Mountains	closedw	Needles	17
690050	Little Piute Mountains	open	Needles	17
690052	Little Piute Mountains	open	Needles	17
690054	Little Piute Mountains	open	Needles	17
690061	Little Piute Mountains	open	Needles	17
690119	Little Piute Mountains	open	Needles	17
690203	Little Piute Mountains	open	Needles	17
690212	Little Piute Mountains	open	Needles	17
690225	Little Piute Mountains	open	Needles	17
690226	Little Piute Mountains	open	Needles	17
690229	Little Piute Mountains	open	Needles	17
690232	Little Piute Mountains	open	Needles	17

Route No.	USGS Map Name	Designation	Field Office	Map No.
690233	Little Piute Mountains	open	Needles	17
690234	Little Piute Mountains	open	Needles	17
690238	Stepladder Mountains NW	closed	Needles	18
690239	Stepladder Mountains NW	closed	Needles	18
690228	Stepladder Mountains NW	closed (partial)	Needles	18
690236	Stepladder Mountains NW	closed (partial)	Needles	18
690054	Stepladder Mountains NW	open	Needles	18
690061	Stepladder Mountains NW	open	Needles	18
690119	Stepladder Mountains NW	open	Needles	18
690203	Stepladder Mountains NW	open	Needles	18
690237	Stepladder Mountains NW	open	Needles	18
690228	Stepladder Mountains NW	open (partial)	Needles	18
690236	Stepladder Mountains NW	open (partial)	Needles	18
690247	Stepladder Mountains NE	closed	Needles	19
690248	Stepladder Mountains NE	closed	Needles	19
690056	Stepladder Mountains NE	open	Needles	19
690083	Stepladder Mountains NE	open	Needles	19
690084	Stepladder Mountains NE	open	Needles	19
690085	Stepladder Mountains NE	open	Needles	19
690119	Stepladder Mountains NE	open	Needles	19
690203	Stepladder Mountains NE	open	Needles	19
690236	Stepladder Mountains NE	open	Needles	19
690240	Stepladder Mountains NE	open	Needles	19
690241	Stepladder Mountains NE	open	Needles	19
690242	Stepladder Mountains NE	open	Needles	19
690243	Stepladder Mountains NE	open	Needles	19
690245	Stepladder Mountains NE	open	Needles	19
690246	Stepladder Mountains NE	open	Needles	19
690249	Stepladder Mountains NE	open	Needles	19
690250	Stepladder Mountains NE	open	Needles	19
690251	Stepladder Mountains NE	open	Needles	19
690252	Stepladder Mountains NE	open	Needles	19
690253	Stepladder Mountains NE	open	Needles	19
690254	Stepladder Mountains NE	open	Needles	19
690056	Monumental Pass	open	Needles	20
690102	Monumental Pass	open	Needles	20
690115	Monumental Pass	open	Needles	20
690119	Monumental Pass	open	Needles	20
690203	Monumental Pass	open	Needles	20
690246	Monumental Pass	open	Needles	20
690255	Monumental Pass	open	Needles	20
690256	Monumental Pass	open	Needles	20

Route No.	USGS Map Name	Designation	Field Office	Map No.
690257	Monumental Pass	open	Needles	20
690258	Monumental Pass	open	Needles	20
690259	Monumental Pass	open	Needles	20
690260	Monumental Pass	open	Needles	20
690261	Monumental Pass	open	Needles	20
690262	Monumental Pass	open	Needles	20
690263	Monumental Pass	open	Needles	20
690264	Monumental Pass	open	Needles	20
690265	Monumental Pass	open	Needles	20
690266	Monumental Pass	open	Needles	20
690267	Monumental Pass	open	Needles	20
690271	Whale Mountain	closed	Needles	21
690114	Whale Mountain	open	Needles	21
690115	Whale Mountain	open	Needles	21
690119	Whale Mountain	open	Needles	21
690260	Whale Mountain	open	Needles	21
690263	Whale Mountain	open	Needles	21
690264	Whale Mountain	open	Needles	21
690268	Whale Mountain	open	Needles	21
690269	Whale Mountain	open	Needles	21
690270	Whale Mountain	open	Needles	21
690272	Whale Mountain	open	Needles	21
690273	Whale Mountain	open	Needles	21
690274	Whale Mountain	open	Needles	21
690275	Whale Mountain	open	Needles	21
690276	Whale Mountain	open	Needles	21
690277	Whale Mountain	open	Needles	21
690278	Whale Mountain	open	Needles	21
690279	Whale Mountain	open	Needles	21
690280	Whale Mountain	open	Needles	21
690281	Whale Mountain	open	Needles	21
690282	Whale Mountain	open	Needles	21
690283	Whale Mountain	open	Needles	21
690284	Whale Mountain	open	Needles	21
690311	Amboy	closed (partial)	Needles	23
690138	Amboy	open	Needles	23
690285	Amboy	open	Needles	23
690286	Amboy	open	Needles	23
690287	Amboy	open	Needles	23
690288	Amboy	open	Needles	23
690289	Amboy	open	Needles	23
690290	Amboy	open	Needles	23

Route No.	USGS Map Name	Designation	Field Office	Map No.
690291	Amboy	open	Needles	23
690292	Amboy	open	Needles	23
690293	Amboy	open	Needles	23
690294	Amboy	open	Needles	23
690295	Amboy	open	Needles	23
690296	Amboy	open	Needles	23
690297	Amboy	open	Needles	23
690298	Amboy	open	Needles	23
690299	Amboy	open	Needles	23
690300	Amboy	open	Needles	23
690301	Amboy	open	Needles	23
690302	Amboy	open	Needles	23
690303	Amboy	open	Needles	23
690304	Amboy	open	Needles	23
690305	Amboy	open	Needles	23
690306	Amboy	open	Needles	23
690307	Amboy	open	Needles	23
690308	Amboy	open	Needles	23
690309	Amboy	open	Needles	23
690310	Amboy	open	Needles	23
690312	Amboy	open	Needles	23
690313	Amboy	open	Needles	23
690314	Amboy	open	Needles	23
690315	Amboy	open	Needles	23
690316	Amboy	open	Needles	23
690317	Amboy	open	Needles	23
690318	Amboy	open	Needles	23
690319	Amboy	open	Needles	23
690320	Amboy	open	Needles	23
690311	Amboy	open (partial)	Needles	23
690334	Cadiz	closed	Needles	24
690336	Cadiz	closed	Needles	24
690338	Cadiz	closed	Needles	24
690339	Cadiz	closed	Needles	24
690346	Cadiz	closed	Needles	24
690355	Cadiz	closed	Needles	24
690327	Cadiz	closed (partial)	Needles	24
690328	Cadiz	closed (partial)	Needles	24
690335	Cadiz	closedn	Needles	24
690340	Cadiz	closedn	Needles	24
690138	Cadiz	open	Needles	24
690288	Cadiz	open	Needles	24

Route No.	USGS Map Name	Designation	Field Office	Map No.
690289	Cadiz	open	Needles	24
690290	Cadiz	open	Needles	24
690291	Cadiz	open	Needles	24
690299	Cadiz	open	Needles	24
690304	Cadiz	open	Needles	24
690321	Cadiz	open	Needles	24
690322	Cadiz	open	Needles	24
690323	Cadiz	open	Needles	24
690324	Cadiz	open	Needles	24
690325	Cadiz	open	Needles	24
690329	Cadiz	open	Needles	24
690330	Cadiz	open	Needles	24
690331	Cadiz	open	Needles	24
690332	Cadiz	open	Needles	24
690333	Cadiz	open	Needles	24
690337	Cadiz	open	Needles	24
690341	Cadiz	open	Needles	24
690342	Cadiz	open	Needles	24
690343	Cadiz	open	Needles	24
690344	Cadiz	open	Needles	24
690345	Cadiz	open	Needles	24
690347	Cadiz	open	Needles	24
690348	Cadiz	open	Needles	24
690349	Cadiz	open	Needles	24
690350	Cadiz	open	Needles	24
690351	Cadiz	open	Needles	24
690352	Cadiz	open	Needles	24
690354	Cadiz	open	Needles	24
690356	Cadiz	open	Needles	24
690357	Cadiz	open	Needles	24
690358	Cadiz	open	Needles	24
690327	Cadiz	open (partial)	Needles	24
690328	Cadiz	open (partial)	Needles	24
690359	Cadiz Summit	closed	Needles	25
690383	Cadiz Summit	closed	Needles	25
690384	Cadiz Summit	closed	Needles	25
690385	Cadiz Summit	closed	Needles	25
690395	Cadiz Summit	closed	Needles	25
690396	Cadiz Summit	closed	Needles	25
690398	Cadiz Summit	closed	Needles	25
690907	Cadiz Summit	closed	Needles	25
690371	Cadiz Summit	closed (partial)	Needles	25

Route No.	USGS Map Name	Designation	Field Office	Map No.
690360	Cadiz Summit	closedh	Needles	25
690361	Cadiz Summit	closedh	Needles	25
690391	Cadiz Summit	closedh	Needles	25
690392	Cadiz Summit	closedh	Needles	25
690389	Cadiz Summit	closedh (partial)	Needles	25
690368	Cadiz Summit	closedn	Needles	25
690159	Cadiz Summit	open	Needles	25
690170	Cadiz Summit	open	Needles	25
690180	Cadiz Summit	open	Needles	25
690181	Cadiz Summit	open	Needles	25
690214	Cadiz Summit	open	Needles	25
690288	Cadiz Summit	open	Needles	25
690289	Cadiz Summit	open	Needles	25
690291	Cadiz Summit	open	Needles	25
690299	Cadiz Summit	open	Needles	25
690304	Cadiz Summit	open	Needles	25
690342	Cadiz Summit	open	Needles	25
690343	Cadiz Summit	open	Needles	25
690344	Cadiz Summit	open	Needles	25
690347	Cadiz Summit	open	Needles	25
690348	Cadiz Summit	open	Needles	25
690358	Cadiz Summit	open	Needles	25
690362	Cadiz Summit	open	Needles	25
690363	Cadiz Summit	open	Needles	25
690364	Cadiz Summit	open	Needles	25
690365	Cadiz Summit	open	Needles	25
690366	Cadiz Summit	open	Needles	25
690367	Cadiz Summit	open	Needles	25
690369	Cadiz Summit	open	Needles	25
690370	Cadiz Summit	open	Needles	25
690372	Cadiz Summit	open	Needles	25
690373	Cadiz Summit	open	Needles	25
690374	Cadiz Summit	open	Needles	25
690375	Cadiz Summit	open	Needles	25
690376	Cadiz Summit	open	Needles	25
690377	Cadiz Summit	open	Needles	25
690378	Cadiz Summit	open	Needles	25
690379	Cadiz Summit	open	Needles	25
690380	Cadiz Summit	open	Needles	25
690381	Cadiz Summit	open	Needles	25
690382	Cadiz Summit	open	Needles	25
690386	Cadiz Summit	open	Needles	25

Route No.	USGS Map Name	Designation	Field Office	Map No.
690387	Cadiz Summit	open	Needles	25
690388	Cadiz Summit	open	Needles	25
690390	Cadiz Summit	open	Needles	25
690393	Cadiz Summit	open	Needles	25
690394	Cadiz Summit	open	Needles	25
690397	Cadiz Summit	open	Needles	25
690371	Cadiz Summit	open (partial)	Needles	25
690389	Cadiz Summit	open (partial)	Needles	25
690204	Skeleton Pass	closed	Needles	26
690399	Skeleton Pass	closed	Needles	26
690400	Skeleton Pass	closed	Needles	26
690401	Skeleton Pass	closed	Needles	26
690202	Skeleton Pass	closedg	Needles	26
690405	Skeleton Pass	closedg	Needles	26
690180	Skeleton Pass	open	Needles	26
690181	Skeleton Pass	open	Needles	26
690195	Skeleton Pass	open	Needles	26
690200	Skeleton Pass	open	Needles	26
690203	Skeleton Pass	open	Needles	26
690214	Skeleton Pass	open	Needles	26
690370	Skeleton Pass	open	Needles	26
690402	Skeleton Pass	open	Needles	26
690403	Skeleton Pass	open	Needles	26
690404	Skeleton Pass	open	Needles	26
690204	Old Woman Statue	closed	Needles	27
690406	Old Woman Statue	closed	Needles	27
690211	Old Woman Statue	open	Needles	27
690214	Old Woman Statue	open	Needles	27
690217	Old Woman Statue	open	Needles	27
690218	Old Woman Statue	open	Needles	27
690219	Old Woman Statue	open	Needles	27
690220	Old Woman Statue	open	Needles	27
690221	Old Woman Statue	open	Needles	27
690233	Old Woman Statue	open	Needles	27
690403	Old Woman Statue	open	Needles	27
690404	Old Woman Statue	open	Needles	27
690407	Old Woman Statue	open	Needles	27
690408	Old Woman Statue	open	Needles	27
690228	Painted Rock Wash	closed	Needles	28
690421	Painted Rock Wash	closed	Needles	28
690420	Painted Rock Wash	closed (partial)	Needles	28
690418	Painted Rock Wash	closedg	Needles	28

Route No.	USGS Map Name	Designation	Field Office	Map No.
690211	Painted Rock Wash	closedg (partial)	Needles	28
690231	Painted Rock Wash	closedw	Needles	28
690054	Painted Rock Wash	open	Needles	28
690232	Painted Rock Wash	open	Needles	28
690233	Painted Rock Wash	open	Needles	28
690407	Painted Rock Wash	open	Needles	28
690410	Painted Rock Wash	open	Needles	28
690411	Painted Rock Wash	open	Needles	28
690412	Painted Rock Wash	open	Needles	28
690413	Painted Rock Wash	open	Needles	28
690414	Painted Rock Wash	open	Needles	28
690415	Painted Rock Wash	open	Needles	28
690416	Painted Rock Wash	open	Needles	28
690417	Painted Rock Wash	open	Needles	28
690419	Painted Rock Wash	open	Needles	28
690422	Painted Rock Wash	open	Needles	28
690429	Painted Rock Wash	open	Needles	28
690211	Painted Rock Wash	open (partial)	Needles	28
690420	Painted Rock Wash	open (partial)	Needles	28
690228	Stepladder Mountains SW	closed	Needles	29
690238	Stepladder Mountains SW	closed	Needles	29
690239	Stepladder Mountains SW	closed	Needles	29
690423	Stepladder Mountains SW	closed	Needles	29
690425	Stepladder Mountains	closed	Needles	30
690254	Stepladder Mountains	open	Needles	30
690424	Stepladder Mountains	open	Needles	30
690056	Snaggletooth	open	Needles	31
690267	Snaggletooth	open	Needles	31
690426	Snaggletooth	open	Needles	31
690427	Snaggletooth	open	Needles	31
690428	Snaggletooth	open	Needles	31
690429	Snaggletooth	open	Needles	31
690430	Snaggletooth	open	Needles	31
690431	Snaggletooth	open	Needles	31
690432	Snaggletooth	open	Needles	31
690434	Snaggletooth	open	Needles	31
690435	Snaggletooth	open	Needles	31
690436	Snaggletooth	open	Needles	31
690438	Snaggletooth	open	Needles	31
690056	Chemehuevi Peak	open	Needles	32
690432	Chemehuevi Peak	open	Needles	32
690437	Chemehuevi Peak	open	Needles	32

Route No.	USGS Map Name	Designation	Field Office	Map No.
690311	Bristol Lake NW	closed	Needles	34
690441	Bristol Lake NW	closed	Needles	34
690439	Bristol Lake NW	closed (partial)	Needles	34
690303	Bristol Lake NW	open	Needles	34
690310	Bristol Lake NW	open	Needles	34
690318	Bristol Lake NW	open	Needles	34
690319	Bristol Lake NW	open	Needles	34
690350	Bristol Lake NW	open	Needles	34
690356	Bristol Lake NW	open	Needles	34
690438	Bristol Lake NW	open	Needles	34
690440	Bristol Lake NW	open	Needles	34
690442	Bristol Lake NW	open	Needles	34
690443	Bristol Lake NW	open	Needles	34
690439	Bristol Lake NW	open (partial)	Needles	34
690311	Calumet Mine	closed	Needles	35
690439	Calumet Mine	closed	Needles	35
690444	Calumet Mine	closed	Needles	35
690446	Calumet Mine	closed	Needles	35
690447	Calumet Mine	closed	Needles	35
690451	Calumet Mine	closed	Needles	35
690908	Calumet Mine	closed	Needles	35
690442	Calumet Mine	closed (partial)	Needles	35
690449	Calumet Mine	closedh	Needles	35
690450	Calumet Mine	closedh	Needles	35
690350	Calumet Mine	open	Needles	35
690356	Calumet Mine	open	Needles	35
690358	Calumet Mine	open	Needles	35
690443	Calumet Mine	open	Needles	35
690445	Calumet Mine	open	Needles	35
690448	Calumet Mine	open	Needles	35
690442	Calumet Mine	open (partial)	Needles	35
690456	Cadiz Lake NW	closed	Needles	36
690457	Cadiz Lake NW	closed	Needles	36
690455	Cadiz Lake NW	closed (partial)	Needles	36
690214	Cadiz Lake NW	open	Needles	36
690342	Cadiz Lake NW	open	Needles	36
690443	Cadiz Lake NW	open	Needles	36
690452	Cadiz Lake NW	open	Needles	36
690453	Cadiz Lake NW	open	Needles	36
690454	Cadiz Lake NW	open	Needles	36
690458	Cadiz Lake NW	open	Needles	36
690455	Cadiz Lake NW	open (partial)	Needles	36

Route No.	USGS Map Name	Designation	Field Office	Map No.
690463	Cadiz Lake NE	closed	Needles	37
690342	Cadiz Lake NE	open	Needles	37
690402	Cadiz Lake NE	open	Needles	37
690404	Cadiz Lake NE	open	Needles	37
690453	Cadiz Lake NE	open	Needles	37
690459	Cadiz Lake NE	open	Needles	37
690460	Cadiz Lake NE	open	Needles	37
690461	Cadiz Lake NE	open	Needles	37
690462	Cadiz Lake NE	open	Needles	37
690464	Cadiz Lake NE	open	Needles	37
690465	Cadiz Lake NE	open	Needles	37
690465	Sheep Camp Spring	open	Needles	38
690466	Sheep Camp Spring	open	Needles	38
690468	Sheep Camp Spring	open	Needles	38
690469	Sheep Camp Spring	open	Needles	38
690470	Sheep Camp Spring	open	Needles	38
690420	Wilhelm Spring	closed	Needles	39
690228	Wilhelm Spring	closed (partial)	Needles	39
690211	Wilhelm Spring	closedg	Needles	39
690054	Wilhelm Spring	open	Needles	39
690422	Wilhelm Spring	open	Needles	39
690434	Wilhelm Spring	open	Needles	39
690473	Wilhelm Spring	open	Needles	39
690228	Wilhelm Spring	open (partial)	Needles	39
690434	West of Mohawk Spring	open	Needles	40
690434	Mohawk Spring	open	Needles	41
690474	Mohawk Spring	open	Needles	41
690475	Mohawk Spring	open	Needles	41
690476	Mohawk Spring	open	Needles	41
690477	Mohawk Spring	open	Needles	41
690478	Mohawk Spring	open	Needles	41
690479	Mohawk Spring	open	Needles	41
690480	Mohawk Spring	open	Needles	41
690481	Mohawk Spring	open	Needles	41
690482	Mohawk Spring	open	Needles	41
690483	Mohawk Spring	open	Needles	41
690484	Mohawk Spring	open	Needles	41
690487	Mohawk Spring	open	Needles	41
690488	Mohawk Spring	open	Needles	41
690489	Mohawk Spring	open	Needles	41
690490	Mohawk Spring	open	Needles	41
690491	Mohawk Spring	open	Needles	41

Route No.	USGS Map Name	Designation	Field Office	Map No.
690492	Mohawk Spring	open	Needles	41
690493	Mohawk Spring	open	Needles	41
690494	Mohawk Spring	open	Needles	41
690495	Mohawk Spring	open	Needles	41
690496	Mohawk Spring	open	Needles	41
690497	Mohawk Spring	open	Needles	41
690498	Mohawk Spring	open	Needles	41
690499	Mohawk Spring	open	Needles	41
690952	Mohawk Spring	open (pending)	Needles	41
690509	Savahia Peak NW	closed	Needles	42
690508	Savahia Peak NW	closedg	Needles	42
690510	Savahia Peak NW	closedg	Needles	42
690434	Savahia Peak NW	open	Needles	42
690436	Savahia Peak NW	open	Needles	42
690491	Savahia Peak NW	open	Needles	42
690498	Savahia Peak NW	open	Needles	42
690499	Savahia Peak NW	open	Needles	42
690500	Savahia Peak NW	open	Needles	42
690501	Savahia Peak NW	open	Needles	42
690502	Savahia Peak NW	open	Needles	42
690503	Savahia Peak NW	open	Needles	42
690504	Savahia Peak NW	open	Needles	42
690505	Savahia Peak NW	open	Needles	42
690506	Savahia Peak NW	open	Needles	42
690507	Savahia Peak NW	open	Needles	42
690511	Savahia Peak NW	open	Needles	42
690512	Savahia Peak NE	closed	Needles	43
690515	Savahia Peak NE	closed	Needles	43
690516	Savahia Peak NE	closed	Needles	43
690518	Savahia Peak NE	closed	Needles	43
690508	Savahia Peak NE	closedg	Needles	43
690510	Savahia Peak NE	closedg (partial)	Needles	43
690517	Savahia Peak NE	closedz	Needles	43
690056	Savahia Peak NE	open	Needles	43
690437	Savahia Peak NE	open	Needles	43
690507	Savahia Peak NE	open	Needles	43
690513	Savahia Peak NE	open	Needles	43
690514	Savahia Peak NE	open	Needles	43
690519	Savahia Peak NE	open	Needles	43
690520	Savahia Peak NE	open	Needles	43
690896	Savahia Peak NE	open	Needles	43
690510	Savahia Peak NE	open (partial)	Needles	43

Route No.	USGS Map Name	Designation	Field Office	Map No.
690515	Havasu Lake	closed	Needles	44
690517	Havasu Lake	closedz	Needles	44
690542	Havasu Lake	closedz	Needles	44
690543	Havasu Lake	closedz	Needles	44
690544	Havasu Lake	closedz	Needles	44
690056	Havasu Lake	open	Needles	44
690510	Havasu Lake	open	Needles	44
690513	Havasu Lake	open	Needles	44
690519	Havasu Lake	open	Needles	44
690520	Havasu Lake	open	Needles	44
690521	Havasu Lake	open	Needles	44
690522	Havasu Lake	open	Needles	44
690523	Havasu Lake	open	Needles	44
690524	Havasu Lake	open	Needles	44
690525	Havasu Lake	open	Needles	44
690526	Havasu Lake	open	Needles	44
690527	Havasu Lake	open	Needles	44
690528	Havasu Lake	open	Needles	44
690529	Havasu Lake	open	Needles	44
690530	Havasu Lake	open	Needles	44
690531	Havasu Lake	open	Needles	44
690532	Havasu Lake	open	Needles	44
690533	Havasu Lake	open	Needles	44
690534	Havasu Lake	open	Needles	44
690535	Havasu Lake	open	Needles	44
690536	Havasu Lake	open	Needles	44
690537	Havasu Lake	open	Needles	44
690538	Havasu Lake	open	Needles	44
690539	Havasu Lake	open	Needles	44
690540	Havasu Lake	open	Needles	44
690545	Havasu Lake	open	Needles	44
690546	Havasu Lake	open	Needles	44
690547	Havasu Lake	open	Needles	44
690548	Havasu Lake	open	Needles	44
690549	Havasu Lake	open	Needles	44
690896	Havasu Lake	open	Needles	44
696501	Havasu Lake	open	Needles	44
696502	Havasu Lake	open	Needles	44
696503	Havasu Lake	open	Needles	44
696504	Havasu Lake	open	Needles	44
696505	Havasu Lake	open	Needles	44
696506	Havasu Lake	open	Needles	44

Route No.	USGS Map Name	Designation	Field Office	Map No.
696507	Havasu Lake	open	Needles	44
696508	Havasu Lake	open	Needles	44
696509	Havasu Lake	open	Needles	44
696510	Havasu Lake	open	Needles	44
690056	Lake Havasu City South	open	Needles	45
690550	Lake Havasu City South	open	Needles	45
690441	Bristol Lake SW	closed	Needles	46
690552	Bristol Lake SW	closed	Needles	46
690553	Bristol Lake SW	closed	Needles	46
690440	Bristol Lake SW	open	Needles	46
690442	Bristol Lake SW	open	Needles	46
690443	Bristol Lake SW	open	Needles	46
690554	Bristol Lake SW	open	Needles	46
690555	Bristol Lake SW	open	Needles	46
690556	Bristol Lake SW	open	Needles	46
690557	Bristol Lake SW	open	Needles	46
690558	Bristol Lake SW	open	Needles	46
690559	Bristol Lake SW	open	Needles	46
690560	Calumet Mountains	closed	Needles	47
690448	Calumet Mountains	open	Needles	47
690560	Cadiz Lake	closed	Needles	48
690561	Cadiz Lake	closed	Needles	48
690562	Cadiz Lake	closed	Needles	48
690563	Cadiz Lake	closed	Needles	48
690564	Cadiz Lake	closed	Needles	48
690572	Cadiz Lake	closed	Needles	48
690576	Cadiz Lake	closed	Needles	48
690577	Cadiz Lake	closed	Needles	48
690448	Cadiz Lake	open	Needles	48
690565	Cadiz Lake	open	Needles	48
690566	Cadiz Lake	open	Needles	48
690567	Cadiz Lake	open	Needles	48
690568	Cadiz Lake	open	Needles	48
690569	Cadiz Lake	open	Needles	48
690570	Cadiz Lake	open	Needles	48
690571	Cadiz Lake	open	Needles	48
690573	Cadiz Lake	open	Needles	48
690574	Cadiz Lake	open	Needles	48
690575	Cadiz Lake	open	Needles	48
690572	Chubbuck	closed	Needles	49
690707	Chubbuck	closed	Needles	49
690579	Chubbuck	closed (partial)	Needles	49

Route No.	USGS Map Name	Designation	Field Office	Map No.
690342	Chubbuck	open	Needles	49
690402	Chubbuck	open	Needles	49
690464	Chubbuck	open	Needles	49
690465	Chubbuck	open	Needles	49
690570	Chubbuck	open	Needles	49
690573	Chubbuck	open	Needles	49
690578	Chubbuck	open	Needles	49
690580	Chubbuck	open	Needles	49
690581	Chubbuck	open	Needles	49
690582	Chubbuck	open	Needles	49
690583	Chubbuck	open	Needles	49
690584	Chubbuck	open	Needles	49
690586	Chubbuck	open	Needles	49
690587	Chubbuck	open	Needles	49
690588	Chubbuck	open	Needles	49
690589	Chubbuck	open	Needles	49
690579	Chubbuck	open (partial)	Needles	49
690593	Milligan	closed	Needles	50
690594	Milligan	closed	Needles	50
690599	Milligan	closed	Needles	50
690605	Milligan	closed	Needles	50
690342	Milligan	open	Needles	50
690589	Milligan	open	Needles	50
690590	Milligan	open	Needles	50
690591	Milligan	open	Needles	50
690592	Milligan	open	Needles	50
690595	Milligan	open	Needles	50
690596	Milligan	open	Needles	50
690597	Milligan	open	Needles	50
690600	Milligan	open	Needles	50
690601	Milligan	open	Needles	50
690602	Milligan	open	Needles	50
690603	Milligan	open	Needles	50
690604	Milligan	open	Needles	50
690607	Milligan	open	Needles	50
690611	East of Milligan	closed	Needles	51
690054	East of Milligan	open	Needles	51
690228	East of Milligan	open	Needles	51
690342	East of Milligan	open	Needles	51
690596	East of Milligan	open	Needles	51
690598	East of Milligan	open	Needles	51
690606	East of Milligan	open	Needles	51

Route No.	USGS Map Name	Designation	Field Office	Map No.
690607	East of Milligan	open	Needles	51
690608	East of Milligan	open	Needles	51
690609	East of Milligan	open	Needles	51
690610	East of Milligan	open	Needles	51
690612	East of Milligan	open	Needles	51
690613	Martins Well	closed	Needles	52
690614	Martins Well	closed	Needles	52
690624	Martins Well	closed	Needles	52
690612	Martins Well	closed (partial)	Needles	52
690616	Martins Well	open	Needles	52
690617	Martins Well	open	Needles	52
690618	Martins Well	open	Needles	52
690619	Martins Well	open	Needles	52
690620	Martins Well	open	Needles	52
690621	Martins Well	open	Needles	52
690622	Martins Well	open	Needles	52
690623	Martins Well	open	Needles	52
690625	Martins Well	open	Needles	52
690626	Martins Well	open	Needles	52
690612	Martins Well	open (partial)	Needles	52
690497	Mopah Peaks	open	Needles	53
690631	Savahia Peak SW	closed	Needles	54
690640	Savahia Peak SW	closed	Needles	54
690641	Savahia Peak SW	closed	Needles	54
690643	Savahia Peak SW	closed	Needles	54
690655	Savahia Peak SW	closed (partial)	Needles	54
690112	Savahia Peak SW	open	Needles	54
690497	Savahia Peak SW	open	Needles	54
690499	Savahia Peak SW	open	Needles	54
690507	Savahia Peak SW	open	Needles	54
690627	Savahia Peak SW	open	Needles	54
690629	Savahia Peak SW	open	Needles	54
690630	Savahia Peak SW	open	Needles	54
690632	Savahia Peak SW	open	Needles	54
690633	Savahia Peak SW	open	Needles	54
690634	Savahia Peak SW	open	Needles	54
690642	Savahia Peak SW	open	Needles	54
690644	Savahia Peak SW	open	Needles	54
690645	Savahia Peak SW	open	Needles	54
690646	Savahia Peak SW	open	Needles	54
690651	Savahia Peak SW	open	Needles	54
690652	Savahia Peak SW	open	Needles	54

Route No.	USGS Map Name	Designation	Field Office	Map No.
690653	Savahia Peak SW	open	Needles	54
690654	Savahia Peak SW	open	Needles	54
690656	Savahia Peak SW	open	Needles	54
690655	Savahia Peak SW	open (partial)	Needles	54
690950	Savahia Peak SW	open (pending)	Needles	54
690518	Savahia Peak	closed	Needles	55
690631	Savahia Peak	closed	Needles	55
690638	Savahia Peak	closed	Needles	55
690640	Savahia Peak	closed	Needles	55
690641	Savahia Peak	closed	Needles	55
690657	Savahia Peak	closed	Needles	55
690658	Savahia Peak	closed	Needles	55
690659	Savahia Peak	closed	Needles	55
690668	Savahia Peak	closed	Needles	55
690674	Savahia Peak	closed	Needles	55
690677	Savahia Peak	closed	Needles	55
690639	Savahia Peak	closed (partial)	Needles	55
690672	Savahia Peak	closedh	Needles	55
690675	Savahia Peak	closedn	Needles	55
690514	Savahia Peak	open	Needles	55
690519	Savahia Peak	open	Needles	55
690634	Savahia Peak	open	Needles	55
690635	Savahia Peak	open	Needles	55
690636	Savahia Peak	open	Needles	55
690637	Savahia Peak	open	Needles	55
690644	Savahia Peak	open	Needles	55
690646	Savahia Peak	open	Needles	55
690647	Savahia Peak	open	Needles	55
690648	Savahia Peak	open	Needles	55
690649	Savahia Peak	open	Needles	55
690650	Savahia Peak	open	Needles	55
690660	Savahia Peak	open	Needles	55
690661	Savahia Peak	open	Needles	55
690662	Savahia Peak	open	Needles	55
690663	Savahia Peak	open	Needles	55
690664	Savahia Peak	open	Needles	55
690665	Savahia Peak	open	Needles	55
690666	Savahia Peak	open	Needles	55
690667	Savahia Peak	open	Needles	55
690669	Savahia Peak	open	Needles	55
690670	Savahia Peak	open	Needles	55
690671	Savahia Peak	open	Needles	55

Route No.	USGS Map Name	Designation	Field Office	Map No.
690673	Savahia Peak	open	Needles	55
690676	Savahia Peak	open	Needles	55
690678	Savahia Peak	open	Needles	55
690639	Savahia Peak	open (partial)	Needles	55
690681	Whipple Mountains SW	closed	Needles	56
690909	Whipple Mountains SW	closed	Needles	56
690675	Whipple Mountains SW	closed (partial)	Needles	56
690519	Whipple Mountains SW	open	Needles	56
690520	Whipple Mountains SW	open	Needles	56
690547	Whipple Mountains SW	open	Needles	56
690551	Whipple Mountains SW	open	Needles	56
690676	Whipple Mountains SW	open	Needles	56
690678	Whipple Mountains SW	open	Needles	56
690679	Whipple Mountains SW	open	Needles	56
690680	Whipple Mountains SW	open	Needles	56
690682	Whipple Mountains SW	open	Needles	56
690683	Whipple Mountains SW	open	Needles	56
690675	Whipple Mountains SW	open (partial)	Needles	56
690688	Whipple Wash	closed	Needles	57
690689	Whipple Wash	closed	Needles	57
690690	Whipple Wash	closed	Needles	57
690691	Whipple Wash	closed	Needles	57
699991	Whipple Wash	closedz	Needles	57
699992	Whipple Wash	closedz	Needles	57
699993	Whipple Wash	closedz	Needles	57
690684	Whipple Wash	closedz (partial)	Needles	57
690056	Whipple Wash	open	Needles	57
690686	Whipple Wash	open	Needles	57
690803	Whipple Wash	open	Needles	57
690684	Whipple Wash	open (partial)	Needles	57
699992	Gene Wash	closedz	Needles	58
690684	Gene Wash	closedz	Needles	58
690557	Dale Lake	open	Needles	59
690558	Dale Lake	open	Needles	59
690667	Dale Lake	open	Needles	59
690692	Dale Lake	open	Needles	59
690693	Dale Lake	open	Needles	59
690694	Dale Lake	open	Needles	59
690695	Dale Lake	open	Needles	59
690696	Dale Lake	open	Needles	59
690697	Dale Lake	open	Needles	59
690448	Cadiz Valley NW	open	Needles	61

Route No.	USGS Map Name	Designation	Field Office	Map No.
690569	Cadiz Valley NW	open	Needles	61
690707	Cadiz Valley NE	closed	Needles	62
690706	Cadiz Valley NE	closed (partial)	Needles	62
690569	Cadiz Valley NE	open	Needles	62
690706	Cadiz Valley NE	open (partial)	Needles	62
690605	Iron Mountains	closed	Needles	63
690714	Iron Mountains	closed	Needles	63
690602	Iron Mountains	open	Needles	63
690604	Iron Mountains	open	Needles	63
690708	Iron Mountains	open	Needles	63
690709	Iron Mountains	open	Needles	63
690710	Iron Mountains	open	Needles	63
690711	Iron Mountains	open	Needles	63
690712	Iron Mountains	open	Needles	63
690713	Iron Mountains	open	Needles	63
690715	Iron Mountains	open	Needles	63
690054	Danby Lake	open	Needles	64
690342	Danby Lake	open	Needles	64
690596	Danby Lake	open	Needles	64
690608	Danby Lake	open	Needles	64
690609	Danby Lake	open	Needles	64
690616	Danby Lake	open	Needles	64
690715	Danby Lake	open	Needles	64
690716	Danby Lake	open	Needles	64
690717	Danby Lake	open	Needles	64
690718	Danby Lake	open	Needles	64
690719	Danby Lake	open	Needles	64
690720	Danby Lake	open	Needles	64
690721	Danby Lake	open	Needles	64
690722	Danby Lake	open	Needles	64
690723	Danby Lake	open	Needles	64
690724	Danby Lake	open	Needles	64
690725	Danby Lake	open	Needles	64
690726	Danby Lake	open	Needles	64
690727	Danby Lake	open	Needles	64
690728	Danby Lake	open	Needles	64
690612	Sablon	closed	Needles	65
690730	Sablon	closed	Needles	65
690731	Sablon	closed	Needles	65
690342	Sablon	open	Needles	65
690609	Sablon	open	Needles	65
690616	Sablon	open	Needles	65

Route No.	USGS Map Name	Designation	Field Office	Map No.
690623	Sablon	open	Needles	65
690729	Sablon	open	Needles	65
690732	Horn Spring	open	Needles	66
690733	Horn Spring	open	Needles	66
690734	Horn Spring	open	Needles	66
690735	Horn Spring	open	Needles	66
690736	Horn Spring	open	Needles	66
690609	Vidal NW	open	Needles	67
690655	Vidal NW	open	Needles	67
690732	Vidal NW	open	Needles	67
690733	Vidal NW	open	Needles	67
690734	Vidal NW	open	Needles	67
690735	Vidal NW	open	Needles	67
690736	Vidal NW	open	Needles	67
690737	Vidal NW	open	Needles	67
690738	Vidal NW	open	Needles	67
690740	Vidal NW	open	Needles	67
690741	Vidal NW	open	Needles	67
690675	Vidal Junction	closed	Needles	68
690754	Vidal Junction	closed	Needles	68
690474	Vidal Junction	open	Needles	68
690609	Vidal Junction	open	Needles	68
690648	Vidal Junction	open	Needles	68
690664	Vidal Junction	open	Needles	68
690665	Vidal Junction	open	Needles	68
690666	Vidal Junction	open	Needles	68
690682	Vidal Junction	open	Needles	68
690741	Vidal Junction	open	Needles	68
690742	Vidal Junction	open	Needles	68
690743	Vidal Junction	open	Needles	68
690744	Vidal Junction	open	Needles	68
690745	Vidal Junction	open	Needles	68
690746	Vidal Junction	open	Needles	68
690748	Vidal Junction	open	Needles	68
690750	Vidal Junction	open	Needles	68
690751	Vidal Junction	open	Needles	68
690752	Vidal Junction	open	Needles	68
690753	Vidal Junction	open	Needles	68
690755	Vidal Junction	open	Needles	68
690775	Parker NW	closed	Needles	69
690777	Parker NW	closed	Needles	69
690781	Parker NW	closed (partial)	Needles	69

Route No.	USGS Map Name	Designation	Field Office	Map No.
690761	Parker NW	closedh	Needles	69
690762	Parker NW	closedh	Needles	69
690763	Parker NW	closedh	Needles	69
690764	Parker NW	closedh	Needles	69
690767	Parker NW	closedn	Needles	69
690682	Parker NW	open	Needles	69
690683	Parker NW	open	Needles	69
690753	Parker NW	open	Needles	69
690755	Parker NW	open	Needles	69
690756	Parker NW	open	Needles	69
690757	Parker NW	open	Needles	69
690758	Parker NW	open	Needles	69
690759	Parker NW	open	Needles	69
690760	Parker NW	open	Needles	69
690765	Parker NW	open	Needles	69
690766	Parker NW	open	Needles	69
690768	Parker NW	open	Needles	69
690769	Parker NW	open	Needles	69
690770	Parker NW	open	Needles	69
690771	Parker NW	open	Needles	69
690772	Parker NW	open	Needles	69
690773	Parker NW	open	Needles	69
690774	Parker NW	open	Needles	69
690776	Parker NW	open	Needles	69
690778	Parker NW	open	Needles	69
690779	Parker NW	open	Needles	69
690780	Parker NW	open	Needles	69
690782	Parker NW	open	Needles	69
690783	Parker NW	open	Needles	69
690784	Parker NW	open	Needles	69
690785	Parker NW	open	Needles	69
690786	Parker NW	open	Needles	69
690787	Parker NW	open	Needles	69
690789	Parker NW	open	Needles	69
690792	Parker NW	open	Needles	69
690799	Parker NW	open	Needles	69
690802	Parker NW	open	Needles	69
690860	Parker NW	open	Needles	69
690868	Parker NW	open	Needles	69
690869	Parker NW	open	Needles	69
690971	Parker NW	open	Needles	69
690781	Parker NW	open (partial)	Needles	69

Route No.	USGS Map Name	Designation	Field Office	Map No.
690775	Parker	closed	Needles	70
690796	Parker	closed	Needles	70
690781	Parker	closedn	Needles	70
690797	Parker	closedn	Needles	70
690776	Parker	open	Needles	70
690778	Parker	open	Needles	70
690783	Parker	open	Needles	70
690794	Parker	open	Needles	70
690795	Parker	open	Needles	70
690798	Parker	open	Needles	70
690799	Parker	open	Needles	70
690800	Parker	open	Needles	70
690801	Parker	open	Needles	70
690802	Parker	open	Needles	70
690803	Parker	open	Needles	70
690707	Cadiz Valley SE	closed	Needles	74
690707	Cadiz Valley SE	closed	Palm Springs	74
661046	Cadiz Valley SE	open	Palm Springs	74
661342	Cadiz Valley SE	open	Needles	74
661342	Cadiz Valley SE	open	Palm Springs	74
661343	Cadiz Valley SE	open	Needles	74
661343	Cadiz Valley SE	open	Palm Springs	74
690569	Cadiz Valley SE	open	Needles	74
690805	Cadiz Valley SE	open	Needles	74
690806	Cadiz Valley SE	open	Needles	74
690808	Cadiz Valley SE	open	Needles	74
690714	Granite Pass	closed	Needles	75
661046	Granite Pass	open	Palm Springs	75
661047	Granite Pass	open	Palm Springs	75
661048	Granite Pass	open	Palm Springs	75
661049	Granite Pass	open	Palm Springs	75
661053	Granite Pass	open	Palm Springs	75
661054	Granite Pass	open	Palm Springs	75
661055	Granite Pass	open	Palm Springs	75
661056	Granite Pass	open	Palm Springs	75
690708	Granite Pass	open	Needles	75
690715	Granite Pass	open	Needles	75
690715	Granite Pass	open	Palm Springs	75
690808	Granite Pass	open	Needles	75
690810	Granite Pass	open	Needles	75
690810	Granite Pass	open	Palm Springs	75
690811	Granite Pass	open	Needles	75

Route No.	USGS Map Name	Designation	Field Office	Map No.
690811	Granite Pass	open	Palm Springs	75
690812	Granite Pass	open	Needles	75
690813	Granite Pass	open	Needles	75
690814	Granite Pass	open	Needles	75
690815	Granite Pass	open	Needles	75
690816	Granite Pass	open	Needles	75
690817	Granite Pass	open	Needles	75
690818	Granite Pass	open	Needles	75
690819	Granite Pass	open	Needles	75
690820	Granite Pass	open	Needles	75
690821	Granite Pass	open	Needles	75
690822	Granite Pass	open	Needles	75
690823	Granite Pass	open	Needles	75
690824	Granite Pass	open	Needles	75
660654	East of Granite Pass	open	Palm Springs	76
660655	East of Granite Pass	open	Palm Springs	76
661353	East of Granite Pass	open	Palm Springs	76
690718	East of Granite Pass	open	Needles	76
690720	East of Granite Pass	open	Needles	76
690825	East of Granite Pass	open	Needles	76
690826	East of Granite Pass	open	Needles	76
690826	East of Granite Pass	open	Palm Springs	76
690731	Arica Mountains	closed	Needles	77
690828	Arica Mountains	closed	Needles	77
661360	Arica Mountains	open	Palm Springs	77
661361	Arica Mountains	open	Palm Springs	77
661362	Arica Mountains	open	Palm Springs	77
661366	Arica Mountains	open	Palm Springs	77
690342	Arica Mountains	open	Needles	77
690609	Arica Mountains	open	Needles	77
690827	Arica Mountains	open	Needles	77
690829	Arica Mountains	open	Needles	77
690830	Arica Mountains	open	Needles	77
690834	Arica Mountains	open	Palm Springs	77
660847	Rice	closed	Palm Springs	78
690731	Rice	closed	Needles	78
690828	Rice	closed	Needles	78
690831	Rice	closed	Needles	78
690832	Rice	closed	Needles	78
690844	Rice	closed	Needles	78
690845	Rice	closed	Needles	78
690846	Rice	closed	Needles	78

Route No.	USGS Map Name	Designation	Field Office	Map No.
690846	Rice	closed	Palm Springs	78
661419	Rice	closedg	Palm Springs	78
661420	Rice	closedg	Palm Springs	78
690838	Rice	closedg	Needles	78
690838	Rice	closedg	Palm Springs	78
690840	Rice	closedg	Needles	78
690840	Rice	closedg	Palm Springs	78
690837	Rice	closedg (partial)	Palm Springs	78
690839	Rice	closedg (partial)	Palm Springs	78
660768	Rice	open	Palm Springs	78
661366	Rice	open	Palm Springs	78
661411	Rice	open	Palm Springs	78
661412	Rice	open	Palm Springs	78
661413	Rice	open	Palm Springs	78
661414	Rice	open	Palm Springs	78
661415	Rice	open	Palm Springs	78
661416	Rice	open	Palm Springs	78
661417	Rice	open	Palm Springs	78
661418	Rice	open	Palm Springs	78
661421	Rice	open	Palm Springs	78
661422	Rice	open	Palm Springs	78
690609	Rice	open	Needles	78
690833	Rice	open	Needles	78
690834	Rice	open	Needles	78
690834	Rice	open	Palm Springs	78
690835	Rice	open	Needles	78
690835	Rice	open	Palm Springs	78
690836	Rice	open	Needles	78
690837	Rice	open	Needles	78
690839	Rice	open	Needles	78
690841	Rice	open	Needles	78
690842	Rice	open	Needles	78
690842	Rice	open	Palm Springs	78
690843	Rice	open	Needles	78
690951	Rice	open	Needles	78
690951	Rice	open	Palm Springs	78
690952	Rice	open	Palm Springs	78
690954	Rice	open	Palm Springs	78
690837	Rice	open (partial)	Palm Springs	78
690839	Rice	open (partial)	Palm Springs	78
660767	Grommet	closed	Palm Springs	79
660771	Grommet	closed	Palm Springs	79

Route No.	USGS Map Name	Designation	Field Office	Map No.
660773	Grommet	closed	Needles	79
660773	Grommet	closed	Palm Springs	79
660780	Grommet	closed	Palm Springs	79
660847	Grommet	closed	Palm Springs	79
690844	Grommet	closed	Needles	79
690845	Grommet	closed	Needles	79
690846	Grommet	closed	Needles	79
690851	Grommet	closed	Needles	79
690852	Grommet	closed	Needles	79
690861	Grommet	closed	Needles	79
690854	Grommet	closed (partial)	Palm Springs	79
690860	Grommet	closed (partial)	Needles	79
690848	Grommet	closedg	Needles	79
690848	Grommet	closedg	Palm Springs	79
660772	Grommet	closedz	Palm Springs	79
660770	Grommet	open	Palm Springs	79
660774	Grommet	open	Palm Springs	79
690609	Grommet	open	Needles	79
690732	Grommet	open	Needles	79
690734	Grommet	open	Needles	79
690741	Grommet	open	Needles	79
690836	Grommet	open	Needles	79
690849	Grommet	open	Needles	79
690849	Grommet	open	Palm Springs	79
690850	Grommet	open	Needles	79
690850	Grommet	open	Palm Springs	79
690853	Grommet	open	Needles	79
690854	Grommet	open	Needles	79
690855	Grommet	open	Needles	79
690855	Grommet	open	Palm Springs	79
690856	Grommet	open	Needles	79
690857	Grommet	open	Needles	79
690858	Grommet	open	Needles	79
690859	Grommet	open	Needles	79
690862	Grommet	open	Needles	79
690863	Grommet	open	Needles	79
690866	Grommet	open	Palm Springs	79
690952	Grommet	open	Palm Springs	79
690854	Grommet	open (partial)	Palm Springs	79
690860	Grommet	open (partial)	Needles	79
690860	Vidal	closed	Needles	80
690861	Vidal	closed	Needles	80

Route No.	USGS Map Name	Designation	Field Office	Map No.
690911	Vidal	closed	Palm Springs	80
690862	Vidal	closed (partial)	Palm Springs	80
690864	Vidal	closed (partial)	Needles	80
660947	Vidal	closedh	Palm Springs	80
660956	Vidal	closedh	Palm Springs	80
690872	Vidal	closedh (partial)	Palm Springs	80
660900	Vidal	open	Palm Springs	80
660939	Vidal	open	Palm Springs	80
690741	Vidal	open	Needles	80
690853	Vidal	open	Needles	80
690853	Vidal	open	Palm Springs	80
690859	Vidal	open	Needles	80
690862	Vidal	open	Needles	80
690864	Vidal	open	Palm Springs	80
690865	Vidal	open	Needles	80
690865	Vidal	open	Palm Springs	80
690866	Vidal	open	Needles	80
690866	Vidal	open	Palm Springs	80
690867	Vidal	open	Needles	80
690868	Vidal	open	Needles	80
690869	Vidal	open	Needles	80
690870	Vidal	open	Needles	80
690871	Vidal	open	Needles	80
690873	Vidal	open	Needles	80
690910	Vidal	open	Palm Springs	80
690862	Vidal	open (partial)	Palm Springs	80
690864	Vidal	open (partial)	Needles	80
690872	Vidal	open (partial)	Palm Springs	80
660963	Parker SW	closed	Palm Springs	81
660954	Parker SW	closedh	Palm Springs	81
660955	Parker SW	closedh	Palm Springs	81
660956	Parker SW	closedh	Palm Springs	81
660951	Parker SW	open	Palm Springs	81
660952	Parker SW	open	Palm Springs	81
660953	Parker SW	open	Palm Springs	81
660957	Parker SW	open	Palm Springs	81
660958	Parker SW	open	Palm Springs	81
660959	Parker SW	open	Palm Springs	81
660960	Parker SW	open	Palm Springs	81
660961	Parker SW	open	Palm Springs	81
690753	Parker SW	open	Needles	81
690781	Parker SW	open	Needles	81

Route No.	USGS Map Name	Designation	Field Office	Map No.
690784	Parker SW	open	Needles	81
690785	Parker SW	open	Needles	81
690786	Parker SW	open	Needles	81
690787	Parker SW	open	Needles	81
690792	Parker SW	open	Needles	81
690853	Parker SW	open	Needles	81
690867	Parker SW	open	Needles	81
690868	Parker SW	open	Needles	81
690869	Parker SW	open	Needles	81
690870	Parker SW	open	Needles	81
690871	Parker SW	open	Needles	81
690872	Parker SW	open	Needles	81
690872	Parker SW	open	Palm Springs	81
690874	Parker SW	open	Needles	81
690874	Parker SW	open	Palm Springs	81
690875	Parker SW	open	Needles	81
690876	Parker SW	open	Needles	81
690877	Parker SW	open	Needles	81
690878	Parker SW	open	Needles	81
690879	Parker SW	open	Needles	81
690880	Parker SW	open	Needles	81
690881	Parker SW	open	Needles	81
690882	Parker SW	open	Needles	81
690883	Parker SW	open	Needles	81
690884	Parker SW	open	Needles	81
690885	Parker SW	open	Needles	81
690886	Parker SW	open	Needles	81
690887	Parker SW	open	Needles	81
690888	Parker SW	open	Needles	81
690889	Parker SW	open	Needles	81
690890	Parker SW	open	Needles	81
690891	Parker SW	open	Needles	81
690892	Parker SW	open	Needles	81
690893	Parker SW	open	Needles	81
690893	Parker SW	open	Palm Springs	81
690894	Parker SW	open	Needles	81
690895	Parker SW	open	Needles	81
690955	Parker SW	open	Needles	81
690971	Parker SW	open	Needles	81
691001	Parker SW	open	Needles	81
691002	Parker SW	open	Needles	81
661316	Placer Canyon	open	Palm Springs	85

Route No.	USGS Map Name	Designation	Field Office	Map No.
661317	Placer Canyon	open	Palm Springs	85
661318	Placer Canyon	open	Palm Springs	85
661319	Placer Canyon	open	Palm Springs	85
660349	Pinto Wells	open	Palm Springs	86
660351	Pinto Wells	open	Palm Springs	86
660558	Pinto Wells	open	Palm Springs	86
660559	Pinto Wells	open	Palm Springs	86
661341	Coxcomb Mountains	closed	Palm Springs	87
661375	Coxcomb Mountains	closed	Palm Springs	87
661376	Coxcomb Mountains	closed	Palm Springs	87
661385	Coxcomb Mountains	closed	Palm Springs	87
660349	Coxcomb Mountains	open	Palm Springs	87
660351	Coxcomb Mountains	open	Palm Springs	87
660656	Coxcomb Mountains	open	Palm Springs	87
661046	Coxcomb Mountains	open	Palm Springs	87
661053	Coxcomb Mountains	open	Palm Springs	87
661068	Coxcomb Mountains	open	Palm Springs	87
661070	Coxcomb Mountains	open	Palm Springs	87
661071	Coxcomb Mountains	open	Palm Springs	87
661342	Coxcomb Mountains	open	Palm Springs	87
661343	Coxcomb Mountains	open	Palm Springs	87
661373	Coxcomb Mountains	open	Palm Springs	87
661377	Coxcomb Mountains	open	Palm Springs	87
661378	Coxcomb Mountains	open	Palm Springs	87
661379	Coxcomb Mountains	open	Palm Springs	87
661380	Coxcomb Mountains	open	Palm Springs	87
661381	Coxcomb Mountains	open	Palm Springs	87
661382	Coxcomb Mountains	open	Palm Springs	87
661383	Coxcomb Mountains	open	Palm Springs	87
661384	Coxcomb Mountains	open	Palm Springs	87
661385	Coxcomb Mountains	open	Palm Springs	87
661386	Coxcomb Mountains	open	Palm Springs	87
661387	Coxcomb Mountains	open	Palm Springs	87
661388	Coxcomb Mountains	open	Palm Springs	87
661389	Coxcomb Mountains	open	Palm Springs	87
661395	Coxcomb Mountains	open	Palm Springs	87
661397	Coxcomb Mountains	open	Palm Springs	87
661400	Coxcomb Mountains	open	Palm Springs	87
661402	Coxcomb Mountains	open	Palm Springs	87
660564	West of Palen Pass	open	Palm Springs	88
660656	West of Palen Pass	open	Palm Springs	88
661046	West of Palen Pass	open	Palm Springs	88

Route No.	USGS Map Name	Designation	Field Office	Map No.
661053	West of Palen Pass	open	Palm Springs	88
661065	West of Palen Pass	open	Palm Springs	88
661066	West of Palen Pass	open	Palm Springs	88
661067	West of Palen Pass	open	Palm Springs	88
661068	West of Palen Pass	open	Palm Springs	88
661069	West of Palen Pass	open	Palm Springs	88
661070	West of Palen Pass	open	Palm Springs	88
661071	West of Palen Pass	open	Palm Springs	88
661388	West of Palen Pass	open	Palm Springs	88
660648	Palen Pass	closedg	Palm Springs	89
660649	Palen Pass	closedg	Palm Springs	89
660650	Palen Pass	closedg	Palm Springs	89
660653	Palen Pass	closedg	Palm Springs	89
660654	Palen Pass	open	Palm Springs	89
660655	Palen Pass	open	Palm Springs	89
660656	Palen Pass	open	Palm Springs	89
660657	Palen Pass	open	Palm Springs	89
660658	Palen Pass	open	Palm Springs	89
661242	Little Maria Mountains	closedg (partial)	Palm Springs	90
660656	Little Maria Mountains	closedw (partial)	Palm Springs	90
660654	Little Maria Mountains	open	Palm Springs	90
660655	Little Maria Mountains	open	Palm Springs	90
660658	Little Maria Mountains	open	Palm Springs	90
660664	Little Maria Mountains	open	Palm Springs	90
660669	Little Maria Mountains	open	Palm Springs	90
660674	Little Maria Mountains	open	Palm Springs	90
660675	Little Maria Mountains	open	Palm Springs	90
660677	Little Maria Mountains	open	Palm Springs	90
661362	Little Maria Mountains	open	Palm Springs	90
690834	Little Maria Mountains	open	Palm Springs	90
660656	Little Maria Mountains	open (partial)	Palm Springs	90
661242	Little Maria Mountains	open (partial)	Palm Springs	90
660753	Styx	closed	Palm Springs	91
660754	Styx	closed	Palm Springs	91
660755	Styx	closed	Palm Springs	91
660756	Styx	closed	Palm Springs	91
660745	Styx	closed (partial)	Palm Springs	91
660746	Styx	open	Palm Springs	91
660747	Styx	open	Palm Springs	91
660748	Styx	open	Palm Springs	91
660750	Styx	open	Palm Springs	91
660751	Styx	open	Palm Springs	91

Route No.	USGS Map Name	Designation	Field Office	Map No.
660752	Styx	open	Palm Springs	91
690834	Styx	open	Palm Springs	91
690951	Styx	open	Palm Springs	91
660745	Styx	open (partial)	Palm Springs	91
660767	Big Maria Mountains NW	closed	Palm Springs	92
660780	Big Maria Mountains NW	closed	Palm Springs	92
690854	Big Maria Mountains NW	closed (partial)	Palm Springs	92
690848	Big Maria Mountains NW	closedg	Palm Springs	92
660770	Big Maria Mountains NW	closedg (partial)	Palm Springs	92
690849	Big Maria Mountains NW	closedg (partial)	Palm Springs	92
660777	Big Maria Mountains NW	open	Palm Springs	92
660779	Big Maria Mountains NW	open	Palm Springs	92
660782	Big Maria Mountains NW	open	Palm Springs	92
690866	Big Maria Mountains NW	open	Palm Springs	92
660770	Big Maria Mountains NW	open (partial)	Palm Springs	92
690849	Big Maria Mountains NW	open (partial)	Palm Springs	92
690854	Big Maria Mountains NW	open (partial)	Palm Springs	92
660913	Big Maria Mountains NE	closed	Palm Springs	93
663000	Big Maria Mountains NE	closed	Palm Springs	93
690865	Big Maria Mountains NE	closed (partial)	Palm Springs	93
690849	Big Maria Mountains NE	closedg	Palm Springs	93
660770	Big Maria Mountains NE	open	Palm Springs	93
660777	Big Maria Mountains NE	open	Palm Springs	93
660779	Big Maria Mountains NE	open	Palm Springs	93
660782	Big Maria Mountains NE	open	Palm Springs	93
660899	Big Maria Mountains NE	open	Palm Springs	93
660906	Big Maria Mountains NE	open	Palm Springs	93
660907	Big Maria Mountains NE	open	Palm Springs	93
660920	Big Maria Mountains NE	open	Palm Springs	93
660922	Big Maria Mountains NE	open	Palm Springs	93
660924	Big Maria Mountains NE	open	Palm Springs	93
660925	Big Maria Mountains NE	open	Palm Springs	93
660926	Big Maria Mountains NE	open	Palm Springs	93
660927	Big Maria Mountains NE	open	Palm Springs	93
660928	Big Maria Mountains NE	open	Palm Springs	93
660929	Big Maria Mountains NE	open	Palm Springs	93
660930	Big Maria Mountains NE	open	Palm Springs	93
660931	Big Maria Mountains NE	open	Palm Springs	93
663501	Big Maria Mountains NE	open	Palm Springs	93
690865	Big Maria Mountains NE	open (partial)	Palm Springs	93
660004	West Berdoo Canyon	open	Palm Springs	94
660005	West Berdoo Canyon	open	Palm Springs	94

Route No.	USGS Map Name	Designation	Field Office	Map No.
660006	West Berdoo Canyon	open	Palm Springs	94
660010	West Berdoo Canyon	open	Palm Springs	94
660027	West Berdoo Canyon	open	Palm Springs	94
660045	West Berdoo Canyon	open	Palm Springs	94
660038	Rockhouse Canyon	open	Palm Springs	95
660045	Rockhouse Canyon	open	Palm Springs	95
663502	Rockhouse Canyon	open	Palm Springs	95
661316	Buzzard Spring	open	Palm Springs	99
661317	Buzzard Spring	open	Palm Springs	99
661318	Buzzard Spring	open	Palm Springs	99
661319	Buzzard Spring	open	Palm Springs	99
661326	Buzzard Spring	open	Palm Springs	99
661327	Buzzard Spring	open	Palm Springs	99
661328	Buzzard Spring	open	Palm Springs	99
661331	Buzzard Spring	open	Palm Springs	99
660299	Victory Pass	closed	Palm Springs	100
660348	Victory Pass	closed	Palm Springs	100
660335	Victory Pass	closedw (partial)	Palm Springs	100
660336	Victory Pass	closedw (partial)	Palm Springs	100
660375	Victory Pass	closedw (partial)	Palm Springs	100
660297	Victory Pass	open	Palm Springs	100
660298	Victory Pass	open	Palm Springs	100
660325	Victory Pass	open	Palm Springs	100
660326	Victory Pass	open	Palm Springs	100
660327	Victory Pass	open	Palm Springs	100
660328	Victory Pass	open	Palm Springs	100
660329	Victory Pass	open	Palm Springs	100
660330	Victory Pass	open	Palm Springs	100
660331	Victory Pass	open	Palm Springs	100
660332	Victory Pass	open	Palm Springs	100
660333	Victory Pass	open	Palm Springs	100
660334	Victory Pass	open	Palm Springs	100
660337	Victory Pass	open	Palm Springs	100
660338	Victory Pass	open	Palm Springs	100
660339	Victory Pass	open	Palm Springs	100
660340	Victory Pass	open	Palm Springs	100
660341	Victory Pass	open	Palm Springs	100
660342	Victory Pass	open	Palm Springs	100
660343	Victory Pass	open	Palm Springs	100
660344	Victory Pass	open	Palm Springs	100
660345	Victory Pass	open	Palm Springs	100
660346	Victory Pass	open	Palm Springs	100

Route No.	USGS Map Name	Designation	Field Office	Map No.
660347	Victory Pass	open	Palm Springs	100
660349	Victory Pass	open	Palm Springs	100
660350	Victory Pass	open	Palm Springs	100
660351	Victory Pass	open	Palm Springs	100
660352	Victory Pass	open	Palm Springs	100
660353	Victory Pass	open	Palm Springs	100
660354	Victory Pass	open	Palm Springs	100
660355	Victory Pass	open	Palm Springs	100
660356	Victory Pass	open	Palm Springs	100
660357	Victory Pass	open	Palm Springs	100
660360	Victory Pass	open	Palm Springs	100
660361	Victory Pass	open	Palm Springs	100
660362	Victory Pass	open	Palm Springs	100
660363	Victory Pass	open	Palm Springs	100
660364	Victory Pass	open	Palm Springs	100
660365	Victory Pass	open	Palm Springs	100
660366	Victory Pass	open	Palm Springs	100
660367	Victory Pass	open	Palm Springs	100
660533	Victory Pass	open	Palm Springs	100
660535	Victory Pass	open	Palm Springs	100
660537	Victory Pass	open	Palm Springs	100
660546	Victory Pass	open	Palm Springs	100
660557	Victory Pass	open	Palm Springs	100
660558	Victory Pass	open	Palm Springs	100
660559	Victory Pass	open	Palm Springs	100
660560	Victory Pass	open	Palm Springs	100
660561	Victory Pass	open	Palm Springs	100
660562	Victory Pass	open	Palm Springs	100
661233	Victory Pass	open	Palm Springs	100
663503	Victory Pass	open	Palm Springs	100
660335	Victory Pass	open (partial)	Palm Springs	100
660336	Victory Pass	open (partial)	Palm Springs	100
660375	Victory Pass	open (partial)	Palm Springs	100
660336	East of Victory Pass	closedw	Palm Springs	101
660375	East of Victory Pass	closedw	Palm Springs	101
660332	East of Victory Pass	open	Palm Springs	101
660334	East of Victory Pass	open	Palm Springs	101
660337	East of Victory Pass	open	Palm Springs	101
660349	East of Victory Pass	open	Palm Springs	101
660508	East of Victory Pass	open	Palm Springs	101
660528	East of Victory Pass	open	Palm Springs	101
660529	East of Victory Pass	open	Palm Springs	101

Route No.	USGS Map Name	Designation	Field Office	Map No.
660530	East of Victory Pass	open	Palm Springs	101
660531	East of Victory Pass	open	Palm Springs	101
660533	East of Victory Pass	open	Palm Springs	101
660534	East of Victory Pass	open	Palm Springs	101
660535	East of Victory Pass	open	Palm Springs	101
660536	East of Victory Pass	open	Palm Springs	101
660537	East of Victory Pass	open	Palm Springs	101
660539	East of Victory Pass	open	Palm Springs	101
660540	East of Victory Pass	open	Palm Springs	101
660541	East of Victory Pass	open	Palm Springs	101
660542	East of Victory Pass	open	Palm Springs	101
660543	East of Victory Pass	open	Palm Springs	101
660544	East of Victory Pass	open	Palm Springs	101
660545	East of Victory Pass	open	Palm Springs	101
660546	East of Victory Pass	open	Palm Springs	101
660545	Palen Lake	open	Palm Springs	102
660564	Palen Lake	open	Palm Springs	102
660565	Palen Lake	open	Palm Springs	102
660566	Palen Lake	open	Palm Springs	102
660567	Palen Lake	open	Palm Springs	102
660665	Palen Mountains	open	Palm Springs	103
663504	Palen Mountains	open	Palm Springs	103
660672	Arlington Mine	closedh	Palm Springs	104
660679	Arlington Mine	closedh	Palm Springs	104
660680	Arlington Mine	closedh	Palm Springs	104
660656	Arlington Mine	closedw	Palm Springs	104
660664	Arlington Mine	open	Palm Springs	104
660665	Arlington Mine	open	Palm Springs	104
660666	Arlington Mine	open	Palm Springs	104
660667	Arlington Mine	open	Palm Springs	104
660668	Arlington Mine	open	Palm Springs	104
660669	Arlington Mine	open	Palm Springs	104
660670	Arlington Mine	open	Palm Springs	104
660671	Arlington Mine	open	Palm Springs	104
660673	Arlington Mine	open	Palm Springs	104
660674	Arlington Mine	open	Palm Springs	104
660675	Arlington Mine	open	Palm Springs	104
660676	Arlington Mine	open	Palm Springs	104
660677	Arlington Mine	open	Palm Springs	104
660678	Arlington Mine	open	Palm Springs	104
660681	Arlington Mine	open	Palm Springs	104
660682	Arlington Mine	open	Palm Springs	104

Route No.	USGS Map Name	Designation	Field Office	Map No.
663505	Arlington Mine	open	Palm Springs	104
660756	Inca	closed	Palm Springs	105
661253	Inca	closedh	Palm Springs	105
661256	Inca	closedw	Palm Springs	105
660656	Inca	open	Palm Springs	105
660665	Inca	open	Palm Springs	105
660668	Inca	open	Palm Springs	105
660676	Inca	open	Palm Springs	105
660677	Inca	open	Palm Springs	105
660682	Inca	open	Palm Springs	105
660791	Inca	open	Palm Springs	105
660793	Inca	open	Palm Springs	105
661085	Inca	open	Palm Springs	105
661254	Inca	open	Palm Springs	105
661255	Inca	open	Palm Springs	105
661256	Inca	open	Palm Springs	105
661257	Inca	open	Palm Springs	105
661258	Inca	open	Palm Springs	105
661259	Inca	open	Palm Springs	105
661260	Inca	open	Palm Springs	105
661261	Inca	open	Palm Springs	105
661262	Inca	open	Palm Springs	105
661263	Inca	open	Palm Springs	105
661264	Inca	open	Palm Springs	105
661265	Inca	open	Palm Springs	105
661266	Inca	open	Palm Springs	105
661267	Inca	open	Palm Springs	105
661268	Inca	open	Palm Springs	105
661269	Inca	open	Palm Springs	105
661270	Inca	open	Palm Springs	105
661272	Inca	open	Palm Springs	105
661273	Inca	open	Palm Springs	105
661274	Inca	open	Palm Springs	105
661275	Inca	open	Palm Springs	105
661276	Inca	open	Palm Springs	105
661277	Inca	open	Palm Springs	105
661278	Inca	open	Palm Springs	105
661279	Inca	open	Palm Springs	105
661280	Inca	open	Palm Springs	105
661281	Inca	open	Palm Springs	105
661282	Inca	open	Palm Springs	105
662004	Inca	open	Palm Springs	105

Route No.	USGS Map Name	Designation	Field Office	Map No.
690834	Inca	open	Palm Springs	105
660803	Big Maria Mountains SW	closed	Palm Springs	106
660824	Big Maria Mountains SW	closed	Palm Springs	106
660805	Big Maria Mountains SW	closed (partial)	Palm Springs	106
660809	Big Maria Mountains SW	closed (partial)	Palm Springs	106
660821	Big Maria Mountains SW	closed (partial)	Palm Springs	106
660826	Big Maria Mountains SW	closedg	Palm Springs	106
660789	Big Maria Mountains SW	closedn	Palm Springs	106
660790	Big Maria Mountains SW	closedn	Palm Springs	106
660792	Big Maria Mountains SW	closedn	Palm Springs	106
660795	Big Maria Mountains SW	closedn	Palm Springs	106
660796	Big Maria Mountains SW	closedn	Palm Springs	106
660813	Big Maria Mountains SW	closedn	Palm Springs	106
660822	Big Maria Mountains SW	closedn	Palm Springs	106
660791	Big Maria Mountains SW	open	Palm Springs	106
660793	Big Maria Mountains SW	open	Palm Springs	106
660794	Big Maria Mountains SW	open	Palm Springs	106
660797	Big Maria Mountains SW	open	Palm Springs	106
660798	Big Maria Mountains SW	open	Palm Springs	106
660799	Big Maria Mountains SW	open	Palm Springs	106
660800	Big Maria Mountains SW	open	Palm Springs	106
660801	Big Maria Mountains SW	open	Palm Springs	106
660802	Big Maria Mountains SW	open	Palm Springs	106
660804	Big Maria Mountains SW	open	Palm Springs	106
660806	Big Maria Mountains SW	open	Palm Springs	106
660807	Big Maria Mountains SW	open	Palm Springs	106
660808	Big Maria Mountains SW	open	Palm Springs	106
660810	Big Maria Mountains SW	open	Palm Springs	106
660811	Big Maria Mountains SW	open	Palm Springs	106
660812	Big Maria Mountains SW	open	Palm Springs	106
660814	Big Maria Mountains SW	open	Palm Springs	106
660815	Big Maria Mountains SW	open	Palm Springs	106
660816	Big Maria Mountains SW	open	Palm Springs	106
660817	Big Maria Mountains SW	open	Palm Springs	106
660818	Big Maria Mountains SW	open	Palm Springs	106
660819	Big Maria Mountains SW	open	Palm Springs	106
660820	Big Maria Mountains SW	open	Palm Springs	106
660823	Big Maria Mountains SW	open	Palm Springs	106
660825	Big Maria Mountains SW	open	Palm Springs	106
660827	Big Maria Mountains SW	open	Palm Springs	106
660828	Big Maria Mountains SW	open	Palm Springs	106
660909	Big Maria Mountains SW	open	Palm Springs	106

Route No.	USGS Map Name	Designation	Field Office	Map No.
690834	Big Maria Mountains SW	open	Palm Springs	106
690866	Big Maria Mountains SW	open	Palm Springs	106
660805	Big Maria Mountains SW	open (partial)	Palm Springs	106
660809	Big Maria Mountains SW	open (partial)	Palm Springs	106
660821	Big Maria Mountains SW	open (partial)	Palm Springs	106
660913	Big Maria Mountains SE	closed	Palm Springs	107
660914	Big Maria Mountains SE	closed	Palm Springs	107
660807	Big Maria Mountains SE	open	Palm Springs	107
660820	Big Maria Mountains SE	open	Palm Springs	107
660841	Big Maria Mountains SE	open	Palm Springs	107
660906	Big Maria Mountains SE	open	Palm Springs	107
660907	Big Maria Mountains SE	open	Palm Springs	107
660908	Big Maria Mountains SE	open	Palm Springs	107
660909	Big Maria Mountains SE	open	Palm Springs	107
660910	Big Maria Mountains SE	open	Palm Springs	107
660911	Big Maria Mountains SE	open	Palm Springs	107
660912	Big Maria Mountains SE	open	Palm Springs	107
663506	Big Maria Mountains SE	open	Palm Springs	107
660011	Indio	open	Palm Springs	108
660012	Indio	open	Palm Springs	108
660013	Indio	open	Palm Springs	108
660014	Indio	open	Palm Springs	108
660015	Indio	open	Palm Springs	108
660016	Indio	open	Palm Springs	108
660017	Indio	open	Palm Springs	108
660018	Indio	open	Palm Springs	108
660019	Indio	open	Palm Springs	108
660038	Indio	open	Palm Springs	108
660011	Thermal Canyon	open	Palm Springs	109
660012	Thermal Canyon	open	Palm Springs	109
660014	Thermal Canyon	open	Palm Springs	109
660038	Thermal Canyon	open	Palm Springs	109
660041	Thermal Canyon	open	Palm Springs	109
660042	Thermal Canyon	open	Palm Springs	109
660043	Thermal Canyon	open	Palm Springs	109
660044	Thermal Canyon	open	Palm Springs	109
660045	Thermal Canyon	open	Palm Springs	109
660046	Thermal Canyon	open	Palm Springs	109
660047	Thermal Canyon	open	Palm Springs	109
660048	Thermal Canyon	open	Palm Springs	109
660049	Thermal Canyon	open	Palm Springs	109
660050	Thermal Canyon	open	Palm Springs	109

Route No.	USGS Map Name	Designation	Field Office	Map No.
660051	Thermal Canyon	open	Palm Springs	109
660055	Thermal Canyon	open	Palm Springs	109
660056	Thermal Canyon	open	Palm Springs	109
660057	Thermal Canyon	open	Palm Springs	109
660058	Thermal Canyon	open	Palm Springs	109
661016	Thermal Canyon	open	Palm Springs	109
661017	Thermal Canyon	open	Palm Springs	109
661018	Thermal Canyon	open	Palm Springs	109
661019	Thermal Canyon	open	Palm Springs	109
661020	Thermal Canyon	open	Palm Springs	109
661021	Thermal Canyon	open	Palm Springs	109
661023	Thermal Canyon	open	Palm Springs	109
661029	Thermal Canyon	open	Palm Springs	109
662111	Thermal Canyon	open	Palm Springs	109
660069	Cottonwood Basin	closed	Palm Springs	110
660072	Cottonwood Basin	closed	Palm Springs	110
660073	Cottonwood Basin	closed	Palm Springs	110
660076	Cottonwood Basin	closed	Palm Springs	110
660079	Cottonwood Basin	closed	Palm Springs	110
660183	Cottonwood Basin	closed	Palm Springs	110
661030	Cottonwood Basin	closed	Palm Springs	110
660011	Cottonwood Basin	open	Palm Springs	110
660045	Cottonwood Basin	open	Palm Springs	110
660050	Cottonwood Basin	open	Palm Springs	110
660066	Cottonwood Basin	open	Palm Springs	110
660067	Cottonwood Basin	open	Palm Springs	110
660068	Cottonwood Basin	open	Palm Springs	110
660070	Cottonwood Basin	open	Palm Springs	110
660071	Cottonwood Basin	open	Palm Springs	110
660074	Cottonwood Basin	open	Palm Springs	110
660075	Cottonwood Basin	open	Palm Springs	110
660077	Cottonwood Basin	open	Palm Springs	110
660078	Cottonwood Basin	open	Palm Springs	110
660080	Cottonwood Basin	open	Palm Springs	110
660082	Cottonwood Basin	open	Palm Springs	110
660084	Cottonwood Basin	open	Palm Springs	110
660085	Cottonwood Basin	open	Palm Springs	110
660086	Cottonwood Basin	open	Palm Springs	110
660088	Cottonwood Basin	open	Palm Springs	110
660091	Cottonwood Basin	open	Palm Springs	110
661018	Cottonwood Basin	open	Palm Springs	110
661019	Cottonwood Basin	open	Palm Springs	110

Route No.	USGS Map Name	Designation	Field Office	Map No.
661020	Cottonwood Basin	open	Palm Springs	110
661021	Cottonwood Basin	open	Palm Springs	110
661029	Cottonwood Basin	open	Palm Springs	110
661032	Cottonwood Basin	open	Palm Springs	110
661033	Cottonwood Basin	open	Palm Springs	110
661034	Cottonwood Basin	open	Palm Springs	110
661035	Cottonwood Basin	open	Palm Springs	110
661036	Cottonwood Basin	open	Palm Springs	110
661038	Cottonwood Basin	open	Palm Springs	110
661040	Cottonwood Basin	open	Palm Springs	110
661074	Cottonwood Basin	open	Palm Springs	110
661081	Cottonwood Basin	open	Palm Springs	110
660183	Cottonwood Spring	closed	Palm Springs	111
663001	Cottonwood Spring	closed	Palm Springs	111
660011	Cottonwood Spring	open	Palm Springs	111
660066	Cottonwood Spring	open	Palm Springs	111
660067	Cottonwood Spring	open	Palm Springs	111
660070	Cottonwood Spring	open	Palm Springs	111
660071	Cottonwood Spring	open	Palm Springs	111
660074	Cottonwood Spring	open	Palm Springs	111
660080	Cottonwood Spring	open	Palm Springs	111
660088	Cottonwood Spring	open	Palm Springs	111
660131	Cottonwood Spring	open	Palm Springs	111
660133	Cottonwood Spring	open	Palm Springs	111
660166	Cottonwood Spring	open	Palm Springs	111
660168	Cottonwood Spring	open	Palm Springs	111
660170	Cottonwood Spring	open	Palm Springs	111
660171	Cottonwood Spring	open	Palm Springs	111
660172	Cottonwood Spring	open	Palm Springs	111
660173	Cottonwood Spring	open	Palm Springs	111
660174	Cottonwood Spring	open	Palm Springs	111
660175	Cottonwood Spring	open	Palm Springs	111
660176	Cottonwood Spring	open	Palm Springs	111
660177	Cottonwood Spring	open	Palm Springs	111
660178	Cottonwood Spring	open	Palm Springs	111
660179	Cottonwood Spring	open	Palm Springs	111
660182	Cottonwood Spring	open	Palm Springs	111
660185	Cottonwood Spring	open	Palm Springs	111
660186	Cottonwood Spring	open	Palm Springs	111
660187	Cottonwood Spring	open	Palm Springs	111
660188	Cottonwood Spring	open	Palm Springs	111
661080	Cottonwood Spring	open	Palm Springs	111

Route No.	USGS Map Name	Designation	Field Office	Map No.
662112	Cottonwood Spring	open	Palm Springs	111
663001	Cottonwood Spring	open	Palm Springs	111
663507	Cottonwood Spring	open	Palm Springs	111
663508	Cottonwood Spring	open	Palm Springs	111
660209	Hayfield	closed	Palm Springs	112
660203	Hayfield	closedg	Palm Springs	112
660210	Hayfield	closedg	Palm Springs	112
660233	Hayfield	closedg	Palm Springs	112
660229	Hayfield	closedr	Palm Springs	112
660198	Hayfield	closedw (partial)	Palm Springs	112
660211	Hayfield	closedz	Palm Springs	112
660212	Hayfield	closedz	Palm Springs	112
660074	Hayfield	open	Palm Springs	112
660080	Hayfield	open	Palm Springs	112
660170	Hayfield	open	Palm Springs	112
660187	Hayfield	open	Palm Springs	112
660194	Hayfield	open	Palm Springs	112
660195	Hayfield	open	Palm Springs	112
660197	Hayfield	open	Palm Springs	112
660199	Hayfield	open	Palm Springs	112
660200	Hayfield	open	Palm Springs	112
660201	Hayfield	open	Palm Springs	112
660202	Hayfield	open	Palm Springs	112
660204	Hayfield	open	Palm Springs	112
660205	Hayfield	open	Palm Springs	112
660206	Hayfield	open	Palm Springs	112
660207	Hayfield	open	Palm Springs	112
660208	Hayfield	open	Palm Springs	112
660213	Hayfield	open	Palm Springs	112
660214	Hayfield	open	Palm Springs	112
660215	Hayfield	open	Palm Springs	112
660216	Hayfield	open	Palm Springs	112
660217	Hayfield	open	Palm Springs	112
660218	Hayfield	open	Palm Springs	112
660219	Hayfield	open	Palm Springs	112
660220	Hayfield	open	Palm Springs	112
660221	Hayfield	open	Palm Springs	112
660222	Hayfield	open	Palm Springs	112
660223	Hayfield	open	Palm Springs	112
660224	Hayfield	open	Palm Springs	112
660225	Hayfield	open	Palm Springs	112
660226	Hayfield	open	Palm Springs	112

Route No.	USGS Map Name	Designation	Field Office	Map No.
660227	Hayfield	open	Palm Springs	112
660228	Hayfield	open	Palm Springs	112
660230	Hayfield	open	Palm Springs	112
660231	Hayfield	open	Palm Springs	112
660232	Hayfield	open	Palm Springs	112
662110	Hayfield	open	Palm Springs	112
663507	Hayfield	open	Palm Springs	112
660198	Hayfield	open (partial)	Palm Springs	112
660305	Hayfield Spring	closed (partial)	Palm Springs	113
660310	Hayfield Spring	closed (partial)	Palm Springs	113
660277	Hayfield Spring	closedg	Palm Springs	113
660279	Hayfield Spring	closedg	Palm Springs	113
660317	Hayfield Spring	closedg	Palm Springs	113
660170	Hayfield Spring	open	Palm Springs	113
660195	Hayfield Spring	open	Palm Springs	113
660197	Hayfield Spring	open	Palm Springs	113
660230	Hayfield Spring	open	Palm Springs	113
660232	Hayfield Spring	open	Palm Springs	113
660281	Hayfield Spring	open	Palm Springs	113
660286	Hayfield Spring	open	Palm Springs	113
660288	Hayfield Spring	open	Palm Springs	113
660301	Hayfield Spring	open	Palm Springs	113
660302	Hayfield Spring	open	Palm Springs	113
660303	Hayfield Spring	open	Palm Springs	113
660307	Hayfield Spring	open	Palm Springs	113
660308	Hayfield Spring	open	Palm Springs	113
660309	Hayfield Spring	open	Palm Springs	113
660311	Hayfield Spring	open	Palm Springs	113
660313	Hayfield Spring	open	Palm Springs	113
660314	Hayfield Spring	open	Palm Springs	113
660315	Hayfield Spring	open	Palm Springs	113
660316	Hayfield Spring	open	Palm Springs	113
660318	Hayfield Spring	open	Palm Springs	113
660319	Hayfield Spring	open	Palm Springs	113
660320	Hayfield Spring	open	Palm Springs	113
660392	Hayfield Spring	open	Palm Springs	113
660450	Hayfield Spring	open	Palm Springs	113
660451	Hayfield Spring	open	Palm Springs	113
660452	Hayfield Spring	open	Palm Springs	113
662101	Hayfield Spring	open	Palm Springs	113
662102	Hayfield Spring	open	Palm Springs	113
662103	Hayfield Spring	open	Palm Springs	113

Route No.	USGS Map Name	Designation	Field Office	Map No.
662104	Hayfield Spring	open	Palm Springs	113
663509	Hayfield Spring	open	Palm Springs	113
660305	Hayfield Spring	open (partial)	Palm Springs	113
660310	Hayfield Spring	open (partial)	Palm Springs	113
660386	Desert Center	closedg	Palm Springs	114
660387	Desert Center	closedg	Palm Springs	114
660388	Desert Center	closedg	Palm Springs	114
660390	Desert Center	closedg	Palm Springs	114
660391	Desert Center	closedg	Palm Springs	114
660395	Desert Center	closedg	Palm Springs	114
660398	Desert Center	closedg	Palm Springs	114
660401	Desert Center	closedg	Palm Springs	114
660402	Desert Center	closedg	Palm Springs	114
660403	Desert Center	closedg	Palm Springs	114
660404	Desert Center	closedg	Palm Springs	114
660406	Desert Center	closedg	Palm Springs	114
660409	Desert Center	closedg	Palm Springs	114
660410	Desert Center	closedg	Palm Springs	114
660412	Desert Center	closedg	Palm Springs	114
660432	Desert Center	closedg	Palm Springs	114
660433	Desert Center	closedg	Palm Springs	114
660434	Desert Center	closedg	Palm Springs	114
660435	Desert Center	closedg	Palm Springs	114
660437	Desert Center	closedg	Palm Springs	114
660438	Desert Center	closedg	Palm Springs	114
660439	Desert Center	closedg	Palm Springs	114
660442	Desert Center	closedg	Palm Springs	114
660400	Desert Center	closedg (partial)	Palm Springs	114
660170	Desert Center	open	Palm Springs	114
660195	Desert Center	open	Palm Springs	114
660307	Desert Center	open	Palm Springs	114
660311	Desert Center	open	Palm Springs	114
660313	Desert Center	open	Palm Springs	114
660325	Desert Center	open	Palm Springs	114
660326	Desert Center	open	Palm Springs	114
660327	Desert Center	open	Palm Springs	114
660333	Desert Center	open	Palm Springs	114
660339	Desert Center	open	Palm Springs	114
660369	Desert Center	open	Palm Springs	114
660370	Desert Center	open	Palm Springs	114
660371	Desert Center	open	Palm Springs	114
660372	Desert Center	open	Palm Springs	114

Route No.	USGS Map Name	Designation	Field Office	Map No.
660373	Desert Center	open	Palm Springs	114
660374	Desert Center	open	Palm Springs	114
660375	Desert Center	open	Palm Springs	114
660376	Desert Center	open	Palm Springs	114
660377	Desert Center	open	Palm Springs	114
660378	Desert Center	open	Palm Springs	114
660379	Desert Center	open	Palm Springs	114
660380	Desert Center	open	Palm Springs	114
660382	Desert Center	open	Palm Springs	114
660383	Desert Center	open	Palm Springs	114
660384	Desert Center	open	Palm Springs	114
660389	Desert Center	open	Palm Springs	114
660392	Desert Center	open	Palm Springs	114
660393	Desert Center	open	Palm Springs	114
660394	Desert Center	open	Palm Springs	114
660396	Desert Center	open	Palm Springs	114
660397	Desert Center	open	Palm Springs	114
660399	Desert Center	open	Palm Springs	114
660405	Desert Center	open	Palm Springs	114
660408	Desert Center	open	Palm Springs	114
660412	Desert Center	open	Palm Springs	114
660413	Desert Center	open	Palm Springs	114
660414	Desert Center	open	Palm Springs	114
660415	Desert Center	open	Palm Springs	114
660416	Desert Center	open	Palm Springs	114
660418	Desert Center	open	Palm Springs	114
660419	Desert Center	open	Palm Springs	114
660420	Desert Center	open	Palm Springs	114
660421	Desert Center	open	Palm Springs	114
660422	Desert Center	open	Palm Springs	114
660423	Desert Center	open	Palm Springs	114
660424	Desert Center	open	Palm Springs	114
660425	Desert Center	open	Palm Springs	114
660429	Desert Center	open	Palm Springs	114
660430	Desert Center	open	Palm Springs	114
660431	Desert Center	open	Palm Springs	114
660436	Desert Center	open	Palm Springs	114
660440	Desert Center	open	Palm Springs	114
660441	Desert Center	open	Palm Springs	114
660442	Desert Center	open	Palm Springs	114
660443	Desert Center	open	Palm Springs	114
660444	Desert Center	open	Palm Springs	114

Route No.	USGS Map Name	Designation	Field Office	Map No.
660445	Desert Center	open	Palm Springs	114
660446	Desert Center	open	Palm Springs	114
660447	Desert Center	open	Palm Springs	114
660501	Desert Center	open	Palm Springs	114
663503	Desert Center	open	Palm Springs	114
663509	Desert Center	open	Palm Springs	114
660400	Desert Center	open (partial)	Palm Springs	114
660496	Corn Spring	closed	Palm Springs	115
660332	Corn Spring	open	Palm Springs	115
660371	Corn Spring	open	Palm Springs	115
660377	Corn Spring	open	Palm Springs	115
660378	Corn Spring	open	Palm Springs	115
660379	Corn Spring	open	Palm Springs	115
660380	Corn Spring	open	Palm Springs	115
660392	Corn Spring	open	Palm Springs	115
660413	Corn Spring	open	Palm Springs	115
660414	Corn Spring	open	Palm Springs	115
660418	Corn Spring	open	Palm Springs	115
660425	Corn Spring	open	Palm Springs	115
660430	Corn Spring	open	Palm Springs	115
660446	Corn Spring	open	Palm Springs	115
660478	Corn Spring	open	Palm Springs	115
660493	Corn Spring	open	Palm Springs	115
660494	Corn Spring	open	Palm Springs	115
660495	Corn Spring	open	Palm Springs	115
660497	Corn Spring	open	Palm Springs	115
660498	Corn Spring	open	Palm Springs	115
660500	Corn Spring	open	Palm Springs	115
660501	Corn Spring	open	Palm Springs	115
660502	Corn Spring	open	Palm Springs	115
660503	Corn Spring	open	Palm Springs	115
660504	Corn Spring	open	Palm Springs	115
660505	Corn Spring	open	Palm Springs	115
660506	Corn Spring	open	Palm Springs	115
660507	Corn Spring	open	Palm Springs	115
660508	Corn Spring	open	Palm Springs	115
660510	Corn Spring	open	Palm Springs	115
660511	Corn Spring	open	Palm Springs	115
660512	Corn Spring	open	Palm Springs	115
660513	Corn Spring	open	Palm Springs	115
660514	Corn Spring	open	Palm Springs	115
660515	Corn Spring	open	Palm Springs	115

Route No.	USGS Map Name	Designation	Field Office	Map No.
660516	Corn Spring	open	Palm Springs	115
660517	Corn Spring	open	Palm Springs	115
660518	Corn Spring	open	Palm Springs	115
660519	Corn Spring	open	Palm Springs	115
660528	Corn Spring	open	Palm Springs	115
660529	Corn Spring	open	Palm Springs	115
660540	Corn Spring	open	Palm Springs	115
660541	Corn Spring	open	Palm Springs	115
660952	Corn Spring	open	Palm Springs	115
660946	Sidewinder Well	closedn	Palm Springs	116
660392	Sidewinder Well	open	Palm Springs	116
660413	Sidewinder Well	open	Palm Springs	116
660501	Sidewinder Well	open	Palm Springs	116
660502	Sidewinder Well	open	Palm Springs	116
660503	Sidewinder Well	open	Palm Springs	116
660511	Sidewinder Well	open	Palm Springs	116
660564	Sidewinder Well	open	Palm Springs	116
660580	Sidewinder Well	open	Palm Springs	116
660634	Sidewinder Well	open	Palm Springs	116
660948	Sidewinder Well	open	Palm Springs	116
660949	Sidewinder Well	open	Palm Springs	116
660950	Sidewinder Well	open	Palm Springs	116
660951	Sidewinder Well	open	Palm Springs	116
660952	Sidewinder Well	open	Palm Springs	116
660953	Sidewinder Well	open	Palm Springs	116
660954	Sidewinder Well	open	Palm Springs	116
660955	Sidewinder Well	open	Palm Springs	116
660956	Sidewinder Well	open	Palm Springs	116
660957	Sidewinder Well	open	Palm Springs	116
660958	Sidewinder Well	open	Palm Springs	116
660392	Ford Dry Lake	open	Palm Springs	117
660564	Ford Dry Lake	open	Palm Springs	117
660634	Ford Dry Lake	open	Palm Springs	117
660636	Ford Dry Lake	open	Palm Springs	117
660637	Ford Dry Lake	open	Palm Springs	117
660639	Ford Dry Lake	open	Palm Springs	117
660640	Ford Dry Lake	open	Palm Springs	117
660641	Ford Dry Lake	open	Palm Springs	117
660952	Ford Dry Lake	open	Palm Springs	117
660695	McCoy Spring	closed	Palm Springs	118
660696	McCoy Spring	closed (partial)	Palm Springs	118
660656	McCoy Spring	open	Palm Springs	118

Route No.	USGS Map Name	Designation	Field Office	Map No.
660692	McCoy Spring	open	Palm Springs	118
660697	McCoy Spring	open	Palm Springs	118
660698	McCoy Spring	open	Palm Springs	118
660696	McCoy Spring	open (partial)	Palm Springs	118
660697	McCoy Peak	open	Palm Springs	119
661080	McCoy Peak	open	Palm Springs	119
661081	McCoy Peak	open	Palm Springs	119
661084	McCoy Peak	open	Palm Springs	119
661085	McCoy Peak	open	Palm Springs	119
661113	McCoy Peak	open	Palm Springs	119
661115	McCoy Peak	open	Palm Springs	119
661116	McCoy Peak	open	Palm Springs	119
660789	McCoy Wash	closed	Palm Springs	120
660790	McCoy Wash	closed	Palm Springs	120
660792	McCoy Wash	closed	Palm Springs	120
660830	McCoy Wash	closed	Palm Springs	120
660791	McCoy Wash	open	Palm Springs	120
660806	McCoy Wash	open	Palm Springs	120
660807	McCoy Wash	open	Palm Springs	120
660810	McCoy Wash	open	Palm Springs	120
660831	McCoy Wash	open	Palm Springs	120
660832	McCoy Wash	open	Palm Springs	120
660833	McCoy Wash	open	Palm Springs	120
660834	McCoy Wash	open	Palm Springs	120
660835	McCoy Wash	open	Palm Springs	120
660836	McCoy Wash	open	Palm Springs	120
660837	McCoy Wash	open	Palm Springs	120
660838	McCoy Wash	open	Palm Springs	120
660839	McCoy Wash	open	Palm Springs	120
660840	McCoy Wash	open	Palm Springs	120
660841	McCoy Wash	open	Palm Springs	120
660842	McCoy Wash	open	Palm Springs	120
660843	McCoy Wash	open	Palm Springs	120
660844	McCoy Wash	open	Palm Springs	120
660845	McCoy Wash	open	Palm Springs	120
660846	McCoy Wash	open	Palm Springs	120
660847	McCoy Wash	open	Palm Springs	120
660848	McCoy Wash	open	Palm Springs	120
660849	McCoy Wash	open	Palm Springs	120
660850	McCoy Wash	open	Palm Springs	120
660851	McCoy Wash	open	Palm Springs	120
660852	McCoy Wash	open	Palm Springs	120

Route No.	USGS Map Name	Designation	Field Office	Map No.
660853	McCoy Wash	open	Palm Springs	120
660855	McCoy Wash	open	Palm Springs	120
660868	McCoy Wash	open	Palm Springs	120
661185	McCoy Wash	open	Palm Springs	120
661186	McCoy Wash	open	Palm Springs	120
661189	McCoy Wash	open	Palm Springs	120
662001	McCoy Wash	open	Palm Springs	120
662002	McCoy Wash	open	Palm Springs	120
662003	McCoy Wash	open	Palm Springs	120
690834	McCoy Wash	open	Palm Springs	120
690866	McCoy Wash	open	Palm Springs	120
660897	Blythe NE	closed	Palm Springs	121
660898	Blythe NE	closed	Palm Springs	121
660791	Blythe NE	open	Palm Springs	121
660841	Blythe NE	open	Palm Springs	121
660896	Blythe NE	open	Palm Springs	121
661500	Blythe NE	open	Palm Springs	121
690834	Blythe NE	open	Palm Springs	121
660029	Mecca	open	Palm Springs	122
660030	Mecca	open	Palm Springs	122
660031	Mecca	open	Palm Springs	122
660032	Mecca	open	Palm Springs	122
660033	Mecca	open	Palm Springs	122
660036	Mecca	open	Palm Springs	122
660037	Mecca	open	Palm Springs	122
660050	Mecca	open	Palm Springs	122
661210	Mecca	open	Palm Springs	122
660096	Mortmar	closedg	Palm Springs	123
660097	Mortmar	closedg	Palm Springs	123
660109	Mortmar	closedg	Palm Springs	123
660108	Mortmar	limitedz (partial)	Palm Springs	123
660030	Mortmar	open	Palm Springs	123
660032	Mortmar	open	Palm Springs	123
660037	Mortmar	open	Palm Springs	123
660068	Mortmar	open	Palm Springs	123
660093	Mortmar	open	Palm Springs	123
660094	Mortmar	open	Palm Springs	123
660095	Mortmar	open	Palm Springs	123
660098	Mortmar	open	Palm Springs	123
660099	Mortmar	open	Palm Springs	123
660100	Mortmar	open	Palm Springs	123
660105	Mortmar	open	Palm Springs	123

Route No.	USGS Map Name	Designation	Field Office	Map No.
660106	Mortmar	open	Palm Springs	123
660107	Mortmar	open	Palm Springs	123
660135	Mortmar	open	Palm Springs	123
660154	Mortmar	open	Palm Springs	123
660998	Mortmar	open	Palm Springs	123
660999	Mortmar	open	Palm Springs	123
661000	Mortmar	open	Palm Springs	123
661001	Mortmar	open	Palm Springs	123
661005	Mortmar	open	Palm Springs	123
661006	Mortmar	open	Palm Springs	123
661007	Mortmar	open	Palm Springs	123
662106	Mortmar	open	Palm Springs	123
662107	Mortmar	open	Palm Springs	123
662108	Mortmar	open	Palm Springs	123
662109	Mortmar	open	Palm Springs	123
660108	Mortmar	open (partial)	Palm Springs	123
660131	Orocopia Canyon	open	Palm Springs	124
660132	Orocopia Canyon	open	Palm Springs	124
660133	Orocopia Canyon	open	Palm Springs	124
660134	Orocopia Canyon	open	Palm Springs	124
660135	Orocopia Canyon	open	Palm Springs	124
660139	Orocopia Canyon	open	Palm Springs	124
660141	Orocopia Canyon	open	Palm Springs	124
660142	Orocopia Canyon	open	Palm Springs	124
660143	Orocopia Canyon	open	Palm Springs	124
660144	Orocopia Canyon	open	Palm Springs	124
660154	Orocopia Canyon	open	Palm Springs	124
660158	Orocopia Canyon	open	Palm Springs	124
660159	Orocopia Canyon	open	Palm Springs	124
662100	Orocopia Canyon	open	Palm Springs	124
663002	Red Canyon	closed	Palm Springs	125
660248	Red Canyon	closedw	Palm Springs	125
661204	Red Canyon	closedw	Palm Springs	125
660260	Red Canyon	closedw (partial)	Palm Springs	125
660255	Red Canyon	closedz	Palm Springs	125
660159	Red Canyon	open	Palm Springs	125
660194	Red Canyon	open	Palm Springs	125
660202	Red Canyon	open	Palm Springs	125
660238	Red Canyon	open	Palm Springs	125
660239	Red Canyon	open	Palm Springs	125
660240	Red Canyon	open	Palm Springs	125
660242	Red Canyon	open	Palm Springs	125

Route No.	USGS Map Name	Designation	Field Office	Map No.
660243	Red Canyon	open	Palm Springs	125
660244	Red Canyon	open	Palm Springs	125
660245	Red Canyon	open	Palm Springs	125
660246	Red Canyon	open	Palm Springs	125
660247	Red Canyon	open	Palm Springs	125
660249	Red Canyon	open	Palm Springs	125
660250	Red Canyon	open	Palm Springs	125
660251	Red Canyon	open	Palm Springs	125
660252	Red Canyon	open	Palm Springs	125
660256	Red Canyon	open	Palm Springs	125
660257	Red Canyon	open	Palm Springs	125
660258	Red Canyon	open	Palm Springs	125
660262	Red Canyon	open	Palm Springs	125
661201	Red Canyon	open	Palm Springs	125
661202	Red Canyon	open	Palm Springs	125
661203	Red Canyon	open	Palm Springs	125
660260	Red Canyon	open (partial)	Palm Springs	125
660277	East of Red Canyon	closedg	Palm Springs	126
660279	East of Red Canyon	closedg	Palm Springs	126
660292	East of Red Canyon	closedg	Palm Springs	126
660321	East of Red Canyon	closedg	Palm Springs	126
660322	East of Red Canyon	closedg	Palm Springs	126
661305	East of Red Canyon	closedg	Palm Springs	126
661306	East of Red Canyon	closedg	Palm Springs	126
660291	East of Red Canyon	closedg (partial)	Palm Springs	126
660458	East of Red Canyon	closedw	Palm Springs	126
661308	East of Red Canyon	closedw	Palm Springs	126
660159	East of Red Canyon	open	Palm Springs	126
660194	East of Red Canyon	open	Palm Springs	126
660201	East of Red Canyon	open	Palm Springs	126
660257	East of Red Canyon	open	Palm Springs	126
660274	East of Red Canyon	open	Palm Springs	126
660275	East of Red Canyon	open	Palm Springs	126
660276	East of Red Canyon	open	Palm Springs	126
660278	East of Red Canyon	open	Palm Springs	126
660280	East of Red Canyon	open	Palm Springs	126
660281	East of Red Canyon	open	Palm Springs	126
660282	East of Red Canyon	open	Palm Springs	126
660283	East of Red Canyon	open	Palm Springs	126
660284	East of Red Canyon	open	Palm Springs	126
660285	East of Red Canyon	open	Palm Springs	126
660286	East of Red Canyon	open	Palm Springs	126

Route No.	USGS Map Name	Designation	Field Office	Map No.
660287	East of Red Canyon	open	Palm Springs	126
660288	East of Red Canyon	open	Palm Springs	126
660289	East of Red Canyon	open	Palm Springs	126
660290	East of Red Canyon	open	Palm Springs	126
660293	East of Red Canyon	open	Palm Springs	126
660323	East of Red Canyon	open	Palm Springs	126
660324	East of Red Canyon	open	Palm Springs	126
660459	East of Red Canyon	open	Palm Springs	126
661202	East of Red Canyon	open	Palm Springs	126
661203	East of Red Canyon	open	Palm Springs	126
661307	East of Red Canyon	open	Palm Springs	126
661308	East of Red Canyon	open	Palm Springs	126
660291	East of Red Canyon	open (partial)	Palm Springs	126
660460	Red Cloud Canyon	closedg	Palm Springs	127
660461	Red Cloud Canyon	closedg	Palm Springs	127
660462	Red Cloud Canyon	closedg	Palm Springs	127
660463	Red Cloud Canyon	closedg	Palm Springs	127
660458	Red Cloud Canyon	closedw	Palm Springs	127
660159	Red Cloud Canyon	open	Palm Springs	127
660201	Red Cloud Canyon	open	Palm Springs	127
660281	Red Cloud Canyon	open	Palm Springs	127
660307	Red Cloud Canyon	open	Palm Springs	127
660414	Red Cloud Canyon	open	Palm Springs	127
660457	Red Cloud Canyon	open	Palm Springs	127
660459	Red Cloud Canyon	open	Palm Springs	127
660464	Red Cloud Canyon	open	Palm Springs	127
660480	Red Cloud Canyon	open	Palm Springs	127
663509	Red Cloud Canyon	open	Palm Springs	127
660413	Pilot Mountain	open	Palm Springs	128
660414	Pilot Mountain	open	Palm Springs	128
660468	Pilot Mountain	open	Palm Springs	128
660478	Pilot Mountain	open	Palm Springs	128
660480	Pilot Mountain	open	Palm Springs	128
660481	Pilot Mountain	open	Palm Springs	128
660482	Pilot Mountain	open	Palm Springs	128
660483	Pilot Mountain	open	Palm Springs	128
660485	Pilot Mountain	open	Palm Springs	128
660486	Pilot Mountain	open	Palm Springs	128
660626	Aztec Mines	closed	Palm Springs	129
660483	Aztec Mines	open	Palm Springs	129
660511	Aztec Mines	open	Palm Springs	129
660576	Aztec Mines	open	Palm Springs	129

Route No.	USGS Map Name	Designation	Field Office	Map No.
660577	Aztec Mines	open	Palm Springs	129
660578	Aztec Mines	open	Palm Springs	129
660580	Aztec Mines	open	Palm Springs	129
660581	Aztec Mines	open	Palm Springs	129
660955	Aztec Mines	open	Palm Springs	129
660626	East of Aztec Mines	closed (partial)	Palm Springs	130
660392	East of Aztec Mines	open	Palm Springs	130
660511	East of Aztec Mines	open	Palm Springs	130
660576	East of Aztec Mines	open	Palm Springs	130
660580	East of Aztec Mines	open	Palm Springs	130
660594	East of Aztec Mines	open	Palm Springs	130
660637	East of Aztec Mines	open	Palm Springs	130
660639	East of Aztec Mines	open	Palm Springs	130
660640	East of Aztec Mines	open	Palm Springs	130
660641	East of Aztec Mines	open	Palm Springs	130
660703	East of Aztec Mines	open	Palm Springs	130
660955	East of Aztec Mines	open	Palm Springs	130
660626	East of Aztec Mines	open (partial)	Palm Springs	130
660511	Hopkins Well	open	Palm Springs	131
660580	Hopkins Well	open	Palm Springs	131
660637	Hopkins Well	open	Palm Springs	131
660656	Hopkins Well	open	Palm Springs	131
660669	Hopkins Well	open	Palm Springs	131
660692	Hopkins Well	open	Palm Springs	131
660696	Hopkins Well	open	Palm Springs	131
660701	Hopkins Well	open	Palm Springs	131
660702	Hopkins Well	open	Palm Springs	131
660703	Hopkins Well	open	Palm Springs	131
660704	Hopkins Well	open	Palm Springs	131
660705	Hopkins Well	open	Palm Springs	131
660706	Hopkins Well	open	Palm Springs	131
660707	Hopkins Well	open	Palm Springs	131
660708	Hopkins Well	open	Palm Springs	131
660709	Hopkins Well	open	Palm Springs	131
660710	Hopkins Well	open	Palm Springs	131
660711	Hopkins Well	open	Palm Springs	131
660712	Hopkins Well	open	Palm Springs	131
660714	Hopkins Well	open	Palm Springs	131
660715	Hopkins Well	open	Palm Springs	131
660716	Hopkins Well	open	Palm Springs	131
660717	Hopkins Well	open	Palm Springs	131
660718	Hopkins Well	open	Palm Springs	131

Route No.	USGS Map Name	Designation	Field Office	Map No.
660967	Roosevelt Mine	closedh	Palm Springs	132
661099	Roosevelt Mine	closedh	Palm Springs	132
660966	Roosevelt Mine	closedn	Palm Springs	132
661095	Roosevelt Mine	closedp	Palm Springs	132
661101	Roosevelt Mine	closedp	Palm Springs	132
660159	Roosevelt Mine	open	Palm Springs	132
660620	Roosevelt Mine	open	Palm Springs	132
660637	Roosevelt Mine	open	Palm Springs	132
660703	Roosevelt Mine	open	Palm Springs	132
660709	Roosevelt Mine	open	Palm Springs	132
660710	Roosevelt Mine	open	Palm Springs	132
660712	Roosevelt Mine	open	Palm Springs	132
660858	Roosevelt Mine	open	Palm Springs	132
660860	Roosevelt Mine	open	Palm Springs	132
660863	Roosevelt Mine	open	Palm Springs	132
660866	Roosevelt Mine	open	Palm Springs	132
660868	Roosevelt Mine	open	Palm Springs	132
660869	Roosevelt Mine	open	Palm Springs	132
660980	Roosevelt Mine	open	Palm Springs	132
661080	Roosevelt Mine	open	Palm Springs	132
661081	Roosevelt Mine	open	Palm Springs	132
661082	Roosevelt Mine	open	Palm Springs	132
661083	Roosevelt Mine	open	Palm Springs	132
661084	Roosevelt Mine	open	Palm Springs	132
661085	Roosevelt Mine	open	Palm Springs	132
661086	Roosevelt Mine	open	Palm Springs	132
661087	Roosevelt Mine	open	Palm Springs	132
661088	Roosevelt Mine	open	Palm Springs	132
661089	Roosevelt Mine	open	Palm Springs	132
661090	Roosevelt Mine	open	Palm Springs	132
661091	Roosevelt Mine	open	Palm Springs	132
661092	Roosevelt Mine	open	Palm Springs	132
661093	Roosevelt Mine	open	Palm Springs	132
661094	Roosevelt Mine	open	Palm Springs	132
661096	Roosevelt Mine	open	Palm Springs	132
661097	Roosevelt Mine	open	Palm Springs	132
661098	Roosevelt Mine	open	Palm Springs	132
661102	Roosevelt Mine	open	Palm Springs	132
661103	Roosevelt Mine	open	Palm Springs	132
661104	Roosevelt Mine	open	Palm Springs	132
661501	Roosevelt Mine	open	Palm Springs	132
660637	Ripley	open	Palm Springs	133

Route No.	USGS Map Name	Designation	Field Office	Map No.
660703	Ripley	open	Palm Springs	133
660709	Ripley	open	Palm Springs	133
660712	Ripley	open	Palm Springs	133
660831	Ripley	open	Palm Springs	133
660857	Ripley	open	Palm Springs	133
660858	Ripley	open	Palm Springs	133
660859	Ripley	open	Palm Springs	133
660860	Ripley	open	Palm Springs	133
660861	Ripley	open	Palm Springs	133
660862	Ripley	open	Palm Springs	133
660863	Ripley	open	Palm Springs	133
660864	Ripley	open	Palm Springs	133
660866	Ripley	open	Palm Springs	133
660867	Ripley	open	Palm Springs	133
660868	Ripley	open	Palm Springs	133
660869	Ripley	open	Palm Springs	133
660870	Ripley	open	Palm Springs	133
660871	Ripley	open	Palm Springs	133
660874	Ripley	open	Palm Springs	133
660875	Ripley	open	Palm Springs	133
660876	Ripley	open	Palm Springs	133
660877	Ripley	open	Palm Springs	133
660878	Ripley	open	Palm Springs	133
661093	Ripley	open	Palm Springs	133
661102	Ripley	open	Palm Springs	133
661104	Ripley	open	Palm Springs	133
660159	Iris Pass	open	Palm Springs	138
660159	Augustine Pass	open	Palm Springs	139
660468	Augustine Pass	open	Palm Springs	139
660469	Augustine Pass	open	Palm Springs	139
660470	Augustine Pass	open	Palm Springs	139
660481	Augustine Pass	open	Palm Springs	139
670550	Augustine Pass	open	El Centro	139
671917	Augustine Pass	open	El Centro	139
674001	Augustine Pass	open	El Centro	139
660588	Chuckwalla Spring	closedr (partial)	Palm Springs	140
660586	Chuckwalla Spring	closedw	Palm Springs	140
660587	Chuckwalla Spring	closedw	Palm Springs	140
660600	Chuckwalla Spring	closedw	Palm Springs	140
660159	Chuckwalla Spring	open	El Centro	140
660159	Chuckwalla Spring	open	Palm Springs	140
660469	Chuckwalla Spring	open	Palm Springs	140

Route No.	USGS Map Name	Designation	Field Office	Map No.
660576	Chuckwalla Spring	open	Palm Springs	140
660581	Chuckwalla Spring	open	Palm Springs	140
660588	Chuckwalla Spring	open	El Centro	140
660589	Chuckwalla Spring	open	Palm Springs	140
660590	Chuckwalla Spring	open	Palm Springs	140
660591	Chuckwalla Spring	open	Palm Springs	140
660592	Chuckwalla Spring	open	Palm Springs	140
660593	Chuckwalla Spring	open	El Centro	140
660593	Chuckwalla Spring	open	Palm Springs	140
660594	Chuckwalla Spring	open	El Centro	140
660594	Chuckwalla Spring	open	Palm Springs	140
660595	Chuckwalla Spring	open	Palm Springs	140
660596	Chuckwalla Spring	open	Palm Springs	140
660597	Chuckwalla Spring	open	Palm Springs	140
660598	Chuckwalla Spring	open	Palm Springs	140
660620	Chuckwalla Spring	open	El Centro	140
670551	Chuckwalla Spring	open	El Centro	140
670552	Chuckwalla Spring	open	El Centro	140
670554	Chuckwalla Spring	open	El Centro	140
670555	Chuckwalla Spring	open	El Centro	140
671916	Chuckwalla Spring	open	El Centro	140
671917	Chuckwalla Spring	open	El Centro	140
671918	Chuckwalla Spring	open	El Centro	140
660588	Chuckwalla Spring	open (partial)	Palm Springs	140
660622	Little Chuckwalla Mountains	closedg	Palm Springs	141
660159	Little Chuckwalla Mountains	open	El Centro	141
660159	Little Chuckwalla Mountains	open	Palm Springs	141
660594	Little Chuckwalla Mountains	open	Palm Springs	141
660606	Little Chuckwalla Mountains	open	Palm Springs	141
660607	Little Chuckwalla Mountains	open	Palm Springs	141
660608	Little Chuckwalla Mountains	open	Palm Springs	141
660609	Little Chuckwalla Mountains	open	Palm Springs	141
660610	Little Chuckwalla Mountains	open	Palm Springs	141
660612	Little Chuckwalla Mountains	open	Palm Springs	141
660614	Little Chuckwalla Mountains	open	Palm Springs	141
660617	Little Chuckwalla Mountains	open	Palm Springs	141
660619	Little Chuckwalla Mountains	open	Palm Springs	141
660620	Little Chuckwalla Mountains	open	El Centro	141
660620	Little Chuckwalla Mountains	open	Palm Springs	141
660623	Little Chuckwalla Mountains	open	El Centro	141
660623	Little Chuckwalla Mountains	open	Palm Springs	141
669992	Little Chuckwalla Mountains	open	Palm Springs	141

Route No.	USGS Map Name	Designation	Field Office	Map No.
670401	Little Chuckwalla Mountains	open	El Centro	141
670401	Little Chuckwalla Mountains	open	Palm Springs	141
670553	Little Chuckwalla Mountains	open	El Centro	141
670555	Little Chuckwalla Mountains	open	El Centro	141
670556	Little Chuckwalla Mountains	open	El Centro	141
670557	Little Chuckwalla Mountains	open	El Centro	141
670558	Little Chuckwalla Mountains	open	El Centro	141
670559	Little Chuckwalla Mountains	open	El Centro	141
670561	Little Chuckwalla Mountains	open	El Centro	141
670571	Little Chuckwalla Mountains	open	El Centro	141
660159	Wiley Well	open	Palm Springs	142
660620	Wiley Well	open	Palm Springs	142
660623	Wiley Well	open	Palm Springs	142
660701	Wiley Well	open	Palm Springs	142
660704	Wiley Well	open	El Centro	142
660704	Wiley Well	open	Palm Springs	142
660710	Wiley Well	open	Palm Springs	142
660711	Wiley Well	open	Palm Springs	142
660714	Wiley Well	open	Palm Springs	142
660726	Wiley Well	open	Palm Springs	142
660727	Wiley Well	open	Palm Springs	142
660728	Wiley Well	open	El Centro	142
660728	Wiley Well	open	Palm Springs	142
660729	Wiley Well	open	Palm Springs	142
660730	Wiley Well	open	Palm Springs	142
660731	Wiley Well	open	Palm Springs	142
660732	Wiley Well	open	Palm Springs	142
660733	Wiley Well	open	Palm Springs	142
660737	Wiley Well	open	El Centro	142
660737	Wiley Well	open	Palm Springs	142
670401	Wiley Well	open	El Centro	142
670557	Wiley Well	open	El Centro	142
670558	Wiley Well	open	El Centro	142
670559	Wiley Well	open	El Centro	142
670560	Wiley Well	open	El Centro	142
670561	Wiley Well	open	El Centro	142
670562	Wiley Well	open	El Centro	142
670564	Wiley Well	open	El Centro	142
670576	Wiley Well	open	El Centro	142
671300	Wiley Well	open	El Centro	142
671301	Wiley Well	open	El Centro	142
671302	Wiley Well	open	El Centro	142

Route No.	USGS Map Name	Designation	Field Office	Map No.
671303	Wiley Well	open	El Centro	142
671305	Wiley Well	open	El Centro	142
671306	Wiley Well	open	El Centro	142
671307	Wiley Well	open	El Centro	142
671308	Wiley Well	open	El Centro	142
671310	Wiley Well	open	El Centro	142
671312	Wiley Well	open	El Centro	142
671901	Wiley Well	open	El Centro	142
671970	Wiley Well	open	El Centro	142
671971	Wiley Well	open	El Centro	142
660971	Thumb Peak	closed	El Centro	143
660973	Thumb Peak	closed	Palm Springs	143
660977	Thumb Peak	closed	Palm Springs	143
660971	Thumb Peak	closed (partial)	Palm Springs	143
660972	Thumb Peak	closedg	Palm Springs	143
660981	Thumb Peak	closedg	Palm Springs	143
670567	Thumb Peak	closedg	El Centro	143
671972	Thumb Peak	closedg	El Centro	143
679980	Thumb Peak	closedg	El Centro	143
660972	Thumb Peak	closedg (partial)	El Centro	143
669997	Thumb Peak	closedg (partial)	Palm Springs	143
670565	Thumb Peak	closedg (partial)	El Centro	143
660967	Thumb Peak	closedh	Palm Springs	143
660966	Thumb Peak	closedn	Palm Springs	143
660159	Thumb Peak	open	Palm Springs	143
660620	Thumb Peak	open	Palm Springs	143
660727	Thumb Peak	open	Palm Springs	143
660731	Thumb Peak	open	Palm Springs	143
660868	Thumb Peak	open	Palm Springs	143
660888	Thumb Peak	open	Palm Springs	143
660967	Thumb Peak	open	Palm Springs	143
660968	Thumb Peak	open	Palm Springs	143
660969	Thumb Peak	open	Palm Springs	143
660970	Thumb Peak	open	Palm Springs	143
660974	Thumb Peak	open	Palm Springs	143
660975	Thumb Peak	open	Palm Springs	143
660976	Thumb Peak	open	Palm Springs	143
660978	Thumb Peak	open	Palm Springs	143
660979	Thumb Peak	open	Palm Springs	143
660980	Thumb Peak	open	Palm Springs	143
669990	Thumb Peak	open	Palm Springs	143
669991	Thumb Peak	open	El Centro	143

Route No.	USGS Map Name	Designation	Field Office	Map No.
669991	Thumb Peak	open	Palm Springs	143
669993	Thumb Peak	open	El Centro	143
669993	Thumb Peak	open	Palm Springs	143
669994	Thumb Peak	open	Palm Springs	143
669995	Thumb Peak	open	El Centro	143
669995	Thumb Peak	open	Palm Springs	143
669996	Thumb Peak	open	Palm Springs	143
669998	Thumb Peak	open	Palm Springs	143
670566	Thumb Peak	open	El Centro	143
670568	Thumb Peak	open	El Centro	143
679986	Thumb Peak	open	El Centro	143
660971	Thumb Peak	open (partial)	Palm Springs	143
660972	Thumb Peak	open (partial)	El Centro	143
669997	Thumb Peak	open (partial)	Palm Springs	143
670565	Thumb Peak	open (partial)	El Centro	143
660159	Palo Verde	open	Palm Springs	144
660888	Palo Verde	open	Palm Springs	144
660889	Palo Verde	open	Palm Springs	144
670550	Pegleg Well	open	El Centro	148
670551	Pegleg Well	open	El Centro	148
670552	Pegleg Well	open	El Centro	148
670554	Pegleg Well	open	El Centro	148
670555	Pegleg Well	open	El Centro	148
671910	Pegleg Well	open	El Centro	148
670556	Little Mule Mountains	open	El Centro	149
670571	Little Mule Mountains	open	El Centro	149
670572	Little Mule Mountains	open	El Centro	149
670573	Little Mule Mountains	open	El Centro	149
670574	Little Mule Mountains	open	El Centro	149
670575	Little Mule Mountains	open	El Centro	149
671313	Little Mule Mountains	open	El Centro	149
671908	Little Mule Mountains	open	El Centro	149
671910	Little Mule Mountains	open	El Centro	149
671911	Little Mule Mountains	open	El Centro	149
671912	Little Mule Mountains	open	El Centro	149
671913	Little Mule Mountains	open	El Centro	149
671914	Little Mule Mountains	open	El Centro	149
671915	Little Mule Mountains	open	El Centro	149
679981	Little Mule Mountains	open	El Centro	149
670559	West of Palo Verde Peak	open	El Centro	150
670560	West of Palo Verde Peak	open	El Centro	150
670564	West of Palo Verde Peak	open	El Centro	150

Route No.	USGS Map Name	Designation	Field Office	Map No.
670571	West of Palo Verde Peak	open	El Centro	150
670572	West of Palo Verde Peak	open	El Centro	150
670575	West of Palo Verde Peak	open	El Centro	150
670576	West of Palo Verde Peak	open	El Centro	150
670577	West of Palo Verde Peak	open	El Centro	150
670584	West of Palo Verde Peak	open	El Centro	150
671310	West of Palo Verde Peak	open	El Centro	150
671312	West of Palo Verde Peak	open	El Centro	150
671313	West of Palo Verde Peak	open	El Centro	150
671894	West of Palo Verde Peak	open	El Centro	150
671895	West of Palo Verde Peak	open	El Centro	150
671900	West of Palo Verde Peak	open	El Centro	150
671901	West of Palo Verde Peak	open	El Centro	150
671902	West of Palo Verde Peak	open	El Centro	150
671903	West of Palo Verde Peak	open	El Centro	150
671904	West of Palo Verde Peak	open	El Centro	150
671905	West of Palo Verde Peak	open	El Centro	150
671906	West of Palo Verde Peak	open	El Centro	150
671907	West of Palo Verde Peak	open	El Centro	150
671910	West of Palo Verde Peak	open	El Centro	150
679981	West of Palo Verde Peak	open	El Centro	150
679985	West of Palo Verde Peak	open	El Centro	150
670568	Palo Verde Peak	open	El Centro	151
670569	Palo Verde Peak	open	El Centro	151
670578	Palo Verde Peak	open	El Centro	151
670579	Palo Verde Peak	open	El Centro	151
670580	Palo Verde Peak	open	El Centro	151
670581	Palo Verde Peak	open	El Centro	151
670582	Palo Verde Peak	open	El Centro	151
670583	Palo Verde Peak	open	El Centro	151
671310	Palo Verde Peak	open	El Centro	151
671892	Palo Verde Peak	open	El Centro	151
677001	Palo Verde Peak	open	El Centro	151
679981	Palo Verde Peak	open	El Centro	151
671310	Cibola	open	El Centro	152
671891	Cibola	open	El Centro	152
679981	Cibola	open	El Centro	152
670585	Mount Barrow	closedg	El Centro	157
671938	Mount Barrow	closedg	El Centro	157
671939	Mount Barrow	closedg	El Centro	157
671940	Mount Barrow	closedg	El Centro	157
670587	Mount Barrow	closedg (partial)	El Centro	157

Route No.	USGS Map Name	Designation	Field Office	Map No.
670569	Mount Barrow	open	El Centro	157
670584	Mount Barrow	open	El Centro	157
670585	Mount Barrow	open	El Centro	157
670588	Mount Barrow	open	El Centro	157
670590	Mount Barrow	open	El Centro	157
670591	Mount Barrow	open	El Centro	157
670592	Mount Barrow	open	El Centro	157
670597	Mount Barrow	open	El Centro	157
670621	Mount Barrow	open	El Centro	157
670623	Mount Barrow	open	El Centro	157
671894	Mount Barrow	open	El Centro	157
671895	Mount Barrow	open	El Centro	157
671896	Mount Barrow	open	El Centro	157
671937	Mount Barrow	open	El Centro	157
671941	Mount Barrow	open	El Centro	157
671946	Mount Barrow	open	El Centro	157
674002	Mount Barrow	open	El Centro	157
677002	Mount Barrow	open	El Centro	157
670587	Mount Barrow	open (partial)	El Centro	157
670587	Buzzards Peak	closedg	El Centro	158
670601	Buzzards Peak	closedg	El Centro	158
679988	Buzzards Peak	closedg	El Centro	158
679989	Buzzards Peak	closedg	El Centro	158
679993	Buzzards Peak	closedg	El Centro	158
670569	Buzzards Peak	closedg (partial)	El Centro	158
670604	Buzzards Peak	closedg (partial)	El Centro	158
671896	Buzzards Peak	closedg (partial)	El Centro	158
670602	Buzzards Peak	closedw	El Centro	158
679990	Buzzards Peak	closedw	El Centro	158
679991	Buzzards Peak	closedw	El Centro	158
679992	Buzzards Peak	closedw	El Centro	158
670579	Buzzards Peak	open	El Centro	158
670580	Buzzards Peak	open	El Centro	158
670581	Buzzards Peak	open	El Centro	158
670582	Buzzards Peak	open	El Centro	158
670585	Buzzards Peak	open	El Centro	158
670591	Buzzards Peak	open	El Centro	158
670592	Buzzards Peak	open	El Centro	158
670593	Buzzards Peak	open	El Centro	158
670596	Buzzards Peak	open	El Centro	158
670597	Buzzards Peak	open	El Centro	158
670598	Buzzards Peak	open	El Centro	158

Route No.	USGS Map Name	Designation	Field Office	Map No.
670599	Buzzards Peak	open	El Centro	158
670600	Buzzards Peak	open	El Centro	158
670603	Buzzards Peak	open	El Centro	158
670605	Buzzards Peak	open	El Centro	158
671884	Buzzards Peak	open	El Centro	158
671885	Buzzards Peak	open	El Centro	158
671886	Buzzards Peak	open	El Centro	158
671887	Buzzards Peak	open	El Centro	158
671888	Buzzards Peak	open	El Centro	158
671893	Buzzards Peak	open	El Centro	158
671894	Buzzards Peak	open	El Centro	158
671897	Buzzards Peak	open	El Centro	158
671898	Buzzards Peak	open	El Centro	158
671942	Buzzards Peak	open	El Centro	158
671944	Buzzards Peak	open	El Centro	158
671945	Buzzards Peak	open	El Centro	158
671946	Buzzards Peak	open	El Centro	158
670569	Buzzards Peak	open (partial)	El Centro	158
670604	Buzzards Peak	open (partial)	El Centro	158
671896	Buzzards Peak	open (partial)	El Centro	158
671890	Picacho NW	closedg	El Centro	159
670597	Picacho NW	open	El Centro	159
670599	Picacho NW	open	El Centro	159
670600	Picacho NW	open	El Centro	159
671889	Picacho NW	open	El Centro	159
679994	East of Acolita	closedz	El Centro	162
670612	East of Acolita	closedz (partial)	El Centro	162
670606	East of Acolita	open	El Centro	162
670607	East of Acolita	open	El Centro	162
670608	East of Acolita	open	El Centro	162
670609	East of Acolita	open	El Centro	162
670610	East of Acolita	open	El Centro	162
670611	East of Acolita	open	El Centro	162
670613	East of Acolita	open	El Centro	162
670614	East of Acolita	open	El Centro	162
670617	East of Acolita	open	El Centro	162
670618	East of Acolita	open	El Centro	162
671300	East of Acolita	open	El Centro	162
671919	East of Acolita	open	El Centro	162
671920	East of Acolita	open	El Centro	162
671921	East of Acolita	open	El Centro	162
671922	East of Acolita	open	El Centro	162

Route No.	USGS Map Name	Designation	Field Office	Map No.
674003	East of Acolita	open	El Centro	162
674004	East of Acolita	open	El Centro	162
674005	East of Acolita	open	El Centro	162
674006	East of Acolita	open	El Centro	162
676501	East of Acolita	open	El Centro	162
676505	East of Acolita	open	El Centro	162
676508	East of Acolita	open	El Centro	162
676509	East of Acolita	open	El Centro	162
676510	East of Acolita	open	El Centro	162
676525	East of Acolita	open	El Centro	162
676526	East of Acolita	open	El Centro	162
676527	East of Acolita	open	El Centro	162
676528	East of Acolita	open	El Centro	162
670612	East of Acolita	open (partial)	El Centro	162
679995	Gables Wash	closed	El Centro	163
679996	Gables Wash	closed	El Centro	163
670626	Gables Wash	closed (partial)	El Centro	163
679994	Gables Wash	closedz	El Centro	163
670585	Gables Wash	open	El Centro	163
670588	Gables Wash	open	El Centro	163
670592	Gables Wash	open	El Centro	163
670609	Gables Wash	open	El Centro	163
670618	Gables Wash	open	El Centro	163
670619	Gables Wash	open	El Centro	163
670620	Gables Wash	open	El Centro	163
670621	Gables Wash	open	El Centro	163
670622	Gables Wash	open	El Centro	163
670623	Gables Wash	open	El Centro	163
670624	Gables Wash	open	El Centro	163
670625	Gables Wash	open	El Centro	163
670627	Gables Wash	open	El Centro	163
670628	Gables Wash	open	El Centro	163
670629	Gables Wash	open	El Centro	163
670630	Gables Wash	open	El Centro	163
670632	Gables Wash	open	El Centro	163
670633	Gables Wash	open	El Centro	163
670634	Gables Wash	open	El Centro	163
670635	Gables Wash	open	El Centro	163
670636	Gables Wash	open	El Centro	163
670637	Gables Wash	open	El Centro	163
670638	Gables Wash	open	El Centro	163
670640	Gables Wash	open	El Centro	163

Route No.	USGS Map Name	Designation	Field Office	Map No.
670650	Gables Wash	open	El Centro	163
670656	Gables Wash	open	El Centro	163
671923	Gables Wash	open	El Centro	163
671924	Gables Wash	open	El Centro	163
671925	Gables Wash	open	El Centro	163
671926	Gables Wash	open	El Centro	163
671927	Gables Wash	open	El Centro	163
671928	Gables Wash	open	El Centro	163
671929	Gables Wash	open	El Centro	163
671930	Gables Wash	open	El Centro	163
671931	Gables Wash	open	El Centro	163
671932	Gables Wash	open	El Centro	163
671933	Gables Wash	open	El Centro	163
671934	Gables Wash	open	El Centro	163
671935	Gables Wash	open	El Centro	163
671936	Gables Wash	open	El Centro	163
671940	Gables Wash	open	El Centro	163
674007	Gables Wash	open	El Centro	163
676501	Gables Wash	open	El Centro	163
676502	Gables Wash	open	El Centro	163
676503	Gables Wash	open	El Centro	163
676504	Gables Wash	open	El Centro	163
670626	Gables Wash	open (partial)	El Centro	163
670646	Quartz Peak	closedz	El Centro	164
671883	Quartz Peak	closedz	El Centro	164
670592	Quartz Peak	open	El Centro	164
670638	Quartz Peak	open	El Centro	164
670639	Quartz Peak	open	El Centro	164
670640	Quartz Peak	open	El Centro	164
670641	Quartz Peak	open	El Centro	164
670642	Quartz Peak	open	El Centro	164
670647	Quartz Peak	open	El Centro	164
670649	Quartz Peak	open	El Centro	164
671066	Quartz Peak	open	El Centro	164
671501	Quartz Peak	open	El Centro	164
671502	Quartz Peak	open	El Centro	164
671503	Quartz Peak	open	El Centro	164
671882	Quartz Peak	open	El Centro	164
679997	Quartz Peak	open	El Centro	164
679998	Quartz Peak	open	El Centro	164
671331	Picacho SW	closed	El Centro	165
671334	Picacho SW	closed	El Centro	165

Route No.	USGS Map Name	Designation	Field Office	Map No.
671947	Picacho SW	closed (partial)	El Centro	165
670649	Picacho SW	open	El Centro	165
670686	Picacho SW	open	El Centro	165
670692	Picacho SW	open	El Centro	165
671329	Picacho SW	open	El Centro	165
671333	Picacho SW	open	El Centro	165
671948	Picacho SW	open	El Centro	165
672000	Picacho SW	open	El Centro	165
671947	Picacho SW	open (partial)	El Centro	165
670651	Glamis	open	El Centro	167
671300	Glamis	open	El Centro	167
671921	Glamis	open	El Centro	167
676505	Glamis	open	El Centro	167
676506	Glamis	open	El Centro	167
676507	Glamis	open	El Centro	167
676508	Glamis	open	El Centro	167
676509	Glamis	open	El Centro	167
676510	Glamis	open	El Centro	167
676511	Glamis	open	El Centro	167
670609	Clyde	open	El Centro	168
670618	Clyde	open	El Centro	168
670619	Clyde	open	El Centro	168
670620	Clyde	open	El Centro	168
670629	Clyde	open	El Centro	168
670630	Clyde	open	El Centro	168
670632	Clyde	open	El Centro	168
670633	Clyde	open	El Centro	168
670634	Clyde	open	El Centro	168
670639	Clyde	open	El Centro	168
670641	Clyde	open	El Centro	168
670649	Clyde	open	El Centro	168
670650	Clyde	open	El Centro	168
670651	Clyde	open	El Centro	168
670655	Clyde	open	El Centro	168
670656	Clyde	open	El Centro	168
670657	Clyde	open	El Centro	168
671300	Clyde	open	El Centro	168
671863	Clyde	open	El Centro	168
671923	Clyde	open	El Centro	168
676504	Clyde	open	El Centro	168
676511	Clyde	open	El Centro	168
676512	Clyde	open	El Centro	168

Route No.	USGS Map Name	Designation	Field Office	Map No.
676513	Clyde	open	El Centro	168
676514	Clyde	open	El Centro	168
676515	Clyde	open	El Centro	168
672002	Hedges	closed	El Centro	169
672003	Hedges	closed	El Centro	169
672005	Hedges	closed	El Centro	169
672009	Hedges	closed	El Centro	169
672010	Hedges	closed	El Centro	169
670653	Hedges	closedg	El Centro	169
670665	Hedges	closedg	El Centro	169
670673	Hedges	closedg	El Centro	169
671207	Hedges	closedg	El Centro	169
671210	Hedges	closedg	El Centro	169
671211	Hedges	closedg	El Centro	169
671314	Hedges	closedg	El Centro	169
671315	Hedges	closedg	El Centro	169
671855	Hedges	closedg	El Centro	169
672001	Hedges	closedg	El Centro	169
672007	Hedges	closedg	El Centro	169
672008	Hedges	closedg	El Centro	169
672011	Hedges	closedg	El Centro	169
672012	Hedges	closedg	El Centro	169
672013	Hedges	closedg	El Centro	169
672014	Hedges	closedg	El Centro	169
672015	Hedges	closedg	El Centro	169
672016	Hedges	closedg	El Centro	169
672017	Hedges	closedg	El Centro	169
672018	Hedges	closedg	El Centro	169
672019	Hedges	closedg	El Centro	169
672020	Hedges	closedg	El Centro	169
672021	Hedges	closedg	El Centro	169
672022	Hedges	closedg	El Centro	169
672023	Hedges	closedg	El Centro	169
670659	Hedges	closedg (partial)	El Centro	169
670667	Hedges	closedg (partial)	El Centro	169
670677	Hedges	closedg (partial)	El Centro	169
670685	Hedges	closedg (partial)	El Centro	169
671254	Hedges	closedg (partial)	El Centro	169
670676	Hedges	closedz (partial)	El Centro	169
670592	Hedges	open	El Centro	169
670639	Hedges	open	El Centro	169
670641	Hedges	open	El Centro	169

Route No.	USGS Map Name	Designation	Field Office	Map No.
670647	Hedges	open	El Centro	169
670649	Hedges	open	El Centro	169
670654	Hedges	open	El Centro	169
670656	Hedges	open	El Centro	169
670657	Hedges	open	El Centro	169
670658	Hedges	open	El Centro	169
670660	Hedges	open	El Centro	169
670661	Hedges	open	El Centro	169
670662	Hedges	open	El Centro	169
670663	Hedges	open	El Centro	169
670664	Hedges	open	El Centro	169
670666	Hedges	open	El Centro	169
670668	Hedges	open	El Centro	169
670669	Hedges	open	El Centro	169
670670	Hedges	open	El Centro	169
670671	Hedges	open	El Centro	169
670674	Hedges	open	El Centro	169
670675	Hedges	open	El Centro	169
670678	Hedges	open	El Centro	169
670687	Hedges	open	El Centro	169
670692	Hedges	open	El Centro	169
670702	Hedges	open	El Centro	169
670703	Hedges	open	El Centro	169
670801	Hedges	open	El Centro	169
670803	Hedges	open	El Centro	169
671065	Hedges	open	El Centro	169
671066	Hedges	open	El Centro	169
671070	Hedges	open	El Centro	169
671071	Hedges	open	El Centro	169
671072	Hedges	open	El Centro	169
671073	Hedges	open	El Centro	169
671074	Hedges	open	El Centro	169
671076	Hedges	open	El Centro	169
671202	Hedges	open	El Centro	169
671206	Hedges	open	El Centro	169
671210	Hedges	open	El Centro	169
671211	Hedges	open	El Centro	169
671213	Hedges	open	El Centro	169
671215	Hedges	open	El Centro	169
671216	Hedges	open	El Centro	169
671219	Hedges	open	El Centro	169
671220	Hedges	open	El Centro	169

Route No.	USGS Map Name	Designation	Field Office	Map No.
671221	Hedges	open	El Centro	169
671251	Hedges	open	El Centro	169
671252	Hedges	open	El Centro	169
671253	Hedges	open	El Centro	169
671255	Hedges	open	El Centro	169
671256	Hedges	open	El Centro	169
671300	Hedges	open	El Centro	169
671301	Hedges	open	El Centro	169
671302	Hedges	open	El Centro	169
671303	Hedges	open	El Centro	169
671304	Hedges	open	El Centro	169
671305	Hedges	open	El Centro	169
671306	Hedges	open	El Centro	169
671307	Hedges	open	El Centro	169
671308	Hedges	open	El Centro	169
671309	Hedges	open	El Centro	169
671310	Hedges	open	El Centro	169
671311	Hedges	open	El Centro	169
671312	Hedges	open	El Centro	169
671313	Hedges	open	El Centro	169
671316	Hedges	open	El Centro	169
671335	Hedges	open	El Centro	169
671340	Hedges	open	El Centro	169
671341	Hedges	open	El Centro	169
671853	Hedges	open	El Centro	169
671855	Hedges	open	El Centro	169
671856	Hedges	open	El Centro	169
671857	Hedges	open	El Centro	169
671859	Hedges	open	El Centro	169
671860	Hedges	open	El Centro	169
671861	Hedges	open	El Centro	169
671862	Hedges	open	El Centro	169
671867	Hedges	open	El Centro	169
671868	Hedges	open	El Centro	169
671869	Hedges	open	El Centro	169
671870	Hedges	open	El Centro	169
671871	Hedges	open	El Centro	169
671874	Hedges	open	El Centro	169
671875	Hedges	open	El Centro	169
671876	Hedges	open	El Centro	169
671877	Hedges	open	El Centro	169
671878	Hedges	open	El Centro	169

Route No.	USGS Map Name	Designation	Field Office	Map No.
671880	Hedges	open	El Centro	169
671881	Hedges	open	El Centro	169
671941	Hedges	open	El Centro	169
672004	Hedges	open	El Centro	169
672006	Hedges	open	El Centro	169
672024	Hedges	open	El Centro	169
676514	Hedges	open	El Centro	169
676516	Hedges	open	El Centro	169
676517	Hedges	open	El Centro	169
679983	Hedges	open	El Centro	169
670659	Hedges	open (partial)	El Centro	169
670667	Hedges	open (partial)	El Centro	169
670676	Hedges	open (partial)	El Centro	169
670677	Hedges	open (partial)	El Centro	169
670685	Hedges	open (partial)	El Centro	169
671254	Hedges	open (partial)	El Centro	169
671224	Picacho Peak	closed	El Centro	170
671226	Picacho Peak	closed	El Centro	170
671242	Picacho Peak	closed	El Centro	170
671319	Picacho Peak	closed	El Centro	170
671320	Picacho Peak	closed	El Centro	170
671324	Picacho Peak	closed	El Centro	170
671330	Picacho Peak	closed	El Centro	170
671331	Picacho Peak	closed	El Centro	170
671332	Picacho Peak	closed	El Centro	170
671334	Picacho Peak	closed	El Centro	170
671500	Picacho Peak	closed	El Centro	170
671851	Picacho Peak	closed	El Centro	170
671852	Picacho Peak	closed	El Centro	170
671946	Picacho Peak	closed	El Centro	170
671947	Picacho Peak	closed	El Centro	170
672025	Picacho Peak	closed	El Centro	170
672026	Picacho Peak	closed	El Centro	170
670693	Picacho Peak	closed (partial)	El Centro	170
670696	Picacho Peak	closed (partial)	El Centro	170
671328	Picacho Peak	closed (partial)	El Centro	170
671318	Picacho Peak	closedg	El Centro	170
672027	Picacho Peak	closedg	El Centro	170
672028	Picacho Peak	closedg	El Centro	170
672029	Picacho Peak	closedg	El Centro	170
672030	Picacho Peak	closedg	El Centro	170
670722	Picacho Peak	closedg (partial)	El Centro	170

Route No.	USGS Map Name	Designation	Field Office	Map No.
670622	Picacho Peak	open	El Centro	170
670659	Picacho Peak	open	El Centro	170
670685	Picacho Peak	open	El Centro	170
670686	Picacho Peak	open	El Centro	170
670687	Picacho Peak	open	El Centro	170
670689	Picacho Peak	open	El Centro	170
670690	Picacho Peak	open	El Centro	170
670691	Picacho Peak	open	El Centro	170
670692	Picacho Peak	open	El Centro	170
670694	Picacho Peak	open	El Centro	170
670695	Picacho Peak	open	El Centro	170
670697	Picacho Peak	open	El Centro	170
670698	Picacho Peak	open	El Centro	170
671220	Picacho Peak	open	El Centro	170
671222	Picacho Peak	open	El Centro	170
671230	Picacho Peak	open	El Centro	170
671231	Picacho Peak	open	El Centro	170
671233	Picacho Peak	open	El Centro	170
671235	Picacho Peak	open	El Centro	170
671236	Picacho Peak	open	El Centro	170
671237	Picacho Peak	open	El Centro	170
671238	Picacho Peak	open	El Centro	170
671239	Picacho Peak	open	El Centro	170
671240	Picacho Peak	open	El Centro	170
671241	Picacho Peak	open	El Centro	170
671242	Picacho Peak	open	El Centro	170
671244	Picacho Peak	open	El Centro	170
671245	Picacho Peak	open	El Centro	170
671248	Picacho Peak	open	El Centro	170
671249	Picacho Peak	open	El Centro	170
671252	Picacho Peak	open	El Centro	170
671316	Picacho Peak	open	El Centro	170
671317	Picacho Peak	open	El Centro	170
671321	Picacho Peak	open	El Centro	170
671322	Picacho Peak	open	El Centro	170
671323	Picacho Peak	open	El Centro	170
671329	Picacho Peak	open	El Centro	170
671335	Picacho Peak	open	El Centro	170
671336	Picacho Peak	open	El Centro	170
671337	Picacho Peak	open	El Centro	170
671339	Picacho Peak	open	El Centro	170
671505	Picacho Peak	open	El Centro	170

Route No.	USGS Map Name	Designation	Field Office	Map No.
671506	Picacho Peak	open	El Centro	170
672000	Picacho Peak	open	El Centro	170
679984	Picacho Peak	open	El Centro	170
670693	Picacho Peak	open (partial)	El Centro	170
670696	Picacho Peak	open (partial)	El Centro	170
670722	Picacho Peak	open (partial)	El Centro	170
671328	Picacho Peak	open (partial)	El Centro	170
670695	Little Picacho Peak	open	El Centro	171
670699	Little Picacho Peak	open	El Centro	171
670727	Little Picacho Peak	open	El Centro	171
670800	Little Picacho Peak	open	El Centro	171
670832	Little Picacho Peak	open	El Centro	171
679984	Little Picacho Peak	open	El Centro	171
671300	Cactus	open	El Centro	172
671864	Cactus	open	El Centro	172
672031	Ogilby	closed	El Centro	173
670711	Ogilby	closedg	El Centro	173
670729	Ogilby	closedg	El Centro	173
672032	Ogilby	closedg	El Centro	173
670808	Ogilby	closedz	El Centro	173
670809	Ogilby	closedz	El Centro	173
670810	Ogilby	closedz	El Centro	173
670707	Ogilby	closedz (partial)	El Centro	173
670708	Ogilby	closedz (partial)	El Centro	173
670592	Ogilby	open	El Centro	173
670622	Ogilby	open	El Centro	173
670656	Ogilby	open	El Centro	173
670669	Ogilby	open	El Centro	173
670674	Ogilby	open	El Centro	173
670701	Ogilby	open	El Centro	173
670702	Ogilby	open	El Centro	173
670703	Ogilby	open	El Centro	173
670705	Ogilby	open	El Centro	173
670706	Ogilby	open	El Centro	173
670709	Ogilby	open	El Centro	173
670710	Ogilby	open	El Centro	173
670712	Ogilby	open	El Centro	173
670713	Ogilby	open	El Centro	173
670714	Ogilby	open	El Centro	173
670715	Ogilby	open	El Centro	173
670716	Ogilby	open	El Centro	173
670718	Ogilby	open	El Centro	173

Route No.	USGS Map Name	Designation	Field Office	Map No.
670719	Ogilby	open	El Centro	173
670721	Ogilby	open	El Centro	173
670801	Ogilby	open	El Centro	173
670802	Ogilby	open	El Centro	173
670803	Ogilby	open	El Centro	173
670806	Ogilby	open	El Centro	173
670812	Ogilby	open	El Centro	173
670813	Ogilby	open	El Centro	173
670814	Ogilby	open	El Centro	173
670815	Ogilby	open	El Centro	173
670816	Ogilby	open	El Centro	173
670817	Ogilby	open	El Centro	173
670818	Ogilby	open	El Centro	173
670820	Ogilby	open	El Centro	173
670823	Ogilby	open	El Centro	173
670825	Ogilby	open	El Centro	173
670826	Ogilby	open	El Centro	173
670829	Ogilby	open	El Centro	173
671300	Ogilby	open	El Centro	173
671335	Ogilby	open	El Centro	173
671862	Ogilby	open	El Centro	173
671865	Ogilby	open	El Centro	173
671866	Ogilby	open	El Centro	173
674008	Ogilby	open	El Centro	173
674009	Ogilby	open	El Centro	173
674010	Ogilby	open	El Centro	173
674011	Ogilby	open	El Centro	173
674012	Ogilby	open	El Centro	173
674013	Ogilby	open	El Centro	173
674014	Ogilby	open	El Centro	173
674015	Ogilby	open	El Centro	173
674020	Ogilby	open	El Centro	173
676518	Ogilby	open	El Centro	173
676519	Ogilby	open	El Centro	173
676520	Ogilby	open	El Centro	173
676521	Ogilby	open	El Centro	173
676522	Ogilby	open	El Centro	173
676523	Ogilby	open	El Centro	173
676524	Ogilby	open	El Centro	173
670707	Ogilby	open (partial)	El Centro	173
670708	Ogilby	open (partial)	El Centro	173
670722	Araz	closedg	El Centro	174

Route No.	USGS Map Name	Designation	Field Office	Map No.
672033	Araz	closedg	El Centro	174
670622	Araz	open	El Centro	174
670685	Araz	open	El Centro	174
670686	Araz	open	El Centro	174
670698	Araz	open	El Centro	174
670717	Araz	open	El Centro	174
670718	Araz	open	El Centro	174
671245	Araz	open	El Centro	174
671249	Araz	open	El Centro	174
671505	Araz	open	El Centro	174
670698	Bard	open	El Centro	175
670723	Bard	open	El Centro	175
670724	Bard	open	El Centro	175
670725	Bard	open	El Centro	175
670726	Bard	open	El Centro	175
670727	Bard	open	El Centro	175
670728	Bard	open	El Centro	175
670832	Bard	open	El Centro	175
671504	Bard	open	El Centro	175
679984	Bard	open	El Centro	175
674014	Grays Well NE	open	El Centro	176
674015	Grays Well NE	open	El Centro	176
674016	Grays Well NE	open	El Centro	176
674017	Grays Well NE	open	El Centro	176
674018	Grays Well NE	open	El Centro	176
674019	Grays Well NE	open	El Centro	176
674022	Grays Well NE	open	El Centro	176
674021	Yuma West	open	El Centro	177
674022	Yuma West	open	El Centro	177

Table R-6. Description of Closed Route Segments for Partially Closed Routes

Route No.	Description	Map #
690022	from 690008 to 690024	6
690074	north of intersection with 690075	9
690126	north of intersection with 690128, and east of intersection with 690119	13
690126	west of intersection with 690141	14
690149	north of intersection with 690152	14
690159	from 690160 to National Trails Highway	14
690155	from 690119 to 690156	15
690167	southwest of intersection with 690168	15
690170	from 690164 to National Trails Highway	15
690173	southwest of intersection with 690021	15
690212	from 690119 to 690211	16
690228	south of intersection with 690203	18
690236	from 690119 to 690203	18
690311	from 690313 to 690442	23
690327	north of intersection with 690328	24
690328	north of intersection with 690327	24
690371	from 690159 to 690181	25
690389	southeast of intersection with 690214	25
690211	from 690054 to 690422	28
690420	from 690054 to 690228	28
690439	east of intersection with 690356	34
690442	from 690358 to 690445	35
690455	south of intersection with 690456	36
690228	north of intersection with 690434	39
690510	from 690514 to U.S. Highway 95	43
690579	all of route segment in Section 31, T3N R16E	49
690612	east of intersection with 690613	52
690655	U.S. Highway 95 to loop at northwestern end of route	54
690639	north of intersection with 690657	55
690675	from 690666 to 690681	56
690684	from locked gate at Copper Basin east to NECO boundary	57
690706	east of intersection with 690707	62

Route No.	Description	Map #
690781	east of intersection with 690782	69
690837	south of intersection with 660847	78
690839	south of intersection with 660768	78
690854	between intersections with 660774	79
690860	west of intersection with 690853	79
690862	south of intersection with 690864	80
690864	from 690853 to 690865	80
690872	south of intersection with 690910	80
660656	south of intersection with 660669	90
661242	north of intersection with 660654	90
660745	west of intersection with 660747	91
660770	from 690848 to 690854	92
690849	east of intersection with 690866	92
690854	south of intersection with 690770	92
690865	east of intersection with 660931	93
660335	from 660334 to 660336	100
660336	south of intersection with 660334	100
660375	from 660333 to 660349	100
660805	from 660821 to 660825, and from 660811 to 660821	106
660809	from 660805 to 660808	106
660821	from 660804 to 660810	106
660198	east of intersection with 660216	112
660305	from 660301 to 660319	113
660310	from 660195 to 660281	113
660400	south of intersection with 660396	114
660696	north of intersection with 660697	118
660260	north of intersection with 661202	125
660291	from 660289 to 660290	126
660626	southwest of gravel pit	129
660588	north of intersection with 660595	140
660971	from 660566 to 660727	143
660972	south of intersection with 679986	143
669997	from 660972 to 669996	143

Route No.	Description	Map #
670565	east of intersection with 670566	143
670587	between intersections with 670588	157
670569	from 670587 to 671896	158
670604	from 670579 to 679993	158
671896	segment connecting easterly to 670587	158
670612	from 674005 to 674006	162
670626	north of intersection with 679996	163
671947	from 671333 to 671948	165
670659	from 670678 to 671256	169
670667	from 670592 to 670658	169
670676	east of locked gate	169
670677	from 671252 to 671254	169
670685	west of intersection with 670662	169
671254	from 670656 to 670677	169
670693	south of intersection with westerly extension of route	170
670696	western 1/3 of route	170
670722	west of intersection with 670686	170
671328	south of intersection with 671329	170
670707	east of locked gate	173
670708	north of intersection with 674011	173

Table R-7. Route Designation Revisions from Draft EIS (DEIS) to Final EIS (FEIS)

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
690901	Needles SW	10	n/a	open	Needles FO staff review and conclusion: The DEIS map does not depict any portion of route 690901. Subsequent field survey confirmed the existence of the route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating route 690901 as "open."
690902	Needles SW	10	n/a	open	Needles FO staff review and conclusion: The DEIS map does not depict any portion of route 690902. Subsequent field survey confirmed the existence of the route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating route 690902 as "open."
690903	Needles SW	10	n/a	open	Needles FO staff review and conclusion: The DEIS map does not depict any portion of route 690903. Subsequent field survey confirmed the existence of the route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating route 690903 as "open."
690904	Needles SW	10	n/a	closed	Mapping error: The DEIS map does not depict any portion of route 690904, yet it is shown on the 7.5-minute USGS map as an existing route. It is now included on the FEIS map as a non-route and designated "closed."
690904	Needles	11	n/a	closed	Mapping error: The DEIS map does not depict any portion of route 690904, yet it is shown on the 7.5-minute USGS map as an existing route. It is now included on the FEIS map as a non-route and designated "closed."
690905	Needles	11	n/a	open	Needles FO staff review and conclusion: The DEIS map does not depict any portion of route 690905. Subsequent field survey confirmed the existence of the route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating route 690905 as "open."
690142	Castle Dome	14	closed	open	Response to public comment, Needles FO staff review and conclusion: The route exists and is easy to follow in its entirety. Its characterization on the DEIS map as a non-route is incorrect. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
690149	Castle Dome	14	closedw (partial)	closedz (partial)	Response to public comment, Needles FO staff review and conclusion: The Needles FO plans to construct a parking area at the intersection of routes 690149 and 690152 as part of a visitor services project, thereby blocking access to the segment of route 690149 north of the project site. The designation of this segment of route 690149 is not changed for the FEIS.
690152	Castle Dome	14	open	closed	Needles FO staff review and conclusion: This route is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, it is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690153	Castle	14	open	closed	Needles FO staff review and conclusion: This route is a non-route

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
	Dome				contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, it is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690173	Danby	15	closed	closed (partial)	Needles FO staff review and conclusion: The route segment northeast of its intersection with route 690021 is an existing route contrary to its characterization on the DEIS map as a non-route. This segment is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open." The route segment southwest of its intersection with route 690021 is a non-route---the proposal for this segment as "closed" is not changed from the DEIS.
690238	Stepladder Mountains NW	18	open	closed	Mapping error: Route 690238 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690238 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690420	Painted Rock Wash	28	closedg (partial)	closed (partial)	Needles FO staff review and conclusion: The route segment between routes 690054 and 690228 is characterized on the DEIS map as an existing redundant route and proposed for closure. Contrary to this characterization, the route segment is a non-route and designated "closed." The proposal that the route segment be closed is not changed from the DEIS.
690421	Painted Rock Wash	28	closedg	closed	Needles FO staff review and conclusion: The route is characterized on the DEIS map as an existing redundant route and proposed for closure. Contrary to this characterization, the route segment is a non-route and designated "closed." The proposal that the route segment be closed is not changed from the DEIS.
690238	Stepladder Mountains SW	29	open	closed	Mapping error: Route 690238 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690238 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690455	Cadiz Lake NW	36	open	closed (partial)	Needles FO staff review and conclusion: The route segment south of its intersection with route 690456 is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, this route segment is designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation. The route segment north of its intersection with route 690456 is an existing route---the proposal for designating this segment as "open" is not changed from the DEIS.

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
690420	Wilhelm Spring	39	closedg	closed	Needles FO staff review and conclusion: The route segment between routes 690054 and 690228 is characterized on the DEIS map as an existing redundant route and proposed for closure. Contrary to this characterization, the route segment is a non-route and designated "closed." The proposal that the route segment be closed is not changed from the DEIS.
690499	Mohawk Spring	41	closed	open	Response to public comment, Needles FO staff review and conclusion: Although the route is rough in certain locations, its characterization on the DEIS map as a non-route is incorrect. The route offers a challenging OHV experience sought by many OHV enthusiasts. This route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
690499	Savahia Peak NW	42	closed	open	Response to public comment, Needles FO staff review and conclusion: Although the route is rough in certain locations, its characterization on the DEIS map as a non-route is incorrect. The route offers a challenging OHV experience sought by many OHV enthusiasts. This route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
690507	Savahia Peak NW	42	closedg (partial)	open	Needles FO staff review and conclusion: The primary east-west route between U.S. Highway 95 and route 690514 is route 690507, not route 690508 as indicated on the DEIS map (routes 690508 and 690510 relative to route 690507 are depicted as parallel and identified as redundant on the FEIS map). Route 690507 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation of the segment east of its intersection with route 690508 from "closed" to "open."
690508	Savahia Peak NW	42	open	closedg	Needles FO staff review and conclusion: The primary east-west route between U.S. Highway 95 and route 690514 is route 690507, not route 690508 as indicated on the DEIS map (routes 690508 and 690510 relative to route 690507 are depicted as parallel and identified as redundant on the FEIS map). Route 690508 is now designated "closed." Opportunities for OHV recreation at this location are not affected by the change in designation given that route 690507, which is parallel and in close proximity to route 690508, provides essentially the same access for motorized vehicles.
690507	Savahia Peak NE	43	closedg	open	Needles FO staff review and conclusion: The primary east-west route between U.S. Highway 95 and route 690514 is route 690507, not route 690508 as indicated on the DEIS map (routes 690508 and 690510 relative to route 690507 are depicted as parallel and identified as redundant on the FEIS map). Route 690507 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation of the segment east of its intersection with route 690508 from "closed" to "open."
690508	Savahia Peak NE	43	open	closedg	Needles FO staff review and conclusion: The primary east-west route between U.S. Highway 95 and route 690514 is route 690507, not route

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					690508 as indicated on the DEIS map (routes 690508 and 690510 relative to route 690507 are depicted as parallel and identified as redundant on the FEIS map). Route 690508 is now designated "closed." Opportunities for OHV recreation at this location are not affected by the change in designation given that route 690507, which is parallel and in close proximity to route 690508, provides essentially the same access for motorized vehicles.
690515	Savahia Peak NE	43	open	closed	Needles FO staff review and conclusion: This route is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, it is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690516	Savahia Peak NE	43	open	closed	Needles FO staff review and conclusion: This route is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, it is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690517	Savahia Peak NE	43	open	closedg	Needles FO staff review and conclusion: Opportunities for OHV recreation in this part of the Chemehuevi Wash area are not substantially affected by the change in designation because parallel routes to both sides of route 690517 (routes 690056 and 690513) provide access in this area. Further, upon traveling northwest from route 690513, access on route 690517 terminates at its intersection with route 690515, a non-route designated "closed."
690515	Havasu Lake	44	closedn (partial)	closed	Needles FO staff review and conclusion: The segment northwest of route 690519 is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, this segment is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation. Characterization of the route as a non-route southeast of route 690519 is not changed from the DEIS.
690542	Havasu Lake	44	open	closedz	Needles FO staff review and conclusion: This route extending north from Havasu Lake Road is depicted on the DEIS map as an existing route proposed for "open" designation. This route has facilitated unauthorized access into the Chemehuevi Indian Reservation. The Reservation is closed to public access except with permission of the Chemehuevi Indian Tribe. This route is now designated "closed" to preclude further unauthorized access to the Reservation. Opportunities for OHV recreation are not substantially affected by the change in designation because a network of routes providing access to most parts of the Chemehuevi Wash area south of Havasu Lake Road remain available for motorized-vehicle use.
690543	Havasu Lake	44	open	closedz	Needles FO staff review and conclusion: This route extending north from Havasu Lake Road is depicted on the DEIS map as an existing route proposed for "open" designation. This route has facilitated unauthorized access into the Chemehuevi Indian Reservation. The Reservation is closed to public access except with permission of the Chemehuevi Indian Tribe. This route is now designated "closed" to preclude further unauthorized access to the Reservation. Opportunities for OHV recreation are not substantially affected by the change in

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					designation because a network of routes providing access to most parts of the Chemehuevi Wash area south of Havasu Lake Road remain available for motorized-vehicle use.
690544	Havasu Lake	44	open	closedz	Needles FO staff review and conclusion: This route extending north from Havasu Lake Road is depicted on the DEIS map as an existing route proposed for "open" designation. This route has facilitated unauthorized access into the Chemehuevi Indian Reservation. The Reservation is closed to public access except with permission of the Chemehuevi Indian Tribe. This route is now designated "closed" to preclude further unauthorized access to the Reservation. Opportunities for OHV recreation are not substantially affected by the change in designation because a network of routes providing access to most parts of the Chemehuevi Wash area south of Havasu Lake Road remain available for motorized-vehicle use.
696501	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696502	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696503	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696504	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696505	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696506	Havasu	44	n/a	open	Needles FO staff review and conclusion: This route was not identified

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
	Lake				during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696507	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696508	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696509	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
696510	Havasu Lake	44	n/a	open	Needles FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the lower Chemehuevi Wash area as conducted by BLM Needles Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
690579	Chubbuck	49	open	closed (partial)	Needles FO staff review and conclusion: The route segment in Section 31, T3N R16E, is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, this segment is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation. The route segment in Section 30, T3N R16E, is an existing route---the proposal for designating this segment as "open" is not changed from the DEIS.
690707	Chubbuck	49	open	closed	Mapping error: Route 690707 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690707 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690613	Martins Well	52	open	closed	Mapping error: Route 690613 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690613 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690614	Martins Well	52	open	closed	Mapping error: Route 690614 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690614 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690499	Savahia Peak SW	54	closed	open	Response to public comment, Needles FO staff review and conclusion: Although the route is rough in certain locations, its characterization on the DEIS map as a non-route is incorrect. The route offers a challenging OHV experience sought by many OHV enthusiasts. This route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
690639	Savahia Peak	55	open	closed (partial)	Needles FO staff review and conclusion: The route segment north of its intersection with route 690657 is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, this segment is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation. The route segment south of its intersection with route 690657 is an existing route--the proposal for designating this segment as "open" is not changed from the DEIS.
690675	Savahia Peak	55	open	closed	Mapping error: Route 690675 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690675 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690675	Whipple Mountains SW	56	open	closed (partial)	Mapping error: Route 690675 west of its intersection with route 690681 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690675 west of its intersection with route 690681 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690681	Whipple Mountains SW	56	open	closed	Mapping error: Route 690681 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690681 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690909	Whipple Mountains SW	56	open	closed	Mapping error: Route 690909 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690909 is now designated "closed." Its non-route condition suggests that opportunities for OHV

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					recreation are not affected by the change in designation.
690684	Whipple Wash	57	open	closedz (partial)	Mapping error: The segment of route 690684 east of a locked gate is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map indicates the presence of the locked gate thereby restricting general public access. The segment of route 690684 east of the gate is now designated "closed."
699991	Whipple Wash	57	open	closedz	Mapping error: Route 699991 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map indicates the presence of a locked gate on route 690684 that precludes public access to route 699991. Route 699991 is now designated "closed."
699992	Whipple Wash	57	open	closedz	Mapping error: Route 699992 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map indicates the presence of a locked gate on route 690684 that precludes public access to route 699992. Route 699992 is now designated "closed."
699993	Whipple Wash	57	open	closedz	Mapping error: Route 699993 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map indicates the presence of a locked gate on route 690684 that precludes public access to route 699993. Route 699993 is now designated "closed."
690684	Gene Wash	58	open	closedz	Mapping error: The segment of route 690684 east of a locked gate is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map indicates the presence of the locked gate thereby restricting general public access. The segment of route 690684 east of the gate is now designated "closed."
690707	Cadiz Valley NE	62	open	closed	Mapping error: Route 690707 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690707 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690732	Horn Spring	66	closedn (partial)	open	Needles FO staff review and conclusion: The DEIS map does not depict an existing extension of the route at its northwestern end that connects with route 690733. Route 690733 is designated "open." The extension of route 690732 is approximately 0.3 miles in length. This extension is now designated "open." OHV recreation is thereby enhanced by providing a loop opportunity for travel in conjunction with use of routes 690733 and 690734. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route 690732 extension as "open."
690732	Vidal NW	67	closedn (partial)	open	Needles FO staff review and conclusion: The route segment immediately northwest of route 690609 is an existing route. Its characterization on the DEIS map as a non-route is incorrect. This segment is now designated "open" consistent with the DEIS proposal for the remainder of the route. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
690675	Vidal Junction	68	open	closed	Mapping error: Route 690675 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690675 is now designated "closed." Its non-route condition suggests that opportunities for OHV

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					recreation are not affected by the change in designation.
690767	Parker NW	69	open	closedn	Mapping error: Route 690767 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts the majority of the route as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690767 is now designated "closed" in its entirety. Its mostly non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690781	Parker NW	69	open	closed (partial)	Mapping error: Route 690781 east of its intersection with route 690782 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts this portion, in part, as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690781 east of its intersection with route 690782 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690781	Parker	70	open	closedn	Mapping error: Route 690781 east of its intersection with route 690782 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts this portion, in part, as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690781 east of its intersection with route 690782 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
690707	Cadiz Valley SE	74	open	closed	Mapping error: Route 690707 is incorrectly depicted on the DEIS map as "proposed open." The April 1996 inventory map depicts it as a non-route. It is coded on the 7.5 minute DEIS map as "100," thereby characterizing it as a non-route. Route 690707 is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
660771	Grommet	79	n/a	closed	Mapping error: The DEIS map does not depict any portion of route 660771, yet it is shown on the 7.5-minute USGS map as an existing route. Also, it is depicted on the April 1996 inventory map as a non-route. It is now included on the FEIS map as a non-route and designated "closed."
660780	Grommet	79	n/a	closed	Mapping error: The DEIS map does not depict any portion of route 660780, yet it is shown on the 7.5-minute USGS map as an existing route. Also, it is depicted on the April 1996 inventory map as a non-route. It is now included on the FEIS map as a non-route and designated "closed."
690848	Grommet	79	open	closedg	Palm Springs FO staff review and conclusion: The primary north-south route between Camp Rice and route 690866 is route 690849, not route 690848 as indicated on the DEIS map (routes 690773 and 690849 relative to route 690848 are parallel routes; 690849 is depicted as redundant and 690773 is depicted as a non-route on the map). Route 690848 is now designated "closed" as a redundant route. Opportunities for OHV recreation at this location are not affected by the change in designation because route 690849, which is parallel and in close proximity to route 690848, provides essentially the same access for motorized vehicles and is now designated "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
690849	Grommet	79	closedg (partial)	open	Palm Springs FO staff review and conclusion: The primary north-south route between Camp Rice and route 690866 is route 690849, not route 690848 as indicated on the DEIS map (routes 690773 and 690849 relative to route 690848 are parallel routes; 690849 is depicted as redundant and 690773 is depicted as a non-route on the map). The segment of route 690849 northwest of route 690866 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation of this route segment from "closed" to "open." The proposal for designating the segment of route 690849 north of its intersection with route 660847 as "open" is not changed from the DEIS.
690862	Vidal	80	open	closed (partial)	Mapping error: The DEIS map does not depict the segment of route 690862 that is located between routes 690864 and 690865, yet it is shown on the 7.5-minute USGS map as an existing route. Also, it is depicted on the April 1996 inventory map as a non-route. It is now included on the FEIS map as a non-route and designated "closed."
690910	Vidal	80	closed	open	Response to public comment, Palm Springs FO staff review and conclusion: Contrary to the characterization of route 690910 on the DEIS map as a non-route, the route exists and is used to access the Stewart Mine area. The route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation of this route from "closed" to "open."
660963	Parker SW	81	n/a	closed	Mapping error: The DEIS map does not depict any portion of route 660963, yet it is shown on the 7.5-minute USGS map as an existing route. Also, it is depicted on the April 1996 inventory map as a non-route. It is now included on the FEIS map as a non-route and designated "closed."
660770	Big Maria Mountains NW	92	open	closedg (partial)	Palm Springs FO staff review and conclusion: Upon recognizing route 690849 as the primary north-south route in this area and route 690848 as redundant (see rationale for changes relative to each of these routes), the latter now designated "closed," the segment of route 660770 west of its intersection with route 690854 dead-ends at a closed route. Hence, this western segment of route 660770 is now designated "closed." Opportunities for OHV recreation at this location are not affected by the change in designation given the availability of other nearby open routes for access.
690848	Big Maria Mountains NW	92	open	closedg	Palm Springs FO staff review and conclusion: The primary north-south route between Camp Rice and route 690866 is route 690849, not route 690848 as indicated on the DEIS map (routes 690773 and 690849 relative to route 690848 are parallel routes; 690849 is depicted as redundant and 690773 is depicted as a non-route on the map). Route 690848 is now designated "closed" as a redundant route. Opportunities for OHV recreation at this location are not affected by the change in designation because route 690849, which is parallel and in close proximity to route 690848, provides essentially the same access for motorized vehicles and is now designated "open."

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663501	Big Maria Mountains NE	93	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. It forms the southern boundary of the Riverside Mountains Wilderness and is the regularly-used route in this area. Route 663501 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
690865	Big Maria Mountains NE	93	open	closed (partial)	Palm Springs FO staff review and conclusion: This route is a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a non-route, it is now designated "closed." Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation, particularly since route 663501, which parallels it to the north, has been added as an open route.
663502	Rockhouse Canyon	95	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used, it provides access into Little Fargo Canyon. Route 663502 is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660375	Victory Pass	100	closedw (partial)	closedw (partial)	Palm Springs FO staff review and conclusion: A segment of route 660375 northeast of route 660332 is depicted on the DEIS map as closed due to proximity to a water source. The remainder of this segment of the route is now designated "closed" to avert a continuation of travel to the water source. The proposal that route 660375 southwest of route 660332 be designated "open" is not changed from the DEIS.
663503	Victory Pass	100	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660544	East of Victory Pass	101	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map but is captured on the original inventory map. As an existing route that is regularly used, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
663504	Palen Mountains	103	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
663505	Arlington Mine	104	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used along the eastern boundary of the Palen-McCoy Wilderness, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660794	Big Maria Mountains SW	106	closed	open	Response to public comment, Palm Springs FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, this route is an existing route that provides technical four-wheeling OHV opportunities. It is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
660826	Big Maria Mountains SW	106	closed	closedg	Response to public comment, Palm Springs FO staff review and conclusion: Except for a very short segment of the route at its intersection with route 660793, route 660826 is not depicted on the DEIS map. Public comment indicates it is an existing route. Given its proximity to parallel routes 660793 to the north and 660797 to the south, route 660828 is now identified as a redundant route that is designated as "closed." Opportunities for OHV recreation at this location are not affected by its designation as "closed" given the availability of other nearby open routes for access.
663506	Big Maria Mountains SE	107	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used between U.S. Highway 95 and the western boundary of the Big Maria Mountains Wilderness, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660078	Cottonwood Basin	110	closed	open	Palm Springs FO staff review and conclusion: This is an existing route that is regularly used contrary to its characterization on the DEIS map as a non-route. Route 660078 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open."
660066	Cottonwood Spring	111	closed	open	Palm Springs FO staff review and conclusion: This is an existing route that was captured on the adjacent DEIS map (Cottonwood Basin) but was inadvertently omitted from the Cottonwood Spring map. The route does not end at the boundary of the Cottonwood Basin map. Consistent with the open designation of the route on the adjacent map, it is designated "open" on the Cottonwood Spring quadrangle. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660067	Cottonwood Spring	111	closed	open	Palm Springs FO staff review and conclusion: This is an existing route that was captured on the adjacent DEIS map (Cottonwood Basin) but was inadvertently omitted from the Cottonwood Spring map. The route does not end at the boundary of the Cottonwood Basin map. Consistent with the open designation of the route on the adjacent map, it is designated "open" on the Cottonwood Spring quadrangle. No impacts to resource values or other uses of the public or neighboring lands are

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					anticipated as a consequence its designation as "open."
663507	Cottonwood Spring	111	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used between routes 660133 and 660201, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
663508	Cottonwood Spring	111	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used between Box Canyon Road and a paved road that parallels Interstate Highway 10, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660211	Hayfield	112	open	closedz	Palm Springs FO staff review and conclusion: This route connects a non-route that is designated "closed" (route 660209) with another closed route (660198). As an open route, it would de dangling with no connecting routes. Therefore, route 660211 is now designated "closed."
663507	Hayfield	112	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used between routes 660133 and 660201, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
663509	Hayfield Spring	113	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used along Red Cloud Wash, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660391	Desert Center	114	n/a	closedg	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route in an area where numerous routes provide access to the north side of the Chuckwalla Mountains, it is now designated "closed."
660438	Desert Center	114	n/a	closedg	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route in an area where numerous routes provide access to the north side of the Chuckwalla Mountains, it is now designated "closed" due to its redundancy.
663503	Desert Center	114	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
663509	Desert Center	114	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used along Red Cloud Wash, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
660495	Corn Spring	115	closedp	open	Palm Springs FO staff review and conclusion: This route is regularly used and provides important access to the northern boundary of the Chuckwalla Mountains Wilderness. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660946	Sidewinder Well	116	open	closedn	Palm Springs FO staff review and conclusion: The route in this cherrystem of the Palen-McCoy Wilderness is predominantly a non-route contrary to its characterization on the DEIS map as an existing route proposed for "open" designation. As a partial non-route, it is now designated "closed" in its entirety. Its non-route condition suggests that opportunities for OHV recreation are not affected by the change in designation.
660093	Mortmar	123	limitedz	open	Palm Springs FO staff review and conclusion: The designation of "limited" in this area is appropriate only to a segment of route 660108 to avoid disturbance to bighorn sheep that access water sources located in the Mecca Hills as they travel west from the Orocopia Mountains during the summer months. It is not believed that bighorn sheep access these water sources from the north. The designation of route 660094 is now "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660094	Mortmar	123	closedg	open	Palm Springs FO staff review and conclusion: This route is regularly used and assists in keeping motorized vehicles from intruding into the Mecca Hills Wilderness by providing an alternate opportunity. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660107	Mortmar	123	limitedz	open	Palm Springs FO staff review and conclusion: The designation of "limited" in this area is appropriate only to a segment of route 660108 to avoid disturbance to bighorn sheep that access water sources located in the Mecca Hills as they travel west from the Orocopia Mountains during the summer months. It is not believed that bighorn sheep access these water sources from the north. The designation of route 660107 is now "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660108	Mortmar	123	limitedz (partial)	limitedz (partial)	Palm Springs FO staff review and conclusion: The designation of "limited" in this area is appropriate only to the segment of route 660108 between its intersection with routes 660107 and 660154. The closure of this segment from June 1 to September 30 is to avoid disturbance to bighorn sheep that access water sources located in the Mecca Hills as they travel west from the Orocopia Mountains during the summer months. It is not believed that bighorn sheep access these water sources from the north. Hence, the segment of route 660108 north of its intersection with route 660107 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660998	Mortmar	123	limitedz	open	Palm Springs FO staff review and conclusion: The designation of

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					"limited" in this area is appropriate only to a segment of route 660108 to avoid disturbance to bighorn sheep that access water sources located in the Mecca Hills as they travel west from the Orocopia Mountains during the summer months. It is not believed that bighorn sheep access these water sources from the north. The designation of route 660998 is now "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660194	Red Canyon	125	closed (partial)	open	Response to public comment, Palm Springs FO staff review and conclusion: The Red Canyon Jeep Trail is a major OHV route that is frequently used. The section of route identified on the DEIS map as a non-route is a mapping error. Consistent with the proposed designation of the remainder of the route, this route is now designated "open" in its entirety. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660256	Red Canyon	125	limitedz	open	Palm Springs FO staff review and conclusion: Prior to designation of the Orocopia Mountains Wilderness, motorized-vehicle access was available to Gucci Spring. Now that such access is prohibited beyond the wilderness boundary and is not afforded to the Spring, the limited designation is not required. The route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660291	East of Red Canyon	126	open	closedg (partial)	Palm Springs FO staff review and conclusion: The segment of this route between its intersection with 660289 and 660290 is redundant---it provides the same access opportunity as route 660290 to the east. This segment is now designated "closed" because of its redundancy. Opportunities for OHV recreation at this location are not affected by the change in designation because opportunities for motorized-vehicle access in this area are not substantially affected.
660292	East of Red Canyon	126	open	closedg	Palm Springs FO staff review and conclusion: This route provides access to the same location as the combination of route 660290 and the northwestern segment of route 660291. As a redundant route, it is now designated "closed." Opportunities for OHV recreation at this location are not affected by the change in designation because opportunities for motorized-vehicle access in this area are not substantially affected.
660460	Red Cloud Canyon	127	n/a	closedg	Palm Springs FO staff review and conclusion: This existing route is not depicted on the DEIS map. Sufficient opportunity for motorized-vehicle access to the southwest corner of the Chuckwalla Mountains Wilderness is provided on route 660459. Route 660460 is now designated "closed" as a redundant route.
663509	Red Cloud Canyon	127	n/a	open	Palm Springs FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used along Red Cloud Wash, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660626	East of Aztec Mines	130	closed	closed (partial)	Response to public comment, Palm Springs FO staff review and conclusion: Contrary to the characterization of route 660626 on the DEIS map as a non-route from route 660580 to a previously-used gravel pit, the route is paved and is used on a regular basis. This segment of

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					the route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing the proposed designation from "closed" to "open." The remainder of route 660626 from the gravel pit to its intersection with route 660581 is not depicted on the DEIS map---it is accurately characterized as a non-route on the FEIS map and is designated "closed."
660703	East of Aztec Mines	130	n/a	open	Response to public comment, Palm Springs FO staff review and conclusion: In error, route 660703 was not extended to the west from the boundary of the adjacent map (Hopkins Well), hence it is not depicted on the East of Aztec Mines quadrangle. This existing route parallels a large powerline and is regularly used. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
660701	Hopkins Well	131	closedn (partial)	open	Palm Springs FO staff review and conclusion: A segment of Government Pass Road, route 660701, is incorrectly depicted on the DEIS map as a non-route. This route is regularly used, provides an important link between Interstate Highway 10 and the Bradshaw Trail, and forms the eastern boundary of the Little Chuckwalla Mountains Wilderness. Consistent with the remainder of the route, this segment is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674001	Augustine Pass	139	n/a	open	El Centro FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used to the boundary of the Chocolate Mountains Aerial Gunnery Range, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
671916	Chuckwalla Spring	140	closedn (partial)	open	El Centro FO staff review and conclusion: The segment of route 671916 that connects routes 670550 and 670551 is not depicted on the DEIS map. As an existing route that is regularly used to access the boundary of the Chocolate Mountains Aerial Gunnery Range, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
674001	Chuckwalla Spring	140	n/a	open	El Centro FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used to access the boundary of the Chocolate Mountains Aerial Gunnery Range, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
670557	Little Chuckwalla Mountains	141	closedg	open	Response to public comment, El Centro FO staff review and conclusion: This route provides the best access to the Hidden Saddle Geode Beds; the adjacent route (670558) is also used for rockhounding access in this area. These routes have not facilitated cross-country travel---vehicles have remained on them. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
660701	Wiley Well	142	closedn (partial)	open	Palm Springs FO staff review and conclusion: Government Pass Road, route 660701, is incorrectly depicted on the DEIS map as a non-route. This route is regularly used, provides an important link between Interstate Highway 10 and the Bradshaw Trail, and forms the eastern boundary of the Little Chuckwalla Mountains Wilderness. Consistent with the remainder of the route to the north as depicted on the Hopkins Well quadrangle, the route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670557	Wiley Well	142	closedg (partial)	open	Response to public comment, El Centro FO staff review and conclusion: This route provides the best access to the Hidden Saddle Geode Beds; the adjacent route (670558) is also used for rockhounding access in this area. These routes have not facilitated cross-country travel---vehicles have remained on them. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
660971	Thumb Peak	143	closed	closed (partial)	Response to public comment, Palm Springs FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, the segment north of route 669990 is an existing route that is used on an occasional basis for access to rockhound collection areas. This segment is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
660972	Thumb Peak	143	closedg	closedg (partial)	Response to public comment, El Centro FO staff review and conclusion: The southern segment of this route to the Palo Verde Mountains Wilderness boundary provides the best access to the Clapp Springs rockhounding area. The segment south of the route's intersection with route 679986 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
669997	Thumb Peak	143	open	closedg (partial)	El Centro FO staff review and conclusion: The segment of this route west of its intersection with route 669996 provides connectivity with a route that is closed due to its redundancy (route 660972, partial). The western segment of route 669997, therefore, provides no unique opportunities for OHV recreation in this area. This route segment is now designated as "closed."
679986	Thumb Peak	143	closed (partial)	open	Response to public comment, El Centro FO staff review and conclusion: The western end of this route leading to the Palo Verde Mountains Wilderness is incorrectly depicted on the DEIS map as a closed wilderness route. It was intended that the open route extend to the wilderness boundary. Hence, route 679986 is now designated "open" to the wilderness boundary. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence its designation as "open."
670584	Mount Barrow	157	closedn (partial)	open	El Centro FO staff review and conclusion: The western portion of this route is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range, hence closed to public access. It is an existing route that provides access to the Gunnery

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					Range boundary. The route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
670585	Mount Barrow	157	closedg	open	El Centro FO staff review and conclusion: This route is characterized on the DEIS map as a redundant route proposed for designation as "closed." However, it is a regularly-used route that provides access different than nearby routes. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670587	Mount Barrow	157	closedg	closedg (partial)	El Centro FO staff review and conclusion: The segment of this route between routes 670585 and 670588 is characterized on the DEIS map as redundant and proposed for closure. It is a regularly-used route that provides a connection between routes in this area. This segment is now designated "open." In addition, the segment of route 570587 between routes 671938 and 670591, also characterized as redundant on the DEIS map, is now designated as "open." It is a regularly-used route. Without this change in designation, route 670588 (an open route) would be left dangling with no connection. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing their designation from "closed" to "open."
671895	Mount Barrow	157	closedn (partial)	open	El Centro FO staff review and conclusion: The western portion of this route is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range, hence closed to public access. It is an existing route that provides access to the Gunnery Range boundary. The route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674002	Mount Barrow	157	n/a	open	Response to public comment, El Centro FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used to access the boundary of the Chocolate Mountains Aerial Gunnery Range, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
670569	Buzzards Peak	158	open	closedg (partial)	El Centro FO staff review and conclusion: The segment of route 670569 between its intersection with routes 671896 and 670587 provides access to a closed route (670587). Without this change in designation, the northeastern end of the route would be left dangling with no connection. Therefore, this segment of route 670569 is now designated "closed" as a redundant route segment. Opportunities for OHV recreation at this location are not affected by the change in designation because opportunities for motorized-vehicle access in this area are not substantially affected.
670596	Buzzards Peak	158	closed	open	Response to public comment, El Centro FO staff review and conclusion: This route is navigable in four-wheel drive and provides access to a gold nugget specimen area for rockhounding. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
670605	Buzzards Peak	158	closedg	open	El Centro FO staff review and conclusion: This route provides access to a destination campsite and is regularly used. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671896	Buzzards Peak	158	open	closedg (partial)	El Centro FO staff review and conclusion: The segment of route 671896 east of the main body of the route that connects with route 670587 provides access to a closed route (670587). Without this change in designation, this eastern segment of the route would be left dangling with no connection. Therefore, this segment of route 671896 is now designated "closed" as a redundant route segment. Opportunities for OHV recreation at this location are not affected by the change in designation because opportunities for motorized-vehicle access in this area are not substantially affected.
670607	East of Acolita	162	closedn (partial)	open	El Centro FO staff review and conclusion: The northern end of route 670607 is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range. This route provides access to the Gunnery Range boundary. The route segment is now designated "open" consistent with the remainder of the route. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670609	East of Acolita	162	closedn (partial)	open	El Centro FO staff review and conclusion: The northwestern end of route 670609 is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range. This route provides access to the Gunnery Range boundary. The route segment is now designated "open" consistent with the remainder of the route. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670612	East of Acolita	162	open	closedz (partial)	El Centro FO staff review and conclusion: The segment of this route within the Santa Fe Mine property is inappropriately identified on the DEIS map as an open route. It is now designated "closed." Route 674005 added as an adjacent route now designated "open" provides alternate access to the same location.
671300	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
671921	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: Individual routes in a dense network of routes adjacent to Glamis were not identified during the initial inventory. These routes do not appear on the DEIS map. Instead, the DEIS map labels this area as "dense network of routes too numerous to depict." The addition of individual routes on the FEIS map reflects a more recent and accurate inventory for this area as conducted by BLM El Centro Field Office staff. Rather than assign a

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					different number to each individual route in this dense network, all routes are assigned the number 671921. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating these routes as "open."
674003	East of Acolita	162	closed	open	El Centro FO staff review and conclusion: This route is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range. This is a regularly-used connector route between routes 670607 and 670609. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674004	East of Acolita	162	closed	open	El Centro FO staff review and conclusion: This route is incorrectly characterized on the DEIS map as a route in the Chocolate Mountains Aerial Gunnery Range. This is a regularly-used connector route between routes 674003, 670608, and 674006. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674005	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route is not depicted on the DEIS map. As an existing route that is regularly used along the Santa Fe Mine property line, it is now designated as "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
676501	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676505	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676508	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676509	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676510	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676525	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676526	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676527	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676528	East of Acolita	162	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
670638	Gables Wash	163	closedn (partial)	open	El Centro FO staff review and conclusion: An extension of route 670638 is not depicted on the DEIS map. This regularly-used route connects routes 670592 and 670638. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
674007	Gables Wash	163	closedn (partial)	open	El Centro FO staff review and conclusion: An extension of route 674007 is not depicted on the DEIS map. This regularly-used route intersects California Highway 78 at two locations. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
676501	Gables Wash	163	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676502	Gables Wash	163	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676503	Gables Wash	163	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676504	Gables Wash	163	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
670640	Quartz Peak	164	closedn (partial)	open	Response to public comment, El Centro FO staff review and conclusion: A segment of this route immediately north of route 670641 is characterized on the DEIS as a non-route proposed for "closed" designation. Contrary to this characterization, the route exists and comprises an important link to the remainder of the route on the west side of Black Mountain. This route segment is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670641	Quartz Peak	164	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670641 is an

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670646	Quartz Peak	164	closed	closedz	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671883 is an existing route. However, it remains designated as "closed" because it facilitates recurring illegal motorized-vehicle intrusions into the Indian Pass Wilderness at this location.
670647	Quartz Peak	164	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670647 is an existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671503	Quartz Peak	164	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671503 is an existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671883	Quartz Peak	164	closedn (partial)	closedz	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671883 is an existing route. However, it remains designated as "closed" because it facilitates recurring illegal motorized-vehicle intrusions into the Indian Pass Wilderness at this location.
679997	Quartz Peak	164	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 679997 is an existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
679998	Quartz Peak	164	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 679998 is an existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671300	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
671921	Glamis	167	n/a	open	El Centro FO staff review and conclusion: Individual routes in a dense network of routes adjacent to Glamis were not identified during the initial inventory. These routes do not appear on the DEIS map. Instead, the DEIS map labels this area as "dense network of routes too

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					numerous to depict." The addition of individual routes on the FEIS map reflects a more recent and accurate inventory for this area as conducted by BLM El Centro Field Office staff. Rather than assign a different number to each individual route in this dense network, all routes are assigned the number 671921. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating these routes as "open."
676505	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676506	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676507	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676508	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676509	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676510	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676511	Glamis	167	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676504	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676511	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676512	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676513	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676514	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676515	Clyde	168	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
670647	Hedges	169	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670647 is an existing route occasionally used by hunters and rockhounders. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670659	Hedges	169	closedg (partial)	closedg (partial)	El Centro FO staff review and conclusion: The segment of route 670659 intersecting routes 671313 and 670659 is characterized on the DEIS map as a redundant route proposed for closure. With closure of this segment, the southern end of route 671313 is left dangling with no connection. This segment of route 670659, therefore, is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670660	Hedges	169	closedg (partial)	open	El Centro FO staff review and conclusion: The southwestern segment of route 670660 is characterized on the DEIS map as a redundant route proposed for closure. This is a regularly-used segment that connects Ogilby Road with routes in this area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670661	Hedges	169	closedg (partial)	open	El Centro FO staff review and conclusion: The western segment of route 670661 is characterized on the DEIS map as a redundant route proposed for closure. This is a regularly-used segment that connects Ogilby Road with routes in this area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670665	Hedges	169	closed	closedg	El Centro FO staff review and conclusion: This connecting route between routes 670592 and 670658 is characterized on the DEIS map as a non-route proposed for closure. Rather, it is an existing redundant route. The designation of "closed" is not changed from the DEIS.
670666	Hedges	169	closed	open	El Centro FO staff review and conclusion: This route is incorrectly characterized on the DEIS map as a non-route proposed for closure. Rather it is an existing route that is regularly-used as a connector between routes 670656 and 670658. This route is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
670667	Hedges	169	closed	closedg (partial)	El Centro FO staff review and conclusion: The segment connecting routes 670592 and 670658 is characterized on the DEIS map as a non-route proposed for closure. Rather, it is an existing redundant route. The designation of "closed" is not changed from the DEIS. The segment of route 670667 southwest of route 670658 is also characterized on the DEIS map as a non-route proposed for closure. This is an existing route that is regularly-used as a connector between routes 670656 and 670658. This segment is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670673	Hedges	169	closed	closedg	El Centro FO staff review and conclusion: Contrary to its characterization as a non-route on the DEIS map, route 670673 is an existing route. However, it is a route that provides no unique OHV opportunities in this area. Given the close proximity of parallel routes, route 670673 is now designated "closed" due to its redundancy. The designation of "closed" is not changed from the DEIS.
670676	Hedges	169	open	closedz (partial)	El Centro FO staff review and conclusion: The eastern segment of this route that provides access to the Tumco Mine is incorrectly characterized as an open route. A gate precludes public access to the site. The eastern segment of the route, therefore, is now designated "closed."
670685	Hedges	169	closed	closedg (partial)	El Centro FO staff review and conclusion: Contrary to its characterization as a non-route on the DEIS map, route 670685 west of its intersection with route 670662 is an existing route. However, it is a route segment that provides no unique OHV opportunities in this area. Given the close proximity of a parallel route (672024), route 670685 west of its intersection with route 670662 is now designated "closed" due to its redundancy. The designation of "closed" is not changed from the DEIS.
672001	Hedges	169	closed	closedg	El Centro FO staff review and conclusion: This connecting route between routes 670592 and 670658 is characterized on the DEIS map as a non-route proposed for closure. Rather, it is an existing redundant route. The designation of "closed" is not changed from the DEIS.
672007	Hedges	169	closed	closedg	El Centro FO staff review and conclusion: This connecting route between routes 670592 and 670658 is characterized on the DEIS map as a non-route proposed for closure. Rather, it is an existing redundant route. The designation of "closed" is not changed from the DEIS.
672024	Hedges	169	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization as a non-route on the DEIS map, route 672024 is an existing route. It provides regularly-used access to the east side of the Cargo Muchacho Mountains. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
676514	Hedges	169	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676516	Hedges	169	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676517	Hedges	169	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
670690	Picacho Peak	170	closedn (partial)	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, the segment located west of its intersection with route 671230 exists and is occasionally used by hunters during certain times of the year. This segment of route 670690 is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670693	Picacho Peak	170	closed	closed (partial)	El Centro FO review and conclusion: The northern segment of the route is incorrectly characterized on the DEIS map as a non-route. Rather, it is an existing route that is occasionally used for access to the eastern side of Picacho Peak. It is now designated "open." A portion of the route is not depicted on the DEIS map---this westward extension is also designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open." Characterization of the route's southern extension on the DEIS map as a non-route proposed for closure is not changed.
671222	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671222 exists and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671230	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671230 exists and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671235	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671235 exists

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671236	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671236 exists and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671237	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671237 exists and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671249	Picacho Peak	170	closedg	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671249 exists and is occasionally used by hunters during certain times of the year. It is one of several connected routes providing access within Picacho Wash. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671339	Picacho Peak	170	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671339 exists and is occasionally used by hunters during certain times of the year. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
672000	Picacho Peak	170	closed	open	El Centro FO review and conclusion: Contrary to its characterization as a non-route on the DEIS map, route 672000 is an existing route that receives occasional use. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671300	Cactus	172	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
670701	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670701 is an occasionally-used existing route. An extension of the route between Ogilby Road and route 670801 is not depicted on the DEIS map but also exists and is occasionally used. Route 670701, therefore, is now designated "open" in its entirety. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					consequence of changing its designation from "closed" to "open."
670702	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670702 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670705	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670705 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670707	Ogilby	173	closedn (partial)	closedz (partial)	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, the segment of route 670707 west of American Girl Wash is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open." The eastern segment of route 670707 near its intersection with route 670708 is incorrectly characterized on the DEIS map as a non-route. Rather, it is an existing route upon which public use is precluded by a locked gate. Therefore, the eastern segment remains closed but for a different reason.
670708	Ogilby	173	closedn (partial)	closedz (partial)	El Centro FO staff review and conclusion: Contrary to their characterization on the DEIS map as non-routes, segments of route 670708 to the south of route 674011 are occasionally-used existing routes that provide access to American Girl Mine area. They are now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing their designation from "closed" to "open." Access to the northernmost segment of route 670708 (north of its intersection with route 674011) is precluded by locked gates. This segment is incorrectly characterized as a non-route on the DEIS map, but its designation as "closed" is not changed---only the reason for its closure is changed.
670712	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670712 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670713	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670713 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670714	Ogilby	173	closedn (partial)	open	El Centro FO staff review and conclusion: Contrary to their characterization on the DEIS map as non-routes, segments of route 670714 are occasionally-used existing routes. They are now designated

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					"open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing their designation from "closed" to "open."
670715	Ogilby	173	closedn (partial)	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, the northern segment of route 670715 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670716	Ogilby	173	closedn (partial)	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, the southwestern segment of route 670716 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670803	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670803 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670806	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670806 is an occasionally-used existing route that provides access to American Girl Mine area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670808	Ogilby	173	closed	closedz	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670808 is an existing route, but general public access to it is precluded by a locked gate. The designation of the route as "closed" is not changed from the DEIS, but the reason for the closure is changed.
670809	Ogilby	173	closed	closedz	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670809 is an existing route, but general public access to it is precluded by a locked gate. The designation of the route as "closed" is not changed from the DEIS, but the reason for the closure is changed.
670810	Ogilby	173	closed	closedz	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670810 is an existing route, but general public access to it is precluded by a locked gate. The designation of the route as "closed" is not changed from the DEIS, but the reason for the closure is changed.
670814	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670814 is an occasionally-used existing route that provides access to American Girl Mine area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670823	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670823 is an

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
670826	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 670826 is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671300	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
671335	Ogilby	173	closedn (partial)	open	El Centro FO staff review and conclusion: The southwestern segment of this route is incorrectly characterized on the DEIS map as a non-route. It is an existing route that is occasionally used and provides unique access to this portion of the Cargo Muchacho Mountains. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
671865	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671865 is an occasionally-used existing route that provides access to American Girl Mine area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674008	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674009	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674010	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is an occasionally-used existing route. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674011	Ogilby	173	closed	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 674011 is an occasionally-used existing route that provides access to American Girl Mine area. It is now designated "open." No impacts to resource values

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674012	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is an occasionally-used existing route that connects routes 670715 and 670718. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674013	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to the sand dunes south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674014	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674015	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674020	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route along a transmission line that provides access to a popular camping area. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
676518	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676519	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
676520	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676521	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676522	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676523	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
676524	Ogilby	173	n/a	open	El Centro FO staff review and conclusion: This route was not identified during the initial inventory of routes, hence it does not appear on the DEIS map. The addition of this route on the FEIS map reflects a more recent and accurate inventory of routes for the area northeast of the Imperial Sand Dunes Recreation Area as conducted by BLM El Centro Field Office staff. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of designating the route as "open."
671249	Araz	174	closedg	open	El Centro FO staff review and conclusion: Contrary to its characterization on the DEIS map as a non-route, route 671249 exists and is occasionally used by hunters during certain times of the year. It is one of several connected routes providing access within Picacho Wash. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of changing its designation from "closed" to "open."
674014	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
					Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674015	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674016	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access along a transmission line in the area of Pilot Knob Mesa and Imperial Sand Dunes south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674017	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674018	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674019	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674022	Grays Well NE	176	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access along the All American Canal. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."
674021	Yuma West	177	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access to Pilot Knob Mesa south of Interstate Highway 8. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

Route No.	USGS Map Name	Map No.	DEIS Desig.	FEIS Desig.	Rationale for Revision
674022	Yuma West	177	n/a	open	El Centro FO staff review and conclusion: The DEIS map does not depict any portion of this route. However it is a regularly-used existing route that provides access along the All American Canal. It is now designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

Table R-8. Map Relates

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
Bannock	34114-H7	Needles	1
Needles NW	34114-H6	Needles	2
Van Winkle Spring	34115-G5	Needles	3
West of Blind Hills	34115-G4	Needles	4
Blind Hills	34115-G3	Needles	5
Fenner	34115-G2	Needles	6
Fenner Spring	34115-G1	Needles	7
West of Flattop Mountain	34114-G8	Needles	8
Flattop Mountain	34114-G7	Needles	9
Needles SW	34114-G6	Needles	10
Needles	34114-G5	Needles	11
Brown Buttes	34115-F6	Needles	12
Van Winkle Wash	34115-F5	Needles	13
Castle Dome	34115-F4	Needles	14
Danby	34115-F3	Needles	15
Essex	34115-F2	Needles	16
Little Piute Mountains	34115-F1	Needles	17
Stepladder Mountains NW	34114-F8	Needles	18
Stepladder Mountains NE	34114-F7	Needles	19
Monumental Pass	34114-F6	Needles	20
Whale Mountain	34114-F5	Needles	21
Topock	34114-F4	Needles	22
Amboy	34115-E6	Needles	23
Cadiz	34115-E5	Needles	24

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
Cadiz Summit	34115-E4	Needles	25
Skeleton Pass	34115-E3	Needles	26
Old Woman Statue	34115-E2	Needles	27
Painted Rock Wash	34115-E1	Needles	28
Stepladder Mountains SW	34114-E8	Needles	29
Stepladder Mountains	34114-E7	Needles	30
Snaggletooth	34114-E6	Needles	31
Chemehuevi Peak	34114-E5	Needles	32
Castle Rock	34114-E4	Needles	33
Bristol Lake NW	34115-D6	Needles	34
Calumet Mine	34115-D5	Needles	35
Cadiz Lake NW	34115-D4	Needles	36
Cadiz Lake NE	34115-D3	Needles	37
Sheep Camp Spring	34115-D2	Needles	38
Wilhelm Spring	34115-D1	Needles	39
West of Mohawk Spring	34114-D8	Needles	40
Mohawk Spring	34114-D7	Needles	41
Savahia Peak NW	34114-D6	Needles	42
Savahia Peak NE	34114-D5	Needles	43
Havasu Lake	34114-D4	Needles	44
Lake Havasu City South	34114-D3	Needles	45
Bristol Lake SW	34115-C6	Needles	46
Calumet Mountains	34115-C5	Needles	47
Cadiz Lake	34115-C4	Needles	48
Chubbuck	34115-C3	Needles	49
Milligan	34115-C2	Needles	50
East of Milligan	34115-C1	Needles	51
Martins Well	34114-C8	Needles	52
Mopah Peaks	34114-C7	Needles	53
Savahia Peak SW	34114-C6	Needles	54
Savahia Peak	34114-C5	Needles	55
Whipple Mountains SW	34114-C4	Needles	56
Whipple Wash	34114-C3	Needles	57
Gene Wash	34114-C2	Needles	58
Dale Lake	34115-B6	Needles	59

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
East of Dale Lake	34115-B5	Needles	60
Cadiz Valley NW	34115-B4	Needles	61
Cadiz Valley NE	34115-B3	Needles	62
Iron Mountains	34115-B2	Needles	63
Danby Lake	34115-B1	Needles	64
Sablon	34114-B8	Needles	65
Horn Spring	34114-B7	Needles	66
Vidal NW	34114-B6	Needles	67
Vidal Junction	34114-B5	Needles	68
Parker NW	34114-B4	Needles	69
Parker	34114-B3	Needles	70
New Dale	34115-A6	Needles/Palm Springs	71
Clarks Pass	34115-A5	Needles/Palm Springs	72
Cadiz Valley SW	34115-A4	Needles/Palm Springs	73
Cadiz Valley SE	34115-A3	Needles/Palm Springs	74
Granite Pass	34115-A2	Needles/Palm Springs	75
East of Granite Pass	34115-A1	Needles/Palm Springs	76
Arica Mountains	34114-A8	Needles/Palm Springs	77
Rice	34114-A7	Needles/Palm Springs	78
Grommet	34114-A6	Needles/Palm Springs	79
Vidal	34114-A5	Needles/Palm Springs	80
Parker SW	34114-A4	Needles/Palm Springs	81
Fried Liver Wash	33115-H8	Palm Springs	82
Pinto Mountain	33115-H7	Palm Springs	83
San Bernardino Wash	33115-H6	Palm Springs	84
Placer Canyon	33115-H5	Palm Springs	85
Pinto Wells	33115-H4	Palm Springs	86
Coxcomb Mountains	33115-H3	Palm Springs	87
West of Palen Pass	33115-H2	Palm Springs	88
Palen Pass	33115-H1	Palm Springs	89
Little Maria Mountains	33114-H8	Palm Springs	90
Styx	33114-H7	Palm Springs	91
Big Maria Mountains NW	33114-H6	Palm Springs	92
Big Maria Mountains NE	33114-H5	Palm Springs	93
West Berdoo Canyon	33116-G2	Palm Springs	94

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
Rockhouse Canyon	33116-G1	Palm Springs	95
Washington Wash	33115-G8	Palm Springs	96
Porcupine Wash	33115-G7	Palm Springs	97
Conejo Well	33115-G6	Palm Springs	98
Buzzard Spring	33115-G5	Palm Springs	99
Victory Pass	33115-G4	Palm Springs	100
East of Victory Pass	33115-G3	Palm Springs	101
Palen Lake	33115-G2	Palm Springs	102
Palen Mountains	33115-G1	Palm Springs	103
Arlington Mine	33114-G8	Palm Springs	104
Inca	33114-G7	Palm Springs	105
Big Maria Mountains SW	33114-G6	Palm Springs	106
Big Maria Mountains SE	33114-G5	Palm Springs	107
Indio	33116-F2	Palm Springs	108
Thermal Canyon	33116-F1	Palm Springs	109
Cottonwood Basin	33115-F8	Palm Springs	110
Cottonwood Spring	33115-F7	Palm Springs	111
Hayfield	33115-F6	Palm Springs	112
Hayfield Spring	33115-F5	Palm Springs	113
Desert Center	33115-F4	Palm Springs	114
Corn Spring	33115-F3	Palm Springs	115
Sidewinder Well	33115-F2	Palm Springs	116
Ford Dry Lake	33115-F1	Palm Springs	117
McCoy Spring	33114-F8	Palm Springs	118
McCoy Peak	33114-F7	Palm Springs	119
McCoy Wash	33114-F6	Palm Springs	120
Blythe NE	33114-F5	Palm Springs	121
Mecca	33116-E1	Palm Springs	122
Mortmar	33115-E8	Palm Springs	123
Orocopia Canyon	33115-E7	Palm Springs	124
Red Canyon	33115-E6	Palm Springs	125
East of Red Canyon	33115-E5	Palm Springs	126
Red Cloud Canyon	33115-E4	Palm Springs	127
Pilot Mountain	33115-E3	Palm Springs	128
Aztec Mines	33115-E2	Palm Springs	129

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
East of Aztec Mines	33115-E1	Palm Springs	130
Hopkins Well	33114-E8	Palm Springs	131
Roosevelt Mine	33114-E7	Palm Springs	132
Ripley	33114-E6	Palm Springs	133
Blythe	33114-E5	Palm Springs	134
Durmid	33115-D7	Palm Springs/El Centro	135
Frink NW	33115-D6	Palm Springs/El Centro	136
Frink NE	33115-D5	Palm Springs/El Centro	137
Iris Pass	33115-D4	Palm Springs/El Centro	138
Augustine Pass	33115-D3	Palm Springs/El Centro	139
Chuckwalla Spring	33115-D2	Palm Springs/El Centro	140
Little Chuckwalla Mountains	33115-D1	Palm Springs/El Centro	141
Wiley Well	33114-D8	Palm Springs/El Centro	142
Thumb Peak	33114-D7	Palm Springs/El Centro	143
Palo Verde	33114-D6	Palm Springs/El Centro	144
Wister	33115-C5	El Centro	145
Iris Wash	33115-C4	El Centro	146
Lion Head Mountain	33115-C3	El Centro	147
Pegleg Well	33115-C2	El Centro	148
Little Mule Mountains	33115-C1	El Centro	149
West of Palo Verde Peak	33114-C8	El Centro	150
Palo Verde Peak	33114-C7	El Centro	151
Cibola	33114-C6	El Centro	152
Iris	33115-B4	El Centro	153
Tortuga	33115-B3	El Centro	154
Mammoth Wash	33115-B2	El Centro	155
Blue Mountain	33115-B1	El Centro	156
Mount Barrow	33114-B8	El Centro	157
Buzzards Peak	33114-B7	El Centro	158
Picacho NW	33114-B6	El Centro	159
Amos	33115-A3	El Centro	160
Acolita	33115-A2	El Centro	161
East of Acolita	33115-A1	El Centro	162
Gables Wash	33114-A8	El Centro	163

USGS Map Name	USGS Map Code	Field Office	Inventory Map No.
Quartz Peak	33114-A7	El Centro	164
Picacho SW	33114-A6	El Centro	165
Picacho	33114-A5	El Centro	166
Glamis	32115-H1	El Centro	167
Clyde	32114-H8	El Centro	168
Hedges	32114-H7	El Centro	169
Picacho Peak	32114-H6	El Centro	170
Little Picacho Peak	32114-H5	El Centro	171
Cactus	32114-G8	El Centro	172
Ogilby	32114-G7	El Centro	173
Araz	32114-G6	El Centro	174
Bard	32114-G5	El Centro	175
Grays Well NE	32114-F7	El Centro	176
Yuma West	32114-F6	El Centro	177

Appendix S
Public Comments and Responses

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Public Review of DEIS

The public review period of the Draft plan and Environmental Impact Statement began on February 26, 2001, and ended eight months later on November 1, 2001. Notice of the public review period was initially published in the *Federal Register* on February 23, 2001, by the Environmental Protection Agency and later announced on March 12, 2001 by BLM. The public was notified of the following dates and venues for public meetings through news releases, public service announcements, and the BLM California website. Public comments were received in these meetings and recorded by court reporter. The public meetings were held from 6:30 p.m. to 9:30 p.m. on the following dates (in 2001) at the following locations:

Monday, April 23
Needles Council Chambers
City/County Administration Bldg.
1111 Bailey Street
Needles, CA 92363

Tuesday, April 24
Yucca Valley Community Center
Yucca Room
Dumosa Ave.
Yucca Valley, CA

Wednesday, April 25
Blythe City Council Chambers
235 N. Broadway
Blythe, CA 92225

Thursday, April 26
Service District Auditorium
Lake Tamarisk Road & Park View Dr.
Desert Center, CA

Monday, April 30
Bureau of Land Management
Palm Springs-South Coast Field Office
690 W. Garnet
North Palm Springs, CA

Tuesday, May 1
Meeting Room, Board of Supervisors
Imperial County Administration Center
940 W. Main, 2nd Floor
El Centro, CA

Wednesday, May 2
Cleveland National Forest
Oak Room
10845 Rancho Bernardo Road, Suite 200
Rancho Bernardo, CA

Thursday, May 3
Bureau of Land Management
California Desert District Office
6221 Box Springs Blvd.
Riverside, CA

Monday, May 7
Sheraton Hotel,
Cypress Room
303 E. Cordova Street
Pasadena, CA

On two occasions the review period was extended, resulting in the eight-month period noted above. The extended review period was requested by many in the public who felt that the document was too complex and proposals too important to be adequately reviewed in 90 days.

On numerous occasions, in addition to the above noted public meetings, BLM provided overviews on the DEIS to individuals, interest groups, local governments, BLM's Desert Advisory Council, Joshua Tree

National Park's Commission, and tribal councils. Tribal councils consulted include: Quechan (May 31, 2001), Chemehuevi (September 14, 2001), Fort Mojave (October 23, 2001), and Colorado River Indian Tribes (CRIT) (November 11, 2001). In addition BLM notified the public that the Preferred Alternative routes of travel designations proposal was available for review on 7.5 minute quad maps covering the entire Planning Area. By the end of the public comment period, over 1600 comments were received. These comments were in the form of letters, faxes, email, and public meeting comments.

Desert Advisory Council Resolutions and Responses

The following resolutions from BLM's Desert Advisory Council were developed at the Council's meeting on December 8, 2001 and are included with the set of public comments on the DEIS. These resolutions were developed following the Council's review of NECO and NEMO DEIS proposals and the public comments on each DEIS. BLM has responded to these resolutions and are also included below. Resolutions numbered 1, 2, and 4 do not apply in the NECO planning area.

1. The Council recommends that all uses within the Imperial Dunes planning area affected by decisions in the Final Recreation Area Management Plan be mitigated.

Response: The Imperial Sand Dunes (ISDRA) is a unique, world class OHV recreation site that possesses unique features and vastness that is not available anywhere else for mitigation in kind. Further, the multiple use mandate that BLM operates under provides for other uses in addition to motorized recreation, and these needs must also be considered. The Draft Plan includes an array of alternatives that address the impacts of management actions. Those impacts are characterized in terms of loss and gain of opportunities within the ISDRA. The BLM is still receiving public comment on the draft and will fully consider all comments received before issuing a final plan later this year.

2. The Council requests assistance from the State of California and the Department of the Interior in providing law enforcement in the Imperial Sand Dunes.

Response: We believe that this important recommendation from the DAC has been addressed. In response to lawlessness over the 2001 Thanksgiving weekend, BLM joined forces with the Imperial County Sheriff, the Imperial County Board of Supervisors, and the California Highway Patrol to dramatically increase law enforcement during the Christmas holiday weekend. On December 4, 2001, the Imperial County Board of Supervisors passed a resolution requesting that the State of California assist the BLM and County Sheriff's Department in providing law enforcement at the Dunes. During the New Year's holiday weekend, BLM initiated a multi-agency Incident Command System to provide adequate support personnel and necessary law enforcement presence to support a declared Zero Tolerance policy.

The Incident Command System has significantly decreased lawlessness as evidenced over the New Years, Martin Luther King, President's Day, and Easter holiday weekends. The California State Parks and Recreation, Off-Highway Motor Vehicle Recreation Commission, awarded a $1.2 million grant to provide law enforcement and logistical support to the Dunes.

3. The Council recommends that grazing continue to be authorized at current levels and with current terms and conditions until BLM conducts studies relative to the impacts of livestock grazing on desert tortoise. The Council recommends that BLM actively pursue funding for such studies.

Response: The forage competition study in the Eastern Mojave Desert ended in 1995. Currently no further studies are being conducted. Starting such studies would require the participation of a willing owner of a grazing allotment and the U.S. Fish and Wildlife Service, and long-term funding, which is not currently available, would need to be secured.

In developing the CDCA amendments, BLM has considered the best and latest information and analyses in a forum of cooperating agencies and interests. The proposals contained in the amendments reflect independent consideration of the best science available and conclusions which are independent of the recommendations contained in the Desert Tortoise Recovery Plan. The U.S. Fish and Wildlife Service will do the same in rendering its biological opinion to the amendments. Upon concluding the planning process, BLM and other land managing agencies will monitor desert tortoise population trends, as well as other related factors noted in the plan amendments, and will adjust its management as a part of its commitment to adaptive management. BLM and the U.S. Fish and Wildlife Service have already agreed to consider some experimental grazing proposals.

4. The Council recommends BLM pursue the Freeman exchange proposal.

Response: (Applicable to the NEMO Planning Area only.) This exchange would facilitate community expansion for Nipton. Based upon this resolution, a review of the U.S. Fish and Wildlife Service *Desert Tortoise Recovery Plan*, and the intended use of the lands for public education, BLM has incorporated the proposal into the Proposed Plan Amendments/Final EIS.

5. The Council supports the NECO proposal for additional wildlife guzzlers.

Response: Based upon this resolution and a considerable number of other public comments, the proposal on artificial waters has been expanded for the 24 waters proposed in wilderness areas to address phasing and the need for additional biological information.

6. The Council recommends that BLM request the U.S. Fish and Wildlife Service to update the Desert Tortoise Recovery Plan and the BLM not implement the Recovery Plan or NEMO and NECO until the revision is complete and the on-going GAO audit completed and the report filed.

Response: BLM wrote to the U.S. Fish and Wildlife Service on March 15, 2002, to request information on whether or not the Desert Tortoise Recovery Plan has been reevaluated, if there is a plan to do so in the future, and, if so, what the date is for a reevaluation. No response has been received to date. However, court stipulation deadlines and other factors require BLM to stay on schedule to issue final decisions on these plans by the end of the year.

7. The Council recommends the five open areas recommended for closure in the NECO plan remain open in the final NECO Plan.

Response: The NECO Plan actually proposes to close only two OHV open areas: Ford Dry Lake and Rice Dunes. The other three areas mentioned--Palen Dunes, Palen Dry Lake, and Ford Dunes--were closed in the 1980 CDCA Plan, but the closures were not as clearly defined as they were for other dunes and playas. The proposal to close Ford Dry Lake and Rice Dunes focuses primarily on three factors: (1) dunes and playas are relatively rare in the western United States and contain specialized and often endemic species; (2) while these two were designated open in 1980, they have remained relatively unused for the past 20 years; (3) due to a variety of factors--size, configuration, topography, and location--they do not have significant value for the OHV use intended and would not be expected to see increased use in the future. Consequently, they are proposed for closure in the preferred alternative of the Proposed Plan/FEIS.

8. The Council recommends that all uses within the NECO and NEMO planning area affected by decisions in the Final NECO and NEMO Plans be mitigated.

Response: As an amendment to the 1980 CDCA Plan, the focus of NECO and NEMO Plan amendments are species and habitats. Those aspects of the CDCA Plan not addressed in NECO continue to apply to BLM's long range and every day multiple use management activities. Developing the CDCA Plan involved consideration of many values and conflicts and making many difficult trade-offs. As much as possible, competing values with inherent conflicting applications were emphasized in different areas to reduce conflicts and restrictions. However, where many conservation and use values are co-located, the mix is considered compatible and acceptable.

Much the same consideration has applied in developing the NECO and NEMO Plan amendments. High value desert tortoise and high value recreation and mineral areas were made as mutually exclusive as possible. For instance, Highway 78 defines a portion of the boundary for the Chuckwalla DWMA. This line divides the DWMA and the area to the southeast, which is valuable for both recreation and mineral uses. In the Shadow Valley DWMA, an area immediately south of Turquoise Mountain and adjacent peaks that provides access to the area was excluded from the proposed plan amendment because of its recreational and mineral value.

Another consideration relates to the goal of having very large DWMAs and the inclusion of 80 percent of the ranges of special status species in some kind of conservation emphasis area. With this high degree of inclusion, it was felt that little change to casual use recreation would be required. Vehicle-related recreation values were prominent in developing these and other proposals and through this approach are as minimally affected as possible.

Public Comments Analysis--USFS Content Analysis Methodology

The U.S. Forest Service's (USFS) Content Analysis Team (CAT) specializes in analyses of public comments. They were contracted to analyze and synthesize public comments into concise "public concern" statements. These public concerns statements were grouped into topics and subject groupings through a process developed by USFS and provided for a number of federal agencies over recent years. The advantages of

going to this team are twofold: professional expertise using sophisticated methodology, and independent review. Following is a description of the methodology.

The USFS documented and analyzed public comments on the NECO DEIS using a process called content analysis. This process provides a systematic method of compiling and categorizing the full range of public viewpoints and concerns. Content analysis is intended to facilitate good decision-making by helping the planning team to clarify, adjust, or incorporate technical information in preparing the Proposed Plan/Final EIS. All responses (i.e., letters, emails, faxes, and public meeting comments) were included in this analysis.

In the content analysis process used for this project, each response was given a unique identifying number, which allows analysts to link specific comments to original letters. Respondents' names and addresses were then entered into a project-specific database program, enabling the creation of a complete mailing list of all respondents. The database is also used to track pertinent demographic information, such as federal, state, tribal, county, and local governments or government associations; business and industry groups; recreational organizations; and preservation, conservation and multiple use organizations.

All input was considered and reviewed by a group of analysts. Each response was first read by one analyst and then separated into comments addressing various concerns and themes. Comments were then entered verbatim into a database. A second analyst reviewed a printed report of the sorted comments to ensure accuracy and consistency while preparing the summary analysis. These reports allow analysts to identify a wide range of public concerns, analyze the relationships among them, and summarize comments into "public concern statements."

A public concern statement is just that, a statement of a public concern. It can represent one unique comment from an individual response, or a common concern from numerous responses. The planning staff, who ultimately respond to these public concerns, do not know how many people shared this concern, but rather evaluate the public concern on its merit. It is important for the public and project team members to understand that this process does not treat comments as votes and thus cannot sway decision makers toward the opinion of individuals, groups, or pluralities. Content analysis ensures that every comment is considered with equal merit in the decision process. For each public concern statement, a supporting sample statement is presented. A sample statement is a quote from one response that best represents the public concern. The final product includes a list of public concern statements (and associated sample statements) organized by general subjects in the Content Analysis Report (USFS 2002). This report and the back-up full-text comments were provided to BLM to serve in preparing responses to comments.

This process and the resulting summary are not intended to replace comments in their original form. Rather, they provide a map to the letters and other input on file with BLM and greatly facilitate the review and responses to concerns.

Responses to Public Comments

Over 460 public concern statements were provided to BLM by the above-described process. BLM's project management personnel reviewed this list of public concern statements and associated sample statements and assigned appropriate staff to each public concern. In making these assignments, it became clear that some of the public concerns could be combined. Assigned staff evaluated the public concern statements and

associated sample statements. They made revisions to this Plan and FEIS as appropriate, and prepared written response to public concern statements that are presented below.

Responses to public concerns are provided below. In reviewing the public concerns and responses, readers should note the following:

- To the extent that two or more public concern statements are the same or very similar, the comments are grouped together and addressed in one response.
- For public concern statements that were characterized as applause, no response was prepared.
- For comments which only cast a preference for a particular alternative or proposal with no justification, no response was prepared.
- For public concern statements for areas well beyond the geographic range of this plan and/or and subjects not pertinent to this plan, no response was prepared.
- For comments which are the same as or similar to topics in both the NECO and NEMO plans, responses are the same or very similar.
- The public concern statements which follow are grouped by subject. Choice was necessary in placing some statements into groups. Therefore, the reader is encouraged to review all the groupings to fully understand public concerns on particular subjects.

In the following section, Public Concern is abbreviated PC. The public concern statements are presented in bold text, and the response is in normal text.

Planning Process--Public Participation and Cooperation

PC 1: The BLM should extend the comment period to allow for adequate review of proposed plans.
PC 2: The BLM should adequately notify the public regarding opportunities for participating in the planning process.

Response: A variety of media are used to notify and involve the public in land use planning and other action proposals: the *Federal Register*, public service announcements in local and regional newspapers and radio stations, mailings to BLM mailing lists, and the BLM website. In the case of newspapers and radio stations, BLM can only hope that the announcements are carried in places and at times to be most communicated. In some cases BLM has returned to communities to repeat the opportunity. In all, it is unfortunate that some people still do not get the word and are left out of the process. The extension of the public review period from February 26, 2001, to November 1, 2001, hopefully has mitigated this issue.

PC 3: The BLM should have a court reporter at public hearings.

Response: The court reporter did record comments at each of the public meetings held. A portion of each meeting was also devoted to questions and answers before and/or after the recording of comments, which helped clarify proposals and broaden understanding to better focus comments. The question and answer portion was not required to be recorded.

PC 4: The BLM should respond to requests for information.
PC 5: The BLM should provide the public with access to the views of other agencies involved in NECO planning to encourage public participation.

Response: BLM and the cooperating agencies on this plan do the best they can to respond to public concerns and represent themselves in public forums. In the case of PC4, specific concerns are addressed in the FEIS. In the case of PC5, only BLM managers and staff conducted the NECO DEIS public meetings because (1) BLM is the lead agency and nearly all the difficult land use decisions in the plan concern public lands managed
by BLM, (2) BLM people are articulate enough on other agencies' programs and management, and (3) other agencies' staff had scheduling conflicts.

PC 6: The BLM should simultaneously provide all relevant planning information to facilitate meaningful public comment.

Response: Land use plan amendments of the nature of NECO are difficult to describe. Since it is not practical to bring forward the full 1980 CDCA Plan that is being amended, not to mention similar and pertinent documents of other agencies, BLM must extract and summarize information from other documents, policies, and laws to the extent necessary to state proposals, develop the EIS, and provide context for understanding. BLM feels that NECO brings forward adequate general and current management information from the CDCA Plan, other agencies' plans and policies, and the *Desert Tortoise Recovery Plan* to achieve the need, and that the document itself is complete with rationale, criteria, and analysis to support proposals contained in the alternatives. All the copies of NECO that were mailed to the public, as well as the electronic copy on the BLM California website, contain the same information. To the extent that individuals in the public want to better understand the nature and context of proposals, it is incumbent upon them to obtain the documents they are interested in.

PC 8: The BLM should ensure that resource maps are available to the public early in the public involvement process.
PC 9: The BLM should provide accurate maps and route closure information to encourage public participation.
PC 10: The BLM should provide maps that are sufficient to allow site-specific analysis of every motorized route.
PC 11: The Final EIS should contain maps depicting all county roads in the NECO area.

Response: At 5.5 million acres it was not possible include in the DEIS and FEIS documents maps at the most detailed scale. Given the technology of computer mapping, NECO maps are much more sophisticated, informative, and readable than maps in previous land use plans. Document appendices describe mapping processes, analysis methods, and accuracies. One appendix contains the segment-by-segment description of DWMA boundaries. The public was told that it could request maps of informed preferred alternative routes of travel designations at 7.5' scale, but few in the public actually did request such maps. The public was invited to attend public meetings at which additional maps and overlays were available to review and staff were available to answer questions. The public review period was eight months, a period in which the public had the opportunity to contact BLM for individual attention on any matter at any time. Finally, many interest

groups and individuals cooperated with BLM and other agencies during the planning process that spanned several years and had the opportunity to review the many iterative details.

Throughout the planning process the public was invited to advise BLM of inaccuracies in data, and many corrections were made from such public participation. To the extent that roads and other information are incompletely described, BLM will continue to improve its database. BLM should be advised of specific county roads not shown on the inventory. County roads are not being considered for closure under the routes of travel designation process in any alternative.

PC 12: The BLM should eliminate bias against motorized recreationists in the planning process.
PC 20: The BLM should include motorized recreation planners on the Interdisciplinary Team to ensure a balanced perspective on the Travel Plan.
PC 76: The Final EIS should not show bias towards motorized recreation in desert washes, which should be considered as desert watersheds.

Response: The involvement of federal, state, and local agencies and non-agency interests in development of the NECO Plan is described in Chapter 7 (Consultation and Coordination). Throughout Plan development, individuals representing diverse interest groups assisted in the development and analysis of data, participated in the development and review of plan proposals and alternatives, and fostered plan input from their constituencies.

In furtherance of the regulatory route designation criteria at 43 CFR 8342.1, biological parameters to protect certain species of concern were established and considered in proposing route designation scenarios under the various alternatives (see Table 2-11 in Section 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation, for a summary of these parameters). These "biological parameters" are derived from life histories and species accounts for special status wildlife species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4, Biological Resources, and Appendix N, Wildlife History and Wildlife/Plant Tables). Where no such relationships are supported by existing studies, limitations on motorized-vehicle use to protect special status species and their habitats are not proposed. The consequences of applying the biological parameters in designating routes of travel as "open," "limited," and "closed," relative to both special status species and motorized-vehicle recreation, inclusive of "navigable washes," are described in Chapter 4 (see Sec. 4.2.8, Recreation Management). "Navigable washes" in the context of motorized-vehicle use are defined in Chapter 3 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access).

PC 13: The BLM should ensure that all interested parties are treated equitably and that concerns are not ignored.
PC 14: The BLM should address the perception that local concerns have been ignored in the planning process.
PC 18: The BLM should comply with NEPA regulations to ensure that public comments are not considered as votes during the planning process.
PC 19: The BLM should investigate and report any misuse of public comments being used as votes in forming decisions regarding the Travel Plan.

Response: Chapter 7 of the FEIS describes in detail the public involvement process that included public outreach and meetings, public involvement steps, and comment periods as required by law. All public comments received during the extended comment period were analyzed and categorized by an independent team from outside the California Desert District. Following the independent comment analysis, the public concerns were analyzed and addressed by resource specialists and considered by BLM managers. The comments were not weighted by the number received or counted as vote, nor was special consideration given to comments received from a particular geographic region, organization, or individual.

PC 15: The BLM should cooperate with local citizens to integrate local knowledge into the planning process.

Response: The planning process for this plan amendment has included numerous public meetings and an extended comment period in which citizens were provided opportunities to be involved in the planning process and to share local knowledge. Chapter 7 of the FEIS describes how information received through the public involvement process was analyzed and considered in the planning process.

PC 16: The BLM should ensure private property concerns are addressed.

Response: The NECO Plan involves the management of public lands and does not make decisions regarding private property. To the extent that concerns are expressed on this topic, they will be addressed.

PC 17: The BLM should use effective outreach methods for informing motorized users about the proposed Travel Plan.

Response: The involvement of federal, state, and local agencies and non-agency interests in development of the NECO Plan is described in Chapter 7 (Consultation and Coordination). As the Plan progressed, a public mailing list of about 800 individuals, interest groups, and agencies was developed. At several times throughout the planning process, notifications were sent to this group regarding (1) completion and availability of the routes of travel inventory for review, (2) public meetings for mid-process Plan review, (3) general Plan updates, and (4) public meetings during the review period of the Draft NECO Plan/EIS wherein comments were recorded for the public record. Elements and status of the Plan were reviewed at regular meetings of the BLM's Desert Advisory Council (public meetings) over the years. Throughout Plan development, individuals representing diverse interest groups, including motorized recreationists, assisted in the development and analysis of data, participated in the development and review of plan proposals and alternatives, and fostered support from their constituencies for the Plan. Further, representatives of the BLM have addressed various clubs and interest groups upon request regarding the manner in which the route designation process was being addressed in the NECO planning process.

PC 21: The BLM should evaluate how nationally funded environmental groups have influenced the NEPA process regarding motorized recreation.

Response: The BLM followed all applicable laws and regulations regarding the NEPA and BLM planning in the process of this amendment to the CDCA Plan. The investigation of nationally funded environmental groups is beyond the legal authority of the BLM and beyond the scope of this plan amendment.

PC 24: The BLM should establish an interagency group to review projects undertaken by cooperators and volunteer groups.

Response: This suggestion has been incorporated into the Proposed Plan (see Commitments common to alternatives under Chapter 2, section 2.2 and 2.3)

PC 25: The BLM should include the California State Department of Department of Fish and Game in the decision-making process.
PC 41: The BLM should coordinate NECO planning with the California Department of Fish and Game.
PC 139: The CDCA Plan Amendment should include flexible provisions to accommodate California State Department of Fish and Game's water development projects.

Response: As a NECO cooperator and Sites Act partner, the California State Department of Fish and Game is included in the decision-making process.

PC 31: The CDCA Plan Amendment should incorporate the recommendations of the Science Panel Report and include the guidelines used for designing management goals.

Response: Adaptive management is an important land use planning and management theme. Many of the Science Panel recommendations point to the need for a long-term program of data collection, monitoring, and research. In the meantime BLM has confidence that the proposed conservation approach and specific decisions are well-based in the array of data and various analyses and models as well as our characterization of current levels of uses. BLM will consider publishing its information and science basis. In addition BLM has a cooperative agreement with the University of California at Riverside to share the information and science for peer review and teaching purposes.

PC 40: The Final EIS should incorporate all CDCA lawsuit settlement conservation measures.

Response: The cooperating agencies stand behind the ecosystem and science basis, analysis of effects, and decisions contained in the proposed plan. Further sweeping sets of restrictions would not meet the Purpose and Need sections described in Chapter 1.

PC 52: The BLM should address how the CDCA Plan Amendment will incorporate potentially conflicting mandates among agencies involved in planning.

Response: The BLM has collaborated with other agencies in the development of this plan amendment. Although the basic mandates and missions of other agencies may differ, valuable information and perspective was gained by the BLM in the collaborative planning process. In addition, the BLM administers the lands in the planning area under various laws such as the Endangered Species Act, the Clean Air Act, and the Federal Land Policy Management Act. All of the applicable laws and regulations regarding the management of the public lands and resources as well as the information and perspective gained from various agencies were carefully considered in development and analysis of the alternatives.

PC 55: The Final EIS should not include additional land use restrictions within the Preferred Alternative.

Response: The land use planning process is participated in by a number of local, state, and federal agencies, a number of interest groups, and many individuals--including all the members of the public who have commented on the DEIS. This broad level of public participation ensures the greatest consideration of points of view. Because much of the planning area is already managed under restriction measures, it was considered important to minimize the imposing of any further restriction measures.

PC 61: The Final EIS should include a Travel Plan Alternative that supports motorized recreation.

Response: Management prescriptions that focus on motorized-vehicle access address only one element of a multi-faceted, complex ecosystem approach for the protection and enhancement, where appropriate, of special status species and their habitats on public lands. An alternative that focuses solely on motorized-vehicle access and development of a "travel plan" as suggested does not address other issues identified by the BLM, other agencies, and the public, such as the management of domestic livestock, the management of wild horses and burros, and the adjustment of land tenure, all of which pertain to the purpose and need for amending the California Desert Conservation Area Plan (see Sec. 1.1, Purpose, Need and Scope). A "travel plan alternative" is not a separate and distinct alternative outside the array of alternatives presented in the Draft NECO Plan/EIS, and is not an alternative that is fully responsive to the stated purpose and need. Hence, such an alternative does not require evaluation in accordance with the National Environmental Policy Act (NEPA).

The NECO Plan alternatives present various route networks consistent with application of the designation criteria at 43 CFR 8342.1 that, in part, require trails be located to minimize harassment of wildlife or significant disruption of wildlife habitat with special attention given to protect endangered or threatened species and their habitats (see Sec. 3.9, Off-Highway Vehicle use/Motorized-Vehicle Access). A reasonable, prudent, and practicable alternative is one that fully addresses the purpose and need identified for the NECO Plan and resolves issues (see Chapter 1, Introduction). An alternative that allows use of all "existing" routes of travel within the NECO Planning Area (see Sec. 3.9 for a definition of "existing" routes), including washes with a history of prior use, fails to prescribe actions that minimize harassment of special status species or significant disruption of their habitats, and does not give special attention to the threatened desert tortoise as required by the regulations. The biological parameters relative to routes of travel designations are incorporated by each alternative, including the No Action Alternative, as necessary to conform to regulatory requirements (see Table 2-11 of Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation, for a summary of the biological parameters).

PC 64: The BLM should consult with the Environmental Protection Agency prior to releasing the Final EIS, if the Preferred Alternative changes.

Response: The Preferred Alternative has several minor changes. EPA has been consulted on the FEIS.

PC 197: The programmatic consultation for projects affecting desert tortoise will only provide a milkvetch biological opinion from USFWS and not a comparable State endangered species permit from CDFG.

Response: The California Endangered Species Act (CESA) allows the Department to adopt the milkvetch biological opinion to meet its requirements. It will be up to the Department to evaluate projects on a case-by-case basis to determine whether the milkvetch (programmatic) biological opinion for desert tortoise is adequate. If the Department determines that the programmatic is not adequate, a separate CESA permit must be obtained.

PC 203: The CDCA Plan Amendment should include a thorough list of special status animals.

Response: The list of species addressed was based on the records available in the planning process and was developed by the biological team. The list was reviewed over the course of many years by agencies and concerned citizens involved in the interest group committee.

PC 279: The BLM should give preference to enhancing threatened and endangered species populations over game species populations.

Response: BLM does not give preference to game species over conservation of threatened/endangered species. In Chapter 2 the goals and objectives for the desert tortoise, as well as for all the special status species, clearly indicate the need for healthy populations. In some cases to achieve this, certainly for the desert tortoise, population increases are necessary. Enjoyment of species and habitats for recreation purposes is secondary to conservation. However, on BLM-managed milkvetch lands conservation does not imply preservation in all locations. Central to the challenge of BLM's multiple use management mandate is allowing many human uses needs on the land and at the same time assuring the conservation of native species and the habitats and ecological processes upon which they depend.

PC 325: The BLM should coordinate with the National Park Service regarding motor access routes into the Mojave National Preserve.

Response: This situation does not apply to NECO as I-40 lies between NECO and the Mojave National Preserve.

PC 336: The BLM should revise criteria for road closures.

Response: Criteria relative to the NECO route designation process are described in Section 2.5 (Motorized-Vehicle Access/Routes of Travel Designations/Recreation). In furtherance of the regulatory route designation criteria at 43 CFR 8342.1, biological parameters to protect certain species of concern were established (see Sec. 2.2, Recovery of the Desert Tortoise, and Sec. 2.3, Management of Special Status Animals and Plants and Natural Communities). These "biological parameters" are derived from life histories and species accounts for special status wildlife species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4, Biological Resources, and Appendix N, Wildlife History and Wildlife/Plant Tables). Where no such relationships are supported

by existing studies, limitations on motorized-vehicle use to protect special status species and their habitats are not proposed.

An additional criterion for closure of routes relates to route condition, i.e., where routes were declared to be "non-routes" at the time of the inventory (April 1996 and thereafter), such routes are not available for use and are designated "closed" (see Sec. 2.5 for a definition of "non-routes").

PC 337: The Final EIS should disclose the criteria for determining which roads are redundant.

Response: A redundant route is defined in Section 2.5 (Motorized-Vehicle Access/Routes of Travel Designations/Recreation) as one whose purpose is apparently the same or very similar to that of another route, inclusive of providing the same or very similar recreation opportunities or experiences. Section 2.5 also states that identifying redundant routes requires that judgments be made relative to the uses and purposes of certain routes. A route may be considered redundant based on proximity to another route despite a lack of knowledge about its use and purpose. Whether it is recommended for closure may then be dependent on its apparent use and purpose, its contribution to maintenance of a viable route network, its proximity to navigable washes in an "open" wash zone, and/or the potential for management of the route as "closed."

PC 341: The BLM should limit road closures to one percent of the CDCA planning area.

Response: The individual submitting the comment does not clarify whether the one percent limit should be applicable to the overall number of routes or the cumulative mileage of routes. Nevertheless, limiting route closures to one percent of the existing route network, whether in the NECO Planning Area in particular or the California Desert Conservation Area as a whole, constrains the application of route designation criteria at 43 CFR 8342.1. For example, if a certain number or mileage of routes is closed to minimize harassment of wildlife or significant disruption of wildlife habitats (8342.1(b)) and the one percent closure limit is reached, no additional closures could occur upon adoption of such limit even if more closures are warranted in accordance with the regulatory route designation criteria. Failure to apply these criteria to all routes, regardless of the cumulative closures that might result from such application, is inconsistent with regulatory requirements and identified planning criteria. Planning criteria include all applicable milkvetch laws, regulations, executive orders, policies, and applicable portions of existing land use plans that the cooperating agencies are required to follow (see Sec. 1.5, Planning Issues and Criteria).

PC 348: The CDCA Plan Amendment should establish a standard that roads in the CDCA planning area are closed unless posted open.

Response: The individual submitting the comment takes exception to BLM's proposal that routes be designated "open" unless specifically closed (referencing Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation), instead suggesting the converse be adopted whereupon routes would be considered closed unless specifically designated "open" through the planning process. This individual additionally suggests the adoption of a signing strategy whereupon any route not posted "open" is to be considered closed.

The proposal to designate all routes on public lands as "open" with exceptions as specified in Section 2.5.2 does not negate application of the route designation criteria at 43 CFR 8342.1 (which codified Executive

Orders 11644 (87 F.R. 2877) and 11989 (42 F.R. 26959), see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). The exceptions as described for closure of routes are based on biological parameters and other measures to protect resource values (see Sec. 2.5). These measures were developed through the NECO planning process in furtherance of the regulatory route designation criteria. The designation of routes as "open" under the Proposed Plan is based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and minimization of conflicts among various uses of the public lands, and in accordance with the regulatory criteria (see Sec. 3.9). Use of "existing routes" in Multiple-Use Class M and I areas in accordance with the California Desert Conservation Area Plan (No Action Alternative) is not allowed under the Proposed Plan; that is, no routes are available for motorized-vehicle use unless designated "open" as specifically required by Executive Order 11989.

Relative to implementing route designation decisions, the installation of signs is but one element of an implementation strategy identified under the Proposed Plan (see Sec. 2.5.2). Routes comprising a basic recreational access network will be individually signed in such a way as to signify their availability for use. Closed routes will be appropriately signed, barricaded, or rehabilitated as necessary to exclude general public access. Routes that are not included in the basic recreational access network but are available for use will not be signed. This strategy represents a balanced approach between effective communication of route designation decisions to motorized-vehicle users and long-term maintenance requirements associated with the installation of signs. Particular attention was paid to the number of signs that would be necessary under various sign installation scenarios (e.g., "routes signed open strategy," "routes signed closed strategy," or some combination thereof).

PC 349: The Final EIS should present a clear definition of "road."

Response: The definition of an "existing" route in the context of motorized-vehicle access was established in the California Desert Conservation Area (CDCA) Plan and reiterated in Section 3.9 (Off-Highway Vehicle Use/Motorized-Vehicle Access) of the Draft NECO Plan/EIS. An existing route is one established before approval of the Desert Plan in 1980, with a minimum width of two feet, showing significant surface evidence of prior vehicle use or, for washes, history of prior use. The term "wash" is defined as a watercourse, either dry or with running or standing water, which by its physical nature (width, soil, slope, topography, vegetative cover, etc.) permits the passage of motorized vehicles (Appendix VI, CDCA Plan).

The Proposed Plan further identify the term "non-route" as used in the context of motorized-vehicle access (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Non-routes are previously-existing routes that have been substantially reclaimed by the forces of nature. These routes by virtue of their condition are identified for closure.

PC 352: To help in making route closure decisions, the BLM should assign "beneficial use" designations to travel routes proposed for retention.

Response: The individual submitting the comment suggests that "beneficial use" designations (e.g., through-travel, hunting access, access to a specific area or natural resource, etc.) assigned to each route would be useful in determining whether additional existing routes are redundant and could be closed. Section 2.5 (Motorized Vehicle Access/Routes of Travel Designations/Recreation) of the Draft NECO Plan/EIS defines a redundant route as one whose purpose is apparently the same or very similar to that of another route,

inclusive of providing the same or very similar recreation opportunities or experiences. Further, it is stated that identifying redundant routes requires that judgments be made relative to the uses and purposes of certain routes. A route may be considered redundant based on proximity to another route despite any knowledge about its use and purpose. Whether it is recommended for closure as a redundant route may then be dependent on its apparent use and purpose, its contribution to maintenance of a viable route network, its proximity to navigable washes in a "washes open zone," and/or the potential for management of the route as "closed."

Since judgment is usually required in ascertaining a route's redundancy (e.g., determining the recreational value of one route relative to a near-by route is a process subject to a host of variables that have differing degrees of importance to different individuals), the presence or absence of resource values that would be adversely affected should the route remain available for motorized-vehicle use is an important consideration in making a recommendation about its designation as "open" or "closed." In the final decision-making process, the designation of any route as "open" must be in accordance with the regulatory route designation criteria at 43 CFR 8342.1 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). In furtherance of these criteria, the Proposed Plan establish that closure of redundant routes shall be strongly considered to protect and enhance habitat for special status species (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities). Upon application of the regulatory and NECO Plan-specific criteria and a determination that the criteria have been met in designating a particular route "open" that some individuals might consider as redundant, then justification for recommending its closure simply because of its perceived redundancy may be inappropriate. The public review process in this regard, therefore, assists the agency in determining if its assertions of redundancy are accurate.

Planning Process--Implementation, Monitoring, Adaptive Management

PC 42: The BLM should ensure that it has the funding and resources to meet multiple-use mandates while protecting the environment.

PC 43: The CDCA Plan Amendment should clearly identify monitoring objectives and future actions for correcting plan implementation.

PC 44: The BLM should address the availability of funds to provide effective monitoring.

Response: BLM and other cooperating agencies have very limited funds with which to conduct monitoring tasks. At this time, however, there are some opportunities such as combined agencies' capability, costs, grant opportunities, and volunteers that may help. The long-term NECO group will further refine tasks and priorities from what is contained at this time in Chapter 5.

PC 63: The Final EIS should identify specific elements of other alternatives that will be considered as fallback options if management objectives are not being met.

Response: The CDCA Plan, including all amendments, will be periodically monitored and evaluated. Through the monitoring and evaluation process, the plan will be assessed to determine if there is significant cause for an amendment or revision of the plan. Evaluation includes a cumulative analysis of monitoring records with the broader purpose of determining if the plan's goals and objectives are being met or are likely to be met, and whether the goals and objectives were realistic and achievable in the first place. Evaluation

will also assess whether changed circumstances or new information has so altered the levels or methods of activities or the expected impacts that the environmental consequences of the plan are substantively different than those anticipated in the FEIS. If changes are warranted, such changes would be implemented through the BLM planning process and associated NEPA analysis. To anticipate such unknown changes and to predict the outcome of the response to the changes would be speculative and not pertinent to the actual legal process by which such changes must be addressed.

PC 206: The BLM should facilitate adaptive management strategies in DWMAs by developing and instituting a tracking system to tabulate development versus restoration on public lands.

Response: This commitment is identified in Chapter 6.

PC 290: The Final EIS should include an alternative to reopen areas that are proposed for closure.

Response: This comment assumes that the proposed DWMA and WHMA designations constitute area closures. This is not the case. However, people will not be allowed to drive just anywhere but must remain on open routes of travel. As for the proposed road closures, Ford Dry Lake and Rice Dunes OHV areas, or any other administrative closure: closures can be reversed at any time in the future with justification and through the adaptive management aspect of land use planning.

PC 291: The BLM should ensure recreation access to public lands in spite of private inholdings.

Response: Generally, motorized-vehicle access in the NECO Planning Area has not been constrained across private lands by the respective landowners. Upon assertion of rights by private landowners to restrict access across their lands, the BLM will address the issue of public access to public lands on a case-by-case basis.

PC 292: The Final EIS should define "reasonable" with regard to providing alternative recreation access.

Response: The analysis pertaining to the effects of restricting motorized-vehicle access under the Proposed Plan has been strengthened and use of the term "reasonable" has been stricken (see Sec. 4.2.8, Recreation Management). Map 2-32 depicts route designations under the Proposed Plan, and Appendix R enumerates all routes designated "open," "limited," and "closed," except for wash routes not individually captured in the route inventory but designated either "open" or "closed" as a class in "washes open zones" and "washes closed zones" respectively. These zones in Desert Wildlife Management Areas (DWMAs) are depicted on Map 2-10. Public lands outside DWMAs occur within "washes open zones" (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Maps at the 1:24,000 scale depicting routes and their designations under the Proposed Plan are available for review at BLM offices in Riverside, Needles, Palm Springs, and El Centro, California.

PC 326: The BLM should ensure adequate trail signing and maintenance along travel routes.

Response: Under the Proposed Plan, implementation of route designation decisions includes the signing of routes comprising a basic recreational access network in such a way as to signify their availability for use, installation of informational kiosks at key locations throughout the NECO Planning Area, and distribution

of printed media (e.g., maps, brochures, etc.) regarding motorized recreation opportunities (see Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation).

Where maintenance has been necessary to facilitate continued use of primary access routes (e.g. Government Pass Road, route 660704), the BLM has occasionally repaired these routes to their previous condition. However, such maintenance actions by the BLM are generally not required in the NECO Planning Area given the general lack of rainfall and overall low levels of use. If it is determined that funds are insufficient to accomplish maintenance actions as desired and necessary, opportunities to pursue contributed grant funds through the State of California's Department of Parks and Recreation, Division of Off-Highway Motor Vehicle Recreation, are available with support of key public interest groups.

PC 409: The BLM should develop a plan to use OHV gas tax monies to support OHV recreation and motorized vehicle impact mitigation.

Response: The Off-Highway Motor Vehicle Recreation Act of 1988 (State of California) enables the allocation of grant funds for the purpose of establishing, maintaining, managing, and rehabilitating off-highway vehicle (OHV) recreation areas, trails, and facilities in California. Grants are available for acquisition, development, planning, operation, maintenance, and resource management. Funding must be used for areas or trails that were, will be, may be, or are currently dedicated for legal off-highway vehicle use. Funds for this program are derived from a biennial fee paid for the registration of off-highway vehicles, from a portion of fuel taxes paid by all vehicles used off-highway for recreation, and from fees collected and income from special events at State Vehicular Recreation Areas. All funds are deposited in the Off-Highway Vehicle Trust Fund administered by the Off-Highway Motor Vehicle Recreation Division of the California Department of Parks and Recreation.

On an annual basis, with involvement from OHV users and non-OHV users of the public lands, the BLM identifies projects to support OHV recreation and mitigate motorized-vehicle impacts. In most cases, such projects do not require an amendment to the applicable land use plan, except where changes in land use allocations require an amendment (e.g., designation of a new off-highway vehicle recreation area on public lands). Applications for funds to support such projects are then made through the Off-Highway Vehicle Grants Program ("green sticker" program). Upon approval of the funds, projects are undertaken.

NEPA Compliance

PC 22: The BLM should use an independent scientific panel for objective assessments.

Response: The idea of independent science review is good. Two such reviews were conducted during the planning process with reports printed in Appendix I. One long-term commitment made in NECO is annual meetings of cooperators to advance the cooperative approach to plan implementation. This group might well consider continuing the role of independent science involvement.

PC 28: The Final EIS should clearly articulate the BLM's intentions and expected outcomes for the proposed amendment.
PC 45: The BLM should clearly articulate the goals of the CDCA Plan Amendment and ensure it is consistently implemented in the future.

Response: The plan is detailed and complicated. The introduction to Chapter 2 and the introductions to each to the eight issue sections of Chapter 2 contain a vision statement and goals and objectives on which all proposed decisions are based. In addition, considerable thought was given to the wording of proposed decisions as well as Chapter 4 affects analysis to make the document be as clear as possible. Because of the array of public comments received, BLM has paid additional attention to further improvements in wording and analysis.

PC 29: The BLM should base the Final EIS upon the best available science.

Response: The managers and resource professionals involved in the EIS for this plan amendment used the best science that was reasonably available. The EIS contains a substantial number of citations and referenced literature to provide the public with information about the science on which analysis was based. Notwithstanding the science used in the EIS, it is acknowledged that a great deal of professional judgment was relied upon in assessing the effects of the alternatives. This reliance is not a flaw because (1) the judgments are generally well informed given the data upon which they are based (2) the judgments are of experienced resource professionals with educational credentials and years of on-the-ground experience, and (3) a degree of professional technical judgment is inevitable in evaluations and predictions based on the available science and is primarily relied upon in conducting the assessments of effects of this FEIS.

PC 30: The BLM should re-issue a revised Draft EIS that provides adequate environmental impact analysis, and complies with relevant statutory requirements.
PC 46: The BLM should prepare a new Draft EIS in compliance with federal regulations.
PC 48: The BLM should verify that the ongoing planning process is in accordance with the Federal Land Policy and Management Act.
PC 142: The Final EIS should include supporting data for the conclusion that OHV use negatively impacts water sources.
PC 143: The Final EIS should include supporting data for the conclusion that OHV use negatively impacts soil.
PC 144: The Final EIS should include supporting data for the conclusion that Areas of Critical Environmental Concern improve air quality.
PC 147: The Final EIS should include more extensive data on air quality conditions and contributing factors within the NECO Planning Area.

Response: The BLM has followed all procedural steps required by law and regulation. Changes made between the Draft EIS and Final EIS, which result from both public comments and internal agencies' reviews, strengthened the document by the addition of information, facts, scientific and technical evidence, and logic to support conclusions regarding impact analysis of the alternatives.

PC 32: The Final EIS should identify the standards and criteria used to make plan amendment decisions.

Response: The basis of making the decision of what will constitute the Approved Resource Management Plan in the Record of Decision will be a judgment by the responsible official as to which alternative best meets the stated Purpose and Need of the FEIS. The Purpose and Need are described and explained in detail in Chapter One. In making this determination, the responsible official will use the information in Chapter Four that provides an analysis of environmental effects of the alternatives.

PC 34: The Final EIS should provide data supporting the causal link between resource management goals, impediments to those goals, and the restrictions on uses.
PC 85: The CDCA Plan Amendment should address serious threats to the physical and biological well-being of the plants and animal species which inhabit NECO, and restrict public access to limit impact.
PC 205: The BLM should reevaluate its use of road closures and other vehicle restrictions as a tool for protecting sensitive, threatened and endangered species.
PC 246: The BLM should prove that vehicle mortality and illegal collection harms the desert tortoise.
PC 249: The BLM should protect desert tortoise habitat by requiring construction right of ways be shared with construction corridors and access roads.
PC 289: The BLM should substantiate the claim that it is necessary to limit recreation access.

Response: Chapter 2--Alternatives presents the goals and objectives for each issue and the measures to address them. Very few of the measures involve restrictions on public use. Data supporting some restrictions are given in Chapter 4--Environmental Consequences, usually in the No Action Alternative. Various other supporting documents, such as the *Desert Tortoise Recovery Plan*, describe impacts of various activities on that species and cite extensive literature.

PC 35: The BLM should conduct a cumulative impact analysis of other projects on the NECO Planning Area.
PC 145: The Final EIS should evaluate the cumulative air quality impacts caused by the transportation of garbage across BLM land.

Response: The FEIS contains cumulative impact analysis. This cumulative impact analysis, because of the broad landscape nature of the Proposed Plan and the millions of acres involved in the region surrounding the planning area, must by necessity be somewhat general in nature. The FEIS cumulative effects analysis addresses the incremental impacts of the Proposed Plan when added to other past, present, and reasonably foreseeable future actions.

PC 36: The BLM should coordinate NECO planning and implementation with related plans to ensure consistency.
PC 37: The BLM should evaluate the Preferred Alternative's impacts on existing land-use plans to ensure consistency with objectives of regional, state, and local land-use plans.

Response: From these and other public comments, BLM has made considerable improvements to Chapter 4 effects analysis and other subjects. Regarding cumulative affects and agency-agency conflicts, the reader

should keep in mind that the fundamental nature of cooperative planning brings the mandates, plans, and project actions of many agencies into a more synchronous nature than ever has been the case in the past with single-agency planning. Considerable coordination of planning processes has also occurred among adjacent plans, as well as on a California Desert-BLM basis, given the fact that each plan is a plan amendment to the 1980 CDCA Plan. On the other hand, each plan's approach to the desert tortoise and many species are also unique in that they are tied to the unique qualities of place and combinations of uses. In the case of DWMAs, a "stand alone" management is required. Some actions are plan amendments; these are reviewed in a table in the introduction to Chapter 2. Others are prescriptions to ACEC plans for desert tortoise and other species.

PC 38: The BLM should integrate NEMO, NECO, and WEMO planning documents into one California Desert Conservation Area Plan Revision.
PC 47: The BLM should initiate one amendment for all California Desert Conservation Area planning units.

Response: NECO and other planning efforts currently being developed each amend the 1980 CDCA Plan. The nature of values and levels of uses throughout the CDCA vary and do not necessarily invalidate separate plan amendments. However, separate plan amendment decisions are being scrutinized to ensure that they are the same as, or are consistent with, common CDCA Plan themes and programs and that cumulating impacts analyses consider the CDCA as a whole. At the conclusion of these plan amendments, there will still be the one CDCA Plan.

PC 56: The BLM should draft and implement an alternative that includes all provisions of the *Desert Tortoise Recovery Plan*.
PC 57: The Final EIS should include an alternative drafted with ecosystem preservation as the guiding principle.
PC 59: The Final EIS should include a clear statement of the BLM's project objectives and a wider range of alternatives.
PC 62: The Final EIS should include a section listing alternatives that were considered but eliminated from further consideration.

Response: In response to these concerns, BLM has modified the introduction to Chapter 2. In addition, for each of the eight issue subjects in Chapter 2, a set of goals and objectives was developed. Goals and objectives for the full set of recreation and other major elements of public lands management in the California Desert are described in the 1980 CDCA Plan.

PC 70: The Final EIS should incorporate a cumulative impact analysis of the Eagle Mountain Landfill, superceding the project-level EIS.

Response: A cumulative impact analysis is included in the EIS for the Eagle Mountain Landfill. NECO also contains a cumulative impact analysis that is general to the entire CDCA.

PC 89: The BLM should acknowledge impacts to the desert due to drought conditions and natural occurrences rather than human related impacts.

Response: The *Desert Tortoise Recovery Plan* (USFWS 1994, p. 3) discusses reasons for decline in desert tortoise populations. It states, "The most serious problem facing the remaining desert tortoise populations in the Mojave region . . . is the cumulative load of human and disease-related mortality accompanied by habitat destruction, degradation, and fragmentation. Virtually every extant desert tortoise population has been affected by one or more of these factors. While the recent drought undoubtedly exacerbated already difficult conditions for desert tortoises, current population declines are not simply the result of drought. Drought is a natural occurrence which desert tortoises have experienced and survived for thousands of years (VanDevender et al. 1987)." Notwithstanding this, the discussion of environmental consequences in Chapter 4 of the EIS is intended to discuss impacts of the alternatives presented.

PC 191: The Final EIS should evaluate closing the desert to grazing to preserve vegetation.

Response: This proposal was not considered and evaluated in the NECO Plan because it is beyond the scope of the Proposed Plan as defined by the purpose and need of the DEIS.

PC 294: The BLM should use objective evidence to support land use decisions.
PC 299: The BLM should conduct local surveys of actual recreation use in the CDCA.

Response: The NECO Plan points to anecdotal evidence from BLM staff regarding levels of motorized-vehicle use in general throughout the planning area, and specifically as relates to Ford Dry Lake and Rice Valley Dunes. It further addresses use with such qualitative terms as "low," "little use," and "not frequently used" versus quantitative representations of vehicular activity (see Sec. 3.8, Recreation Management).

BLM staff who have provided information on levels of use include Law Enforcement Rangers, who routinely patrol public lands in the course of their duties, and other staff who observe activities on public lands during completion of their field assignments. Their observations indicate infrequent use of such areas as Ford Dry Lake and Rice Valley Dunes (i.e., use by fewer than ten individuals per week); often their observations indicate no use of these areas. These staff have also characterized overall levels of vehicular use of existing back country routes as low. Therefore, significant adverse impacts to motorized-vehicle access and, hence, opportunities for recreation consequent to closing Ford Dry Lake and Rice Valley Dunes to motorized vehicles, as well as closing a limited number of routes under the Proposed Plan, are not reasonably foreseen.

If incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the information must be included in the Environmental Impact Statement (40 CFR 1502.22(a)). "Reasonably foreseeable" includes impacts that have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason (40 CFR 1502.22(b)). Whereas significant adverse impacts to motorized-vehicle access or recreation are not reasonably foreseen under the Proposed Plan (a conclusion that is supported with the now-strengthened analysis in Section 4.2.8, Recreation Management), the best available information in making a reasoned choice among alternatives is sufficient. In this case, the best available

information consists of observations made by BLM staff that routinely patrol and conduct their work assignments on public lands.

PC 301: The BLM should consider equally the impacts from various recreational activities.

Response: Due to the remoteness and size of the NECO Planning Area in particular and the California desert in general, visitors use motorized vehicles to engage in most desert recreational activities, whether as the primary recreational activity (e.g., vehicle touring) or for transit to recreation destinations (e.g., designated wilderness areas). Hence, the impacts from vehicle use, whether legally traveling on existing routes or traveling cross-country where not allowed, have been the primary focus of attention relative to recovery of the desert tortoise and protection of other special status species and their habitats. To date, impacts from non-motorized activities, such as a proliferation of trails created by hikers, equestrians, and mountain bicyclists, have not been identified, although illegal activities facilitated by motorized-vehicle access, such as the shooting of desert tortoises, have occurred (see Sec. 4.1.4.1, Wildlife Management).

PC 302: The Final EIS should evaluate impacts to desert resources resulting from proposed dispersed recreation limits.

Response: Some individuals commenting on the Draft NECO Plan/EIS anticipate that closure of certain routes and areas will shunt existing dispersed motorized-vehicle use onto fewer routes and, where existing use of off-highway vehicle recreation areas (open areas) is further constrained, use will be concentrated in smaller areas. Further, it is suggested that such shifts in use will result in impacts to resource values, and comment that the effects of such shifts have not been evaluated.

Under the Proposed Plan, the extent of route closures is minor (see Sec. 4.2.8, Recreation Management). Further, the overall level of motorized-vehicle use in the NECO Planning Area is considered to be low (see Sec. 3.8, Recreation Management). Previous levels of use on routes to be closed under the Proposed Plan are not known, but considered to be low consistent with the characterization of the overall use level. Whether the limited number of vehicles that previously used the closed routes will instead use the remaining open routes is unknown, but such a shift is reasonable to expect. However, shunting low levels of use from a small proportion of routes to the abundance of remaining routes that likewise receive low levels of use is not anticipated to affect resource values, whether recreational, natural, or cultural.

Relative to the closure of Ford Dry Lake and Rice Valley Dunes to motorized vehicles, no other off-highway vehicle recreation areas exist within the NECO Planning Area. Hence, there would be no shift of open, free-play motorized activities to other regions of the planning area. In a broader perspective, shifts of the low levels of use at these two sites to other existing open areas elsewhere would likely be imperceptible (BLM Law Enforcement Rangers report that on average less than ten individuals per week use the Ford Dry Lake and Rice Valley Dunes areas, pers. comm.). Conversely, as reported by BLM staff (pers. comm.), the recent closure of a portion of the Imperial Sand Dunes Recreation Area (outside the NECO Planning Area) to motorized-vehicle use has not led to perceptible increases in use of the Ford Dry Lake and Rice Valley Dunes areas, likely a consequence of the different, and generally less attractive, opportunities offered at the two sites. Whereas the Imperial Sand Dunes is comprised of predominantly barren and towering expanses of sand dunes (a unique land form in the California desert that offers unusual opportunities for motorized recreation), Ford Dry Lake is a relatively small playa with no topographic relief and the Rice Valley Dunes area is a low-lying

dune system interspersed with hummocks of vegetation that constrain free-play activity to some degree. There is no evidence to suggest that the two off-highway vehicle recreation areas within the NECO Planning Area constitute attractive substitutes for displaced motorized recreationists.

PC 303: The Final EIS should analyze statewide cumulative recreation impacts resulting from proposed management activities.
PC 304: The Final EIS should provide discussion of current trends regarding the reduction of motorized recreation opportunities on public lands.
PC 305: The Final EIS should provide analysis of public demand for motorized recreation.
PC 306: The Final EIS should include an analysis of cumulative impacts to motorized recreation.
PC 307: The Final EIS should analyze cumulative impacts associated with loss of motorized cross-country travel opportunities.
PC 308: The Final EIS should address the cumulative effect of closing routes within a loop trail system.

Response: An analysis addressing cumulative impacts to recreation on a statewide basis is beyond the scope of the NECO Plan. The scope of cumulative impacts analyses to recreation in the context of the NECO Plan is limited to the California Desert Conservation Area. These impacts are described in the cumulative effects section at the end of Chapter 4.

Except in areas designated "open" to motorized vehicles in accordance with the California Desert Conservation Area (CDCA) Plan and the regulations at 43 CFR 8342.1, motorized cross-country travel is prohibited throughout the CDCA . Hence, the Proposed Plan do not result in loss of such opportunities except with regards to closure of the Ford Dry Lake and Rice Valley Dunes Off-Highway Vehicle Recreation Areas wherein motorized free-play activities approved through the CDCA Plan would no longer be allowed. The effects of these closures are described in Section 4.2.8 (Recreation Management). Cumulative impacts associated with increasing limitations imposed over time on recreational activities that rely on the use of motorized vehicles are addressed in the cumulative effects section at the end of Chapter 4.

Connectivity of routes providing loop opportunities was addressed in the Draft NECO Plan/EIS (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Two new routes (totaling about 3-4 miles) to enhance motorized-vehicle touring opportunities on the east side of the Turtle Mountains are identified under the Proposed Plan (see Sec. 2.5). No closures of routes comprising known loop systems occur under these Amendments. Some routes that were once components of loop systems were closed in areas designated as wilderness upon passage of the California Desert Protection Act of 1994 (Public Law 103-433).

PC 309: The Final EIS should include a detailed description of the preferred alternative's impacts on OHV recreation.

Response: The analysis addressing impacts to motorized-vehicle recreation under the Proposed Plan is found in Section 4.2.8 (Recreation Management). This analysis has been strengthened for the Final Environmental Impact Statement.

PC 310: The Final EIS should contain an analysis that compares the number of miles and acres available for non-motorized recreation versus the number of miles of roads and trails available for motorized recreation.

Response: Motorized and non-motorized recreation conflicts were not identified as significant enough to be addressed in the planning process.

PC 311: The Final EIS should describe off-road vehicle impacts resulting from designating the Chemehuevi and Chuckwalla Desert Wildlife Management Areas as areas of critical environmental concern.

Response: Designating Desert Wildlife Management Areas (DWMAs) as Areas of Critical Environmental Concern (ACECs), in and of itself, results in no direct impacts to motorized recreation. The Federal Land Policy and Management Act of 1976 (Public Law 94-579) defines ACECs as "areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards" (Sec. 103(a)).

As recognized in the California Desert Conservation Area Plan, ACEC designation "is a process for determining what special management certain important environmental resources or hazards require, and making a commitment to provide this management" (Chapter 4). Such special management actions that provide for recovery of the desert tortoise and protect special status species and their habitats within DWMAs are identified in the Proposed Plan, and it is these actions that potentially affect opportunities for recreation. These actions, in part, pertain to the use of motorized-vehicles in washes (see Sec. 2.2.2, Recovery of the Desert Tortoise); to parking, stopping, and vehicle camping along approved routes of travel in DWMAs (see Sec. 2.2.2); and to the closure of routes proximal to significant bat roosts, prairie falcon or golden eagle eyries, known occurrences of Couch's spadefoot toad, and natural or artificial water sources (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities). The effects of these actions on motorized recreation are addressed in Chapter 4 (see Sec. 4.2.8, Recreation Management). This analysis has been strengthened for the Final Environmental Impact Statement.

PC 312: The Final EIS should describe off-road vehicle impacts resulting from redesignating all Multiple-Use Class M lands within the proposed desert wildlife management areas to Multiple-Use Class L.

PC 313: The BLM should re-examine the claim that OHV use in Rice Valley Dunes and Ford Dry Lake "will continue to be very low, or non-existent."

Response: As reported by BLM staff, the recent closure of a portion of the Imperial Sand Dunes Recreation Area (outside the NECO Planning Area) or other similar areas in the region to motorized-vehicle use has not led to perceptible increases in use of the Ford Dry Lake and Rice Valley Dunes areas, likely a consequence of the different, and generally less attractive, opportunities offered at the two sites. Whereas the Imperial Sand Dunes is comprised of predominantly barren and towering expanses of sand dunes (a unique land form in the California desert that offers unusual opportunities for motorized recreation), Ford Dry Lake is a relatively small playa with no topographic relief and the Rice Valley Dunes area is a low-lying dune system

interspersed with hummocks of vegetation that constrain free-play activity to some degree. There is no evidence to suggest that the two off-highway vehicle recreation areas within the NECO Planning Area constitute attractive substitutes for displaced motorized recreationists.

PC 314: The Final EIS should clarify the information regarding free play areas.

Response: Information pertaining to selection of motorized-vehicle free-play areas as accomplished through the California Desert Conservation Area (CDCA) Plan, including criteria for evaluating such areas, is found in Appendix V (Recreation) of the CDCA Plan. As stated in Section 3.8 (Recreation Management) of the Draft NECO Plan/EIS, thirty-three potential free-play areas were evaluated for designation. These areas occur throughout the CDCA and not solely within the NECO Planning Area. Only two areas within the NECO Planning Area were ultimately approved as off-highway vehicle recreation areas: Ford Dry Lake and Rice Valley Dunes. Although the CDCA Plan is referenced in Section 3.8 (Recreation Management) and included in the "References" section of the Draft NECO Plan/EIS, specifically citing Appendix V of the CDCA Plan would have clearly directed the reader to the source of the information provided, therein facilitating a better understanding of circumstances relative to the designation of free-play areas.

The CDCA Plan was designed to provide a guide for management over a long-term period. In order to do this, an amendment process was provided to permit changes in the face of unanticipated demands or response to future events that, in 1980 when the Plan was developed, could not have been foreseen. Since development of the CDCA Plan, resource conditions have changed. The Proposed Plan respond to these changes, including actions that change the designation and use of Ford Dry Lake and Rice Valley Dunes Off-Highway Vehicle Recreation Areas.

PC 324: The BLM should not use noise from motorized vehicles as a reason to limit motorized activities.

Response: Noise was not an issue and not included as a criterion developed for the NECO Planning Area routes designations**.**

PC 328: The BLM should not eliminate the Parker 400 Race Course.
PC 329: The Final EIS should provide an expanded analysis regarding the closure of the Parker 400 Race Course.

Response: Nearly 75 percent of the Parker 400 lies in desert tortoise critical habitat. Several years ago the USFWS recommended that the course should be moved out of critical habitat, implying that the event could received a jeopardy opinion. The Proposed Plan proposes that no competitive events occur in DWMAs, which necessitates elimination of this specific event. The rationale is that the nature of how the event is run, including the location and size of spectator and pit areas, creates habitat disturbances which conflict with the conservation emphasis for DWMAs.

PC 330: The Final EIS should provide more detailed information regarding sensitive resources along race routes and impacts.

Response: Biological resources are shown on maps 2-2 and 3-3 through 3-7d in Appendix A. In addition maps H-1 through H-4 show analyses based on the totality of species (e.g., plant and animal species richness). The resources present along the Johnson to Parker and Parker 400 race routes are described in a more site-specific basis in the EIS for that event.

Following is a discussion on impacts with an emphasis on some results from the Barstow-Las Vegas (B-to-V) Motorcycle Race:

Vegetation: The *FEIS for the Proposed Barstow-Las Vegas Motorcycle Race* (BLM 1974) described impacts on vegetation of the Barstow-to-Las Vegas Motorcycle Race. The document referred to field studies that listed the impacts on vegetation as (a) reduction in shrub density, (b) reduction in shrub diversity, (c) reduction in annual plant germination and flowering, (d) reduction in annual plant diversity, and (e) increase in noxious weeds. Through repeated use, competitive event courses substantially widen as a result of racers straying from the course (BLM 1990). Hall (1980) reviewed the effects of off-road vehicle travel on vegetation. The mechanisms for vegetation change are direct impacts, such as crushing of individual plants, and indirect impacts, such as compaction and movement of soil, promotion of weedy species through surface disturbance, soil erosion after loss of soil-holding cryptogamic crusts, loss of seeds in the soil, and reduction of soil moisture through compaction. Adams and Endo (1980) examined aerial photos and 26 sample plots after the 1974 Barstow-Las Vegas race in the area of impact. They found that 40 percent of the ground was covered by tracks, and the area of disturbance had increased by 31 percent that year.

Impacts of racing would be greatest at start and pit areas where there were many spectators and support personnel in vehicles. However, spectators are often widely dispersed along the course. Their driving of four-wheel and two-wheel vehicles off of the authorized route network would result in disturbance of vegetation over a wider area. Based on past races, it is likely that many riders would visit the race area and practice on the course in the weeks before a race; event stipulations to limit cross-country travel would not be enforced at this time (BLM 1990).

In particular, based on monitoring after the 1989 Barstow to Las Vegas Event, in areas outside desert tortoise habitat where the permitted course width was 100 feet, straying and course widening occurred. For example, the course width in the area to the west of a pit area was measured at 260 feet and near Solomon's Knob several transects noted race vehicle tracks over 90 feet outside the permitted course width.

The route in sections 6, 7, and 18 in T15N, R10E is marked on an existing road that is 7-9 feet wide. Much of this road, especially south of the Wander Mine, has numerous large corrugations, which appear to have caused departure of vehicles from the roadbed. In section 6, the zone of principal impact was locally widened to 40 feet. There is evidence of substantial motorcycle and 3-wheel ATV play off the road in all directions around the road junction at the Wander Mine, causing substantial shrub damage and road braiding.

As a result of shortcutting and overrunning in washes, the 1989 event caused extensive damage to vegetation and breakdown of wash banks. There is extensive tracking by motorcycles, 3- and 4-wheel ATVs, and 4-wheel vehicles outside the shallow borrow pit in which Pit 2 is located, especially on the east side. The tracks

occur in the well-vegetated wash adjacent to the two small rock outcrops on the east side of the road, on the steep 6-10 feet high wash banks, and on the terrace above the wash. Motorcycles climbing the wash bank cut slots up to 8 inches wide and 10 inches deep. Individual motorcycle tracks average 8.8 inches wide and 1.5 inches deep, which is equivalent to 1 acre of surface disturbance per 11.3 miles of travel, and about 24 short tons of soil displacement per mile (soil density assumed to be 1.6 gm/cc).

Wildlife: Loss of forage, changes in forage species composition, and loss of cover from predators and weather would result from disturbance of vegetation. In addition, animals would be run over above ground or below ground in burrows. Soil compaction disrupts burrow suitability. In general, it can be expected that biodiversity would be reduced along race routes where vegetation and soil disturbances and changes occur.

Wildlife activities such as foraging would be disrupted by the noise and race activity. Disruptions would take place not only during the race event but also during pre-riding of the course as participants practice. The effects of disruption would be most important in the spring and summer when animals are breeding, nesting, and rearing young and are most closely restricted to a set territory. Displacement during these seasons could result in reproductive failure for that year. Although changes in behavior patterns and animal displacement could occur at any season, effects would be small in winter when most reptiles and small mammals are underground. Driving off of the traveled route would result in some of these animals being crushed or entombed in burrows.

Habitat degradation along off road portions of the course would reduce forage for herbivorous species, and could reduce local populations of species with relatively small home ranges such as kangaroo rats (*Dipodomys* spp.).

Effects on some special status species would be the most important. Among the species that occur along the race corridor are desert tortoise (probably in low densities where they occur), Mojave fringe-toed lizard (primarily on dunes and along playa edges), and LeConte's thrashers (primarily on flats, alluvial fans, and washes).

Although mitigation measures have been applied to other events, measures have mostly been ineffective due to poor compliance by participants and spectators. For example, in the 1989 B-to-V Race, racers impacted three of twelve burrows flagged in Nevada, but none of the flagged burrows in California (BLM 1990). There is also concern that, despite careful pre-race inspections, all burrows that are potentially at risk would not be discovered and flagged because several unflagged burrows were discovered during the 1989 post-race monitoring (BLM 1990). Howard Wilshire made the following observation: "Six possible tortoise burrows were observed, of which three appeared to be active; I made no special search for burrows. None of the burrows was marked and one burrow was closer than 10 feet to the main race route." (Personal observation of the 1989 event from Howard Wilshire from USGS. He has monitored the B-to-V since 1974 as part of his studies of surface processes in arid lands. His observations were made before, during, and after the November 25, 1989, race on a 3.8 mile cross-country segment in desert tortoise habitat, and on December 1-2, in the Baker, West of Baker, Turquoise Mtn., Solomon's Knob, and Valley Wells 7.5' quadrangles.)

The stipulated course through desert tortoise habitat in the 1989 B-to-V Race was only 25 feet. Post race monitoring showed that the average width of the disturbed area in tortoise habitat was 55 feet, or 6.6 acres actually disturbed per mile. (BLM 1990) An analysis of the monitoring data (transect data, photographs, and

BLM staff observations) showed that flagging the race corridor in areas of tortoise presence (as determined by pre-event surveys) was not effective in minimizing the straying of vehicles. The data collected throughout the Barstow Resource Area desert tortoise habitat indicated that racers did not remain within the corridor flagging. The resulting course was two to three times the stipulated width with additional trails and individual tracks established well outside the main trail. Based on these monitoring results, it is likely that impacts to the desert tortoise and its habitat by straying and course widening would occur. The increased width would encourage future OHV use, which would result in additional take of tortoises and further degradation of tortoise habitat.

PC 332: The BLM should rely on objective data regarding impacts from racers straying from Turtle Mountain Race Course.

Response: The description of impacts to wilderness values under current management (No Action Alternative) cites the recollection of Needles Field Office staff that straying did occur during racing events (see Sec. 4.1.5, Wilderness Management). Section 3.8 (Recreation Management) supports this recollection with a reference to Parker 400 post-race evaluations, therein citing incidents of course widening, short cutting, and illegal cross-country travel. Such post-race evaluations are now incorporated by reference in the Final Environmental Impact Statement**.**

PC 333: The Final EIS should provide an analysis of impacts to the human environment from closing roads.

Response: Analyses of impacts on the human environment under the Proposed Plan and other alternatives, including the effects of designating routes of travel as "open," "limited," and "closed," are presented in Chapter 4. "Human environment" is interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment (40 CFR 1508.14). Analyses have been strengthened for the Final Environmental Impact Statement.

Various alternative strategies to accommodate motorized-vehicle recreation while providing for recovery of the desert tortoise and protecting special status species and their habitats are described in Chapter 2 (see Sec. 2.5.1, 2.5.2, 2.5.3, and 2.5.4, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). An alternative suggested by the public to increase off-highway vehicle user fees to pay for additional enforcement staff constitutes a mechanism to ensure compliance with management prescriptions adopted under any alternative, but such action taken in lieu of designating routes "open," "limited," or "closed" fails to respond to the route designation process identified in the California Desert Conservation Area (CDCA) Plan. This process requires BLM to address off-highway use of public lands and routes consistent with the criteria at 43 CFR 8342.1 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). Further, no fees are charged by the BLM for motorized-vehicle use of any public lands within the NECO Planning Area; hence, there are no fees to increase. Funding for additional personnel is acquired through Congressional appropriation, contributed funds such as the "green sticker" program administered by the State of California, or a combination of both.

Another alternative suggested by the public is to increase signage, thereby alerting off-highway vehicle users to the sensitive resources adjacent to routes on which they are traveling. This alternative also fails in responding to the CDCA Plan's route designation process. Instead, it is another mechanism to enhance

compliance with route designation decisions, and is already addressed in each of the alternatives to implement these decisions (see Sec. 2.5 regarding the installation of information kiosks that address resource protection and other matters).

Given the extent of motorized-vehicle access afforded under the Proposed Plan (see Sec. 2.5.2,) and the determination that impacts to motorized recreation are minor (see Sec. 4.2.8, Recreation Management), measures to mitigate such impacts, including actions that might limit the magnitude of the action (e.g., seasonal or alternating closures) or compensate for the impact by replacing or providing substitute resources (e.g., development of new routes corresponding to the extent of routes designated "closed"), are not necessary. Opportunities for motorized recreation are not substantially affected by these Amendments.

PC 334: The BLM should conduct an on-the-ground assessment of multiple-use values for all existing travel routes.

Response: The Federal Land Policy and Management Act (FLPMA), in requiring that development and revision of land use plans use and observe the principles of multiple use and sustained yield (Sec. 202(c)(1)), defines "multiple use," in part, as the management of public lands and their various resource values in such manner that "takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife, and fish," and allows "the use of some land for less than all of the resources" (Sec. 103(c)).

This multiple-use management mandate was invoked when formulating alternatives for the NECO Plan/EIS. Relative to motorized recreation, the BLM evaluated existing routes of travel on a network basis and identified "recreational touring routes" that were declared to be exempt from application of biological parameters pertinent to the route designation process, unless it was determined that use must be limited for other reasons (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Identification of recreational touring routes was based on knowledge of existing routes gained by BLM staff during the course of undertaking their assigned duties. Through the NECO route designation process, additional routes were identified as available for motorized-vehicle use unless restrictions on such use to protect other resource values of the public lands, promote the safety of all users of the public lands, or to minimize conflicts among various uses of the public lands were determined to be necessary. The "biological parameters" established as common to all alternatives consider resource values other than recreation in designating routes according to the criteria at 43 CFR 8342.1. These parameters are based on field surveys that identify locations of and habitats for special status species, as well as life histories and species accounts for these species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4.2 (Wildlife) and Appendix N (Wildlife History and Wildlife/Plant Tables) for a description of special status species). Multiple-use values as related to existing routes of travel, therefore, have been considered in the NECO planning process.

PC 335: The Final EIS should disclose decision criteria for road closures.

Response: Criteria relative to the NECO route designation process are described in Section 2.5 (Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Criteria that relate to recovery of the desert tortoise and protection of special status species and their habitats, and developed in furtherance of the criteria at 43 CFR 8342.1, are excerpted from Sections 2.2 (Recovery of the Desert Tortoise) and 2.3 (Management

of Special Status Animals and Plants and Natural Communities). Application of these criteria on a route-specific basis was not described in the Draft NECO Plan/EIS except as generally depicted on large-scale maps, but route-specific designations are provided for the Proposed Plan in the Final Environmental Impact Statement (see Appendix R). Revisions to designations proposed in the Draft Plan/EIS in response to public comment and further BLM staff review are described on a route-specific basis. Decisions pertaining to designating routes as "open," "limited," and "closed" are based on the identified purpose and need for the NECO Plan which, in part, is to provide for recovery of the desert tortoise and protection of special status species and their habitats (see Sec. 1.1, Purpose, Need and Scope).

PC 338: The BLM should base road closure criteria on the merits of each road.

Response: The BLM evaluated existing routes of travel on a network basis relative to providing opportunities for motorized recreation. A system of "recreational touring routes" was identified and declared to be exempt from application of biological parameters pertinent to the route designation process unless it was determined that use must be limited for other reasons (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Identification of recreational touring routes was based on knowledge of existing routes gained by BLM staff during the course of undertaking their assigned duties. Through the NECO route designation process, additional routes were identified as available for motorized-vehicle use unless restrictions on such use to protect other resource values of the public lands, promote the safety of all users of the public lands, or to minimize conflicts among various uses of the public lands were determined to be necessary.

The "biological parameters" established as common to all alternatives consider resource values other than recreation in designating routes according to the criteria at 43 CFR 8342.1. These parameters are based on field surveys that identify locations of and habitats for special status species, as well as life histories and species accounts for these species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4.2 (Wildlife) and Appendix N (Wildlife History and Wildlife/Plant Tables) for a description of special status species). Except for the establishment of "washes closed zones," these criteria were applied on a route-specific basis. In applying these criteria accordingly, maintenance of a viable route network and potential for manageability were considered (see Sec. 2.5); i.e., application of the criteria was not absolute as other factors, including the recreational value of a route, were considered. Hence, in the context of motorized recreation, the merits of each route identified for closure was considered in the route designation process.

PC 340: The BLM should justify proposed area closures in the NECO area.

Response: One purpose of amending the California Desert Conservation Area Plan is to protect special status species and their habitats through an ecosystem approach that offers the best opportunity to arrest the decline in biodiversity and eliminate or minimize the need for further listings of species as threatened or endangered (see Sec. 1.1, Purpose, Need and Scope). Life histories and species accounts for special status species that relate population declines, in part, to disturbances from human-related activities, including recreational use of motorized vehicles, are provided in Section 3.4.1 (Wildlife) and Appendix N (Wildlife History and Wildlife/Plant Tables). The closure of Ford Dry Lake and Rice Valley Dunes to motorized vehicles (in addition to the existing closures of Palen Dunes, Ford Dunes, and Palen Dry Lake in accordance with the California Desert Conservation Area Plan) is prescribed under the Proposed Plan to protect essential

blowsand habitat or sand source for populations of the Mojave fringe-toed lizard (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities). The effects of these additional closures relative to special status species are described in Section 4.2.4.1 (Wildlife Management). The effects of such closures to opportunities for motorized recreation are addressed in Section 4.2.8 (Recreation Management).

Certain individuals who commented on the Draft NECO Plan/EIS suggest that the prescription to close existing off-highway vehicle areas to motorized recreation activities is based on anecdotal evidence describing use of the Ford Dry Lake and Rice Valley Dunes areas as low. As stated above, the closure is proposed to protect special status species and their habitats. Anecdotal evidence regarding levels of motorized-vehicle use of these areas supports the analysis of impacts to recreation and is not used as the basis for the closure.

PC 351: The BLM should disclose all information relevant to route designation criteria.

Response: Appendix L describes the route inventory process conducted by the BLM for the NECO Plan. An attempt was made to complete an on-the-ground inventory of 100 percent of the routes within the planning area. Inventory maps were provided to the public in 1996, and comments were solicited regarding the completeness and accuracy of the route inventory. Few route-specific comments were received by the BLM prior to release of the Draft NECO Plan/EIS.

Route designation criteria were established by Executive Orders 11644 (87 F.R. 2877) and 11989 (42 F.R. 26959), which, in turn, were codified as regulations at 43 CFR 8342.1 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). These regulations provide general guidance for the route designation process but do not (and could not) identify specific actions to be taken in response to area-specific circumstances such as those occurring within the NECO Planning Area. Hence, in furtherance of the regulatory route designation criteria, various parameters were developed through the NECO planning process including those that provide for recovery of the desert tortoise, protect special status species and their habitats, and ensure that historical and cultural resources on the public lands are addressed relative to motorized-vehicle access (see Sec. 2.2 (Recovery of the Desert Tortoise), 2.3 (Management of Special Status Animals and Plants and Natural Communities), and 2.5 (Motorized-Vehicle Access/Routes of Travel Designations/Recreation)). Biological parameters were derived from life histories and species accounts for special status wildlife species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4, Biological Resources, and Appendix N, Wildlife History and Wildlife/Plant Tables).

The regulatory criteria and criteria developed in furtherance thereof through the NECO planning process are applied to all routes, including wash routes considered as a class in "washes open zones" and "washes closed zones," in the route designation process. Hence, no routes are available for motorized-vehicle use under the Proposed Plan unless designated "open" as specifically required by Executive Order 11989.

PC 381: The CDCA Plan Amendment should prioritize military explosives removal in order to maintain recreation access.

Response: This topic is beyond the scope of the proposed plan.

PC 390: The Final EIS should incorporate all grazing utilization guideline sources into the List of References.

Response: The references for grazing utilization cited in the DEIS were inadvertently omitted from the reference list. They have since been added to the list of references in the FEIS.

Multiple-Use Consideration

PC 23: The BLM should establish a Multiple-Use Review Board to assure that the Final EIS reflects multiple-use management goals and the needs of the public.
PC 58: The Final EIS should include a preferred alternative that preserves multiple-use principles including motorized recreation.
PC 73: The BLM should not place further restrictions on non-wilderness designated public lands.
PC 74: The BLM should reevaluate plans to close any non-wilderness areas within NECO and consider maintaining these areas for recreation purposes.
PC 287: The BLM should ensure continued opportunities for multiple-use recreation within the CDCA.

Response: The NECO document indicates that decisions will be made that commit the cooperating agencies to a common theme of conservation within the scope of their respective mandates. Throughout the planning process, mutual respect and adherence to cooperating agencies' mandates--including multiple-use management on BLM-managed lands, was paramount. The introduction to Chapter 2 also addresses this subject and emphasizes BLM's "managed uses" mandate. A considerable amount of federal lands are already restricted to many public uses, and none of the four alternatives suggested any further closures. The best and most responsible approach to assuring the continuation of multiple-use management of public lands is a science-based approach to conserving species and habitats.

Relatively few routes are proposed closed (when added to the amount of area currently restricted). While the decisions will affect all users, including the physically disabled, it is important to note that a considerable amount and variety of recreation opportunities, including many that require vehicle access, are still available for many kinds of recreation.

PC 91: The BLM should develop planning strategies comparable to the National Park Service and encourage resource management as a priority.
PC 101: The BLM should clarify the proposed change to the Multiple Use Class designation in the Eagle Mountains.

Response: Maps 2-2 and 2-7 in the Proposed Plan show the change in classification. The current and proposed classifications do not apply to private lands. Private lands are not shown on the two maps. BLM and NPS management mandates are different and defined by law. BLM cannot adopt NPS management strategies.

Standards and Guidelines

PC 33: The Final EIS should specify observable criteria as a basis for assessing the indicators cited in the preferred alternative.

Response: The Proposed Plan would implement the four standards of Public Land Health: soils, native species, riparian/wetland and stream function, and water quality. Each standard has several indicators of health. For example, you would find indicators for the soil standard list canopy and ground cover, diversity of plant species, soil organic matter present, and hydrologic and nutrient functions maintained. The amounts of cover, diversity, organic matter, and hydrologic and nutrient function are not specified because the amounts vary considerably from one site to the next. As more data are collected, a range of appropriateness would be developed for a number of indicators.

The assessment team qualitatively reviews all of these processes for the indicators and those for the rest of the standards to ascertain the current health of the area. The assessment process requires a team to complete, and the interested public is welcome to join the effort. The results from the assessment, along with other data and recommendations for future management, are forwarded to the manager for signature and implementation of recommendations.

PC 85: The CDCA Plan Amendment should address serious threats through Public Land Health Standards to the physical and biological well-being of the plants and animal species that inhabit NECO.

Response: Under the Proposed Plan, Public Land Health Standards will be reviewed for all public lands in the NECO area. Currently, in the NECO area health standards are reviewed in grazing allotments and after the NECO Plan has been implemented the scope and review would be expanded beyond grazing allotments. Health assessments that were conducted on Ford Dry Lake, Rice Valley, Chemehuevi, and Lazy Daisy Allotments would be conducted on other public lands. During those assessments, the team would evaluate physical and biological functions such as soil erosion, soil crusts, composition of annual and perennial native and non-native plant species, habitat condition, plant vigor, riparian proper functioning condition, and special status species. The type of actions (human or ecological) impacting resource conditions would be specified when the assessment team's appraisal of resource condition indicates that the standard has not been met. Staff would provide needed recommendations to management for improvement of resource conditions so the standard could be met.

PC 90: The Final EIS should detail the Public Land Health Standards proposed for the NECO Planning Area.

Response: The Proposed Plan provides background discussion on this topic in both Chapter 2 and Appendix B. The idea is that a broad, single set of Standards, which are the same thing as goals, can be applied to all habitats/ecosystems. From one habitat to another, the elements to measure and the measurement of elements to assess whether Standards are being achieved or not will vary.

PC 186: The BLM should require management change in areas of heavy livestock use or multiple trails of hillsides to improve rangeland health.

Response: The preferred method would be to implement the soils and native species standards through field assessments. If excessive trailing were affecting conditions for soils or native species on a portion of the allotment, then prescribed actions would be detailed to alter those practices. Such practices or techniques that could become a term and condition of continued grazing use may include a temporary or permanent reduction in grazing use, adding drift fence, moving a portion of the herd into another part of the allotment, and adding a water source. The two standards and their indicators are found in chapter 2, but are listed below. In addition, some of the guidelines for grazing management may apply to this situation.

Soils: Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, geology, land form, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor, and provide a stable watershed, as indicated by:

- canopy and ground cover are appropriate for the site
- there is diversity of plant species with a variety of root depths
- litter and soil organic matter are present at suitable sites
- micro biotic soil crusts are maintained and in place
- evidence of wind or water erosion does not exceed natural rates for the site
- soil permeability, nutrient cycling and water infiltration are appropriate for the soil type

Native Species: Healthy, productive and diverse habitats for native species, including special status species (Federal T&E, federally proposed, Federal candidates, BLM- sensitive, or California State T&E, and unusual plant assemblages) are maintained in places of natural occurrence, as indicated by:

- photosynthesis and ecological processes continue at levels suitable for the site, season, and precipitation regimes
- plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment
- plant communities are producing litter within acceptable limits
- age class distribution of plants and animals are sufficient to overcome mortality fluctuations
- distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events
- alien and noxious plants and wildlife do not exceed acceptable levels
- appropriate natural disturbances are evident
- populations and their habitats are sufficiently distributed to prevent the need for listing special status species.

PC 187: The Final EIS should clarify the use of the Standards and Guidelines for Rangeland Health and National Research Council's Rangeland Health Evaluation Matrix

PC 188: The Final EIS should clarify Rangeland health and existing standards relevant to the NECO Planning Area.

PC 190: The Final EIS should provide appropriate reference to the National Research Council's Rangeland Health Evaluation Matrix.

Response: In Appendix B, Fundamentals of Rangeland Health, the last sentence of the paragraph referring to the "Rangeland Health Matrix" should have been deleted. It has been deleted from the FEIS.

On February 22, 1995, the Final Rule was issued in the *Federal Register* and direction was provided for rangeland health. Under Title 43 CFR 4180 the State Director must develop regional or state standards and guidelines with the assistance of Resource Advisory Councils. After the standards and guidelines are developed, they are to be sent to the Secretary of the Interior for approval. Until development of regional standards and guidelines, the National Fallback standards and guidelines as shown in the grazing would be utilized.

The California Desert District (CDD) along with the District Advisory Council requested that the CDD be exempt from the statewide effort to develop standards and guidelines. Shortly thereafter the State Director granted approval for the NECO planning effort to develop regional standards and guidelines. Except for the CDD, the BLM completed the *Rangeland Health Standards and Guidelines for California and Northwestern Nevada EIS,* and the Secretary of Interior approved the final standards and guidelines. The California Desert Advisory Council formed a subcommittee, and with assistance from BLM staff developed recommendations for standards and guidelines listed in Appendix B; with some slight modification, these are the same regional standards and guidelines shown in Chapter 2 DEIS. Early in the planning process, the title of rangeland health standards changed to regional public land health standards and regional guidelines. Regional public land health standards would guide future management on all public lands.

Field office staff conducted rangeland health assessments during the past several years. Assessments were conducted on Rice Valley, Chemehuevi, Lazy Daisy, and Ford Dry Lake Allotments. Assessments are conducted with BLM staff, and if available, lessees and interested public. The assessment team defined whether the site under review has met or not met the standard, and when the site meets the standards does it do so with the potential risk of soon failing to meet the standard. Once on the site, indicators for standards are reviewed and the team forms a consensus about the standards based on discussions.

The combined area assessed in the grazing allotments covers over 600,000 acres (over 937 sections of land). The allotments range in size from 49,000 acres to over 300,000 acres. Currently all assessments are conducted on allotments. Future assessments would be conducted on public lands irrespective of grazing activities; however, grazing regulations still require periodic assessments of standards on allotments. The assessment process has undergone changes through the years, and recent Washington Office guidance for assessments means more changes for the assessment process are likely.

Determinations are completed and signed by the manager after the assessment process. The determination is a written review of background information, compilation of available data, rationale for the determination, contributing factors for standards not met, BLM staff recommendations, persons involved in the process, and the manager's implementing signature. Actions are implemented and a review of these prescribed actions is scheduled.

PC 189: The CDCA Plan Amendment should implement the proposed Standards and Guidelines for Rangeland Health with additional science-based recommendations.

Response: The guidelines and the table for utilization listed under the Proposed Plan cover a wide variety of management prescriptions for grazing use. Guidelines can be adjusted over time with additions and deletions as necessary to accommodate new scientific information. These guidelines were cooperatively developed with members of the California Desert District Advisory Council with representation from a variety of interests. Guidelines are to be utilized by managers to achieve the Public Land Standards not to make additional requirements of grazing use.

Guidelines set the tone about livestock prescriptions that would be translated into terms and conditions for the grazing lease. For example, under the Proposed Plan a guideline states, "Grazing on designated ephemeral range land shall be allowed only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established." This guideline translates into, "Cattle grazing would not occur until ephemeral forage reaches and is maintained at 200 pounds air-dry weight per acre." Another term and condition for grazing use from this guideline might be, "Grazing use of ephemeral forage would cease on June 1."

Soil, Air, Water

PC 136: The CDCA Plan Amendment should establish guidelines for evaluating the significance of soil sedimentation impacts resulting from natural and unnatural disturbances.

Response: The overwhelming cause of soil erosion and movement is natural processes: wind and water. Desert ecosystems are defined and sustained by such processes. Human factors add to natural processes in urban areas, areas of industrial development, roads and other route disturbances, and animal grazing. These human causes are not considered to be significant on public lands, and soil erosion is not the major basis for NECO land use decisions.

PC 146: The BLM should install monitors to evaluate air quality impacts caused by military bombing exercises.

Response: There is no bombing near the Kaiser RR where it is aligned in the Chocolate Mountains Aerial Gunnery Range (CMAGR). CMAGR is the responsibility of the Marine Corps Air Station, Yuma (USMC), and inquiries about its operations and activities may be addressed to the Marine Corps Air Station, Yuma.

PC 148: The BLM should protect air quality by limiting all local pollution sources.
PC 149: The Final EIS should outline the potential air quality benefits of the Preferred Alternative.

Response: The contributions to and amounts of air pollution from both on-site and off-site (from the planning area) can not be quantified. BLM generally expects, however, that prescriptions for management of uses in conservation areas--e.g., surface disturbance limits, land acquisition, routes and washes driving reductions--should reduce pollution within the planning area.

PC 323: The BLM should consider mitigating sedimentation concerns from motorized recreation instead of limiting access.

Response: Stream sedimentation, including its application as a criterion for routes designation, is not an issue in the planning area.

General Conservation

PC 66: The CDCA Plan Amendment should take all necessary measures to protect and preserve the 5.5 million acres within NECO.

Response: The Proposed Plan provides an array of proposals that will provide ecosystem conservation. The mandates of BLM and the U.S. Navy (for the Chocolate Mountains Aerial Gunnery Range) are specific to an array of land uses which do not provide for complete preservation of the 5.5 million acres of land. Conservation of a general/overall nature, and managed uses, are provided for; additional preservation is not.

PC 69: The BLM should protect and restore native biodiversity to the Sonoran public lands within NECO.

Response: The Proposed Plan contains goals and objectives and measures that address this concern.

PC 75: The Final EIS should not cite previously closed washes as conservation gains.

Response: The Draft and Proposed Plans mean to suggest that it is the total of previously restricted washes, including those relatively recently closed by thee CDPA plus the new proposed washes closures, that would provide, along with a host of other existing and new proposed measures, adequate conservation for the desert tortoise as well as other components of the ecosystem.

PC 84: The CDCA Plan Amendment should give priority to healthy ecosystems and allow recreational use only if the viability of the ecosystem is not compromised.

Response: The cooperating agencies feel that, given the array of conservation proposals presented in the Proposed Plan and the nature of current and predicted levels of use, future allowable uses should not compromise the integrity of ecosystems. A healthy ecosystem does not necessarily require exclusion of uses, but can be sustained through managed uses.

PC 92: The BLM should address effects of the Border Patrol activities on wilderness and sensitive habitats.

Response: This concern relates to a management issue, not a planning issue. Since it pertains to wilderness areas and areas of sensitive species and habitats, Border Patrol activities in such areas is an ongoing issue. The BLM and Border Patrol have recently met to address and resolve these issues.

PC 204: The Final EIS should incorporate reasonable measures to ensure public access to BLM lands and protect sensitive, threatened, and endangered species.

Response: The Proposed Plan and FEIS purpose and need section in effect captures this comment. The cooperating agencies feel that the document's proposal achieves the goal.

PC 277: The BLM should protect wildlife by not expanding protected areas into bombing ranges.

Response: The degree to which wildlife are conserved, or are injured or killed, on the Chocolate Mountains Aerial Gunnery Range will not be changed by the Proposed Plan or other alternatives. The fact that less than one-half of 1 percent of the Range is bombing targets offers considerable conservation benefits for species and habitats, even when bombs occasionally miss the target. The Range in turn plays an important conservation role when combined with conservation mandates for BLM and National Park lands. As military uses change on the Range over time, the management plans of the involved agencies will be reconsidered.

Desert Tortoise

PC 71: The BLM should consider both size and shape when designating areas.

Response: In delineation of the boundaries of the DWMAs, BLM has considered the distribution of the tortoise, ecosystem elements upon which it depends, connectivity between units, principles of reserve design, and land management constraints. Both the Chemehuevi and Chuckwalla DWMAs meet the minimum size of 1,000 square miles as specified in the *Desert Tortoise Recovery Plan*. To the extent allowed by the distribution of the tortoise and management constraints (e.g., Interstate 10, Highway 62), BLM has considered the guidelines for reserve design given in the Recovery Plan (Section II.D.1.b). Examination of Map 2-35 shows that adjacent wilderness areas augment DWMAs and effectively add to the size and change the shape of reserve areas. This is especially true of the Chemehuevi DWMA.

PC 103: The BLM should justify changes in BLM tortoise habitat categories within the desert.
PC 104: The CDCA Plan Amendment should specify that all acquired replacement habitat become designated critical habitat.

Response: The requirement for their designation, definitions for the three categories, goals for each category, and criteria for the categories were specified in the BLM's *Desert Tortoise Habitat Management on the Public Lands: A Rangewide Plan*, which was signed by the Director in 1988. After operating under an interim desert tortoise habitat category map for several years, the BLM amended the CDCA Plan in 1993 to incorporate the official map. The categories are intended to indicate BLM management priority and are not merely indications of population density or status.

As stated in the Rangewide Plan, the goals of Category I habitat are to maintain stable, viable populations of desert tortoise, to protect existing habitat values, and to increase populations, where possible, and the goal of Category III habitat is to limit tortoise habitat and population declines to the extent possible by mitigating impacts. The goals of category I are similar to the goals of the DWMAs as defined by USFWS in the

Recovery Plan. In the *Desert Tortoise Recovery Plan*, USFWS indicated general areas where DWMAs should be established, but it specifically left the designation of boundaries to the land management agencies (Recovery Plan, p. 48, item 1.b.). Bringing the DWMA designations in accord with the Category designations makes the policy direction in the Rangewide Plan consistent with BLM's management strategy for the DWMAs.

For similar reasons, USFWS has agreed to change the boundary of critical habitat to correspond with the DWMAs. Thus, this was included in the Proposed Plan (see actions on designation of DWMAs in Section 2.2.2). This action would seem appropriate because the DWMAs are a concept presented in the Recovery Plan developed and signed by USFWS. However, the designation of critical habitat is the responsibility of USFWS, and they will evaluate changes, if any, based on the Endangered Species Act and federal regulations. A change, if any, will be proposed and reviewed through a separate process.

PC 117: The CDCA Plan Amendment should not eliminate critical habitat within Chemehuevi and Chuckwalla Desert Wildlife Management Areas.
PC 118: The CDCA Plan Amendment should base size of Desert Wildlife Management Areas on designated critical habitat units.
PC 119: The Final EIS should justify proposals for deleting critical habitat from Desert Wildlife Management Areas.

Response: The *Desert Tortoise Recovery Plan* recommends the designation of desert wildlife management areas (DWMAs) of at least 1,000 square miles (640,000 acres). The Proposed Plan and alternatives propose DWMAs that generally exceed the minimum size. (One exception, the Chuckwalla DWMA, is slightly smaller in two alternatives, but does meet or exceed many other attributes and therefore essentially is of sufficient size.) The Recovery Plan does not suggest that the DWMAs should adhere precisely to current critical habitat. The USFWS has also indicated that upon implementation of DWMAs it will re-describe the area of critical habitat to conform with the area of DWMAs. In the Proposed Plan the Chemehuevi and Chuckwalla DWMAs each exceed 800,000 acres. It is important to point to three essential attributes of these DWMAs: (1) outside wilderness areas and the Chocolate Mountains Aerial Gunnery Range, the boundaries are definable to demographic features, which greatly improves manageability; (2) important use areas (e.g., high recreation and mineral values) are excluded in order to reduce as much as possible difficult conservation-use management issues; and (3) areas of critical habitat that were not included in DWMAs contain the lowest densities of desert tortoise and are presumably the lowest in value.

PC 120: The CDCA Plan Amendment should restrict all motor vehicles to designated roads and designate all washes as closed zones within Desert Wildlife Management Areas.
PC 123: The CDCA Plan Amendment should prohibit all competitive and organized events on designated routes within Desert Wildlife Management Areas.
PC 138: The BLM should prohibit roads and vehicle use in river washes.
PC 250: The BLM should protect desert tortoise habitat by eliminating the Johnson Valley to Parker ORV race.
PC 124: The BLM should establish restrictions for car camping within Desert Wildlife Management Areas to prevent resource damage.
PC 239: The BLM should protect the desert tortoise by restricting camping to designated areas.

Response: In the Proposed Plan driving off roads to park and camp is limited to 100 feet on either side of road centerline in DWMAs and 300 feet elsewhere. BLM feels that 100 feet is reasonable considering that: (1) people need safety and quiet from traffic on roads, and (2) very few people drive over undisturbed land for such purpose, preferring instead to seek short spur roads to secluded camp sites. The current level of recreation camping and uses is very small, is projected to continue, and does not create a significant management issue for any species and habitats. The level of routes and washes that would be designated open should be compatible with recovery of the desert tortoise. All competition vehicle events are proposed to be removed from DWMAs.

PC 125: The BLM should consider withdrawing significant portions of entire Desert Wildlife Management Areas from mineral entries to prevent further habitat loss.

Response: There is a certain amount of unknown with the 1 percent rule in that the location and configuration of future disturbance cannot be foreseen. However, in looking at the commitment from the reverse, one can say that there is a 99 percent non-disturbance rule, a very significant commitment to tortoise recovery regardless of disturbance design. The amount and array of wilderness and mineral resources are not relevant to the 1 percent rule and tortoise recovery commitment. While it is not possible to be certain on future resource use demands, a review of mineral potential (outside of wilderness areas) and mineral development market forces for the foreseeable future suggests a very low likelihood of significant mining-related disturbance inside DWMAs. Finally, any further large-area restrictions (e.g., DWMA mineral withdrawal) would considerably detract from the stated purposes and needs in the CDCA Plan, which is based on BLM's multiple use management mandate. This mandate is considerably reduced due to current restrictions--i.e., about 60 percent of the NECO Planning Area is already withdrawn from mineral entry.

PC 126: The BLM should clarify the one percent disturbance cap on land within Desert Wildlife Management Areas in regards to land ownership and ensure consistency with the West Mojave Plan.

Response: In the Proposed Plan and two alternatives indicate that the proposal applies only to federal lands. Private lands would not be affected. The proposal is same for both the NECO and NEMO plan amendments. BLM will ensure consistency among all the amendments to the CDCA Plan on a variety of plan decisions.

PC 127: The BLM should consider a disturbance cap in Wildlife Habitat Management Areas (WHMAs) similar to that proposed for Desert Wildlife Management Areas in order to protect habitat.

Response: WHMAs primarily address special status species and their habitats that are not listed under the Federal Endangered Species Act. They provide fundamental conservation commitment within the mandate of multiple use management commensurate with the general status of the target species. Any further disturbance restrictions would be unnecessary and not be in keeping with the stated purposes and needs in the CDCA Plan.

PC 128: The CDCA Plan should adequately protect rare and sensitive species and habitats which reside outside Desert Wildlife Management Areas and Wildlife Habitat Management Areas within NECO.
PC 130: The BLM should preserve the desert for the public and not allow more land to be exchanged within NECO.
PC 209: The BLM should maintain ownership of all public lands that have sensitive plant species.

Response: Land exchanges would generally result in acquisitions in WHMAs, weigh value conservation areas, and dispose of public lands with low value habitat. NECO does provide some priority to retention of "fixed site" species. NECO also suggests that this cannot always be possible. In the conduct of BLM's multiple use management mandate, many factors of natural resources and uses vie for management consideration. In the particular mix of resources and uses in a place, there may be overriding or compelling actions in which some matters of resource conservation cannot be met or in which a greater conservation need is achieved at the cost of smaller ones.

PC 194: The BLM should ensure the effectiveness of the NECO plan in recovering species at Chuckwalla Bench.

Response: The Proposed Plan and FEIS suggest that the comprehensive array of actions, along with the many existing management measures, should provide for the recovery of the desert tortoise. Current disturbing activities affect a relatively very small amount of area and should not detract from the goal.

PC 196: The BLM should protect the desert tortoise by developing an effective avian and mammal predator control program.

Response: Raven predation on desert tortoise hatchlings and juveniles has been well documented; Boarman (1999) reviewed the published and unpublished records. Censuses have shown that raven populations are substantially higher than even 30 years ago (Knowles *et al*. 1989).

Examination of carcasses from permanent study (i.e., monitoring) plots has shown that canid predation on all tortoise age classes is common in some areas (Kristin Berry, USGS tortoise researcher, pers. comm.). At a study site near Goffs in the mid-1980's Turner and Berry (1985) found canid destruction of tortoise nests to be 24 percent, 28 percent, and 48 percent over a three-year period. Historic records of coyotes and kit foxes are not available for comparison with today's populations.

The BLM has proposed a program presented in Appendix A (Sec. A.2.12) to address the raven predation issue. Some aspects of the program have been tested (e.g., targeted raven removals), and some have been implemented (e.g.,. closure and rehabilitation of local, unauthorized dumps on BLM lands).

PC 199: The BLM should ensure that the designation of 1 percent new surface disturbance in Desert Wildlife Management Areas is not detrimental to sensitive species.

Response: The BLM has not proposed to <u>designate</u> 1 percent new surface disturbance and does not anticipate that there will be 1 percent cumulative new surface disturbance. Rather, it is a commitment that there will not be more than that. The effects of projects will be analyzed in NEPA documentation, such as an

environmental impact statement, environmental assessment, or other mechanism, as appropriate. Projects affecting desert tortoise (virtually all those that disturb the surface in a DWMA) will be analyzed by USFWS through consultation procedures of the Endangered Species Act or under case-by-case review procedures of the proposed programmatic biological opinion. In addition, the state requirement for environmental review under the California Environmental Quality Act (CEQA) and California Endangered Species Act will still occur. No present interagency oversight or public review will be reduced in the proposed amendments.

PC 201: The BLM should identify the effects that vehicle parking and camping have on sensitive species.

Response: A discussion of impacts has been added to Chapter 4 (Environmental Consequences) from Issue 5 (Motorized-Vehicle Access Routes of Travel Designations/Recreation) for desert tortoise for each alternative. The basic effects are presented in the No Action Alternative.

PC 202: The BLM should develop a stronger monitoring program for desert tortoise due to disease problems.

Response: The proposed monitoring program for desert tortoise is presented in Table 5-1. Monitoring of tortoise populations using the line-distance sampling methodology was initiated in all critical habitat units in 2001. This monitoring program is being conducted under the guidance of Phil Medica, the Multi-agency Desert Tortoise Coordinator, a newly established position directed by the Desert Tortoise Managers Oversight Group (MOG). This program is intended to determine trends in population size for each DWMA. The program is being funded by numerous milkvetch agencies.

In addition, the USGS Biological Resources Division has continued monitoring at permanent trend plots, including Ward Valley and Chemehuevi Valley Plots (in proposed Chemehuevi DWMA) and Chuckwalla Valley and Chuckwalla Bench Plots (in proposed Chuckwalla DWMA). These studies will provide more detailed information on size-class densities, sex ratios, age distribution, and causes of mortality. Kristin Berry of USGS is administering these studies.

In addition, USGS is conducting research on disease pathogenesis and epidemiology. Some diseases identified in desert tortoises include upper respiratory tract disease (URTD), herpes virus, cutaneous dyskeratosis, and shell necrosis. A protocol has been developed to record clinical signs of disease on live tortoises. In addition, blood and nasal washes are being collected to test for herpes virus and URTD. A protocol to salvage ill, dying, and recently dead tortoises for necropsy has been developed. Since 1989, several dozen tortoises have been necropsied by licensed veterinary pathologists with expertise in reptiles. Research is also being done on elevated levels of toxins in tortoise tissues. Funding of these research projects has been limited. (Kristin Berry, USGS, desert tortoise researcher, pers. comm.)

PC 226: The BLM should provide more information on diseases and especially the relationship between OHV use and diseases in tortoises such as cutaneous dyskeratosis and shell necrosis in desert tortoises.

PC 227: The Final EIS should disclose information on the relationship between OHV use and Cutaneous Dyskeratosis in desert tortoises.

PC 228: The Final EIS should disclose any information on the relationship between OHV use and Shell Necrosis in desert tortoises.

Response: Some information on diseases is presented in Section 3.4 (Affected Environment--Biological Resources) under Desert Tortoise Management. The references cited provide additional information. Research on these disease is continuing, but no cause or mode of transmission has been identified. See the response to comment 202 for additional information on the monitoring of diseases.

PC 229: The BLM should protect the desert tortoise from raven predation.

PC 230: The BLM should remove ravens that prey on the desert tortoise through non-lethal means only.

Response: All ravens will take young tortoises on an opportunistic basis, but only a few will focus primarily on them. The Proposed Plan proposals eliminate only those ravens which are documented to primarily take the desert tortoise as food. Actions are also emphasized which focus on sanitation around human facilities to reduce the number of ravens. It is felt that this mix of actions is cost-effective and best addresses both tortoise protection and management of the raven, which is a native species.

PC 231: The BLM should facilitate desert tortoise recovery by eliminating livestock grazing from all desert Wildlife Management Areas.

Response: The introduction to Chapter 2 of the Proposed Plan and FEIS contains an explanation of why the full *Desert Tortoise Recovery Plan* was not included as an alternative. In addition, Chapter 4 analysis of cattle grazing indicates that with the additional, new management proposals forage competition and other effects of cattle grazing on desert tortoise should be at an acceptable, low level.

PC 232: The BLM should limit desert tortoise recovery efforts to designated wilderness areas.

Response: Wilderness areas alone would constitute fragmented conservation of the desert tortoise and, given the biological habitats and needs of the species, as defined in the *Desert Tortoise Recovery Plan*, would not adequately provide for its conservation.

PC 233: The BLM should protect the desert tortoise by creating Desert Wildlife Management Areas of at least 1000 square miles.

Response: The size of each DWMA in the Proposed Plan considerably exceeds 1000 square miles (which is equal to 640,000 acres). The sizes of the DWMAs exceed 800,000 acres.

PC 235: The BLM should develop a tagging program for counting desert tortoises.

Response: On the 15 tortoise permanent study plots, tortoises are marked to track their survivorship between census periods. However, the total population is too large to consider such a program for all tortoises. If declines continue, a program for identifying individual tortoises and tracking their progress may be considered.

PC 236: The BLM should explain why the EIS includes few measures to keep the desert tortoise off heavily traveled highways and roads.
PC 237: The BLM should protect the desert tortoise through proper maintenance of guzzlers.
PC 238: The BLM should protect the desert tortoise from the impacts of military activity.

Response: These concerns address issues of protection.

1. Initial installation and upkeep measures for fencing highways is extremely costly. The effort is cost- effective only where tortoise population is of relatively high density and where highways are elevated (i.e., with bridges and culverts). Fences cannot effectively be kept functional for minor highways and roads over which water and alluvium periodically spreads.
2. Retrofitting animal guzzlers is a commitment made in Chapter 2, section 2.2, Decision and Policy Common to all Alternatives, 7.
3. Military bombing targets comprise one-half of 1 percent of the area of the Chocolate Mountains Aerial Gunnery Range. While there are occasions of human or mechanical error in which non-target areas are affected, the incidence of this is rare and deemed an acceptable risk. Vast areas of the Gunnery Range are unused at all due to the general restriction and provide well for conservation.

PC 240: The Final EIS should include a comparative analysis of desert tortoise mortality rates in areas open to OHV use and in the protected areas.

Response: There are currently no data available to compare tortoise populations inside and outside of off-highway vehicle open areas. Tortoise populations have been studied in depth on four permanent study plots in the planning area. They are in Ward Valley and Chemehuevi Valley (in proposed Chemehuevi DWMA) and in Chuckwalla Valley and Chuckwalla Bench (in proposed Chuckwalla DWMA). These studies provide detailed information on size-class densities, sex ratios, age distribution, and causes of mortality. Kristin Berry of USGS is administering these studies. Tortoise habitat quality in OHV open areas within the planning area is not the same as on these study plots, and populations would be expected to differ greatly. Proposed closures of OHV open areas in the Proposed Plan are not generated by concern for tortoises.

Such studies have been proposed for the West Mojave where there are numerous large OHV open areas (e.g., Stoddard Valley, Johnson Valley, Spangler Hills) with good tortoise habitat as judged by historic populations. On a study plot in the Johnson Valley Open Area, adult tortoises dropped from 69 (1980) to 49 (1986), to 15 and 16 (1990, 1994) per square mile. This is a greater decline than a nearby plot in Lucerne Valley, outside of the OHV open area, where populations declined from 93 to 75 to 64 and 65 per square mile in the same years.

PC 242: The Final EIS should list drought as an important cause of desert tortoise decline.

Response: The effects of short-term drought and long-term drought and whether or not drought has even occurred in the past 20 years is arguable but untested (Boarman 1999). Regardless, tortoise populations have undoubtedly survived longer and more severe droughts in the past thousand years. Drought, to the extent that it may have occurred, would be expected to exacerbate effects of habitat degradation, disease, predation, and other human-induced factors and vice versa.

PC 243: The BLM should quantify the causes of desert tortoise mortality and give a relative importance to them.

Response: It is not possible to quantify all of the causes of mortality. Some, such has gunshot deaths, have been quantified; gunshot deaths have been shown to be very high (as high as 29 percent) in some areas and nil in other areas (Berry 1986). Although there is little information on collecting of tortoises in the wild, the large numbers in captivity in Southern California imply that there has been intensive collecting over a long period of time. The adverse effects of some highways on tortoises have been quantified, but the relative importance is localized (Nicholson 1978).

The main problem with quantifying causes of mortality is that many of the adverse effects are interrelated and confounding. For example, the invasion and widespread distribution of weedy species such as Mediterranean split grass (*Schizmus* spp.) has lowered the nutritional value of forage plants available to tortoises. This may result in poorer health and susceptibility to disease. Avery and Neibergs (1998) showed that cattle step on burrows and that, as a result, tortoises in grazed areas spend more time out of burrows at night. This makes them more susceptible to exposure to weather and predators. More examples could be given. It is not feasible to isolate activities and quantify the contribution of each to tortoise population declines.

PC 244: The BLM should implement desert tortoise breeding programs to mitigate population decline.

Response: The Department of Defense has funded preliminary studies on captive rearing and release of young tortoises. Morafka *et al*. (1996) and Spangenberg (1996) reported on these studies at Ft. Irwin and their use in conservation of neonatal (<1 year old) and juvenile (1-7 years old) tortoises. Captive rearing programs have been considered and investigated because (1) raven predation on hatchling and juvenile tortoises has prevented tortoise recruitment in some area; (2) a rearing program would hold young tortoises until past the primary age of predation; and (3) disease has depleted populations below habitat carrying capacity in some areas. However, more must be learned before a project is proposed for large-scale population augmentation. Such a project may be proposed at a later time.

Morafka, D. J., K. H. Berry, and E. K. Spangenberg. 1996. Predator-proof field enclosures for enhancing hatching success and survivorship of juvenile tortoises: a critical evaluation. *In*: J. Van Abbema (Ed.), Proceedings: Conservation, Restoration, and Management of Tortoises and Turtles--an International Conference. WCS Turtle Recovery Program and the New York Turtle and Tortoise Society, New York.

Spangenberg, E. K. 1996. Field enclosures: their utility in life history studies and conservation of juveniles of the desert tortoise (*Gopherus agassizii*). M.A. Thesis, Calif. St. Univ. Dominguez Hills.96pp.

PC 247: The BLM should assess the impacts of desert tortoise fencing on other wildlife.

Response: Boarman (1995) reported on surveys for vertebrates along both sides of 24 km (14.4 mi.) of Highway 58 (a heavily traveled divided highway) that had tortoise-proof fencing and along both sides of 4.8 km (2.9 mi.) of Highway 58 and 24 km (14.4 mi.) of Highway 395 that had no fencing. On four reported surveys between 1992 and 1994 (i.e., 1992, 1993, May 1994, and July 1994, as reported by Boarman), 1190 carcasses of 31 species (13 reptiles, 8 birds, 10 mammals) were found along the highways. In the four reported surveys, 37.8 carcasses per km (1,088 in 28.8 mi.) were found along unfenced highway and 4.3 carcasses per km (102 in 24 km) were found along unfenced highways. Surprisingly, individuals of leopard lizard (2), zebra-tailed lizard (2), and antelope ground squirrel (2) were found only along the fenced portion. Six species of snake (of only eight species recorded) were found only on the unfenced portions. Also, surprising is that seven species of birds also had reduced mortality on fenced portions of highway, perhaps due to the reduced prey on the roadway. Tortoise mortality was 1.2/km (35) along unfenced highway and <0.1/km (2) along fenced highway. The conclusion is that fencing of roadways greatly reduces highway kills of many vertebrate species.

Fenced highways will require culverts or under bridges to allow the movement of individuals across the highway for genetic interchange and population dispersal. Boarman (1995) also reported on the use of culverts by tortoises along the highways described above; results were inconclusive due to the low numbers of tortoises near the highways. Additional studies will be needed to assess the overall population fragmentation effects of fencing and culverts combined. However, the mortality along even fenced highways indicates that some animals are crossing the barrier. As indicated above, small snakes might be the exception.

Some direct mortality resulting from animals caught in the fence has been observed. Animals caught included leopard lizard (1), western whiptail lizard (5), zebra-tailed lizard (1), coachwhip snake (3), and Mojave rattlesnake (1). These mortalities and other observations of behavior by Boarman indicate that primarily lizards may become caught in the fence.

Boarman, W.I. 1995. Effectiveness of fences and culverts for protecting desert tortoises along California state highway 58: 1991-1994. Natl. Biol. Survey Rept. 37pp+Appendices.

PC 251: The BLM should examine the impacts to the desert tortoise by the introduction of contaminants into the environment by military activities at Chocolate Mountains Aerial Gunnery Range.

Response: The effects of military training at Chocolate Mountains Aerial Gunnery Range have been evaluated in a separate EIS. The U. S. Navy has consulted with the USFWS on the effects of their operations on desert tortoise; a biological opinion has been issued. The NECO Plan contains no changes in military operations on the Range, and operations there are not being reviewed or analyzed in the NECO planning process and EIS.

PC 327: The BLM should eliminate competitive vehicle events in the Desert Wildlife Management Areas.

Response: Competitive vehicle events are proposed to be eliminated in DWMAs in the Proposed Plan.

PC 354: The Final EIS should justify designating desert management areas as Category I Desert Tortoise Habitat.

Response: Most of current desert tortoise critical habitat is Category I and would be included in proposed DWMAs. Category I articulates the highest conservation commitment to recovery of the desert tortoise and is commensurate with DWMA and ACEC designations.

PC 372: The BLM should restrict use of firearms within Desert Wildlife Management Areas.
PC 373: The CDCA Plan Amendment should designate the NECO area as off limits to target shooting.

Response: The *Desert Tortoise Recovery Plan* recommended that discharge of firearms, except for hunting of big game or upland game birds from September through February, should be prohibited in DWMAs. This was presumably based on a study (Berry 1986) that showed a high incidence of gunshot deaths on some permanent study plots. However, for the two permanent study plots in the NECO Planning Area and one just outside (Goffs), the incidence was very low. Specifically, on the Chuckwalla Bench plot (Chuckwalla DWMA), 2 of 110 (1.8 percent) were shot. On the Chemehuevi Valley Plot (Chemehuevi DWMA), 1 of 35 (2.8 percent) was shot. On the Goffs Plot, just north of Interstate 40, 0 of 34 (0 percent) were shot. These low numbers do not indicate a need to restrict use of firearms.

PC 379: The Final EIS should clarify that educational or recreational casual use is not subject to the one percent surface disturbance limitation.

Response: Casual use is not subject to permit. By its very nature there should be no disturbance or contribution toward the 1 percent surface disturbance limit.

PC 431: The BLM should not install tortoise fencing along the Cottonwood section of the Joshua Tree National Park road.

Response: The fence is not included in the Proposed Plan.

Natural Communities, Special Status Plants, Exotic Vegetation

PC 86: The BLM should establish vegetation restoration requirements that reflect the pre-disturbance conditions, annual plants, and species diversity.
PC 87: The BLM should include restored lands within disturbance area determinations until comprehensive restoration criteria are developed.
PC 167: The BLM should consider proposed vegetation criteria presented by the California Native Plant Society.
PC 168: The Final EIS should include annual plants as part of the restoration and vegetation process.
PC 169: The Final EIS should reflect the pre-disturbance conditions and maintain diversity in the restoration and vegetation process.

Response: Appendix E, Desert Restoration, discusses vegetation restoration. As stated in Appendix E, the Desert Restoration Task Force will continue to address and provide information on restoration planning and techniques. This task force is a working group of botanists, wildlife biologists, and other specialists commissioned by the Desert Managers Group, a multi-agency coordination forum for managers. More research and testing is needed to determine the most effective restoration methods. In any event, case-by-case field applications will be needed. Appendix E lists some site considerations; these include, among others, special status species, the rarity and quality of the plant community, management goals for the area, ecological processes, and site characteristics.

Appendix G, Limit on Cumulative New Surface Disturbance, includes triggering criteria for site evaluation with regard to the 1 percent limit on new surface disturbance. These criteria are <u>not</u> restoration criteria or requirements. Rather, passing of the criteria described in Appendix G would suggest that sufficient progress toward restoration may have been made to warrant a site-specific evaluation to determine whether the lands had been restored sufficiently to warrant their removal as "disturbed lands" under the 1 percent cumulative new disturbance limitation. Passing of the evaluation trigger alone will not remove the disturbed lands from the cumulative disturbance total, but rather it is the point at which evaluation of lands would be initiated. The full level of restoration would be left to the evaluation and might involve many other factors.

PC 150: The BLM should clarify the existing NECO vegetation map by indicating specific resources within the planning area.

Response: Vegetation, soils, and other resources have been mapped in the CDCA several times under different techniques, and these efforts have provided general maps without sufficient detail for management utility. Maps resulting from these efforts are included in allotment management plans where they are effective. However, the BLM-approved method to inventory soil and vegetation has not been conducted in the CDCA due in large part to the cost of such an endeavor. Soil and vegetation inventory have been conducted in limited areas of the CDCA, and results from these efforts would be used when maps overlay grazing allotments.

PC 151: The BLM should make additions to the vegetation map for NECO to clarify unmapped species occurrence ranges and discussion of text for the specific species not mapped.

Response: The NECO cooperators who worked on the rare plants included botanists from the federal and state agencies, University of California at Riverside, and the California Native Plant Society. They found that too little is known about some species to be able to develop predictive occurrence range maps.

PC 157: The BLM should provide evidence that off-highway vehicles cause appreciable vegetation loss either in open wash areas or in adjacent areas outside the wash, and evidence of any other environmental impact.
PC 158: The BLM should provide evidence supporting the Draft EIS assertion that off-highway vehicles negatively impact the desert environment in a number of ways.
PC 159: The BLM should provide evidence that off-highway vehicles have significantly affected vegetation and justify the need for any further restrictions on off-highway vehicle routes.
PC 160: The BLM should provide data which supports the EIS assertion that off-highway vehicles are responsible for significant losses of vegetation cover which negatively impact sand dunes.
PC 161: The BLM should explain and provide supporting technical data on the connection between surface disturbance and exotic species proliferation.
PC 248: The BLM should present data justifying protection of the desert tortoise by closure of washes to OHV use.
PC 285: The BLM should disclose technical data supporting the assertion that long term vehicle travel within washes has caused soil loss, vegetative decline, and proliferation of exotic plant species.

Response: Jennings (1997) studied tortoise use of various habitat strata at the Desert Tortoise Natural Area. He found that tortoises used washes, washlets, and hills almost exclusively and avoided flats. During each of three plant phenological periods, the primary food of tortoises was found along the margins of washes and washlets, and overall more than 25 percent of all the plants on which tortoises fed were in the washes and washlets even though these areas comprised only about 10 percent of the area. During the third phenological period (1 to 30 June), when weather was hot and dry, the few tortoises above ground ate mostly (68 percent) along washes and washlets. Overall, of the ten most-preferred plants, three were largely confined to washes. Jennings concluded that tortoises were vulnerable to negative effects from off-highway vehicle use because of their habitat preferences.

Others (Woodbury and Hardy 1948, Burge 1978, and Baxter 1988) have shown that tortoises use washes and washlets for travel, burrowing, nesting, and feeding. The disproportionate time spent in these areas makes tortoises vulnerable to being run over by vehicles using the washes as travel routes. Other studies have described the impacts of off-highway vehicles on washes including disturbance of soil and terrain resulting in deterioration or denudation of vegetation (Burge 1983, Woodman 1983, Goodlett and Goodlett 1993) and destruction of wash margins as washes are widened over time (Berry, et al. 1986). These effects reduce the tortoise's preferred food and cover sites.

PC 170: Several rare plant species (e.g., *Acleisanthes longiflora* [Angel trumpet], *Croton wigginsii* [Wiggin's croton], *Cryptantha holoptera* [Winged cryptantha], *Echinoceraus engelmennii* var. *howei* [Howe's hedgehog cactus], *Pholis sonora* [Sand food]) are included in Table 3-5 and all except winged cryptantha are shown on Maps 7a-d. Why are they included if they only occur outside of the NECO Planning Area?

Response: The goal for special status plants (section 2.3) is to maintain the naturally occurring distribution of 30 special status plants species in the planning area. These plants were included because of the proximity of known occurrences to the planning area. The known distribution plus predicted nearby occurrence was considered in the delineation of the Multi-species WHMA boundaries, and Table N-12 shows the areas and percent of range of each of these in DWMA, Multi-species WHMA, and "Conservation Zone" in the Proposed Plan.

PC 171: The BLM should not try to eliminate non-native plant species from the Planning Area.

Response: The BLM will not be attempting to eradicate all non-native species from the Planning Area. Some (e.g., Mediterranean split grass, red brome) have been well established and widespread for decades and have replaced native plants over extensive areas. It would not be possible to eliminate them. The BLM will make efforts to control the introduction and spread of additional non-native species by limiting activities that cause surface disturbance and/or destroy native plants, thus giving invasive non-native plants the opportunity for establishment and spread. Most BLM control efforts will be focused on localized infestations of non-native plants in critical habitats (e.g., tamarisk at desert springs). Eradication programs have shown that tamarisk infestations can be removed and replaced with native willows, mesquite, and other plants. This is especially important to Neotropical migrant birds that rely on these desert oases as stopovers on their long migrations across the desert.

PC 172: The Final EIS should address the impact foot travel and equestrians have on the spread of noxious weeds within the desert.

Response: The questions and natural and human vectors involved in the issue of spread of weeds are numerous, and answers are difficult to define. There is negotiable recreation related to equestrian and foot traffic, and currently many weeds have already spread widely throughout the region. The document provides discussion in this subject. The nature and long-term effects of weeds is not entirely understood.

PC 174: The CDCA Plan Amendment should include acquisition of private lands to preserve the Coachella Valley milkvetch and should include measures to maintain all ecosystem processes necessary to sustain this plant community.

Response: The approximate distribution is shown on Map 3-7b. Surveys will be conducted in the spring and summer of 2002 to more precisely identify the distribution of Coachella Valley milkvetch in the planning area. Surveys in subsequent, wetter years may be needed to complete this task. When these surveys are completed, BLM will evaluate the need for land acquisition, route closure, and other methods to protect the species and the ecosystem upon which it depends. It should be noted that the fenced Desert Lily Reserve (see Map 2-4) is in the middle of the known distribution.

PC 175: The BLM must strive to eradicate non-native weed species, including Coachella milkvetch, to protect desert areas and natural resources.

Response: Regardless of how the Coachella Valley milkvetch has moved to areas outside Coachella Valley, it is a federally listed native species, and federal land managing agencies are required to protect it.

PC 176: The BLM should thoroughly evaluate various strategies and methods for controlling tamarisk.

Response: For some time, the BLM has had an ongoing program to control tamarisk. Past efforts have focused on the removal of tamarisk in key riparian sites. In the planning area, removal efforts have been undertaken in Bonanza Springs (Clipper Mountains), Tan-Tan Spring (Sacramento Mountains), Crescent Spring (Sacramento Mountains), and at various other springs. Research and experimentation on effective means of removing and preventing tamarisk infestations is continuing. In the past the BLM has used burning (primarily to open human access into thicketized tamarisk stands), cutting, and herbicide treatment. Some researchers (e.g., Jack DeLoach) have been investigating the feasibility of using biological controls, such as insects. The BLM will continue to participate with groups such as the California Exotic Pest Plant Council and Desert Restoration Task Force to refine methods. It is not necessary to define specific techniques in the CDCA Plan.

PC 178: The BLM should prioritize funding for land acquisitions for areas with unique plant communities.

Response: BLM generally applies compensation funds first to habitat acquisitions and secondarily to enhancement and rehabilitation efforts.

PC 179: The CDCA Plan Amendment should eliminate the Parker 400 racecourse to protect vegetation and plant species.

Response: In the Proposed Plan the Parker 400 corridor is entirely eliminated as a place for competitive vehicle events.

PC 180: The CDCA Plan Amendment should protect portions of the Lazy Daisy Allotment to preserve the only occurrence of the Mojave Pinyon/Juniper Woodland species in the NECO Planning Area.

Response: This plant community is present in a very low amount in the NECO Planning Area because the planning area is generally below the elevation where pinyon pine and juniper woodlands are found. The plant community is more abundant immediately north across Interstate Highway 40 in numerous higher mountains. Notwithstanding this, the plant community is entirely within the Old Woman Mountains Wilderness Area and is subject to little disturbance. No information indicates that cattle grazing threatens this community.

PC 184: The Final EIS should separate grazing activities from the preservation of micro biotic crust.

Response: Depending on the manner and degree of grazing activities, grazing use could alter micro biotic crusts. Micro biotic crusts primarily exist and flourish in the first inch of topsoil, and depending on the species, some soil disturbing activities would affect their continue maintenance of that area. Disturbance of the soil can occur with not only livestock use, but with foot traffic or vehicle use.

PC 210: The Final EIS should disclose technical data supporting the assertion that Conservation Zones will benefit all but three special status plants "to a very high degree."

Response: The document contains text and tables in various places which indicate to what degree (number or percent of sites) each special status species is found inside one of the areas included in conservation management. Three plants are outside such that through project location and design or land exchange they could be obliterated. To those which are found in significant numbers/area inside conservation management areas, the milkvetch land managing agencies commit to their conservation through a variety of proposed actions--e.g., avoidance, mitigation, and land acquisition--and there is a very good chance that they should be able to persist over a great period of time.

PC 211: The Final EIS should show the survey data for Coachella Valley milkvetch and provide information supporting the assertion in Table 3-5 that OHV use has negative impacts on the Coachella Valley milkvetch.

PC 212: The Final EIS should include survey data on the milk vetch.

Response: The write-up in Table 3-5 for *Astragalus lentiginosus* var. *Coachellae*, Coachella Valley milkvetch, states, "In the Coachella Valley, heavy vehicle use can destroy plants, and development can result in loss of habitat or disruption of natural processes. The sites in Chuckwalla Valley may also be subject to vehicle use."

The vast majority of plants in this species are located in the Coachella Valley outside of the planning area. These populations and their impacts are not an issue in the NECO Plan. Nevertheless, vehicle use off of roads is extensive, with hill climbs developed in some areas (e.g., Edom Hill, Windy Point). These populations are being addressed in a concurrent planning effort for the Coachella Valley and adjacent mountains.

BLM has records of about six small populations in Chuckwalla Valley (see Map 3-7b). All are adjacent to Highway 177 and readily accessible by vehicles. At this time, there is no information that off-highway vehicle use is disturbing these populations. In fact, the fenced Desert Lily Reserve (see Map 2-4) is in the middle of the known distribution. Surveys will be conducted in the spring and summer of 2002 to more precisely identify the distribution of Coachella Valley milkvetch in the planning area. Surveys in subsequent, wetter years may be needed to complete this task. When these surveys are completed, BLM will evaluate the need for additional management action to protect the species and the ecosystem upon which it depends.

PC 213: The BLM should seasonally exclude sensitive plant species habitat from grazing until studies show impact does not occur.

Response: In grazing allotments within the Planning Area, there are no known endangered plants. Direction for monitoring is located in the Proposed Plan after the guidelines for grazing management on page 2-11 of DEIS. The direction from the DEIS states, "In those areas not meeting one or more standards, monitoring processes will be established if they do not presently exist to monitor indicators of health until the standard or resource objective has been attained." As assessments of standards are completed throughout the planning area, monitoring priorities would be established for those constituent components of the standard that failed during the assessment process. Most likely, resource data collection would occur for several aspects of the indicators. The BLM has limited personnel and funding resources so judicious application of monitoring efforts would occur.

PC 214: The BLM should protect endangered plant species by reducing cattle grazing.

Response: Prescription for grazing use detailed under the Proposed Plan would maintain a low level of grazing use while providing measures to protect and recover the desert tortoise. The level of grazing use planning area-wide is low and slowly becoming less. For example, grazing use on three of the four allotments in the planning area has not occurred in the last four years. The Proposed Plan would provide the lessee an opportunity to relinquish the grazing lease (allotment) in DWMA. Annual use of perennial grasses and shrubs by cattle is tied to sufficient spring production of ephemeral grasses and forbs in DWMAs. When ephemeral production is insufficient then cattle and sheep would not graze on perennial or ephemeral rangelands, respectively. Continuation of mitigation measures for ongoing activities in desert tortoise habitat plus other measures for other activities such burro use and vehicle access would lead to recovery of the desert tortoise.

Other Special Status Animals

PC 193: The BLM should include provisions for recovery of listed species occurring on lands adjacent to the NECO Planning Area, such as Yuma clapper rail and desert pupfish.

Response: The needs of these species are being addressed in planning efforts currently underway for these adjacent areas. Among these planning efforts are the Northern and Eastern Mojave (NEMO) Planning Area north of I-40, the Western Mojave (WEMO) Planning Area to the northwest, the Coachella Valley Planning Area to the west, the Imperial Dunes Planning Area to the southwest, and the lower Colorado River MSCP.

PC 198: The BLM should prove the effectiveness of mitigation measures used to protect special status species.

Response: Most mitigation measures have not been tested for effectiveness on an individual basis. However, most projects involving desert tortoise have biological monitors, and they commonly report verbally to BLM staff on their observations regarding the effectiveness of various measures. For larger projects, end of project reports address effectiveness of mitigation measures. Mitigation measures are modified and refined based on these reports. In 1996, Circle Mountain Biological Consultants (CMBC 1996) examined mitigation measures (i.e., terms and conditions) in 234 milkvetch biological opinions from USFWS

and contacted 145 individuals, including biological monitors. CMBC concluded that implementation of terms and conditions for projects had significantly reduced the number of tortoises killed relative to the numbers authorized by USFWS in the biological opinions. They concluded that tortoise awareness programs, defined work zones, on-site monitors, and tortoise-proof project fencing gave the best protection for tortoises.

Circle Mountain Biological Consultants. 1996. Federal Biological Opinion Analysis for the Proposed Eagle Mountain Landfill Project. Contract Rept., Wrightwood, Calif. 11pp + Appendices.

PC 207: The BLM should set a survey schedule for southwestern willow flycatcher and least Bell's vireo.

Response: In habitat surveys in winter of 2001-2002, suitable nesting habitat was identified at Willow Springs and Old Woman Statue Springs in the Old Woman Mountains. These sites will be surveyed in spring and summer of 2002. Both sites are in the Old Woman Mountains Wilderness Area. No other potential breeding sites have been identified.

PC 215: The BLM should show the survey data supporting the assertion that the Palen Dunes, Rice Valley Dunes, Ford Dunes, Palen Dry Lake, and Ford Dry Lake currently support populations of the Mojave fringe-toed lizard and should provide information supporting the assertion that OHV use has negative impacts on the species.
PC 216: The Final EIS should disclose technical data supporting the assertion that OHV use has caused significant impacts to the Mojave Fringe-toed lizard.
PC 217: The BLM should specify whether the Mojave Fringe-toed lizard is a threatened species, an endangered species, or a species of concern.
PC 223: The BLM should disclose information regarding the designation of "essential blowsand or sand source habitat" for the Fringe-toed lizard.

Response: The Mojave fringe-toed lizard was recorded by Margaret Fusari at a number of sites in Chuckwalla Valley, including "Chuckwalla Valley Dunes" and Palen Dunes and other sites in 1976 and 1978 (Vertebrate Distribution Records, BLM Calif. Desert Dist. Library). Specimens curated at the Los Angeles County Museum of Natural History, San Diego Natural History Museum, and Museum of Vertebrate Zoology (U. C. Berkeley) were collected in dunes and playas throughout Chuckwalla Valley (i.e., Palen Dunes and Dry Lake and Ford Dunes and Dry Lake) and Rice Valley Dunes (Museum Records, BLM Calif. Desert Dist. Library). A general distribution map and other references on life history and distribution may be found in Zeiner *et al*. (1988).

Off-highway vehicles do not heavily use the dunes and playas listed (<10 vehicles per week) (John Blachley, BLM, law enforcement ranger, pers. comm.). Nevertheless, the vegetation on fine, blowsand dunes and playa edges used by fringe-toed lizards is susceptible to loss and degradation with repeated use. In addition, the escape behavior of fringe-toed lizards (i.e., diving into the sand) makes them vulnerable to being run over.

Knauf (2002) compared Colorado Desert fringe-toed lizard (*Uma notata*) occurrences on 25 transects in an area closed to vehicles and 25 transects in an adjacent area used heavily for OHV free-play. Comparisons were made in both spring and fall. In the spring and fall seasons, respectively, mean numbers observed on the transects were 2.4 and 2.2 times higher in the OHV closed area than in the open area.

Knauf, C. R. 2002. Preliminary report--A comparative analysis of Colorado Desert fringe-toed lizard (Uma notata) populations in OHV open and closed areas of the Algodones Dunes, Imperial County, CA. BLM Rept., El Centro, Calif. 2pp.

Zeiner, D. C., W. F. Laudenslayer, and K. E. Mayer (Ed.). 1988. California's wildlife Volume I Amphibians and Reptiles. Dept. of Fish and Game. 272pp.

PC 218: The BLM should show the survey data supporting the assertion that OHVs have negatively affected Couch's spadefoot toad populations or their viability and should identify the routes that come within ¼ mile of habitat.
PC 219: The BLM should indicate whether the Couch's Spadefoot Toad is a sensitive species or a species of special concern.
PC 220: The BLM should identify all routes that come within 1/4 mile of Couch's spadefoot toad habitat.
PC 286: The BLM should re-evaluate its concern for the health of the Couch's spadefoot toad.

Response: Couch's spadefoot toad is a BLM California sensitive species and a CDFG State Species of Concern. Mark Dimmitt (Ph.D. candidate at Univ. of Calif. Riverside and later BLM wildlife biologist in 1970's) recorded numerous sites in the late 1970's in his studies on the species (Vertebrate Distribution Records, BLM Calif. Desert Dist. Library). Specimens curated at the Los Angeles County Museum of Natural History were collected along the major wash beside Highway 78 (Museum Records, BLM Calif. Desert Dist. Library). Dimmitt (1977) mapped 25 sites where he found spadefoot toads in far eastern San Bernardino (1 site), Riverside (5 sites), and Imperial (19 sites) Counties. All the sites are along highways and major roads--Highway 95 in San Bernardino County; Blythe-Midland Road, Chuckwalla Rd, and Interstate 10 in Riverside County; and Highway 78, Ted Kipf Road, and Ogilby Road in Imperial County. He also examined 21 other ponds under favorable conditions where no spadefoot toads were seen. Kim Nicol (CDFG, ecologist, pers. comm.) observed Couch's spadefoot toads in 2000 along impoundments in "Midway Well Wash" alongside Highway 78.

In the arid environment of far eastern San Bernardino, Riverside, and Imperial Counties, activity of spadefoot toads is restricted to short periods following rains when they emerge to feed and reproduce. Spadefoots are underground most of the year to avoid desiccation. Therefore, the cues for emergence are critical to their survival. Dimmitt and Ruibal (1980) observed that vibration from an electric motor resulted in almost 100 percent emergence except when soil temperature was below 20 degrees C. They speculated that the motor resembled the sound of rain, vital to survival above ground, on the surface. Soil wetting and increasing soil temperature failed to break dormancy in the absence of a sound stimulus. They also noted that toads are easily disturbed when above ground and will retreat quickly into their burrows at night when struck with a flashlight beam.

During, and perhaps just before, the short above-ground period, spadefoots seek refuge just below the surface in shallow burrows. They are then vulnerable to crushing by vehicles driving in washes. However, emergence occurs after summer rains (July-September) when human activity in the desert is lowest.

No roads were closed due to proximity to known spadefoot toad breeding sites.

Dimmitt, M. A. 1977. Distribution of Couch's spadefoot toad in California (preliminary report). BLM Rept., Riverside, Calif. 6pp.

Dimmitt, M. A., and R. Ruibal. 1980. Environmental correlates of emergence in spadefoot toads (*Scaphiopus*). Journ. of Herpetology 14(1):21-29.

PC 221: The BLM should provide information supporting the assertion that open routes have negative impacts on the prairie falcon and golden eagle.
PC 222: The Final EIS should disclose information which makes the assertion that OHV races have negative impacts on the prairie falcon and golden eagle.

Response: Nesting sites used by these species are usually on cliff faces, and are referred to as eyries. There are few golden eagle and prairie falcon eyries in the planning area. Parents of these species are easily disturbed during nesting and rearing, especially by people on foot. Only two routes were closed due to proximity to eyries.

PC 252: The BLM should develop site-specific management plans for the special status bird species occurring in the planning area.
PC 253: The BLM should develop a site-specific management plan to protect the vermilion flycatcher.
PC 254: The BLM should develop a site-specific management plan to protect the willow flycatcher and the southwestern willow flycatcher.
PC 255: The BLM should develop a site-specific management plan to protect the Bendire's thrasher.
PC 256: The BLM should develop a site-specific management plan to protect the Crissal thrasher.
PC 257: The BLM should develop a site-specific management plan to protect the LeConte's thrasher.
PC 258: The BLM should develop a site-specific management plan to protect the yellow warbler.

Response: Various proposals have been set forth in the NECO Plan to protect and restore avian habitat quality (see Section 2.3, Issue: Management of Special Status Animals and Plants and Natural Communities, and Section 2.1, Issue: Recovery of the Desert Tortoise)). Based on population trend data collected by CDFG and others, BLM will consider management actions to arrest observed declines in special status birds.

Springs and Artificial Waters

PC 51: The BLM should suspend the proposal to construct guzzlers in wilderness areas until the agency completes a project-specific NEPA analysis.

PC 88: The BLM should reevaluate justification for the proposed water developments for the existence and welfare of wildlife.

PC 111: The CDCA Plan Amendment should manage wilderness areas without added water developments which can lead to artificial expansion of species populations, especially herd animals.

PC 112: The BLM should consider the negative impacts water developments have on desert species and wilderness areas.

PC 113: The BLM should provide site-specific analysis to justify water developments in wilderness areas.

Response: The Proposed Plan FEIS has been slightly modified from the Draft Plan/DEIS on this point (See chapters 2 and 4). Chapter 2 also states that the waters are needed because human alteration of the southern part of the NECO Planning Area is such that the proposed waters are required. As much as possible the proposed waters were located outside of wilderness areas. The analysis of effects suggests that the waters would be very unobtrusive and would have only slight effects upon ecosystem components. The effects of construction and periodic maintenance would lower little effect in wilderness. Conversely, the drinker would help enhance wilderness values from the standpoint of better conserving the continued existence of bighorn sheep, which occupy wilderness areas.

PC 140: The BLM should protect and restore natural springs and seeps as well as artificial guzzlers.

Response: The NECO Plan includes several actions relative to the protection and restoration of natural waters for wildlife. Specifically, in Section 2.3.10 an action addresses rehabilitation and protection of springs and seeps. Various methods are listed, and reference is made to Map 2-22, which shows 45 sites that need tamarisk removal and 93 sites that may need exclosures for cattle or burros. Also, in the Proposed Plan for Routes of Travel Designation (Section 2.5), the parameter to minimize harassment of wildlife and disruption of habitats (Table 2-11 and section 2.3.10) includes consideration of closure of any route within one-quarter mile of any natural water source (e.g., springs, seeps, streams) or artificial watering facility (e.g., guzzlers). Twenty-one routes were closed in their entirety and six routes in part due to proximity to natural and artificial waters. In addition, the Proposed Plan for Management of Special Status Animals and Plants and Natural Communities includes a decision and policy common to all alternatives that "CDFG will continue to construct, improve, and maintain new and existing natural and artificial water sources and exclosures around them." CDFG, together with various volunteers and organizations, has performed this function for many years. Also, in the Proposed Plan (Section 2.3.2) there is a measure allocating natural waters among burros, deer, and bighorn sheep to prevent over-utilization of both forage and water.

PC 141: The BLM should coordinate the maintenance of guzzlers with private organizations.

Response: The proposals regarding routes of travel do not affect authorized access to existing springs and artificial waters for operation and maintenance. This access is also provided for in the 1994 California Desert Protection Act.

PC 162: The BLM should evaluate the impacts of proposed water developments to vegetation and consider locating water developments in plant communities that are not regionally unique.

Response: A discussion of impacts of new water developments on vegetation has been added to the environmental consequences for Vegetation-Natural Communities (Section 4.2.4) from Issue 3: Management of Special Status Animals and Plants and Natural Communities.

PC 163: The Final EIS should clarify enclosure considerations for natural water sources within the NECO Planning Area.
PC 164: The Final EIS should work to improve all springs and seep developments to meet conditions of natural processes and functions.

Response: Exclosures with water piping are proposed only for areas for which large, non-native animals such as cattle and burros are part of the management picture. These animals can cause disturbance and unacceptable lowering of proper functioning condition. Such facilities are unnecessary elsewhere.

PC 224: The Final EIS should include a conservation strategy for the bighorn sheep before guzzlers are constructed in their habitat.

Response: The bighorn strategy for the NECO Planning Area is set forth in Section 2.3. Proposed goals, objectives, policies, and actions are presented.

BLM guidance and policy on a National level can be found in *Mountain Sheep Ecosystem Management Strategy in the 11 Western States and Alaska* (BLM 1995). It provides overall guidance for management of bighorn sheep habitat and populations on BLM lands. The strategy remains current in policy and concept. It approaches California Desert bighorn sheep on a metapopulation basis. CDFG guidance and policy is presented in *A Plan for Bighorn Sheep in California* (CDFG 1983). It remains current as policy and guidance for management of bighorn sheep. It addresses bighorn management at the deme (i.e., subpopulation or mountain range) level. CDFG also publishes an annual environmental impact report on its bighorn sheep hunting program.

Within the planning area, CDFG is currently preparing a Southern Sonoran Mountain Sheep Metapopulation Plan. Although, the draft is currently in preparation, the guzzler proposals to be incorporated into that plan were given to BLM and used in the Proposed Plan.

In addition, CDFG has management plans for several demes or bighorn management units. CDFG says that all are current and are being implemented. These plans include the following:

1. *Bighorn Sheep Management Plan: Orocopia Mountains Management Unit*.
2. *Bighorn Sheep Management Plan: Sheephole Mountains Management Unit*.
3. *Bighorn Sheep Management Plan: Turtle Mountains Management Unit*.
4. *Bighorn Sheep Management Plan: West Chocolates Mountains Managment Unit*.
5. *Bighorn Sheep Management Plan: East Chocolates Mountains Managment Unit*

Calif. Dept. of Fish and Game. 1983. A plan for bighorn sheep in California. CDFG Rept. 11pp.

PC 276: The BLM should help wildlife by allowing vehicle access to water holes for maintenance.

Response: The 1994 California Desert Protection Act that created wilderness areas on lands managed by BLM allowed for continued vehicle access by California Department of Fish and Game and their agents into the wilderness areas to maintain the waters. The Proposed Plan and other alternatives do not change that allowance.

PC 284: The BLM should protect native wildlife by not establishing new guzzlers in the NECO Planning Area.

Response: Chapter 3 of the Proposed Plan/FEIS updates information on the number and kinds of waters south of I-10 in the NECO Planning Area. Most existing waters, natural and artificial, cannot be counted on to sustain populations of bighorn sheep and deer. Most springs and tenajas are not dependable from year to year or are of too little capacity. Most are designed for small animals and are not accessible for large animals, and many of the large animal type are no longer functional. Likewise bighorn sheep will not cross I-10 or go to the Colorado river to drink. Their drinking at the Coachella Canal is not desired due to risk of falling in and drowning. In areas of burros, BLM proposes to fence burros out of waters designed for bighorn sheep and deer. Chapter 4 provides an analysis that indicates that the proposed waters would have a beneficial effect for large animals with no significant negative effects for other native species and their habitats.

Livestock Grazing

PC 65: The BLM should clarify how projected range condition outcomes justify selecting the Preferred Alternative over the No Action Alternative.

Response: The Proposed Plan provides a suite of actions to protect desert tortoise and habitat that do not occur under the No Action Alternative. The BLM's designation of ACECs for the DWMAs is a substantial change over existing management. Improvement of range conditions aside, continued perennial grazing use in DWMA is directly tied to annual ephemeral forage production. Numerous actions, including potential relinquishment of grazing leases, would have direct impact on desert tortoise habitat as well.

PC 166: The Final EIS should scientifically justify the proposed action to maintain perennial plant utilization at or below 40 percent.

Response: Utilization of perennial forage plant species at 40% or below for Mojave and Colorado Desert is based upon guidance from Guidelines for Grazing Management page 2-11 of the DEIS and a citation from page 207, *Range Management; Principles and Practices*, J.L. Holechek 1998. Utilization is achieved by either measuring perennial plants in a study area along sample plot line or through observation with a skilled field specialists.

PC 386: The BLM should evaluate the long-term viability of grazing in the NECO area.

Response: This proposal was not considered and evaluated in the NECO Plan because it was beyond the scope of the Proposed Plan as defined by the purpose and need of the EIS.

PC 387: The BLM should indicate how continuous, season-long livestock use has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems.

Response: The BLM authorizes cattle grazing on the Lazy Daisy Allotment all year-long. The allotment has undergone rangeland health assessment and resource conditions met all standards. Holechek (1998) states, "Although it has been speculated that desirable plants, particularly grasses, will be grazed excessively under continuous grazing, actual research does not support this speculation . . . . [The] advantage of continuous grazing is that actual grazing pressure during the critical growing season is relatively light (10 percent to 20 percent) since adequate forage must be left to carry animals through the dormant season."

Holechek, J.L., R.D. Pieper, and C.H. Herbel, 1998. Range Management, Principles and Practices. Prentice Hall, Upper Saddle River, New Jersey.

PC 388: The BLM should consider the livestock grazing management plan prepared by Dr. Wayne Burkhart and Dave Thomson as an alternative in the Final EIS.

Response: The Proposed Plan would establish a grazing strategy for cattle use in DWMA. Changes to the grazing strategy would be altered under provisions for research of grazing forage utilization and relevant variables. The BLM, FWS, and lessee(s) would develop a written research proposal; after agency review and approval, the proposal would be implemented.

PC 389: The BLM should justify the application of any grazing utilization guidelines.

Response: To see citations for grazing utilization please refer to page 2-11, Table 2-2 Preferred Alternative, Chapter 2 DEIS.

PC 391: The BLM should clarify the use of different threshold values for grazing management.

Response: The statement refers to section 4.1.5 Wildlife Management, *From Issue 2: Recovery of the Desert Tortoise*, Desert Tortoise. This section of Chapter 4, Environmental Consequences, is under the No Action Alternative or current management. Under current management those portions of Lazy Daisy Allotment in Category I and II desert tortoise habitat may authorize cattle use of ephemeral forage (annual grasses and forbs) during spring for one-month increments. Ephemeral forage production must be maintained at or above 350 pounds air dry-weight per acre during grazing use. The 350 pound requirement was utilized prior to turnout of sheep in allotments within west Mojave Desert in Category I and II habitats, however, the requirement is no longer in use in sheep allotments. Measurement of 350 pounds per acre and identification of the area(s) producing ephemeral forage can be obtained with current monitoring techniques.

PC 392: The BLM should reduce or eliminate cattle grazing on BLM managed lands.

Response: This proposal was not considered and evaluated in the NECO Plan because it is beyond the scope of the proposed action as defined by the purpose and need of the EIS.

PC 393: The CDCA Plan Amendment should implement Alternative A for the greatest reduction of grazing areas.

Response: There is no new information provided with this comment and the comment is not substantive.

PC 394: The CDCA Plan Amendment should reduce grazing allotments systematically until large animal grazing in desert regions cease to exist.

Response: There is no new information provided with this comment and the comment is not substantive.

PC 395: The BLM should work with the National Park Service to acquire and permanently retire cattle grazing permits from willing sellers.

Response: Delete PC 395. This comment does not apply to the NECO Planning Area. It is a comment for the NEMO planning area that has been answered.

PC 396: The BLM must provide scientific data justifying any reduction in grazing or change in management of the Lazy Daisy allotment.

Response: Under the Proposed Plan cattle grazing in the Lazy Daisy would continue without reductions in grazing use. A grazing strategy would be developed with staff from BLM and FWS and the lessee(s). This strategy will be developed to address forage competition between cattle and desert tortoises specifically. When ephemeral forage production is less than 230 pounds per acre, cattle shall be substantially removed from the DWMA as per the grazing strategy from March 15 to June 15. The grazing strategy will be a written plan detailing the area of cattle removal, natural cattle movements, existing and potential improvements, and other constraints of cattle management. Hal Avery 1998 found that competition occurred between cattle and desert tortoises when ephemeral forage production dropped below 230 pounds per acre, but forage competition ceased at or above 230 pounds per acre.

Avery, H.W. 1998. Nutritional Ecology of the Desert Tortoise (*Gopherus agassizii*) in relation to cattle grazing in the Mojave Desert. Dissertation to UCLA.

Wild Horses and Burros

PC 260: The BLM should coordinate wild horse and burro herd management between the California and Arizona BLM offices.

Response: In developing the plan amendment considerable collaboration has occurred between BLM offices in California and Arizona. In addition managers from three U.S. Fish and Wildlife refuges, California Department of Fish and Game, and California State Parks and Recreation have been involved. Chapter 2 is replete with references unitizing management between the two sets of offices, including combining herd management areas and appropriate management levels. The plan indicates that agreements, further management details, and implementation will follow the signing of the Record of Decision.

PC 261: The BLM should fully analyze the impacts of wild horses and burros on vegetation and wildlife.

Response: The discussion in Section 4.1.4 (impacts on Vegetation Management, No Action Alternative), *From Issue 4: Wild Horse and Burros* has been expanded to more fully describe the impacts of burros on vegetation. The discussion in Section 4.1.5 (impacts on Wildlife Management, No Action Alternative), *From Issue 4: Wild Horse and Burros* describes the impacts of burros on wildlife. The EIS for the CDCA Plan in 1980 addressed the impacts of wild horses and burros on vegetation and wildlife; the Proposed Alternative in the NECO Plan is to reduce both herd management areas and burro numbers.

PC 262: The BLM should substantiate its counts of wild horses and burros.

Response: The BLM is continually searching for improved methods of conducting population counts. In the past, the CDD employed the direct count census method in determining population estimates. It has been shown that the paint ball mark-re-sight census technique for developing population estimates of wild burros yields statistically sound population estimates. However, this technique is costly and involves hazardous, low-level helicopter flight. The current population census method utilized by the CDD, developed through the efforts of Arizona BLM and the Arizona Department Game and Fish, is the simultaneous double count method. There has been an attempt to use infra-red census techniques, but this is still under evaluation.

PC 263: The BLM should focus on mitigating the impacts of burros rather than restricting the access of recreational users.

Response: Burro management is addressed in law (the 1971 Wild Horse and Burro Act) which requires that, as applied to the planning area, burros be considered as part of the ecosystem on the same footing as natural elements. No consideration was made to manage for a number of burros at the expense of human uses. Chapters 2 and 4 indicate and discuss proposals in various alternatives to reduce areas for and numbers of burros to manage them in concert with native species. For the most part, issues related to the management of burros are unrelated to those from human uses.

PC 265: The BLM should prevent burros from entering the Picacho State Recreation Area.

Response: In order to minimize burro activity on these lands, BLM will be addressing actions that include, but are not limited to, continuing to remove nuisance burros, erecting fencing, and/or providing additional water sources on Public lands for wildlife and burros. It may not be possible that burro activity in Picacho SRA will entirely be instigated.

PC 266: The BLM should support the development of a cooperative interagency management agreement allowing California state parks to manage wild burros within Picacho State Park.

Response: A 1977 Deputy Solicitor Opinion on wild horses and burros on Fish and Wildlife Service Game Ranges concluded that "those animals whose range or any part of their range traverses the public lands are within the scope of the Act." This opinion recognizes that BLM is responsible for the health and welfare of burros, which are protected under the Act, that roam onto other administered lands.

This does not limit the ability for the BLM to coordinate management activities through cooperative agreements with individuals or agencies to achieve management goals and objectives. As for example, the USFWS policy from the USFWS Refuge Manual 7RM 6 states that "burro populations will be reduced to and maintained at the lowest possible level. Reduction will occur in accordance with cooperative agreements with the Bureau of Land Management . . . ."

PC 267: The BLM should facilitate public input in the protection of burros and wild horses by performing a Programmatic Environmental Impact Statement on the national wild horse and burro program.

Response: The impetus to perform such a programmatic EIS is beyond the scope of NECO.

PC 268: The BLM should maintain Appropriate Management Levels of burros within Herd Areas.

Response: It is stated in 43 CFR 4700--Protection, Management, and Control of Wild Free-Roaming Horses and Burros, under 4710.3-1 Herd management areas, that delineation of herd management areas should "consider the appropriate management level for the herd, the habitat requirements of the animals, [and] the relationship with other uses of the public and adjacent private lands."

The majority of the reductions in the HMAs occur on lands which burro populations do not occupy or are infrequently used and are being designated as DWMAs. Reductions in the northern portion of the Chocolate Mule Mountain HMA occur in the Palo Verde Valley, where privately owned, irrigated agricultural fields occur and private land owners request the BLM to remove the burros from damaging their crops under CFR 4720.2-1, Removal of strayed animals from private lands.

The removal of lands in Picacho State Recreation Area, USFWS refuges, Tribal lands and portions of BLM public lands requires that AMLs be reduced.

A table has been added to Chapter 3.7 Wild Horse and Burro Management, reflecting these burro herd areas and their current status.

BLM will still manage for two viable burro herds in NECO.

PC 269: The BLM should protect burros and wild horses by updating all Herd Management Area Plans.

Response: In the NECO Plan, BLM recognizes that the HMAPs are old, and commits to them being updated. (See Chapter 2, Page 47--HMAPs and Unitized Program Administration.).

PC 270: The BLM should ensure that wild horses and burros are afforded the protections guaranteed under the Wild Free-Roaming Horse and Burro Act.
PC 271: The BLM should facilitate free roaming of wild horses and burros to ensure conservation of genetic diversity.

Response: For the existing herd areas and herd management areas in the California Desert District, very little public land remains to be managed for burros which does not have some portion of that management affecting private lands or lands managed by other agencies. Burro populations may not be determined by the ecological carrying capacity, but dependant upon achieving the other agencies' goals, while at the same time maintaining a population of burros.

The NECO Planning area has very few manmade barriers preventing the free roaming nature of burros on Public lands. The only herd that has had a population below 150 over numerous years is the Piute Mountain Herd, which has a current management prescription to reduce the population to zero. The Chocolate/Mule Mountains, Picacho, and Cibola/Trigo HMAs (combined) have just in the past year dropped below an estimated 150 animals. The animals that have been periodically removed have shown to be in good genetic health, some had low body fat scores due to the lack of available forage, especially during drought years. A table has been added to Chapter 3.7 Wild Horse and Burro Management, reflecting the herds sex ratio, recruitment rates, and age structure.

Chapter 3.7 Wild Horse and Burro Management added a population viability analysis section describing the Singer and Zeigenfuss (2000), study on genetic effective population to maintain genetic variation, which ranged from 139 to 185 animals. In accordance with current policy and guidance, BLM has initiated collecting blood samples on wild burros in the plan area for genetic baseline data. As this data is compiled and analyzed, it will be included in the HMAP and the genetic health of a herd would be monitored. BLM would evaluate viable management alternatives for conserving or enhancing genetic diversity within populations, which would include recommendations from the BLM Wild Horse and Population Viability Forum.

PC 272: The BLM should ensure Herd Management Areas are principally managed for the benefit of wild horses and burros.
PC 273: The BLM should ensure that the welfare of wild horses and burros is not superseded by the management of other uses.

Response: In defining an HMA and setting an AML for burro BLM commits to managing for a viable herd in accordance with law and regulation as well as multiple-use management requirements and plan commitments for other values and uses.

PC 275: The BLM should advance the natural biotic community along the Lower Colorado Region by removing burros from the Chocolate/Mule Mountains Herd Area.

Response: The pattern of administrative agencies along the Colorado River creates a difficult context for managing burros, with ongoing efforts for a solution that both addresses the various agencies' mandates and meets the requirements of the Wild Horse and Burro Act. The hope is that the proposed reduction of herd management areas and appropriate management levels, along with creating a unitized approach to managing burros and offering a greater array of management tools, will go a long way toward reducing ecosystem and agency conflicts.

Cultural and Native American Values

PC 411: The BLM should ensure appropriate consultation with Native American tribes that have a cultural affiliation with areas affected by NECO before the Plan is finalized.
PC 428: The BLM should collaborate with outside sources to ensure proper management of culturally sensitive areas and resources.
PC 429: The BLM should manage resources using a landscape-based approach to protect Native American cultural resources.
PC 26: The BLM should meet its consultation requirements with the Quechan Tribe.

Response: BLM has consulted in person with a number of tribal councils and with the State Historical Preservation Office in developing the Proposed Plan. In addition no attention has been brought to the nature and location of specific cultural resources. This is possible because the focus of the plan amendments is conservation of species, narrative cultural resources descriptions and analyses are very general, and no locality information is provided on maps.

PC 412: The Final EIS should include provisions that address the identification, evaluation, preservation of cultural resources, especially as it relates to impacts from OHV and route designation.
PC 414: The BLM should preserve sites of western heritage and cultural significance.
PC 421: The BLM should close all routes where travel may potentially impact surveyed cultural resources to facilitate further analysis.
PC 422: The BLM should protect cultural resources by permanently closing routes in the Johnson Valley to Parker Race corridor.
PC 426: The CDCA Plan Amendment should emphasize the preservation of Native American cultural resources.
PC 427: The BLM should conduct surveys to identify cultural resources within the CDCA Plan area.
PC 428: The BLM should collaborate with outside sources to ensure proper management of culturally sensitive areas and resources.
PC 429: The BLM should manage resources using a landscape-based approach to protect Native American cultural resources.

Response: This Proposed Plan would not change the Cultural Resources Element of the CDCA Plan. BLM would continue to implement the CDCA cultural resources management strategy in accordance with the

CDCA Plan, as implemented in the CDCA Programmatic Agreement (*Programmatic Memorandum of Agreement Among the Advisory Council on Historic Preservation, the Bureau of Land Management (DOI), and the California State Historic Preservation Officer Regarding the California Desert Conservation Area* (1980)) and the BLM National Programmatic Agreement (*Programmatic Agreement among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in which the BLM will meet its Responsibilities under the National Historic Preservation Act* (1997)). The National Programmatic Agreement is implemented in California by a Protocol Agreement between BLM California and the California SHPO (*State Protocol Agreement Between The California State Director of The Bureau of Land Management And The California Sate Historic Preservation Officer* (1998)). The National Programmatic Agreement and Protocol continue to reinforce all of the goals and actions necessary to achieve the cultural resources management proscriptions outlined in the CDCA Plan, but provide BLM more authority and responsibility in carrying out these responsibilities. The cultural resources management goals for the CDCA Plan include: (a) Recognition through ACEC and other special designations; (b) Preservation and Protection; (c) Monitoring; (d) Inventory; (e) Mitigation Plans; (f) Research, and (g) Review and Coordination. Proposed actions subsequent to the Proposed Plan would continue to be reviewed in accordance with Section 106 of NHPA, as implemented in the BLM Statewide Protocol and the 1980 CDCA Programmatic Agreement for cultural resources.

Specific to route designation decisions, the FEIS has been strengthened to address this issue. For the Proposed Plan for route designation, BLM would propose to amend the CDCA Programmatic Agreement with SHPO to formalize the implementation of a phased cultural resources strategy for routes of travel within the NECO Planning Area. The agreement would define the nature of the undertaking and the level of effort necessary to address effects, allow the designation of routes to proceed, provide for a phased identification and evaluation effort over a specific period of time, provide for consultation with SHPO, interested persons, and tribal entities over the design and implementation of identification efforts, and provide remedies (route closure, mitigation) when eligible cultural resources would be determined to be affected. Implementation of the amendment to the CDCA Programmatic Agreement would satisfy agency responsibilities under Section 106 of the NHPA.

PC 413: The Final EIS should include scientific data supporting that OHV use and off-road racing events impact sensitive historical or cultural resources.

Response: The Chapter 4 Impacts Analysis has been augmented and addresses this topic.

PC 423: The BLM should define "reconnaissance surveys."

Response: The FEIS has been clarified to eliminate redundancy and simplify description. Surveys are generally defined as any effort carried out by the agency to identify and record historic properties. Surveys can be characterized by the degree of comprehensiveness of coverage of the Area of Potential Effect. BLM cultural resources managers generally delineate surveys into three categories that generally describe the level of survey coverage. These levels are generally defined as comprehensive survey, sample survey, and literature review.

PC 424: The BLM should protect glacial/pluvial lakebeds for archeological potential.
PC 425: The BLM should eliminate the Lazy Daisy and Rice Valley grazing allotments to protect known and unknown cultural sites.

Response: The conflicts and effects that might be involved in these resource protection and use questions were considered and decided in developing the 1980 CDCA Plan.

Access

PC 49: The BLM should examine proposed route closures for compliance with RS 2477.

Response: Revised Statute 2477 (R.S. 2477) was passed by Congress as Section 8 of the Mining Act of 1866. It was repealed when the Federal Land Policy and Management Act (FLPMA) was passed on October 21, 1976. However, FLPMA did not terminate any existing "rights-of-way" granted under R.S. 2477. The Mining Act established the first system for patenting lode-mining claims and provided for access. RS 2477 said: "The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted."

There are often questions of what was offered under RS 2477, to whom, and how the rights-of-way were to be perfected. These questions have not been answered in a clear and consistent manner either locally or nationally. Many routes across public land came into existence with no documentation of the public land records. Routes across public land after 1866, but before withdrawal, patent, mining claim, or reservation for a specific purpose, and before the passage of FLPMA, may be RS 2477 rights-of-way.

In an attempt to clear up these ambiguities, Congress directed the Department of the Interior to study the history, impacts, status, and alternatives to RS 2477 rights-of-way and to make recommendations for processing claims (assertions). This process began in November 1992. Public meetings were held to assist in preparing a report that was submitted to Congress in May 1993. The Report stated that, until completion of the report, the Department "deferred processing pending claims unless there is an immediate and compelling need to recognize or deny any claims."

The BLM was directed to prepare regulations to guide the process of reviewing RS 2477 claims. Draft regulations were published in 1994. Three terms are important in determining which roads are RS 2477 rights-of-way: (1) "construction," (2) "highways," and (3) "not reserved for public uses." The terms "construction" and "highways" are among the most controversial provisions of RS 2477 and the regulations. On November 19, 1995, Congress approved a moratorium on the regulations. Because there are no final regulations that provide criteria for processing claims under RS 2477, the policy of deferring processing claims unless there is a compelling need remains in place.

The route network identified under the Proposed Plan was developed through a route designation process that considered resource management issues and regulatory and statutory closures (such as in designated wilderness). This process did not make any determinations under RS 2477. If a route is designated as "closed," that designation is not a determination that an RS 2477 right-of-way does not exist. Such a closure

does not extinguish any RS 2477 right-of-way that may exist. Conversely, a route designated "open" does not mean that the route was determined to be an RS 2477 right-of-way.

PC 50: The BLM should review proposed route closures for accordance with multiple-use management directions.

Response: The Federal Land Policy and Management Act (FLPMA), in requiring that development and revision of land use plans use and observe the principles of multiple use and sustained yield (Sec. 202(c)(1)), defines "multiple use," in part, as the management of public lands and their various resource values in such manner that "takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish," and allows "the use of some land for less than all of the resources" (Sec. 103(c)).

In developing the NECO Plan alternatives, including the Proposed Plan, BLM staff observed the principles of multiple use and sustained yield in providing for protection of special status species, in particular for the recovery of the desert tortoise, while not significantly constraining opportunities for a diversity of recreation activities including those that are motorized-vehicle based. Limiting vehicle access to a greater extent in some areas than others to achieve such goals as recovery of the desert tortoise (e.g., Desert Wildlife Management Areas wherein, in part, vehicle access is restricted to specific routes that are individually designated "open" or "limited"), conforms with the multiple-use mandate established by FLPMA, that is, some public lands need not accommodate all resource uses. Analysis in Chapter 4 addressing limitations on motorized-vehicle access (hence recreation) under the Proposed Plan supports a conclusion that such limitations are not substantial (see Section 4.2.8, Recreation Management). The cumulative effects of limitations on vehicle-based recreation, including those stemming from the designation of wilderness upon passage of the California Desert Protection Act of 1994 (Public Law 103-433), are discussed in the cumulative effects section at the end of Chapter 4.

PC 77: The Final EIS should identify desert washes designated as "Jurisdictions Waters of the U.S."

Response: The designation of desert washes involves access by motorized vehicles only.

PC 78: The CDCA Plan Amendment should protect desert washes, both for their inherent resource values and to protect sensitive plant and animal species.
PC 79: The BLM should analyze the environmental impacts of all proposed routes and washes to determine the off-road vehicle effects to wildlife, plants and soils.
PC 80: The CDCA Plan Amendment should prohibit all present and future vehicle access to desert washes to protect desert tortoises, other wildlife and vegetation.

Response: A considerable amount of washes are proposed to be closed. On some of these, closure is already in effect. Chapter 4 analysis has been modified somewhat and suggests that (1) given the array of open and closed washes to various species and habitat occurrences, and (2) given the current amount, time of year, and nature of vehicle uses in washes, that the array of open and closed washes areas is adequate to provide for the conservation of the ecosystem in general and the special status species and habitats in particular.

PC 81: The BLM should restrict vehicle access in pristine areas for the protection of vegetation and wildlife.

Response: The array of currently existing and proposed new decisions provides for the conservation of ecosystem elements including the restriction of vehicles to designated roads and navigable washes. Currently there are also laws against littering. The basis of conservation of biodiversity does not necessarily require pristine environments but does consider arrays and complexities of managed uses.

PC 82: The BLM should analyze the long-term environmental effects associated with off-road vehicle use within NECO.
PC 83: The BLM should evaluate the long-term effects of closing over-used and under-use areas within the NECO.

Response: Analysis in Chapter 4 addresses environmental effects associated with off-highway vehicle use consequent to implementation of management prescriptions under each of the alternatives, including effects on` air quality, soil quality, vegetation, wildlife, wilderness, recreation, and cultural resources. This analysis has been strengthened for the Final Environmental Impact Statement. No areas or specific routes of travel within the NECO Planning Area are identified as having been over-used by off-highway vehicles, including the Ford Dry Lake and Rice Valley Dunes Off-Highway Vehicle Recreation Areas. Hence, it is not anticipated that closures of such areas or individual routes under the Proposed Plan will divert substantial motorized-vehicle use to other areas or routes.

PC 195: The Final EIS should contain action statements which are more definitive than the "strongly considered" statements in DEIS to protect sensitive species and natural resources.

Response: Several actions are criteria for designating routes of travel open, closed, or limited. The wording of these criteria suggests an emphasis that, depending upon the nature of conflicting values (open road v. closed road to keep vehicles away from a species location), may or may not always be applied. Each point of conflict or potential conflict was evaluated on several merits. In some instances, a decision was made to close a road based upon the criteria; in others, the use of the road was the more important consideration.

PC 278: The BLM should protect wildlife by prohibiting new routes and individually analyzing routes to be left open within the NECO Planning Area.

Response: Effects of motorized-vehicle use of the route network under each alternative are described in Chapter 4, including impacts to the desert tortoise (see Sec. 4.1.4, 4.2.4, 4.3.4, and 4.4.4, Biological Resources). Individual routes identified in Appendix R are designated in accordance with the regulatory designation criteria at 43 CFR 8342.1 (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access, for a description of these criteria).

Only two new routes are identified in the Proposed Plan, both located just outside the eastern boundary of the Turtle Mountains Wilderness. The two routes, totaling 3-4 miles in length, enhance motorized-vehicle touring opportunities by connecting routes in this area. Prior to construction, a site-specific environmental review will occur.

Regarding wash routes, a wash need only be two feet wide and have a history of prior use to qualify as an "existing" route in accordance with the California Desert Conservation Area Plan (see Sec. 3.9). Washes are addressed on a zone basis in the context of motorized-vehicle access. Therefore, since a history of prior use is virtually impossible to establish in most instances and the number of two-foot-wide washes in the planning area is estimated to be in the thousands, the task of identifying all individual wash routes for inclusion in the NECO inventory was considered as unreasonable to undertake (see Sec. 3.9). However, some of the frequently used individual wash routes are captured in the route inventory. With many washes being addressed on a zone basis, the only feasible approach to the route designation process for these washes is to address them as a class in identified zones. The designation of these wash routes as "open" in "washes open zones," and "closed" in "washes closed zones," is in accordance with the regulatory designation criteria at 43 CFR 8342.1.

PC 297: The Final EIS should examine the relationship between NECO and the California Back country Discovery Trail footprint.

Response: Information pertaining to California Back Country Discovery Trails has been added to Section 3.8 (Recreation Management). Effects of route designation decisions on the Discovery Trails under the Proposed Plan are now addressed in Section 4.2.8 (Recreation Management).

PC 315: The BLM should restrict motorized use to designated areas.

Response: Use of vehicles is restricted to designated routes of travel except in OHV open areas. The existing two OHV open areas in the planning area are proposed closed. All inventoried routes of travel and navigable washes on a washes system basis are designated open, closed, or limited in the Proposed Plan and each plan alternative.

PC 316: The BLM should ensure that certain routes remain open to motorized use.

Response: Individuals have cited specific routes in their comments and suggest that such routes be designated "open." Accordingly, the responses herein provided are on a route-specific basis. U.S. Geological Survey (USGS) 1:24,000 scale quadrangles within which the routes occur are identified.

Red Canyon Jeep Trail (route numbers 660194, 660202, and 661203; USGS quadrangles: Hayfield, Red Canyon, and East of Red Canyon): The mid-section of the Red Canyon Jeep Trail is depicted on the Draft NECO Plan/EIS maps as a non-route. Such depiction is in error. Under the Proposed Plan, the entire length of the Red Canyon Jeep Trail is designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation.

Hidden Saddle Area (route 670557; USGS quadrangles: Little Chuckwalla Mountains and Wiley Well): The route is depicted on the Draft NECO Plan/EIS maps as a redundant route. Upon further review by the BLM El Centro Field Office staff, it was determined that the route provides the best access to the Hidden Saddle Geode Beds, and the route located immediately to the south (route 670558) provides non-redundant access to the general area. Individuals using this route, as well as route 670558, have not ventured from them with their vehicles. Under the Proposed Plan, route 670557 is designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation.

Route 660626 (USGS quadrangles: Aztec Mines and East of Aztec Mines): Only a portion of this route (the paved section from the old highway to a gravel pit) is depicted on the Draft NECO Plan/EIS maps. This section is incorrectly depicted as a dirt non-route. Under the Proposed Plan, the entire length of the route is addressed. The paved segment from the old highway to the gravel pit is designated "open" and is now depicted as a paved route on the Final EIS maps. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation. The segment from the gravel pit to its intersection with route 660580 is designated "closed" as a non-route. Field review by BLM Palm Springs staff accompanied by the individual submitting the comment confirmed the status of the route.

Route 660703 (USGS quadrangle: East of Aztec Mines): The continuation of route 660703 (a power line maintenance route) from the Hopkins Well and Roosevelt Mine quadrangles is not depicted on the East of Aztec Mines quadrangle. Field review by BLM Palm Springs staff confirmed the presence of the route. Under the Proposed Plan, it is designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation.

Route 660971 (USGS quadrangle: Thumb Peak): Upon further review by BLM Palm Springs Field Office staff, the segment north of route 669990 constitutes an existing route that is used on an occasional basis for access to rockhound collection areas. This determination is contrary to its characterization on the Draft NECO Plan/EIS maps as a non-route. Under the Proposed Plan, this segment is designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation. The segment of route 660971 south of its intersection with route 669990, depicted as a non-route on the Draft Plan maps, is designated "closed" under the Proposed Plan.

Route 690499 (USGS quadrangles--Mohawk Spring, Savahia Peak NW, and Savahia Peak SW): Upon further review by BLM Needles Field Office staff, this route is incorrectly characterized as a non-route on the Draft NECO Plan/EIS maps. Although the route is rough in certain locations, it offers a challenging off-highway vehicle experience for many motorized recreationists. Under the Proposed Plan, this route is designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of this designation.

Routes depicted on the Arlington Mine quadrangle: The individual submitting the comment states that the routes on this map provide the only access to the mines, and that the only remaining access to this area since wilderness designation is via Palen Pass Road. Palen Pass Road (route 660656) and Arlington Mine Road (route 660665) provide primary access from the west and east, respectively, to the Arlington and Black Jack Mines are designated "open" under the Proposed Plan. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of these designations.

Route 661253 (USGS quadrangle--Inca): This route provides access to Brown Mine where significant bat roosts are located. The majority of the route, including the segment at Brown Mine, occurs on private lands. To protect these roosts from human disturbance as prescribed under the Proposed Plan (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities), the segment of the route on public lands is designated "closed" to motorized vehicles. Non-motorized access is not prohibited on the route. Brown Mine is located approximately 1.5 miles from the nearest open route (661254). Motorized-vehicle access to Victor Mine located about 1.2 miles south of Brown Mine is provided via route 661255 that is designated "open" under the Proposed Plan.

Routes 660790, 660792, 660795, and 660796 (USGS quadrangles--Big Maria Mountains SW and McCoy Wash): The individual submitting the comment asserts that beekeepers, snowbirds, and hunters use these routes. Review by BLM Palm Springs Field Office staff affirms the characterization of these routes as non-routes. Accordingly, they are designated "closed" under the Proposed Plan. These formally existing routes, each of which is approximately two miles in length as depicted on the Draft NECO Plan/EIS maps, can be accessed by non-motorized means via Midland Road.

PC 317: The BLM should ensure that all existing trails remain open for motorized recreation.
PC 318: To ensure continuing motorized recreation opportunities, the BLM should create new trails when existing trails are closed.
PC 319: The BLM should maintain and expand the existing trail system in the CDCA planning area.
PC 320: The Final EIS should ensure that opportunities for motorbike recreation will continue.
PC 321: The BLM should provide loop trails on public lands for motorized recreation.

Response: BLM is obligated under regulations and Executive orders to designate routes as described in the introduction to section 2.5. To implement the requirement, criteria were developed for the planning area for designating routes on BLM lands that reflect the general intent of regulation. These criteria are listed in Chapter 2, section 2.5. Routes are proposed closed only where the criteria apply; however, in some cases the use need of a route was more compelling than applying the criterion, and the route was designated open. Routes proposed closed do not include major elements of access, but instead focus on short segments and ends of routes. In a few places new routes are proposed to be constructed to enhance recreation opportunities. Proposed route designations also reflect the intent of the State of California Discovery Trail initiative. Chapter 4 describes the cumulative affects desert-wide from designation of routes. In designating routes no distinction is made for class of vehicle as there are few, if any, vehicle-type conflicts in the planning area. Adaptive management is part of land use planning and plan change. Changes to route and area designations can occur based upon local and regional conservation and uses trends and changes.

PC 339: The BLM should consider road reclassification as an alternative to road obliteration.

Response: Under the Proposed Plan, the rehabilitation of routes designated "closed" constitutes one of several options to exclude access. Signing and barricading closed routes are identified as other options to accomplish the task (see Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). However, the Proposed Plan does not identify mechanisms on a route-by-route basis for implementing route closures. Site- and circumstance-specific considerations will determine the most appropriate and effective way to exclude access for individual routes. Where rehabilitation of routes is determined necessary, project-specific analysis of environmental impacts will be completed prior to approval.

The individual submitting the comment suggests that a more viable alternative to route obliteration is reclassification of routes as either restricted-width or unrestricted-width trails, but fails to explain how such classifications are applicable to the NECO Plan. All routes in the NECO Planning Area are considered as "restricted-width trails." Except for the purposes of stopping, parking, and vehicle camping for which specific distances from the centerline of a route are identified under the Proposed Plan (see Sec. 2.5.2), travel beyond the edge of the roadbed is considered as cross-country travel. Cross-country vehicle travel is not permitted in the California Desert Conservation Area (CDCA) except in off-highway vehicle recreation areas specifically designated for such use. The term "unrestricted-width trail" has no meaning in the context of

motorized-vehicle access in the CDCA. The individual who submitted the comment did not provide a definition of this term.

PC 342: The CDCA Plan Amendment should retain access roads for mineral collection activities.

Response: Access to mineral collection areas under the Proposed Plan is largely retained (see Map 2-32 depicting the network of motorized-vehicle routes designated "open" under the Plan and Map 4-2 depicting historic rockhounding areas). Public comments regarding specific routes to collection areas were considered in developing these Amendments. Some routes identified in the Draft NECO Plan/EIS for closure are now proposed as open in response to these comments, while the proposal to close other routes to collection areas is not modified in order to protect special status species and their habitats.

PC 343: The Final EIS should clarify that the BLM has no authority to close county roads.
PC 344: The Final EIS should ensure the preservation of RS 2477 rights-of-way for future generations.
PC 345: The Final EIS should recognize all travel routes claimed under RS-2477.

Response: BLM is not proposing to close any county road in the planning area. Any RS2477 claims that counties may make in the future will be addressed at that time. Nothing in the Proposed Plan or Record of Decision that will be signed later will affect the opportunity or process for RS2477 claims.

PC 346: The CDCA Plan Amendment should establish that Route 660656 will remain open.

Response: Route 660656 south of its intersection with route 660669 is designated "closed" due to its proximity to a water source. Under the Proposed Plan, closure of any route within 1/4 mile of a natural or artificial water source shall be strongly considered (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities). The closed segment of route 660656 is approximately six miles in length with the southern terminus located at the Palen-McCoy Wilderness boundary. As stated in Sec. 2.5 (Motorized-Vehicle Access/Routes of Travel Designations/Recreation), application of location-specific biological parameters, which include the restriction relative to water sources, occasionally leads to the designation of an entire route on public lands as "closed" rather than limiting the closure to a portion of the route. Such broadening of the parameters in this manner is generally based on judgments regarding potential for manageability.

The segment of route 660656 south of its intersection with route 660669 traverses a broad alluvial area where control of motorized-vehicle access is best accomplished at the point one route diverges from another route, rather than further along the route where opportunities exist to bypass gates or barricades. The individual requesting that route 660656 remain open suggests that closure of the southern segment of the route precludes direct access to Wiley's Well and "cuts off the upper valley from the lower valley." From the point of closure, the Wiley's Well Road exit on Interstate Highway 10 is about 20 miles to the south. Upon enactment of the California Desert Protection Act of 1994 (Public Law 103-433), the Palen-McCoy Wilderness was established, thereby effectively terminating motorized-vehicle travel on route 660656 at the wilderness boundary. Opportunities to access the Wiley's Well area from the point of closure are provided under the Proposed Plan via Palen Pass Road to the west and Arlington Mine Road to the east.

PC 347: The BLM should reevaluate information provided in the DEIS on Rd. 690142.

Response: The individual submitting this comment indicates the proposed closure of route 690142 in accordance with the Draft NECO Plan/EIS is based on the route's proximity to a spring. This assertion is in error. The Draft Plan/EIS proposes the route's closure due to its status as a non-route (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation, regarding the definition of a "non-route"). Upon further review by the BLM Needles Field Office staff, the route is determined to exist and easy to follow in its entirety, hence its characterization as a non-route is incorrect. Under the Proposed Plan, route 690142 is identified for designation as "open." No impacts to resource values or other uses of the public lands or neighboring lands are anticipated as a consequence of this designation.

PC 350: The BLM should ground truth routes that have been declared non-routes.

Response: Appendix L describes the route inventory process conducted for the NECO Plan. To reiterate, in part, an attempt was made to complete an on-the-ground inventory of 100 percent of the routes within the planning area. In ascertaining whether natural reclamation had sufficiently obscured some routes such that they should be considered as "non-routes," the BLM recognized that not everyone would agree on these determinations. The variations in surface conditions from route to route, and even along individual routes from one location to another, necessitated that interpretations be made in the field. To ensure the inventory reflected the existing situation, the public was requested in 1996 to review the route inventory maps and submit comments as to the completeness and accuracy of the inventory. Prior to release of the Draft NECO Plan/EIS, few route-specific comments were received by the BLM, hence the characterization of certain routes as "non-routes" was carried forward with no revision into the draft document.

Based on comments received during the Draft NECO Plan/EIS public comment period and upon further review of route conditions by BLM Field Office staffs in Needles, Palm Springs, and El Centro, it was determined that the characterization of some routes as non-routes was incorrect. Route designations proposals have been accordingly modified for the Proposed Plan.

PC 353: The CDCA Plan Amendment should implement the Memorandum of Understanding between the BLM, the California Department of Parks and Recreation and the U.S. Forest Service as part of the route designation process.

Response: The Memorandum of Understanding (MOU) referenced in the public concern statement was entered into by the BLM, U.S. Forest Service, and Off-Highway Motor Vehicle Recreation (OHMVR) Division of the California Department of Parks and Recreation for the purpose of developing a framework under which to coordinate planning, development, and designation of a Statewide Motor Vehicle Trail and provide long-distance touring opportunities for off-highway vehicle recreation. It was executed by each of the parties in 1989. In 1994, the State's Off-Highway Motor Vehicle Division Recreation Commission adopted California Back Country Discovery Trails as the official name for California's off-highway vehicle trail system and designated the California Back Country Discovery Trails as an element of the Statewide Motorized Trail System.

Information regarding California Back Country Discovery Trails has been added to Section 3.8 (Recreation Management). Although the State's OHMVR Division is the lead agency for the California Back Country

Discovery Trail system, resource management, law enforcement, maintenance, and operation of the system remain the responsibility of the appropriate land management agency.

Routes of travel in the NECO Planning Area have not yet been designated as Discovery Trails. A report published by The Resource Protection Institute in May 1999 identifies California Back Country Discovery Trails in the BLM's California Desert District. Proposed Discovery Trails occurring within the NECO Planning Area are described in Section 3.8. Under the Proposed Plan, such routes are available for motorized-vehicle use, i.e., they are identified for designation as "open" (see Sec. 4.2.8, Recreation Management).

PC 369: The Final EIS should provide additional analysis of safety impacts from limiting vehicle parking on county roads.

Response: The individual submitting the comment expresses concern regarding the 30-foot limit for stopping, parking, and vehicle camping as proposed under the Small DWMA A--Alternative, and indicates support for the limits imposed under the Proposed Plan (see Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). The individual does not, however, provide sufficient information in the comment regarding the safety issue desired to be addressed in further detail (e.g., potential for contact between parked and passing vehicles, potential for contact between pedestrians and passing vehicles, potential for vandalism to parked vehicles when out of sight of owners are pursing non-motorized activities away from vehicles, potential for harm to individuals camping in desolate areas in close proximity to County roads, etc.). In accordance with the Proposed Plan, stopping, parking, and vehicle camping are restricted to areas within 300 feet of the centerline of a route, except within sensitive areas (such as Areas of Critical Environmental Concern) where the limit is 100 feet. BLM concludes that under these Amendments, such limits provide adequate space for these activities (see Sec. 4.2.8, Recreation Management).

PC 371: The BLM should consider the needs of disabled visitors.

Response: The individual submitting the comment relates the availability of motorized-vehicle access to available opportunities for disabled visitors, suggesting that handicapped, elderly, or physically impaired individuals can recreate only on motorized roads and trails. The BLM recognizes that many of the California desert's most attractive resources can be enjoyed only by use of vehicle access routes (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). Thus substantial limitations on motorized-vehicle access would concomitantly affect opportunities for <u>all</u> visitors to experience and enjoy the myriad of resource values contained within the California desert, and may especially impact those with no other options such as travel on foot, horseback, or bicycle due to physical limitations or impairments.

As required by the regulations at 43 CFR 8342.1, the designation of areas and trails (routes) as either "open," "limited," or "closed" shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands, and in accordance with specific criteria (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access, for a description of the criteria). Under the Proposed Plan, routes of travel are so designated in accordance with the regulations. Analysis in Chapter 4 addressing limitations on motorized-vehicle access, hence recreation, concludes that such limitations under these Amendments are minor (see Section 4.2.8, Recreation Management). Motorized-vehicle access to all regions of the NECO Planning Area is little

changed for all visitors, including those that rely to a greater degree on motorized vehicles for recreational purposes than other less-physically challenged individuals.

PC 376: The CDCA Plan Amendment should allow recreational activity in desert washes.

Response: The individual submitting the comment asserts that a species of concern must be documented as occurring in specific washes in order to support the closure of washes to motorized vehicles, and that addressing the designation of washes by zones rather than on a wash-by-wash basis is unacceptable. Rationale for addressing washes on a zone basis, except for those identified and mapped as individual routes, is provided in Section 3.9 (Off-Highway Vehicle Use/Motorized-Vehicle Access). The establishment of "washes closed zones" in Desert Wildlife Management Areas under the Proposed Plan (see Sec. 2.2.2, Recovery of the Desert Tortoise) is identified as a biological parameter developed in furtherance of the regulations at 43 CFR 8342.1 which require that the designation of areas and trails (routes) as either "open," "limited," or "closed" shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands, and in accordance with specific criteria (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access, for a description of the criteria). Distributions of the desert tortoise and causes for its decline in numbers are addressed in Appendix N (Wildlife History and Wildlife/Plant Tables). The establishment of "washes closed zones" is based on the species account and life history. Various studies support the establishment of "washes closed zones." These are discussed and cited below.

Jennings (1997) studied tortoise use of various habitat strata at the Desert Tortoise Natural Area. He found that tortoises used washes, washlets, and hills almost exclusively and avoided flats. During each of three plant phenological periods, the primary food of tortoises were found along the margins of washes and washlets, and overall >25 percent of all the plants on which tortoises fed were in the washes and washlets. Even those these areas comprised only about 10 percent of the area. During the third phenological period (1 to 30 June), when weather was hot and dry, the few tortoises above ground are mostly (68 percent) along washes and washlets. Overall, of the ten most-preferred plants, three were largely confined to washes. Jennings concluded that tortoises were vulnerable to negative effects from off-highway vehicle use because of their habitat preferences.

Others (Woodbury and Hardy 1948, Burge 1978, and Baxter 1988) have shown that tortoises use washes and washlets for travel, burrowing, nesting, and feeding. The disproportionate time spent in these areas makes tortoises vulnerable to being run over by vehicles using the washes as travel routes. Other studies have described the impacts of off-highway vehicles on washes including disturbance of soil and terrain resulting in deterioration or denudation of vegetation (Burge 1983, Woodman 1983, Goodlett and Goodlett 1993) and destruction of wash margins as washes are widened over time (Berry *et al.* 1986). These effects reduce the tortoise's preferred food and cover sites.

In "washes closed zones," vehicle use is restricted to specific routes individually designated "open" or "limited," including navigable washes (see Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation, and Map 2-32 depicting Desert Wildlife Management Areas and the approved access network). Outside "washes closed zones," navigable washes are considered to occur within "washes open zones" and are available for motorized-vehicle use as a class unless it is determined that use in specific

washes or wash zones must be further limited (see Sec. 2.5.2). Hence, opportunities for motorized-vehicle use of washes is not altogether precluded. Non-motorized access to washes is not restricted.

Baxter, R.J. 1988. Spatial distribution of desert tortoises (*Gopherus agassizii*) at Twentynine Palms, California: Implications of relocations. *In* Proc. Symposium on Management of Amphibians, Reptiles, and Small Mammals in North America, pp. 180-189. Flagstaff, Ariz.

Burge, B.L. 1978. Physical characteristics and patterns of utilization of cover sites used by *Gopherus agassizii* in southern Nevada. Proc. Desert Tortoise Council Symp. 1978:132-140.

Burge, B.L. 1983. Impact of Frontier 500 off-road vehicle race on desert tortoise habitat. Proc. Desert Tortoise Council Symp. 1983:27-38.

Goodlett, G.O., and G.C. Goodlett. 1993. Studies of unauthorized off-highway vehicle activity in the Rand Mountains and Fremont Valley, Kern County. Proc. Desert Tortoise Council Symp. 1993:163-187.

Woodbury, A.M., and R. Hardy. 1948. Studies of the desert tortoise, *Gopherus agassizii*. Ecol Monogr. 18:146-200.

Woodman, A.P. 1983. Effects of Parker 400 off-road race on desert tortoise habitat in the Chemehuevi Valley, California. Proc. Desert Tortoise Council Symp. 1983:68-79.

PC 377: The BLM should designate established camping areas as exempt from the 100 foot vehicle camping limit.

Response: The 100-foot limit for stopping, parking, and vehicle camping in sensitive areas such as Areas of Critical Environmental Concern was established through the California Desert Conservation Area Plan. Elsewhere, the limit is 300 feet (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). The only change prescribed under the Proposed Plan is that limits for these activities be measured from the centerline of a route (versus measurements from a route's edge) to establish consistency in expressing the limitations (see Sec. 2.5). For routes twelve feet wide, for example, the area for vehicle camping to each side of the route is reduced by six feet; for routes sixteen feet wide, the area to each side is reduced by eight feet; and so forth. The effects of modifying the existing limitations are addressed in Section 4.2.8 (Recreation Management).

Vehicle camping alongside routes with few restrictions as to location (except as regards distance from a route) has long been a recreational opportunity often unique to public lands (see Sec. 4.3.8, Recreation Management, Small DWMA A Alternative). Over the years, hundreds of vehicle campsites (generally recognized by the presence of fire rings and evidence of vehicular access) have been established throughout the California desert (pers. comm., BLM staff). Although it is not known how many campsites have been established beyond the 100- and 300-foot limits, observations by BLM staff support a conclusion that such occurrences are not wide-ranging in the NECO Planning Area. Therefore, exempting established camping areas from the 100-foot limit in Areas of Critical Environmental Concern would do little to enhance opportunities for vehicle camping. Further, it would constitute approval of vehicle travel that occurred in a manner inconsistent with management prescriptions set forth in the California Desert Conservation Area (CDCA) Plan (except where

vehicle camping occurred within the limits established under the CDCA Plan but outside the limits established under the Proposed Plan upon shifting of the limit's measurement point to the centerline of a route).

The individual submitting the comment further requests that established campsites at the Hauser Geode Beds be specifically exempted from the 100-foot limit and cites instances when up to 80 vehicles have visited the site at one time, suggesting that vehicles would be forced to move from established camping areas to other areas along existing roads under the Proposed Plan. Some lands in the vicinity of the Hauser Geode Beds are not under jurisdiction of the BLM; the limit for stopping, parking, and vehicle camping does not apply to these lands. Camping beyond the 100-foot limit on public lands is not prohibited, rather the restriction applies only to travel with vehicles. The network of routes designated "open" in this area is sufficient to accommodate vehicular camping with 80 vehicles, although it may necessitate spreading them out along the approved routes. Hence, an exemption to the 100-foot rule is not warranted for the few occasions per year whereupon increased visitation to the Hauser Geode Beds occurs and individuals desire to camp in such close proximity to others that the 100-foot rule constrains their ability to do so.

PC 378: The BLM should justify its proposal to close routes to the mine in the Trilobite Wilderness.

Response: The closures of routes 690360 and 690361, the latter diverging from the former and both providing access to the same general location, are based on information furnished to the BLM in March 1999 by Pat Brown (Brown and Berry Consulting) regarding observation of a maternity roost of the California Leaf-nosed bat at this site in the Marble Mountains. Route 690360 is approximately 3/4-mile in length; route 690361 is about 6/10-mile in length. Alternate vehicle access to the Marble Mountains portion of the Trilobite Wilderness is furnished via several routes located 3 to 5 miles to the west including routes 690325, 690327, 690328, 690330, 690331, and 690332.

PC 380: The BLM should clarify how the parking limit of 100 feet from the centerline will be determined on desert roads.

Response: Most non-paved routes of travel in the NECO Planning Area are defined by recognizable berms on each side, typically where routes are maintained with the use of graders, or by the presence of well-established vehicle tracks where routes are "maintained" simply by the repeated passage of vehicles. The centerline of these routes, respectively, is located at the midpoint between the berms or the outer edges of the vehicle tracks. Whether the limit is 100 feet in such sensitive locations as Areas of Critical Environmental Concern or 300 feet elsewhere, the limits for stopping, parking, and vehicle camping are determined relative to this centerline.

PC 382: The BLM should ensure that opportunities for earth science oriented education continue.

Response: The individual submitting the comment cites losses of opportunities for rock and mineral collecting on public lands due to enlargement of National Parks, creation of a National Preserve, designation of wilderness, enlargement of military areas, transfer of milkvetch lands to state parks, and creation of Areas of Critical Environmental Concern, and suggests that no further actions should be approved that eliminate earth science-oriented education and recreation on public lands.

Under the Proposed Plan, the collection of rocks and minerals as a hobby (recreational rockhounding) is allowed consistent with existing regulations and the California Desert Conservation Area Plan, i.e., no changes are identified. Access to mineral collection areas under these Amendments is largely retained (see Map 2-32 depicting the network of motorized-vehicle routes designated "open" under the Plan and Map 4-2 depicting historic rockhounding areas). Public comments regarding specific routes to collection areas were considered in developing the Proposed Plan. Some routes identified in the Draft NECO Plan/EIS for closure are now proposed as open in response to these comments, while the proposal to close other routes to collection areas is not modified in order to protect special status species and their habitats. Hence, opportunities for rock collecting and other earth science-oriented educational activities continue to be provided under the Proposed Plan.

PC 407: The BLM should prioritize enforcement over new restrictions in response to motorized access violations.

Response: The Draft NECO Plan/EIS does not cite violations of motorized-vehicle management prescriptions set forth in the California Desert Conservation Area Plan as rationale for imposing limitations on vehicular access in order to provide for recovery of the desert tortoise and protect other special status species and their habitats. Under the Proposed Plan, routes of travel are designated as "open," "limited," or "closed" consistent with the regulations at 43 CFR 8342.1 (see Section 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access) and biological parameters developed in furtherance of these regulations (see Table 2-11 of Sec. 2.5, Motorized Vehicle Access/Routes of Travel Designations/Recreation, for a summary of these parameters). These "biological parameters" are derived from life histories and species accounts for special status wildlife species that relate population declines, in part, to disturbances from human-related activities including recreational use of motorized vehicles (see Sec. 3.4, Biological Resources, and Appendix N, Wildlife History and Wildlife/Plant Tables). Where no such relationships are supported by existing studies, limitations on motorized-vehicle use to protect special status species and their habitats are not proposed through the NECO Plan.

Application of these criteria to identify a route network that achieves the stated NECO Plan objectives (see Sec. 1.1, Purpose, Need and Scope) addresses legal casual use of existing routes. Driving responsibly in a legal manner on certain routes of travel, including wash routes, can crush tortoises; disrupt vital life functions and affect population status of bats, hawks and falcons; disrupt critical activities (e.g., nesting and breeding) of various species of birds and lizards; and disturb species sensitive to noise such as birds and bighorn sheep (see Sec. 4.1.4.1, Wildlife Management). Certain routes are identified for closure under the Proposed Plan to avert these impacts.

Despite the best efforts of rangers and visitor services staff to provide law enforcement and education, various illegal activities occur on the public lands. Among the illegal activities affecting the desert tortoise in particular are collecting them for pets or other uses; shooting them; collecting vegetation, especially cactus and ocotillo; dumping refuse, car bodies, and hazardous waster; salvaging scrap metal from bombing; manufacturing methamphetamine; and illegal immigration (see Sec. 4.1.4.1). Efforts to curtail such illegal activities will continue.

PC 415: The Final EIS should analyze the impacts of route closures to the preservation of western culture.
PC 416: The Final EIS should evaluate utilizing multiple-use management principles to protect western culture and values.
PC 420: The BLM should not close access routes to sites of historical interest.

Response: BLM has been very painstaking to develop very specific criteria for closing roads and apply these criteria primarily in DWMAs and WHMAs. In areas with high mineral, utilities, and recreation values species and habitat conservation are generally not emphasized nor have road/washes closures been emphasized. As a result, the amount of roads and washes systems proposed closed are small and have not significantly added to restrictions and closures affecting economic and social pursuits that are already in place. BLM has also been as sensitive as possible to retaining access where roads are known to provide access for specific purposes: e.g., economic activities, rock hounding, camping, hunting, trail heads into wilderness areas, and important sightseeing areas.

PC 433: The BLM should upgrade the portion of route 660727 that passes through Coon Hollow to Wiley Well Road to "Proposed Open Dirt Route."

Response: Route 660727 is identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Route 660727 is designated “open” under the Proposed Plan.

PC 434: The BLM should upgrade the portion of route 660701 that lies east of the Little Chuckwalla Wilderness Area from "Proposed Closed" to "Proposed Open Dirt Route."

Response: A portion of Government Pass Road, route 660701, was incorrectly characterized in the Draft NECO Plan/EIS as a non-route. This route is regularly used, provides an important link between Interstate Highway 10 and the Bradshaw National Back Country Byway, and forms the eastern boundary of the Little Chuckwalla Mountains Wilderness. The route is designated “open” in its entirety under the Proposed Plan. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as “open.”

PC 435: The BLM should upgrade portions of route 671300 (to BaSO4 mining area) and route 670560 (to the southern end of Potato Patch collecting area) from "Proposed Open Pending Additional Assessment" to "Proposed Open."

Response: Routes 671300 and 670560 are identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Routes 671300 and 670560 are designated “open” under the Proposed Plan.

PC 437: The BLM should upgrade the portion of route 660972 that lies south of route 679986 from "Proposed Closed" to "Proposed Open Dirt Route."

Response: In the Draft NECO Plan/EIS, the segment of route 660972 south of its intersection with route 679986 is identified as a redundant route proposed for closure. Upon further BLM review and recognition that route 660972 provides the best access to the Clapp Springs rockhounding area, the segment south of the route's intersection with route 679986 is designated "open" under the Proposed Plan. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 438: The BLM should upgrade the western end of route 679986 from "Already Closed" to "Proposed Open Dirt Route."

Response: The western end of route 679986 leading to the boundary of the Palo Verde Mountains Wilderness was incorrectly identified in the Draft NECO Plan/EIS as a closed wilderness route. It was intended that the proposal for a designation of "open" extend to the wilderness boundary. Hence, route 679986 to the wilderness boundary is designated "open" under the Proposed Plan. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 439: The BLM should upgrade route 670596 (Highway 78 into Gold Basin) from "Proposed Closed" to "Proposed Open Dirt Route."

Response: Route 670596 is identified in the Draft NECO Plan/EIS as a non-route proposed for closure. As a navigable route providing access to a gold nugget specimen area for rockhounding, it is designated "open" under the Proposed Plan. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 440: The BLM should upgrade route 670601 from "Proposed Closed" to "Proposed Open Dirt Route" or consider a seasonal open status.

Response: The southern segments of route 670601 are identified in the Draft NECO Plan/EIS as proposed closed due to ecological criteria, in this instance being the route's proximity to a natural or artificial water source (see summary of "biological parameters" in Table 2-11 of Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/ Recreation). The northern segments of the route are identified as redundant and proposed for closure. This designation of "closed" is not changed under the Proposed Plan. Under this Proposed Plan, however, only the northern segment identified as redundant is numbered as 670601. The segments closed due to ecological criteria have been renumbered as 670602 and 679990.

PC 441: The BLM should open routes 670806, 670807, 670708, 670709, and 670810.

Response: The individual submitting the comment requests that routes 670806, 670807, 670708, 670709, and 670810 be opened for use upon closure of the American Girl pits and upon a determination that use of them would be safe and productive for rockhounding. Presently, access to routes 670807 and 670810 is precluded by the presence of a locked gate. Route 670806 and a portion of route 670708 were incorrectly

identified in the Draft NECO Plan/EIS as non-routes proposed for closure. They are existing routes that provide access to the American Girl Mine area. Under the Proposed Plan, route 670806 and the segment of route 670708 south of its intersection with route 674011 are designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of such designation. "Route 670709 is identified in the Draft NECO Plan/EIS as an existing route proposed for designation as "open." This designation is not changed under the Proposed Plan.

PC 442: The BLM should upgrade routes 671066 and 671501 from "Proposed Open Pending Additional Assessment" to "Proposed Open Dirt Routes."

Response: Routes 671066 and 671501 are identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Under the Proposed Plan, routes 671066 and 671501 are designated "open."

A short route (less than 1/4 mile in length) on the Hedges quadrangle was redundantly identified as route 671066 in the Draft NECO Plan/EIS. It was characterized as a non-route proposed for closure. Under the Proposed Plan, it is identified as route 672010; the designation of "closed" is not changed.

PC 443: The BLM should upgrade the routes near the south end of Black Mountain from "Proposed Closed" to "Proposed Open Dirt Roads."

Response: The individual submitting the comment did not specify routes by number. However, a segment of route 670640 south of Black Mountain is incorrectly characterized in the Draft NECO Plan/EIS as a non-route proposed for closure. Contrary to this characterization, the route exists and comprises an important link to the remainder of the route on the west side of Black Mountain. Under the Proposed Plan, route 670640 is designated "open" in its entirety. No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 444: The BLM should identify the road that departs from route 670585 at a point southeast of Mount Barrow and heads northeast for 1-1/2 miles.

Response: BLM staff from the El Centro Field Office concurs with the individual submitting the comment that an existing route as described was not identified in the Draft NECO Plan/EIS. This route provides regularly used access to the Chocolate Mountains Aerial Gunnery Range boundary. Under the Proposed Plan, it is identified as route 674002 and designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 445: The BLM should upgrade routes 660586 and 660587 from "Proposed Closed" to "Proposed Open Dirt Routes" or at least a seasonal basis.

Response: Route 660586, approximately 3/4 of a mile in length, provides access to Mesquite Spring. Route 660587, also about 3/4 of a mile in length, provides access to Chuckwalla Well. These routes are identified in the Draft NECO Plan/EIS as proposed closed due to ecological criteria (see summary of "biological

parameters" in Table 2-11 of Sec. 2.5, Motorized-Vehicle Access/routes of Travel Designations/Recreation). In this instance, the closures are based on the routes' proximity to a natural or artificial water source. Recognizing the importance of water sources to desert wildlife regardless of the time of year and disturbances to these wildlife that are related to motorized-vehicle access (see Sec. 3.4.2, Wildlife, and Appendix N, Wildlife History and Wildlife/Plant Tables), the proposed designation of "closed" for each route is not changed under the Proposed Plan.

PC 446: The BLM should repair route 660576 at its southern terminus.

Response: The repair of specific routes is outside the scope of land use plan decisions; therefore, the repair of route 660576 is not addressed in the Proposed Plan.

PC 447: The BLM should upgrade routes 671066, 671065, 671305, 671372, 671309, 671301, 671941, 671310, and 671304 from "Proposed Open Pending Additional Assessment" to "Proposed Open Dirt Routes."

Response: Routes 671065, 671066, 671301, 671304, 671305, 671309, 671310, and 671941 are identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). These routes are designated "open" under the Proposed Plan.

No route numbered 671372 is identified in the Draft NECO Plan/EIS or Proposed Plan.

PC 448: The BLM should upgrade the routes providing access to the historical TUMCO mining site from "Proposed Closed" to "Proposed Open Dirt Roads."

Response: The individual submitting the comment did not specify any routes by number. Routes 670668, 670669, 670673, 670674, and 670675 (located in the Tumco area of the Cargo Muchacho Mountains) are identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). These routes are designated "open" under the Proposed Plan.

Route 670676 east of Hedges (site) and accessing the Tumco Mine is identified in the Draft NECO Plan/EIS as proposed open. However, a gate precludes public access to the mine. Under the Proposed Plan, the segment of route 670676 east of Hedges (site) is designated "closed."

PC 449: The BLM should upgrade route 670685 to allow access into the eastern portion of the Cargo Muchacho Mountains.

Response: Route 670685 is identified in the Draft NECO Plan/EIS as a non-route proposed for closure. Contrary to this characterization and upon further review by BLM El Centro Field Office staff, it is identified

under the Proposed Plan as an existing route that provides regularly used access to the east side of the Cargo Muchacho Mountains. Due to redundancy in numbering, it is identified in the Proposed Plan as route 672024 and designated "open." No impacts to resource values or other uses of the public or neighboring lands are anticipated as a consequence of its designation as "open."

PC 450: The BLM should upgrade route 671220 to allow access into the northeastern edge of the Cargo Muchacho Mountains.

Response: Route 671220 is identified in the Draft NECO Plan/EIS as proposed open except for certain segments for which designations are deferred pending cultural resources assessment. The approach for such assessments relative to the route designation process has been revised for the Final Environmental Impact Statement (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Under the Proposed Plan, route 671220 is designated "open."

Recreation

PC 72: The BLM should consider providing land compensation for land withdrawn from recreational access.
PC 288: The Final EIS should outline mitigation measures to compensate when lands are withdrawn from recreation use.

Response: There is no "withdrawal" of lands from recreational use or access under any alternative presented in the Draft NECO Plan/EIS. Consistent with the Federal Land Policy and Management Act of 1976, which allows the use of some public land for less than all resource uses in achieving multiple-use management in a manner that does not permanently impair the quality of the environment with consideration given to the relative values of the resources (Sec. 103(c)), and in conformance with the regulations at 43 CFR 8342.1 which require, in part, that trails be located to minimize harassment of wildlife or significant disruption of wildlife habitat with special attention given to protect endangered or threatened species and their habitats (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access), motorized-vehicle access is constrained in certain areas, i.e., certain existing routes of travel are closed to motorized-vehicle access. However, such closure of routes does not constitute a withdrawal of lands from recreational use. Recreational uses of the public lands are diverse and include both motorized and non-motorized activities. Where motorized-vehicles are restricted to certain routes of travel designated "open" under the Proposed Plan, recreational use of adjacent lands is not precluded; that is, the lands are not withdrawn from recreational use. Similarly, where routes are closed, the route itself and adjacent lands are not withdrawn from recreation, but the manner in which recreational use can occur on the route itself is changed.

There is no presumption of unlimited motorized-vehicle access throughout the California Desert Conservation Area (CDCA). Under the CDCA Plan, as amended, motorized-vehicle access is managed in accordance with Multiple-Use Class Guidelines (see Sec. 3.9). At a minimum in Multiple-Use Class L (Limited Use) and M (Moderate Use) areas, use is allowed only on "existing" routes of travel; i.e., cross-country travel is prohibited. In Multiple-Use Class L areas, use is directed toward approved ("open" or "limited") routes. Under the Proposed Plan, motorized-vehicle access is managed in accordance with Multiple-Use Class L guidelines irrespective of the Multiple-Use Class (except in Multiple-Use Class C (Controlled Use) areas and

I (Intensive Use) areas that are not designated as off-highway vehicle recreation areas). The designation of public lands as "limited" to off-highway vehicles (Multiple-Use Class L and M areas) consistent with the regulations at 43 CFR 8342.1 does not constitute a "withdrawal" of lands to recreation or access subject to compensation. Correspondingly, the designation of individual routes as "closed" to motorized vehicles does not constitute a withdrawal subject to compensation.

PC 93: The CDCA Plan Amendment should maintain open status of Ford Dry Lake and Rice Valley Dunes to off-highway vehicle use.
PC 94: The BLM should provide substantive proof of soil quality problems at Rice Valley and Ford Dry Lake, as they are low use areas and should remain open.
PC 95: The CDCA Plan Amendment should provide access to Rice Valley Dunes and Ford Dry Lake.

Response: Ford Dry Lake and Rice Dunes are proposed to be closed for two reasons: (1) Playas and dune systems are relatively rare in the North America. They often harbor species that are also rare and endemic. (2) Ford Dry Lake and Rice Dunes were designated open in the 1980 CDCA Plan to accommodate playa/dunes recreation uses. The expected recreation never occurred, due in part to their location and low recreation value, and is not expected to occur.

PC 96: The BLM should close the Johnson Valley-Parker race course.
PC 97: The CDCA Plan Amendment should permanently eliminate all race courses and close Ford Dry Lake and Rice Dunes to off-highway vehicle use.

Response: The Proposed Plan/FEIS indicates that use on that portion of the Johnson Valley-Parker course that runs through the NECO Planning Area would be outside of the Chemehuevi ACEC and could be environmentally compatible with species and habitat values. The proposal includes considerable design and mitigation measures as well as additional NEPA review to stage events. In full consideration of competitive race events, both the Parker 400 course and the multiple-use class event design guidelines are proposed to be eliminated.

PC 102: The BLM should clarify the deletion of Multiple Use Classification Guideline Criteria in the Preferred Alternative.

Response: The individual commenting on the NECO Plan/EIS references Table 2-1, Amendment 11, and expresses a need for clarification. Table 2-1 (Chapter 2, Alternatives) is a summary of California Desert Conservation Area (CDCA) Plan amendments for the Proposed Plan. It is not intended to furnish details pertaining to the amendments. Details regarding Multiple-Use Class guidelines for organized competitive vehicle events can be found in Sec. 3.8 (Recreation Management). The impacts to recreation under the Proposed Plan can be found in Section 4.2.8 (Recreation Management).

PC 298: The Final EIS should provide detailed information regarding the 1997 Recreational Survey.

Response: Relevant information from *Public Opinions and Attitudes on Outdoor Recreation in California 1997*, published in March 1998 by California State Parks (a division of the California Department of Parks and Recreation, State of California) is reproduced in Section 3.8 (Recreation Management). The 1997 survey of the California population was based on a sample of 2,010 California households selected at random. This

sample size provided data that exceeds 95 percent confidence plus or minus 5 percent when the state is considered as a whole. Each respondent was interviewed for an average of five minutes, with a portion of them also completing a lengthy mail questionnaire. The mail questionnaire contained topics and questions that were too detailed or complex to be dealt with on the telephone. This document is cited at the end of Section 3.8 and in the revised bibliography. Individuals desiring additional detailed information contained in the document may obtain it from the State of California or may review it at libraries where State of California documents are housed.

PC 300: The Final EIS should describe recreation impacts resulting from designating desert wildlife management areas as Category I Desert Tortoise Habitat.

Response: Designating Desert Wildlife Management Areas (DWMAs) as Category I desert tortoise habitat, in and of itself, results in no direct impacts to recreation. However, other actions that provide for recovery of the desert tortoise are identified in the Proposed Plan, and it is these actions that potentially affect opportunities for recreation. Such actions pertain to the use of motorized-vehicles in washes; to parking, stopping, and vehicle camping along approved routes of travel in DWMAs; and to the use of firearms (see Sec. 2.2.2, Recovery of the Desert Tortoise). The effects of these actions on recreation are addressed in Chapter 4 (see Sec. 4.2.8, Recreation Management).

PC 331: The BLM should explore alternatives and mitigation measures before denying permits for competitive race events.

Response: Under the Proposed Plan, competitive motorized-vehicle events within the NECO Planning Area can occur only within the Johnson Valley to Parker corridor and Off-Highway Vehicle Recreation Areas (see Section 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). As the two Off-Highway Vehicle Recreation Areas within the NECO Planning Area (Ford Dry Lake and Rice Valley Dunes) are closed to motorized vehicles under these Amendments (see Sec. 2.3.10, Management of Special Status Animals and Plants and Natural Communities), the only opportunities for such events are within the Johnson Valley to Parker corridor. Events in this corridor shall be permitted in accordance with requirements set forth in the CDCA Plan and stipulations from the 1980 Environmental Impact Statement except where changes and additional requirements are prescribed under the Proposed Plan (see Sec. 2.5.2).

An event-specific Environmental Assessment (EA) shall be completed prior to authorizing (or denying) a competitive vehicle event in the Johnson Valley to Parker corridor (see Sec. 2.5.2). In the EA, alternatives that conform to the land-use plan may be proposed, and additional mitigation measures may be identified. It can be assumed the BLM will issue a permit absent a change in the circumstances that led to its establishment of the corridor. The purpose of the EA is to determine if changes have occurred. The BLM may deny a permit for a race in the corridor if there is reason to believe that changes have occurred and a competitive off-highway vehicle event would result in substantial impacts to resource values that cannot be avoided or mitigated. U.S. District Court has ruled that the BLM may deny a permit for a motorized-vehicle race after following proper procedures such as preparing an Environmental Assessment (see Section 3.8, Recreation Management).

PC 370 The CDCA Amendment should continue to allow recreational gem collecting activities.

Response: Under the Proposed Plan, the collection of rocks and minerals as a hobby (recreational rockhounding) is allowed consistent with existing regulations and the California Desert Conservation Area Plan, i.e., no changes are identified.

PC 374: The Final EIS should evaluate hunting opportunity impacts resulting from proposed route closures.

Response: The analysis regarding impacts to recreation resulting from designating routes of travel as "open," "limited," and "closed" under the Proposed Plan has been strengthened for the Final Environmental Impact Statement (see Sec. 4.2.8, Recreation Management). Specific references to hunting have been omitted in favor of addressing impacts to all recreation activities in general that rely on motorized-vehicle access. Use of the term "reasonable" relative to access opportunities has been stricken.

The individual submitting the comment states that the Environmental Impact Statement must weigh the environmental benefits of the proposed route closures against the impacts to public access and recreation resulting from those closures, and suggests the Draft NECO Plan/EIS fails to do this. The effects on air, soils, wildlife, and vegetation from designating routes as "open," "limited," and "closed" under the Proposed Plan are described in Sections 4.2.1, 4.2.3, and 4.2.4.1, and 4.2.4.2, respectively. The effects on Recreation and Motorized-Vehicle Access consequent to such actions are described in Sections 4.2.8 and 4.2.9, respectively. The effects of different route designation scenarios proposed under other alternatives are also provided in Chapter 4 (Environmental Consequences). These analyses form the analytic basis for comparison of the alternatives (40 CFR 1502.16).

The individual submitting the comment also asserts that closure of washes to vehicles may have a profound adverse effect on hunters whose physical limitations force them to rely on motorized vehicles for access to their favored hunting areas. The BLM recognizes that much of the California desert can only be enjoyed by use of vehicle access routes (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access). It stands to reason, therefore, that substantial limitations on motorized-vehicle access would concomitantly affect opportunities for <u>all</u> visitors to experience and enjoy the myriad of resource values contained within the California desert, including those related to recreational hunting, and may especially impact those with no other options such as travel on foot, horseback, or bicycle due to physical limitations or impairments.

As required by the regulations at 43 CFR 8342.1, the designation of areas and trails (routes) as either "open," "limited," or "closed" shall be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands, and in accordance with specific criteria (see Sec. 3.9 for a description of the criteria). Under the Proposed Plan, routes of travel are so designated in accordance with the regulations. Analysis in Chapter 4 addressing limitations on motorized-vehicle access, hence recreation, concludes that such limitations under these Amendments are minor (see Section 4.2.8, Recreation Management). Motorized-vehicle access to all regions of the NECO Planning Area is little changed for all visitors, including those that rely to a greater degree on motorized vehicles for recreational purposes than other less-physically challenged individuals.

PC 451: The BLM should denote fluorescent calcite, placer gold, Solomon's Mine, copper, minerals, and the anchoring for old gold dredges on the Picacho Southwest Quadrangle.
PC 454: The BLM should denote Clapp Springs and outcrops of coral and coquina on the Thumb Peak Quadrangle.
PC 453: The BLM should denote manganese, rhodonite, gold, fire agate, and ribbon agate float on the Buzzard's Peak Quadrangle.
PC 454: The BLM should denote placer gold, and kyanite with quartz at the Blue Bird Mine on the Ogilby Quadrangle.
PC 455: The BLM should denote copper minerals, petrified palm, kyanite, hematite, jasper, and jasp-agate on the Quartz Peak Quadrangle.
PC 456: The BLM should denote quartz and amethyst on the Mount Barrow Quadrangle.
PC 457: The BLM should denote placer gold on the Chuckwalla Springs Quadrangle.
PC 458: The BLM should expand the listing of "190c--Petrified Palm" to encompass a much larger area on the Hedges Quadrangle.
PC 459: The BLM should denote gold on the Hedges Quadrangle.
PC 460: Various technical edits to quadrangles.

Response: BLM extends its appreciation to the San Diego Mineral and Gem Society, Inc. for the information on collectable minerals. The information has been useful in formulating routes of travel designations and will be added to existing data files on collectable minerals. BLM hopes to work with the Society in the future to improve map locations of these minerals

PC 461: The BLM should explain the change of definition for the term "maintained road."

Response: The definition of a maintained road as described in the Draft NECO Plan/EIS (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation), thereby modifying the definition appearing in the California Desert Conservation Area Plan, is established to distinguish between two categories of dirt routes, these being routes maintained with the use of machines and routes maintained simply by the continuous passage of vehicles. Routes in the first category (along with paved roads) are designated "open" under the Proposed Plan as an exception to application of biological parameters (see Table 2-11 of Sec. 2.5 for a summary of these parameters), unless it is determined that use must be limited for other reasons. Routes in the second category are subject to application of the biological parameters.

Recreational touring routes (see Sec. 3.9, Off-Highway Vehicle Use/Motorized-Vehicle Access) are also designated "open" under the Proposed Plan as an exception to application of biological parameters (unless it is determined that use must be limited for other reasons) in recognition of their importance as a resource to be considered alongside other resource values (see Sec. 2.5.2). Paved roads, maintained dirt routes, and recreational touring routes comprise the backbone of motorized-vehicle access in the NECO Planning Area. Un-maintained dirt routes designated "open" or "limited" provide additional opportunities for motorized recreation.

Wilderness

PC 108: The BLM should complete adequate management plans for the 25 wilderness areas within NECO.

Response: Wilderness management plans are developed for individual wilderness areas to prescribe specific objectives appropriate to the area and describe a strategy to implement the identified objectives. Whereas recreational uses of the 23 wilderness areas within the NECO Planning Area are very similar and do not require specific management strategies to address them; whereas the management of biological resources, grazing, and wild horses and burros in wilderness are addressed through the NECO planning process; and whereas the regulations at 43 CFR 8560 (Management of Designated Wilderness Areas), BLM Manual 8560 (Management of Designated Wilderness Areas), and BLM Handbook H-8560-1 (Management of Designated Wilderness Areas) provide sufficient management guidance to address known and potential wilderness management issues, no wilderness-specific management plans are identified for preparation at this time. Regarding motorized-vehicle incursions into wilderness, they have occurred since designation in 1994 under the California Desert Protection Act. Barriers to preclude such incursions have been installed, and law enforcement patrols have been undertaken to enforce the vehicle prohibition. These actions will continue without specific identification in wilderness management plans. The occurrence of these illegal incursions is recognized in Chapter 4 in sections pertaining to impacts on wilderness resources.

PC 109: The BLM should specify actions to prevent motorized incursions and ban new developments within wilderness areas.
PC 115: The CDCA Plan Amendment should protect all Wilderness lands and Wilderness Study Areas within NECO by regulating vehicle access and preventing new developments.

Response: Motorized-vehicle incursions into wilderness have occurred since designation of wilderness areas in 1994 under the California Desert Protection Act (Public Law 103-433). Barriers to preclude such incursions have been installed, and law enforcement patrols by BLM personnel have been undertaken to enforce the vehicle prohibition. Actions to preclude vehicle incursions will continue in the course of fulfilling land management responsibilities in accordance with the regulations at 43 CFR 8560 (Management of Designated Wilderness Areas), specifically 8560.1-2(d) which states that use of motorized equipment, motor vehicles, motorboats, or other forms of mechanical transport is prohibited in wilderness except as provided in the Wilderness Act or subsequent legislation establishing a particular wilderness area, or as specifically provided for elsewhere in the regulations, and subject to valid existing rights. (Note: No Wilderness Study Areas remain within the NECO Planning Area.)

Developments within designated wilderness areas are not categorically excluded (see Sec. 3.5, Wilderness Management). Under the Proposed Plan, water developments will be installed in certain wilderness areas to protect essential bighorn sheep habitat; maintain, improve, and restore the quality of their habitat; and reestablish bighorn sheep demes (see Sec. 2.3.2, Management of Special Status Animals and Plants and Natural Communities). The effects of these developments on wilderness resources are described in Section 4.2.5 (Wilderness Management).

PC 110: The BLM should provide for motorized recreational opportunity and access within Wilderness areas.

Response: In accordance with the Wilderness Act of 1964 (Public Law 88-571), there shall be no permanent road within any wilderness area designated by this Act except as specifically provided for in this Act and subject to existing private rights, and there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other forms of mechanical transport, and no structure or installation within any such area, except as necessary to meet minimum requirements for the administration of the area for the purposes of this Act (Sec. 4(C)).

In 1994 upon passage of the California Desert Protection Act (Public Law 103-433), the 23 wilderness areas within the NECO Planning Area were so designated. In accordance with this Act, each wilderness area shall be administered in accordance with the provisions of the Wilderness Act, subject to valid existing rights (Sec. 103(a)).

In accordance with the regulations at 43 CFR 8560 (Management of Designated Wilderness Areas), specifically 8560.1-2(d), use of motorized equipment, motor vehicles, motorboats, or other forms of mechanical transport is prohibited in wilderness except as provided in the Wilderness Act or subsequent legislation establishing a particular wilderness area, or as specifically provided for elsewhere in the regulations, and subject to valid existing rights.

The approved route network under the Proposed Plan provides access to the boundaries of wilderness areas (see Map 2-32). From these departure points, primitive and unconfined types of recreation within wilderness can be enjoyed.

PC 114: The BLM should reduce or eliminate grazing in wilderness if ecosystems are being damaged.

Response: Grazing established prior to designation of Wilderness shall be permitted to continue subject to reasonable regulations. The standards to reduce grazing in order to protect ecosystems are identical in or out of wilderness. The analysis of projects to mitigate impacts of grazing on ecosystems in wilderness will be analyzed in site-specific environmental assessments as provided for by the plan. Grazing activities found to be impacting wilderness values would be modified or eliminated.

PC 116: The CDCA Plan Amendment should protect released Wilderness Study Areas.

Response: As a result of the California Desert Protection Act of 1994, there are no longer any wilderness study areas in the NECO Planning Area. NECO decisions fulfill Purposes and Needs identified in Chapter 1. There is no particular mandate to "protect" released WSA's.

PC 322: The BLM should prohibit OHV use in wilderness areas.

Response: BLM has been doing a number a number of things to manage the still relatively new wilderness areas: boundary marking, road entrance eradication, getting wilderness areas on maps for the public, and public education. BLM does not subscribe to the policy of buffers.

Information and Education

PC 60: The Final EIS should include an education alternative designed to reduce and mitigate motorized recreation impacts.

Response: Management prescriptions that focus on education to reduce and mitigate motorized recreation impacts address only one element of a multi-faceted, complex ecosystem approach for the protection and enhancement, where appropriate, of special status species and their habitats on public lands. An alternative that focuses solely on education and outreach as suggested does not address other issues identified by the BLM, other agencies, and the public, such as the management of domestic livestock, the management of wild horses and burros, and the adjustment of land tenure, all of which pertain to the purpose and need for amending the California Desert Conservation Area Plan (see Sec. 1.1, Purpose, Need and Scope). An "education alternative" is not a separate and distinct alternative outside the array of alternatives presented in the Draft NECO Plan/EIS, and is not an alternative that is fully responsive to the stated purpose and need. Hence, such an alternative does not require evaluation in accordance with the National Environmental Policy Act (NEPA).

The "Tread Lightly!" program continues to be an integral part of the BLM's educational outreach effort in the California desert. The "Tread Lightly!" message is incorporated in every Desert Access Guide covering the California Desert Conservation Area. These Guides comprise a set of thirty-one 1:100,000 scale maps depicting surface management status, routes of travel, and points of interest, among other map features. However, such educational outreach efforts as "Tread Lightly!" are not location-specific; that is, they provide only general guidance about responsible motorized-vehicle use. The Proposed Plan, on the other hand, prescribes installation of kiosks at key locations throughout the planning area and distribution of printed materials that furnish site-specific information relating to access opportunities and limitations, resource protection, and visitor safety (Sec. 2.5.2, Motorized-Vehicle Access/Routes of Travel Designations/ Recreation).

PC 293: The BLM should improve availability and quality of public information regarding travel plans on public lands.

Response: Currently, Desert Access Guides (a set of thirty-one 1:100,000 scale maps depicting routes of travel, surface management status, and points of interest among other map features) are widely distributed through independent vendors as well as BLM offices in the California Desert District. Implementation of route designation decisions made under the Proposed Plan includes signing routes, installing informational kiosks at key locations, and distributing printed media regarding the availability of motorized-vehicle recreation opportunities (see Sec. 2.5, Motorized-Vehicle Access/Routes of Travel Designations/Recreation). Upon revision of the Desert Access Guides when determined to be appropriate, changes in route availability, where applicable, will be made.

Mining

PC 383: The BLM should address the impact to the United States defense resulting from natural resource extraction restrictions.

PC 384: The CDCA Plan Amendment should retain public access for mineral exploration, timber, and recreation.

PC 385: The Final EIS should examine project alternatives and mitigation measures for mineral resources in the Plan area.

PC 397: The CDCA Plan Amendment should implement the Preferred Alternative to allow continued mining activity under existing mineral leases.

PC 398: The Final EIS should provide a full analysis of potential impacts to mineral resource availability and economic opportunities.

PC 399: The Final EIS should address detailed treatment of mineral resources and the NECO plan's impact on these resources.

PC 400: The Final EIS should identify documented Marble Mountains mining claim as a mineral resource of high potential.

Response: No new access or extraction restrictions to mineral resources are proposed in the Proposed Plan or alternatives. As a result no detailed minerals maps and analyses are included in NECO. BLM's mineral potential maps are updated from time to time, but whether they display all potential or not is not relevant to ability for private entities to claim, develop, and mine mineral resources.

Rights-of-Way

PC 7: The CDCA Plan Amendment should clarify Environmental Assessment protocols for utility operations.

Response: Land use plans describe the level of additional NEPA analysis that may be required for projects that are proposed for authorization after the completion of a land use plan. In the case of specifically proposed utility lines, an EA or EIS will be required--as has been the case in the past. As described in the proposed plan, the nature of species values, mitigation, and compensation will vary inside and outside desert tortoise DWMAs and from habitat to habitat. BLM does not require an EA for minor maintenance routine, but reconstruction and other actions to existing lines with significant ground disturbances would require NEPA review, tortoise/other species considerations, and a use authorization.

PC 137: The Final EIS should include the Cadiz water development project in its cumulative effects analysis.

Response: The Cumulative Impacts section in Chapter 4 has been expanded to address this.

PC 355: The Final EIS should provide discussion of current and future utility activity in the CDCA.
PC 356 The Final EIS should identify all current and permissible facilities within the planning area utility corridor.
PC 358: The CDCA Plan Amendment should incorporate a goal of providing for future energy needs.

Response: In the Reasonable Foreseeable Future section at the beginning of Chapter 4 is a review of the nature and magnitude for various future uses in the planning area. The forecast is meant to be reasonable and not a maximum possible or worse case scenario. The effects analysis, including cumulative effects, which follows in Chapter 4, is based in part on current and the future picture. To this extent new utility lines are discussed in a general sense. Specific use authorizations are not generally reviewed at the land use planning level. No predictions are made for use authorizations, which must be supported through plan amendments.

PC 357: The CDCA Plan Amendment should clarify permit and facility management plan protocols for utility operations.

Response: In its request for consultation, the BLM has requested that USFWS issue a programmatic biological opinion on activities in tortoise habitat that meet the criteria (i.e., <100 ac., non-EIS, no CDCA Plan amendment) (See the Planning Area-wide Decisions in Section 2.3, Issue: Recovery of the Desert Tortoise). This programmatic biological opinion will cover maintenance of linear utilities, such as pipelines, transmission lines, and fiber-optic cables. Utilities operators that are covered under existing programmatic biological opinions may continue under the existing terms and conditions.

As with existing programmatic biological opinions, utilities must submit to BLM, USFWS, CDFG, and other agency landowners an annual report describing the maintenance and operations activities that are planned for the upcoming year. The report must include mitigation measures to be applied and an estimate of surface disturbance. The agencies will review the report to ensure that projects qualify under the programmatic biological opinion and that mitigation measures are appropriately applied. Unplanned projects, if any, may be reviewed similarly during the course of the year.

In addition as with the existing programmatic biological opinions, the utilities must submit an end-of-year report describing all work that was done, the number of tortoises removed from burrows, the number of tortoises removed for the work site, and the number of tortoises killed or injured. The utility may comment on the effectiveness of mitigation measures. The acreage and location of surface disturbance and computation of compensation must be included.

These requirements have been added to Appendix D, Northern and Eastern Colorado Desert Planning Area Desert Tortoise Mitigation Measures.

PC 359: The Final EIS should provide an expanded analysis of impacts on utilities.
PC 360: The BLM should consult with utility corporations to address resource and industry needs.
PC 361: The BLM should restrict the construction and expansion of utilities outside of existing corridors.
PC 365: The CDCA Plan Amendment should establish a goal of providing at least five additional utility lines per corridor.

PC 368: The CDCA Plan Amendment should establish a standard to protect the Imperial Irrigation utility lines/corridor.

Response: The 1980 CDCA Plan decisions regarding the installation and operation/maintenance of utilities in corridors, along with specific rights-of-way conveyances, and standard mitigation measures that have been in place since the listing of the desert tortoise (Appendix D to the Proposed Plan/FEIS) all apply to current and future utilities in utility corridors. The Proposed Plan adds no withdrawals or new restrictions or requirements to placement and operation/maintenance. BLM would be tracking to what degree new disturbance contributes to the 1 percent disturbance limitation, and would continue to work with use applicants to explore ways to reduce disturbance and improve rehabilitation of disturbed areas. As occurs now, BLM would discourage new utility lines in DWMAs that are outside of designated corridors. Any placement of lines outside of corridors would have to be addressed through a plan amendment, as is currently the case. The projection for future development of utilities is contained in the introduction to Chapter 4 and has been modified based upon public comment.

A number of cooperators have been involved during the development of the Proposed Plan, including utilities people from the southern California area. In addition BLM sought public input during the public scoping and DEIS public review period. Given the current schedule, it is not possible to seek additional public input. In addition it is beyond the scope of this amendment process to revisit the array of utility corridors across the California Desert. The merits of a corridors review aside, such a review, and possible plan amendment, involves several desert tortoise units, new energy initiatives, the North American Free Trade Agreement, new technologies, and other concerns and must be separately proposed and on a strategic, desert-wide basis.

Regarding PC 368, Map 2-1 Appendix A shows only utility corridors that were designated as such in the 1980 CDCA Plan. It does not show utility lines which were placed outside of designated corridors through plan amendments or which existed prior to completing the CDCA Plan. Existing lines outside corridors will continue to serve intended needs under the conditions of the right-of-way conveyance. Any work on them that is outside the scope of routine operation and maintenance will require a new authorization.

PC 362: The CDCA Plan Amendment should establish standards for utility corridor placement that minimize environmental damage.

Response: When a new utility is proposed, the BLM and other involved land management agencies (e.g., National Park Service, military) describe their requirements to the proponent. Among these is BLM's commitment to placement of utilities in designated utility corridors, if possible. Proponents are apprised of endangered species requirements, including those for desert tortoise. Included are requirement that (1) surface disturbing projects are to limit disturbance to that necessary for construction of the project, (2) blading of work areas is to be limited to the extent possible, and (3) disturbed areas are to use existing disturbed areas where possible. These are described in Appendix D (Northern and Eastern Colorado Desert Planning Area Desert Tortoise Mitigation Measures), item 8 on Surface Disturbance. Compensation requirements (Appendix D, Item 4, provides an added incentive to proponents to minimize new surface disturbance. These requirements are applied on a case-by-case basis and receive environmental review, including public comment, prior to authorization.

In the past, fiber-optic cables have been placed in the middle or shoulder of dirt roads (e.g., AT&T and Sprint in Boulder Corridor) or along the shoulder of paved highways (e.g., IXC, Level III Yuma to San Diego, AT&T Blythe to San Diego, and others).

PC 363: The CDCA Plan Amendment should establish that utility corridors are excluded from the one percent surface disturbance rule to give them an incentive to go there.

Response: Use of utility corridors is a requirement of the CDCA Plan. Utilities are allowed to go outside of these only when (1) there is no corridor that will accommodate the use (e.g., recent utilities going into Mexico, such as North Baja Pipeline) and (2) the environmental consequences would be greatly reduced by an alternative (e.g., various fiber-optic cables going along highways and roads). Where utilities are placed outside of designated utility corridors, the CDCA Plan must be amended. In any case, compensation requirements (Appendix D, Item 4) provide an added incentive to proponents to go outside of DWMAs because the ratio there is 5:1 rather than 1:1 outside. All proposed utilities receive environmental review, including public comment, prior to authorization.

PC 364: The Final EIS should clarify the siting process for utility corridors and the 5:1 compensation formula inside DWMAs.

Response: New technologies exist today that were not anticipated when the CDCA Plan was signed in 1980. While the Plan does provide direction that new transmission lines should be placed in corridors, some lines have been sited outside of corridors. This was done on case-by-case basis through plan amendments. In the future, placing new lines inside corridors will require a case-by case review and decision. Placing lines outside corridors will require a plan amendment.

The compensation ratio of 5:1 was developed with the idea of simplifying business by eliminating the formula with variable results, encouraging activities that cause considerable disturbance to be directed away from DWMAs, and more definitively eliminating the cumbersome checkerboard land ownership pattern.

PC 366: The Final EIS should clarify the definition of the term "restoration" with regard to utility operations.

Response: It will be in the interest of all parties to work harder and smarter than ever before to restore disturbed lands. Particularly compelling for both BLM managers and project applicants is the 1 percent disturbance rule. The farther away the limit amount is from current accumulation the better. The land use plan cannot offer a single recipe for restoration; restoration design will vary with the nature of disturbance, soils, habitats, and other factors. Appendix E is provided more for emphasis than specific utility. In DWMAs restoration will be judged completed on a case-by-case basis only through mutual agreement between BLM and the USFWS.

PC 367: The Final EIS should include specific standards for restoration as a prerequisite for returning bonds to utility operations.

Response: Appendix E (Desert Restoration) provides some guidance on restoration. Because methods of restoration must be applied on a site-specific basis and techniques are still being developed, only a list of site

planning and restoration considerations and some common techniques (i.e., applications) are given in Appendix E. The Desert Restoration Task Force will continue to provide advice for agencies participating in the Desert Managers Group.

Most techniques that have been identified involve short-term actions such as replacement of topsoil, surface/seedbed preparation, seeding, mulching, replanting of salvaged plants, and treatment of invasive exotic plants. Most of these (except maybe the last) are usually completed within a few years. Full restoration to near-predisturbance conditions will require that subsequent plant growth and reproduction and establishment of micro biotic crusts occur under natural processes. When and if the proponent has completed the prescribed restoration actions, it is reasonable to release the bond. In recent years, control of exotics has been extending restoration time frames for some projects.

Land Ownership, Acquisition, Disposal

PC 129: The BLM should identify and map public lands proposed for disposal within the NECO area.

Response: It is not possible at this time to specify particular federal lands for disposal because it is not known what lands might be desired by what entities. One can tell from other aspects of NECO that lands included in the various conservation zones are needed for conservation--to the extent that in some kinds of areas (e.g., wilderness, DWMAs) they are not available for disposal at all. Strategically, lands outside the various conservation zones are generally not critical to conservation, but this does not assume that they will all eventually be disposed of, either. On a case-by-case basis, when exchange proposals are made, they will be evaluated with respect to many resource values and plan commitments. Exchange is just one method of acquisition. In instances of mutual benefit, this method can be the best and most appropriate method. It is emphasized as the preferred method to best address needs for community expansion or other private uses and counties' concern for loss of tax basis from net loss of private lands.

PC 131: The BLM should continue efforts to transfer lands from private to public but should have written documentation of proposals upon private consolidation.

Response: The details of land exchanges are considered on a case-by-case basis. BLM consults with a variety of stakeholder agencies and interests upon a proposal being made and initiates broader review later with a NEPA review. BLM attempts to accommodate the interests of all parties with a stake in the outcome. The process includes discussion of the foreseeable uses for both federal and private lands. Once lands are transferred into private ownership, they come under local government control.

PC 132: The Final EIS should disclose all relevant information regarding planned and approved developments within proposed land exchanges.

Response: There is general discussion on this topic in the cumulative impacts section, Chapter 4. There is no proposed exchange at this time. Any future proposed exchange will result in a site-specific environmental assessment and public review. The purpose of exchanges is to improve the manageability of wildlife and habitat, particularly the desert tortoise, while at the same time provide for the development of private lands in places most appropriate for such uses.

PC 133: The Final EIS should reevaluate land acquisition alternatives which could prevent thorough public review of land management.

Response: The proposal to close acquired lands applies only to the specific five land laws listed in NECO section D under Objective B.

PC 134: The BLM should clarify proposed acquisition of California State Lands Commission lands within the NECO area.

Response: BLM can acquire lands only if landowners are willing to sell their land. The State Lands Commission (SLC) lands in DWMAs are noted in Appendix O. The number of acres of SLC lands in WHMAs is not specified in NECO because these lands are not proposed for acquisition. However, if the SLC is interested in exchanging its lands out of WHMAs, BLM would entertain such proposals, but the priority is lower than for wilderness areas and DWMAs, and the need is not considered compelling.

PC 135: The BLM should conduct and publicly disclose a Level 1 contaminate survey for every proposed land exchange prior to implementation.

Response: Consideration of hazardous materials is applied to specific proposals of land acquisitions and exchanges. NECO contains no specific proposals.

PC 234: The BLM should include the Catellus Property acquisition in its analysis of meeting desert tortoise habitat requirements.

Response: BLM has managed and, under the Proposed Plan, would continue to manage the area of DWMAs under its multiple use management mandate. DWMAs are not preserves but managed uses areas. The application of management prescriptions can be difficult and ineffective in situations of checkerboard land ownership. Acquisitions do not add or create habitat, but do increase habitat manageability. The introduction to section 2.7 of Chapter states the case for accomplishing acquisitions through mutually beneficial exchanges.

PC 405: The BLM should analyze the impact of management directions to the future growth and development of local communities.

Response: The 1980 CDCA Plan recognized the need to provide for other agencies' needs, including community expansion, by designating a certain amount of public lands as Multiple Use Class (MUC) Unclassified. In this case the designation means that BLM recognizes that the subject lands are important for community expansion and are available for eventual disposal to counties, cities, or private entities. Public lands around the cities of Blythe and Needles are included in this category. Representatives from both cities have been involved in the planning process and have been invited to review the 1980 CDCA Plan and advise on the adequacy of the amount and array of MUC Unclassified public lands. In addition, lands around freeway exits are not included in DWMAs so that they have to be developed.

Socio-Economic Values

PC 401: The Final EIS should include an analysis of local county tax revenue impacts.

Response: San Bernardino County collects monies from taxing the lessee based on the possessory interest tax. Under the Proposed Plan, grazing use on Lazy Daisy Allotment would continue as in the past except during dry years when ephemeral forage is insufficient. In past dry years, the lessee has removed a portion of the cattle herd from the allotment, and those remaining animals sought higher elevation grazing areas with superior forage until rainfall and forage returned throughout the allotment. While the grazing lease is active, losses, if any, in tax revenue would not be noticeable. However, if the lessee relinquishes the grazing lease, all sources of revenue originating from possessory interest tax would cease.

PC 402: The BLM should address the relationship between individual planning area CDCA Amendments and subsequent impacts on the economy of Kern County.

Response: We disagree. Each bioregional plan is tailored to the needs of the specific areas under consideration with input from the local jurisdiction. BLM has consistency among the plans for broad-scale conservation measures, such as 1 percent cap on new development in the DWMAs, but other actions, including route designation, are site-specific. However, the discussion of cumulative impacts in chapter 4 has been expanded to a CDCA review.

PC 403: The BLM should project the Preferred Alternative's loss of Payment in Lieu of Taxes funds to Imperial County.

Response: The conveyance of land into public management through exchange or acquisition requires an environmental assessment and public review. One element of that assessment would be the affect on PILT and a county's lost of revenue. Since the Plan does not identify a specific acquisition or exchange and given the variety of values, it would be speculative to attempt to define potential lost of revenue. It can be noted that PILT funds would not be reduced in any case.

PC 404: The Final EIS should present an analysis of potential local economic impacts.

Response: The economic analysis in chapter 4 has been strengthened.

PC 406: The Final EIS should analyze of the economic impacts route closures will have to off-road vehicle related businesses.
PC 408: The Final EIS should analyze the social and economic impacts of route closures to motorized recreationists.

Response: Ten percent of total miles, many involving mountainous four-wheel driving, were closed in 1994 with the California Desert Protection Act. The amount of inventoried roads, which would be additionally closed under the Proposed Plan, is 4 percent. No roads are proposed closed which were inventoried as "recreational touring" routes, which are the primary access network for travel to commonly visited, popular places in the planning area. With this level of proposed closure, recreation use would incur negligible displacement, but not diminish in amount. Most recreation use is extensive and dispersed rather evenly over

the entire planning area. Seasonal hunting turnout stimulates local economies to some extent, but no restrictions are placed on hunting other than the small amount of displacement noted above. There would be no change in access to rockhounding sites or availability of camp sites in camp grounds and long-term visitor areas (for winter snowbirds). Recreation use in Joshua Tree National Park would not change. Because there would be no change in the overall level of recreational activity in the planning area, there would be no change to the area's economy related to recreation activity. Since there would be no essential change in recreation as a result of proposed closures, sophisticated and detailed social/economic analyses is not warranted.

PC 410: The Final EIS should include a cost-benefit analysis of fencing proposals for county roads and should limit actions appropriately.

Response: Neither the Preferred Alternative in the DEIS nor the Proposed Plan in the FEIS contain a proposal to fence any county roads. The only highways proposed for tortoise fencing are interstate highways and a portion of Highway 95 in Chemehuevi Valley. All of these are under the responsibility of CalTrans, which carries the burden of installing and maintaining the fences. While such fencing would still be very costly, it would be publicly funded and reduce the need for other restrictions or costs for other aspects of managing DWMAs, some of which could affect private economic or recreation uses.

Fire Management

PC 192: The BLM should develop and adopt a fire management plan.

Response: BLM and NPS have developed a joint fire management program.

U.S. Marine Corps

PC 462: The U.S. Marine Corps expressed the following concerns regarding the Chocolate Mountains Aerial Gunnery Range: (1) the DEIS contains some factual errors on the current management situation and the desert tortoise recovery unit that contains the Chocolate Mountains Aerial Gunnery Range; (2) the application of some action proposals described in chapters 2, 5, and 6; and the quality of the EIS**.**

Response: Document errors have been corrected and/or clarified as required and the EIS has been considerably improved as noted in Chapter 4.

Editorial

PC 430: This Public Concern is a listing of several dozen items of an editorial and very technical nature or items that do not otherwise fit into any other PC statement. These items include misspelled words, map numbering errors, missing references, requests for clarifications, and other factual errors.

Response: The vast majority of the issues have been corrected and/or clarified in the FEIS. A few are not addressed, including situations in which the comment is in error, where BLM could not discern the nature of the issue, or where (for example) certain map colors and lines were used and the issue is a matter of taste or judgment. The complete listing of issue items is not included here.