CHAPTER TWO
ALTERNATIVES

2.1 INTRODUCTION

2.1.1 Overview

Chapter 2 describes seven alternative strategies that have been designed to conserve over 100 sensitive plants and animals and their habitats that are found within the western Mojave Desert while streamlining procedures for complying with the California and federal endangered species acts. This chapter identifies biological goals and objectives, describes the seven alternatives in depth, presents a table that compares the impacts of each of the seven alternatives, and discusses alternatives considered but eliminated from detailed consideration.

The seven alternatives include the following:

- **Alternative A: PROPOSED ACTION - HABITAT CONSERVATION PLAN.** This alternative presents a multi-species conservation strategy applicable to public and private lands throughout the planning area. It would serve as (1) an amendment of BLM's CDCA Plan for public lands, and (2) a "habitat conservation plan" for private lands. Incidental take permits would be issued to participating local jurisdictions and state agencies.
- **Alternative B: BLM Only.** This alternative consists of those elements of Alternative A that are applicable to, and that could be implemented on, BLM-administered public lands. It is applicable to public lands only.
- **Alternative C: Tortoise Recovery Plan.** This combines those elements of Alternative A that are applicable to the Mohave ground squirrel and other sensitive species with the management program recommended by the 1994 Desert Tortoise (Mojave Population) Recovery Plan. CDCA Plan amendments and a habitat conservation plan would be adopted and incidental take permits would be issued to participating local jurisdictions and state agencies. The public expressly requested detailed consideration of this alternative during NEPA scoping meetings.
- **Alternative D: Enhanced Ecosystem Protection.** This alternative places a high priority on the conservation of ecosystems and natural communities as a means to conserve sensitive plants and animals, even if adoption of those recommendations would limit motorized vehicle access to and multiple use of the western Mojave Desert. Its recommendations had their origin in discussions among the participating agencies and members of the public during NEPA scoping and the development of Alternative A. CDCA Plan amendments and a habitat conservation plan would be adopted and incidental take permits would be issued to participating local jurisdictions and state agencies.

- **Alternative E: One DWMA – Enhanced Recreation Opportunities.** This alternative places a high priority on multiple uses of desert lands, including motorized vehicle recreation, even if this might preclude the implementation of some of the programs that otherwise might be implemented to conserve species and ecosystems. It also responds to a specific request raised by the public during scoping meetings that the EIR/S explore whether a single DWMA, protecting only the remaining areas of relatively higher tortoise populations, might be an effective means of conserving desert tortoises. CDCA Plan amendments and a habitat conservation plan would be adopted and incidental take permits would be issued to participating local jurisdictions and state agencies.
- **Alternative F: No DWMA – Aggressive Disease and Raven Management.** This alternative proposes a tortoise conservation strategy that relies on an aggressive program of tortoise disease management and raven control, supported by limited fencing, rather than the establishment of tortoise DWMAs to protect habitat. Subject to these modifications, the Alternative A conservation program for other species would be implemented. CDCA Plan amendments and a habitat conservation plan would be adopted and incidental take permits would be issued to participating local jurisdictions and state agencies.
- **Alternative G: No Action.** Existing conservation strategies currently being applied by each of the participating agencies would continue to be implemented.

Alternative A is discussed first and in depth. This discussion includes a tabular summary of CDCA Plan amendments. The description of each of the other alternatives incorporates the Alternative A discussion by reference; only those components of any given alternative that differ from Alternative A are presented.

An alphanumeric designation has been assigned to each management prescription. Thus the first desert tortoise prescription is labeled DT-1, the third Mohave ground squirrel prescription is referred to as MGS-3, and so forth. Prescription designations include the following: AM (adaptive management), B (bird), Bat (bats), DT (desert tortoise), E (education), HCA (habitat conservation area), LG (livestock grazing), M (monitoring), Mam (mammals), MGS (Mohave ground squirrel), MR (Mojave River), MV (motorized vehicles), P (plant), R (reptiles), Rap (raptors), AB (Alternative B), AC (Alternative C), AD (Alternative D), AE (Alternative E) and AF (Alternative F). Where management prescriptions are duplicative among species, the first cited notation is used.

2.1.2 Biological Goals and Objectives

Measurable biological goals have been developed for each of the species addressed by the West Mojave Plan in accordance with habitat conservation plan requirements established by USFWS. For some species not included in the habitat conservation plan for permit coverage, goals are presented for BLM management. The biological goals are intended to be the broad guiding principles for the Plan's conservation program, and are applicable to all alternatives, though application of the goals to land ownership and to species may differ with each alternative. Biological goals are presented in Table 2-1.

In addition to the biological goals, biological objectives have been developed for the more complex strategies proposed for the desert tortoise, the Mohave ground squirrel, and certain other species. Biological objectives are the measurable components needed to achieve the biological goal such as preserving sufficient habitat, managing the habitat to meet certain criteria, or ensuring the persistence of a specific minimum number of individuals. Goals and objectives can be either habitat or species based, and must be consistent with conservation actions needed to minimize and mitigate impacts to the covered species. The goals promote an effective monitoring program and help determine the focus of an adaptive management strategy.

Table 2-1
Biological Goals and Objectives

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Alkali mariposa lily	Goal 1. Maintain the hydrological processes that support alkali mariposa lily at the Rosamond Lake Basin and outlying seeps, meadows and springs. Goal 2. Conserve and maintain the hydrological processes at outlying sites representative of alkali spring, meadow, and seep habitats. Goal 3. Identify additional springs, meadows, seeps, and playas supporting rare alkali plants.	Objective 1: Conserve a contiguous area of playa edge habitat on private lands adjacent to EAFB. Objective 2: Acquire Rabbit Springs and Paradise Springs (including water rights) through willing seller purchase or exchange. Objective 3: Conserve additional springs with occupied habitat as Conservation Area or ACEC. Objective 4: Maintain integrity of Amargosa Creek to the extent feasible
Barstow woolly sunflower	Goal 1: Protect a contiguous habitat block with conserved populations on public lands throughout the species range Goal 2: Establish an additional reserve through adaptive management in the western part of the range. Goal 3: Manage the remaining outlying populations by site-specific measures.	Objective 1: Consolidate BLM and CDFG lands northeast of Kramer Junction to form a core reserve. The core reserve will be an expanded BLM ACEC and CDFG ecological reserve. Objective 2: Acquire private lands containing known occurrences within the core reserve. Objective 3: Establish a survey requirement area north of EAFB and northwest of Kramer Junction to identify reserve boundaries Objective 4: Require avoidance on a project basis.
Bats California leaf-nosed bat, Townsend's big-eared bat	Goal 1: Maintain and enhance viability of all bat populations in the planning area, regardless of species.	Objective 1: Install bat-accessible gates at the entrance of all significant roosts. Objective 2: Protect foraging habitat for California leaf-nosed bat. Objective 3: Adopt uniform survey requirements and mitigation measures. Objective 4: Establish baseline population numbers.
Bendire's thrasher (BLM only)	Goal 1: Protect and enhance known populations and habitat on public land.	Objective 1: Establish four Bendire's thrasher conservation areas. Objective 2: Establish baseline numbers for all portions of the Conservation Areas.
Brown-crested flycatcher	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Eradicate invasive riparian plants in suitable nesting habitat.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Burrowing owl	Goal 1. Prevent direct incidental take. Goal 2. Protect and enhance known populations and habitat on public land	Objective 1: Provide educational program for jurisdictions. Objective 2: Evaluate the feasibility of establishing grassland preserves.
Cushenbury buckwheat, Cushenbury milkvetch, Cushenbury oxytheca, Parish's daisy, Shockley's rockcress	Goal 1: Conserve two major unfragmented populations on BLM lands contiguous with populations on Forest Service lands. Goal 2: Protect outlying populations of Parish's daisy from grazing.	Objective 1: Establish an ACEC where management is focused on protection of the carbonate endemic plants. Objective 2: Acquire fee title or conservation easements on private land within the ACEC. Objective 3: Adaptively manage populations on reclaimed mine sites.
Charlotte's phacelia	Goal 1: Maintain and enhance existing occurrences and habitat.	
Crucifixion thorn	Goal 1: Preserve disjunct populations on public land and protect the crucifixion thorn woodland community.	
Desert cymopterus	Goal 1: Establish a conservation area containing known occurrences. Goal 2: Protect all known populations from disturbance, including grazing.	Objective 1: Identify potential and suitable habitat. Objective 2: Conduct surveys within potential and suitable habitat to establish baseline population numbers and acreage of occupied habitat.
Desert tortoise	Goal 1: Protect sufficient habitat to ensure long-term tortoise population viability.	Objective 1.1: Establish a minimum of three, preferably four, Desert Wildlife Management Areas that would be managed for the long-term survival and recovery of the desert tortoise, and which would also benefit other special-status plant and animal species. Objective 1.2: Ensure that at least one DWMA exceeds 1,000 square miles in size. Objective 1.3: Design DWMAs so that they are well distributed across the recovery unit, edge-to-area ratios are minimized, impediments to the movement of tortoises are avoided, and (where feasible) boundaries are contiguous.
	Goal 2: Establish an upward or stationary trend in the tortoise population of the West Mojave Recovery Unit for at least 25 years.	Objective 2.1: Achieve population growth rates (lamdas) within DWMAs of at least 1.0. Objective 2.2: Attain a minimum average population density of 10 adult female tortoises per square mile within each DWMA. Objective 2.3: Establish a program for tortoise population monitoring that would detect an increase, decrease, or stable trend in tortoise population densities, and include an information feedback loop that ensures that necessary changes would be made in management.
	Goal 3: Ensure genetic connectivity among desert tortoise populations, both within the West Mojave Recovery Unit, and between this and other recovery units.	Objective 3.1: Delineate and maintain movement corridors between DWMAs, and with the Eastern Mojave Recovery Unit, the Eastern Colorado Recovery Unit, and the Northern Colorado Recovery Unit. Objective 3.2: Ensure a minimum width of two miles for movement corridors, and include provisions for major highway crossings.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
	Goal 4: Reduce tortoise mortality resulting from interspecific (e.g. raven predation) and intraspecific (e.g. disease) conflicts that likely result from human-induced changes in the ecosystem processes.	Objective 4.1: Initiate proactive management programs addressing each conflict, to be implemented by each affected agency or jurisdiction. Objective 4.2: Establish an environmental education program to facilitate public understanding and support for proactive management programs necessary to reduce tortoise mortality. Objective 4.3: Continue research programs and monitoring programs that assess the relative importance of human activities and natural processes that affect desert tortoise populations.
Ferruginous hawk	Goal 1: Minimize electrocutions	Objective 1: Require raptor-safe electrical distribution lines for all new construction Objective 2: Identify problem poles on electrical distribution lines and retrofit as necessary.
Golden eagle (BLM only)	Goal 1: Preserve at least 90% of the baseline number of nesting territories. Goal 2: Minimize electrocutions.	Objective 1: Establish a new baseline number of nesting territories within five years of Plan adoption. Objective 2: Require raptor-safe electrical distribution lines for all new construction. Objective 3: Identify problem poles on electrical distribution lines and retrofit as necessary.
Gray vireo	Goal 1: Conserve at least one core block of suitable nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Identify other occupied habitat.
Inyo California towhee	Goal 1: Conserve and enhance all riparian habitat on public lands within the range of the Inyo California towhee.	Objective 1: Remove non-native vegetation at springs with occupied habitat. Objective 2:Fence springs as necessary to protect the riparian habitat from damage by feral burros or excessive human use.
Kelso Creek monkeyflower (BLM only)	Goal 1: Protect all occurrences and potential habitat on public lands as a Conservation Area.	Objective 1: Protect occupied habitat from disturbance.
Kern buckwheat	Goal 1: Protect all known occurrences.	Objective 1: Protect occupied habitat from disturbance.
Lane Mountain milkvetch	Goal 1: Protect viable unfragmented habitat throughout the limited range.	Objective 1: Acquire occupied habitat on private lands. Objective 2: Minimize potential impacts on public lands.
Least Bell's vireo	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas Objective 4: Eradicate invasive riparian plants in suitable nesting habitat.
LeConte's Thrasher	Goal 1: Protect and enhance known populations and habitat.	Objective 1: Conserve habitat for thrasher within tortoise DWMAs. Objective 2: Establish a series of reserves representing all historical parts of the range.
Little San Bernardino Mountains gilia	Goal 1: Protect all occurrences on public lands and 90% of the known populations on private land. Goal 2: Protect the drainages and fluvial processes that maintain the gilia populations.	Objective 1: Protect occupied habitat within 100 feet of the edges of dry washes on both sides as a Conservation Area. Objective 2: Limit channelization of washes with occupied habitat.
Long-eared owl	Goal 1: Preserve all nest sites and communal roosts.	Objective 1: Maintain Proper Functioning Condition of riparian areas Objective 2: Minimize human disturbance at nest sites and communal roosts.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Mojave fringe-toed lizard	Goal 1: Establish Conservation Areas at eight of the fourteen occupied habitats.	Objective 1: Maintain blowsand ecological processes at the eight identified sites. Objective 2: Protect occupied habitat.
Mohave ground squirrel	Goal 1. Ensure long-term protection of MGS habitat throughout the species range.	Objective 1.1: Upon Plan adoption, establish management areas for the long-term conservation of MGS habitat: (a) the MGS Conservation Area for the protection of unfragmented habitats outside military installations; (b) heightened project review in northeastern Los Angeles County to minimize development of MGS habitats in the southern portion of the range. Objective 1.2: Allow for adjustments to the MGS Conservation Area boundary based on findings of scientific studies. Objective 1.3: Implement appropriate actions to ensure the long-term protection of habitat in the MGS Conservation Area throughout the life of the Plan. Objective 1.4: On a yearly basis, track the loss of MGS habitat resulting from Plan implementation. Objective 1.5: Cooperate with military installations by sharing scientific information and reviewing management plans (INRMP, CLUMP) to assist environmental managers in evaluating MGS habitat protection on the bases.
	Goal 2. Ensure long-term viability of the MGS throughout its range.	Objective 2.1: Minimize and fully mitigate the impacts of the Plan's authorized incidental take of the MGS. Objective 2.2: Upon Plan adoption, initiate and conduct studies that would determine the following measurable biological parameters: (1) the regional status, (2) potential hot spots (refugia), (3) genetic variation throughout the range, and (4) the ecological requirements of the MGS. Objective 2.3: Establish long-term study plots throughout the range and annually monitor their MGS populations. Fund continued monitoring in the Coso Range to provide baseline population data. Objective 2.4: Use the biological and population data from Goal 2, Objectives 2 and 3 to modify the management prescriptions, as warranted, to ensure the long-term viability of the species.
Mojave monkeyflower	Goal 1: Protect viable populations on public land throughout the range. Goal 2: Coordinate with mining companies to protect this species.	Objective 1: Establish a core reserve on public land in the Brisbane Valley. Objective 2: Establish a core reserve west of the Newberry Mountains. Objective 3: Provide site-specific management of occupied habitat on public lands outside the core reserves. Objective 4: Establish a private land mitigation bank
Mojave River vole	Goal 1: Conserve all remaining riparian and wetland occupied habitat. Goal 2: Conduct research and monitoring programs.	Objective 1: Establish permanent study plots and conduct baseline studies. Objective 2: Monitor changes in vole populations and habitat. Objective 3: Identify, map and survey all appropriate habitat along the Mojave River corridor. Objective 4: Maintain groundwater levels in Mojave River that support the riparian habitat. Objective 5: Maintain Proper Functioning Condition of riparian areas Objective 6: Manage disturbance to riparian habitat, including visitor use. Objective 7: Remove non-native vegetation on public land and on private land where permission is granted.
Mojave tarplant	Goal 1: Protect viable populations on public lands. These populations may be disjunct.	Objective 1: Require 50% conservation of newly detected populations on private land.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Ninemile Canyon phacelia	Goal 1: Protect viable populations on public land throughout the range.	Objective 1: Prevent or reduce damage from grazing. Objective 2: Require 50% conservation of newly detected populations on private land.
Parish's alkali grass	Goal 1: Conserve the single private land location. Goal 2: Determine if additional populations are present at other alkaline springs and seeps.	Objective 1: Acquire Rabbit Springs if willing seller.
Parish's phacelia	Goal 1: Preserve large intact populations on the publicly owned dry lakebeds. Goal 2: Conserve a public land corridor connecting the dry lakes.	Objective 1: Establish Conservation Area including occupied habitat and essential connectivity. Objective 2: Acquire private land within Conservation Area from willing seller. Objective 3: (HCA-3) prohibit vehicle traffic on playas within Conservation Area. Objective 4: (P-48) San Bernardino county will perform site-specific review for projects within occupied habitat. Objective 5: (P-50) BLM will require restoration of occupied habitat.
Parish's popcorn flower	Goal 1: Conserve the single private land location. Goal 2: Determine if additional populations are present at other alkaline springs and seeps.	Objective 1: Acquire Rabbit Springs if willing seller.
Prairie falcon	Goal 1: Preserve all nest sites. Goal 2: Maintain population numbers	Objective 1: Reduce disturbance at nest sites.
Red Rock poppy	Goal 1: Conserve and maintain all occurrences in the El Paso Mountains.	Objective 1: Reduce or eliminate threats, including disturbance from OHV use. Objective 2: Require 50% conservation of newly detected populations on private land.
Red Rock tarplant	Goal 1: Conserve and maintain all occurrences in the El Paso Mountains.	Objective 1: Reduce or eliminate threats, including disturbance from OHV use. Objective 2: Require 50% conservation of newly detected populations on private land.
Salt Springs checkerbloom	Goal 1: Conserve the single private land location. Goal 2: Determine if additional populations are present at other alkaline springs and seeps.	Objective 1: Acquire Rabbit Springs if willing seller. Objective 2: Require 90% conservation of the Salt Spring checkerbloom occupied habitat at newly found sites, along with maintenance of the hydrological regime.
San Diego horned lizard	Goal 1: Conserve unfragmented habitat within the range.	Objective 1: Conserve two large representative areas, Big Rock Creek and Mescal Creek, with connectivity of the overall range through the National Forests. Objective 2: Acquire lands within Antelope Valley Significant Ecological Area.
Short-joint beavertail cactus	Goal 1: Conserve unfragmented habitat within the range.	Objective 1: Conserve two large representative populations that are contiguous with National Forest lands. Objective 2: Acquire lands within Antelope Valley Significant Ecological Area.
Southwestern pond turtle	Goal 1: Conserve all remaining populations throughout the range.	Objective 1: Identify new populations in suitable habitat. Objective 2: Conserve all remaining populations in the Mojave River, Lake Elizabeth and Amargosa Creek. Maintain groundwater levels in Mojave River that support the riparian habitat. Objective 3: Maintain Proper Functioning Condition of riparian areas in occupied habitat. Objective 4: Continue restoration at Camp Cady and Afton Canyon.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Southwestern willow flycatcher	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas in Kelso Valley and east Sierra Canyons. . Objective 4: Achieve regional public land health standards for grazing in Kelso Valley and in east Sierra canyons. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.
Summer tanager	Goal 1: Conserve and enhance all suitable riparian nesting habitat outside developed areas.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in nesting habitat.
Triple-ribbed milkvetch	Goal 1. Prevent any loss of occupied habitat Goal 2. Conduct research and monitoring.	Objective 1. Require avoidance of known or newly-detected populations. Objective 2. Compile new information to determine best conservation strategy.
Vermilion flycatcher	Goal 1: Conserve and enhance all suitable riparian nesting habitat outside developed areas.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.
Western snowy plover	Goal 1: Preserve all nest sites and maintain and enhance nesting and wintering habitat on public lands.	Objective 1: Prevent disturbance of nest sites during nesting season.
Western yellow-billed cuckoo	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas in Kelso Valley and east Sierra Canyons. . Objective 4: Eradicate invasive riparian plants in suitable nesting habitat.
White-margined beardtongue	Goal 1: Preserve the wash and sand field habitat of the disjunct population on public land.	Objective 1: Establish Conservation Area near Pisgah Crater.
Yellow-breasted chat	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES
Yellow-eared pocket mouse	Goal 1: Maintain and enhance existing habitat.	Objective 1: Manage grazing on public lands to maintain habitat values.
Yellow warbler	Goal 1: Conserve and enhance all suitable riparian nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.

2.2 ALTERNATIVE A: PROPOSED ACTION: HABITAT CONSERVATION PLAN

Alternative A presents a multi-species conservation strategy applicable to public and private lands throughout the planning area. It was developed by the participating agencies with the intent that it would serve as (1) an amendment of BLM's CDCA Plan for public lands, and (2) a "habitat conservation plan" for private lands. Incidental take permits would be issued to participating local jurisdictions and state agencies. Map 2-1 (foldout map at end of this document) displays components of this alternative.

The strategy is intended to achieve two overarching goals: first, to provide an economic stimulus to communities within the western Mojave Desert by simplifying the process of complying with CESA and FESA, and second, to fulfill federal and California mandates to conserve natural communities and sensitive species.

The narrative description of this alternative is organized as follows:

- Habitat Conservation Area
- Compensation Framework
- Incidental Take Permits
- Species Conservation Measures
- Public Land Livestock Grazing Program
- Public Land Motorized Vehicle Access Network
- Education Program
- Monitoring and Adaptive Management

To implement this alternative on public lands administered by the Bureau of Land Management, 12 amendments of the California Desert Conservation Area Plan would be necessary. Table 2-2 presents a summary of those amendments. It also cross-references more detailed discussions of each alternative that appear later in this chapter.

Table 2-2
Summary of BLM CDCA Plan Amendments

AMENDMENT		SUMMARY	SEE SECTION
N0.	TITLE		
1	New ACECs	Designate 14 new ACECs including: • Four Desert Tortoise DWMAs • Bendire's Thrasher • Carbonate Endemic Plants Research Natural Area • Coolgardie Mesa • Kelso Creek Monkeyflower • Middle Knob • Mojave Fringe-toed Lizard • Mojave Monkeyflower • West Paradise • Parish's Phacelia • Pisgah	2.2.1
2	ACEC Boundary Amendments	Modify boundaries of four ACECs: • Afton Canyon (See Amendment 6 below and Map 2-4) • Barstow Woolly Sunflower • Harper Dry Lake (Map 2-5) • Rand Mountains (See Amendment 5 below)	2.2.1
3	Multiple Use Class Changes	Change Multiple Use Class in Following Areas: • Afton Canyon Natural Area • Bendire's thrasher Conservation Area • Carbonate Endemics Plants ACEC • Lands adjacent to Edwards AFB • Inyo County Disposal Parcels • Land Tenure Adjustment Project • Little San Bernardino Mountains Gilia Habitat • Los Angeles County Significant Ecological Areas • Mojave Fishhook Cactus ACEC • Mojave Fringe-toed Lizard Conservation Area • Mojave Monkeyflower ACEC • Mohave Ground Squirrel Habitat • Non-Wilderness Class C Lands • North Edwards Conservation Area • Pisgah ACEC • San Gabriel Mountains Foothills • Tortoise DWMAs	2.2.1.2.1 Table 2-4
4	Mohave Ground Squirrel WHMA	Designate the Mohave Ground Squirrel Conservation Area as a Wildlife Habitat Management Area	2.2.1.1.3 Map 2-1

AMENDMENT		SUMMARY	SEE SECTION
N0.	TITLE		
5	Rand Mountains – Fremont Valley Management Plan	Amend the CDCA Plan to implement the 1994 Rand Mountains – Fremont Valley Management Plan • Expand Western Rand Mountains ACEC • Multiple Use Class Changes • Adopt Motorized Vehicle Access Network • Designate Desert Tortoise Category I Habitat • Authorize Mineral Withdrawal • Implement a use permit program.	2.2.1.2.4
6	Afton Canyon Natural Area	Modify ACEC boundaries, adopt motorized vehicle access network, change multiple use class designations.	2.2.1.2.5 Map 2-4
7	West Mojave Land Tenure Adjustment Program	Modify boundaries of consolidation, retention and disposal zones to conform to conservation area goals.	2.2.1.2 Map 2-6
8	Regional Public Land Health Standards and Guidelines for Grazing Management	Standards and Guidelines, already adopted for BLM CDCA Public Lands outside of the West Mojave, would be adopted for lands within the planning area	2.2.5
9	Route Designation	Adopt minor modifications of the network of motorized vehicle access routes that were adopted as a component of the CDCA Plan by BLM on June 30, 2003. Modifications include redesign of Juniper subregion, route closures in Lane Mountain milk vetch, Barstow woolly sunflower and Mojave monkeyflower conservation areas and Red Mountain subregion, network adjustments in Wonder Valley and east of Haiwee Reservoir, and establishment of competitive "C" routes northeast of Spangler Hills Open Area.	2.2.6.7 2.2.6.8
10	Motorized Vehicle Stopping, Parking and/or Vehicular Camping	Amend Motorized Vehicle Access Element's Stopping and Parking Section, incorporating following restrictions within DWMAs: • Motorized vehicle based camping limited to previously existing disturbed camping areas adjacent to routes designated "open" • Motorized vehicle stopping and parking allowed within 50 feet of centerline of routes designated "open"	2.2.6.4
11	Barstow to Vegas Race Course	Delete that portion of the Barstow to Vegas Race Course that lies within the West Mojave Planning Area.	2.2.6.5
12	Stoddard Valley to Johnson Valley	Delete competitive event corridor. Establish connector route. No competitive speed events allowed.	2.2.6.5

2.2.1 Habitat Conservation Area

A network of ecosystem conservation areas would be established to protect viable populations of native plant and animal species and their habitats. Collectively, these are referred to as the *Habitat Conservation Area* or HCA. A description of the HCA, its component parts, and limits on new ground disturbance within the HCA follows.

2.2.1.1 Structure and Components

2.2.1.1.1 Overview

Conservation Areas: The HCA would be composed of eighteen conservation areas that are intended to conserve the habitat of particular species, groups of species or biologically important geographic areas. Conservation areas include those established to protect:

- *Desert tortoise.* Four tortoise conservation areas would be established. They are referred to as tortoise DWMAs (Desert Wildlife Management Areas) because this name is consistent with the terminology used by the Desert Tortoise (Mojave Population) Recovery Plan, and has been adopted by other regional planning efforts throughout the listed range of the tortoise.

- *Particular species (except the desert tortoise).* These bear the name of the species being protected, such as Mohave Ground Squirrel Conservation Area or the Alkali Mariposa Lily Conservation Area.

- *Groups of species or an important habitat.* These areas are given a geographic name, such as the Middle Knob Conservation Area.

Conservation areas may overlap one another. For example, the tortoise DWMAs and the Mohave Ground Squirrel Conservation Area partially overlap, and the Barstow Woolly Sunflower Conservation Area is located within this overlap zone. Within such areas, all of the prescriptions associated with each overlapping conservation area apply.

Open Space Corridors: Three open space corridors would protect critical linkages and wildlife movement corridors. These corridors connect the HCA with surrounding State Parks, National Park Service and Forest Service lands.

Special Review Areas (SRA): Lands not adjacent to the HCA but possessing biological values for which a heightened environmental review of new projects would be conducted.

Biological Transition Areas (BTA): The Draft EIR/S proposed that strips of land adjacent to desert tortoise DWMAs would be designated as biological transition areas, wherein a heightened biological review of all new projects would be conducted to ensure that such projects would not degrade the biological integrity of or conflict with the conservation goals established for the adjacent tortoise DWMA. Since that time the participating counties, San Bernardino and Kern in particular, have expressed strong concerns that the BTA concept would be highly complex, would be very difficult to implement and offered little in the way of additional conservation for desert tortoises. In response to these and other concerns expressed during the public comment period, the West Mojave Team re-evaluated each BTA on an individual basis to determine the values that each area was anticipated to provide. Those areas with important

conservation values were included within the tortoise DWMAs and those areas that were judged to have minimal contribution to the overall conservation design were deleted. Map 2-1 reflects those changes, which are described in detail in Appendix X.

2.2.1.1.2 Desert Tortoise Component of HCA

Tortoise DWMAs: (HCA-1) Four tortoise DWMAs including about 2,381 square miles would be established. The boundaries of these DWMAs correspond to the general boundaries identified by the Desert Tortoise (Mojave Population) Recovery Plan (Recovery Plan): the Fremont-Kramer (803 square miles) and Superior-Cronese (1003 square miles) DWMAs, which are adjacent; the Ord-Rodman DWMA (392 square miles); and the Pinto DWMA (183 square miles). Tortoise DWMAs would be managed for tortoise conservation and recovery until which time the tortoise may be delisted as per criteria given in the Recovery Plan.

Public lands administered by the BLM within Tortoise DWMAs would be designated as ACECs. The West Mojave Plan would serve as the ACEC management plan so that future ACEC plans for the four Tortoise DWMAs would not be required.

Existing ACECs that lie within the boundary of the Tortoise DWMAs ("included ACECs") would be maintained, unless specifically deleted by the West Mojave Plan. The provisions of the Tortoise DWMAs would augment, rather than replace, current ACEC protections. If a provision of an included ACEC's management plan conflicts with any of the measures described herein for the Tortoise DWMA, the measures identified by this alternative take precedence and the included ACEC's management plan would be amended to conform to the West Mojave Plan.

Within DWMAs, most current BLM multiple use class designations would be retained. Designations would be changed in the following areas: ~~,~~

- Within the Western Rand Mountains ACEC, the multiple use class would change from class M to class L (see section 2.2.1.2, below).
- Elsewhere in the DWMA, all Class M lands would be changed to Class L.
- Those lands removed from the LTA disposal zone would change from Unclassified to Class L.

All BLM-administered public lands within Tortoise DWMAs would be managed as BLM Category I tortoise habitat. All public lands outside of the Tortoise DWMAs that are within the range of the tortoise would be managed as BLM Category III Tortoise Habitat.

A total of 1,523,936 acres would be included within the DWMAs. This total includes 1,351,466 acres of BLM, private and State of California lands that are currently designated as critical habitat. Based upon field surveys conducted between 1998 and 2001, 72,179 acres of critical habitat that were found to possess only marginal worth as tortoise habitat would not be included within the DWMAs, while 172,470 acres not designated as critical habitat but found to

include important tortoise populations would be included in the DWMAs. Thus the 1,523,936 acres of BLM, private and State of California lands within DWMAs is 100,291 acres greater than the 1,423,645 acres of those lands currently designated as critical habitat.

2.2.1.1.3 Mohave Ground Squirrel Component of HCA

MGS Conservation Area: (HCA-2) A conservation area would be established for the long-term survival and protection of the MGS. This MGS Conservation Area would include portions of the Fremont-Kramer and Superior-Cronese Tortoise DWMAs, and additional, essential habitats located west and north of the two tortoise DWMAs. A total of 1,726,712 acres would be included within the conservation area. The MGS in all other areas would either be managed by the military or be available for incidental take subject to restrictions identified by this alternative.

Within the MGS Conservation Area, the public land south of Owens Lake classified by the CDCA Plan as multiple use class M would be changed to class L.

Public lands within the MGS Conservation Area would be designated as a BLM Wildlife Habitat Management Area in the BLM's CDCA Plan.

Sierra Foothills Habitat Connector: There exists a narrow band of MGS habitat along the eastern side of the Sierra Nevada that is considered to be a very important corridor linking MGS habitats from north to south. Highway 178 west of Freeman Junction bounds this corridor to the south, Olancha bounds the north, the Sierra Nevada the west (up to about 5,500 feet), and Highway 14 and 395 the east. Although this area is already part of the MGS Conservation Area, special review of projects should occur in this area to ensure that the narrow corridor is not completely severed.

Los Angeles County Significant Ecological Area: Los Angeles County has identified a Significant Ecological Area (SEA) for northeastern Los Angeles County that should prove beneficial to protection of the MGS. Within SEAs, the County performs a heightened environmental review for new projects. The West Mojave Plan would adopt these provisions as a means of protecting the MGS in the southern portions of its range.

2.2.1.1.4 Other Conservation Areas

(HCA-3) Fourteen conservation areas (in addition to the tortoise DWMAs and the MGS Conservation Area) would be established to conserve species and habitats of biological significance. All conservation areas, and general management measures to be applied in each, are presented in Table 2-3. Species-specific conservation measures applicable within the conservation areas are described in subsequent sections. Map 2-1 (foldout map at end of document) indicates the regional location of the conservation areas. Specific maps of the following conservation areas are presented later in this chapter, as a part of the more detailed discussion of species conservation strategies in section 2.2.4: the two Lane Mountain Milkvetch

conservation areas (Map 2-10, the Coolgardie and West Paradise Conservation Areas); the Carbonate Endemic Plants Conservation Area (Map 2-11), the Alkali Mariposa Lily Conservation Area (Map 2-12), the North Edwards Conservation Area (Map 2-12A) and the Pisgah Conservation Area (Map 2-12B)

Table 2-3
Other Conservation Areas

CONSERVATION AREA	ACRES	CONSERVATION MEASURES
Fremont-Kramer DWMA	511,901	See discussion under desert tortoise.
Superior-Cronese DWMA	629,389	See discussion under desert tortoise.
Ord-Rodman DWMA	247,080	See discussion under desert tortoise.
Pinto Mountains DWMA	117,016	See discussion under desert tortoise.
MGS Conservation Area	1,726,722	See discussion under Mohave ground squirrel.
Alkali Mariposa Lily	7,243	Establish a conservation area located south and west of Edwards Air Force Base.
Barstow Woolly Sunflower	36,211	Establish a conservation area composed of BLM, CDFG and private lands northeast of Kramer Junction, entirely within the Fremont-Kramer DWMA. Most of the conservation area would become an addition to the CDFG West Mojave Ecological Reserve, pending completion of a land exchange between the BLM and CDFG. The remaining public lands would be designated a BLM ACEC. Management would include acquisition of private lands, signing and designation of vehicle routes. The CDFG would prepare a management plan for the Ecological Reserve after the land exchange is completed.
Bendire's Thrasher	28,046	Establish a conservation area with three sub-units, in southern Kelso Valley in Kern County, and northern Lucerne Valley and Coolgardie Mesa in San Bernardino County. Designate public lands within the conservation area as an ACEC.
Big Rock Creek	10,785	Conservation management should be compatible with existing land uses in the SEA and should not infringe on either permitted mining operations or mining operations conducted pursuant to vested rights, and should enhance potential for improvements of a regional hiking and equestrian trail. Protection of the riparian habitat, wildlife corridor and ecological processes for the Mojave fringe-toed lizard would be priorities.
Carbonate Endemic Plants	5,169	Designate public lands east of Highway 18 in the foothills of the San Bernardino Mountains as an ACEC to protect four federally listed and one unlisted species of plants, as well as the San Diego horned lizard, gray vireo, and bighorn sheep. Lands within the proposed ACEC would be subject to a standard of no surface occupancy to prevent undue and unnecessary degradation of lands under the surface mining regulations. Private lands within the proposed ACEC may be purchased or exchanged for BLM lands in Lucerne Valley. Acquired lands would be withdrawn from mineral entry. The CDCA Plan multiple use class would change from class M to class L.

CONSERVATION AREA	ACRES	CONSERVATION MEASURES
Coolgardie Mesa	13,354	This area north of the Mud Hills lies entirely within the Superior-Cronese DWMA and includes a small portion of the Rainbow Basin Natural Area. The Conservation Area would be designated as an ACEC. Reserve-level management would apply to the conservation area, including withdrawal from mineral entry (subject to valid existing rights), minimization of vehicle routes of travel, and fencing if deemed necessary to protect Lane Mountain milkvetch. Private lands that may be acquired would be withdrawn from mineral entry.
Kelso Creek Monkeyflower	1,870	Establish a conservation area for this West Mojave endemic on public lands with known occupied and potential habitat. Maintain regional standards for rangeland health, monitor grazing, fence private/BLM property lines, and designate vehicle routes of travel.
Middle Knob	20,495	Designate public lands as an ACEC. Require avoidance of all covered species of plants and animals, designate vehicle routes of travel to ensure compatibility with the purposes of the ACEC and with the Pacific Crest Trail, and prohibit new wind energy development on public lands. Restore and protect occupied habitat for Kern buckwheat.
Mojave Monkeyflower	 10,663 36,424	Establish an ACEC composed of two units, in the southern Brisbane Valley and near Daggett Ridge. <u>Brisbane Valley</u>: BLM would retain 10,633 acres between the Mojave River and Interstate 15 in public ownership. Designate routes of travel, amend the LTA program to remove these public lands from the disposal zone, change the multiple use class from Unclassified and I to L and implement mitigation and monitoring procedures. Discontinue sheep grazing. Establish a "survey incentive area" surrounding the conservation area wherein applicants for new ground disturbing activities would have the option of mitigating at 2:1 or conducting a biological survey, the results of which could result in a lower mitigation fee. Establish a 9,358-acre "mining area" where procedures would be implemented to encourage the establishment of a mitigation or conservation bank by the mining industry. Additional mitigation for existing plans of operation and SMARA reclamation plans would not be required in the mining area. <u>Daggett Ridge</u>: Designate routes of travel with the goal of eliminating routes within washes, unnecessary parallel routes, and routes bisecting populations of Mojave monkeyflower. New utilities locating within the existing CDCA Plan utility corridor would be required to avoid monkeyflower occurrences to the maximum extent practicable and provide mitigation fees for compensation lands where avoidance is infeasible. Change multiple use class from M to L.
Mojave Fringe-toed Lizard	 8,485 1,267 18,889 14,224	Designate a four-unit conservation area: 1. Mojave River east of Barstow (to be designated as an ACEC and multiple use class L)) 2. adjacent to Saddleback Butte State Park in Los Angeles County 3. in and adjacent to the Sheephole Wilderness east of Twentynine Palms, to be designated an ACEC. 4. Pisgah ACEC. Manage lands at Alvord Mountain and Manix and Cronese Basin ACECs.

CONSERVATION AREA	ACRES	CONSERVATION MEASURES
		Prohibit windbreaks and designate routes. In Los Angeles County, acquire land, impose limitations on flood control, and establish guidelines for highway improvements.
North Edwards	12,702	Establish conservation area to protect desert cymopterus and Barstow woolly sunflower. Acquire conservation easements on the privately owned land. Conduct botanical surveys and adjust boundaries based on survey results.
West Paradise	1,243	This area lies entirely within the Superior-Cronese DWMA and adjoins the military lands of the Fort Irwin National Training Center near Lane Mountain. Designate the West Paradise Conservation Area as an ACEC. Reserve-level management will apply to the conservation area, including withdrawal from mineral entry (subject to valid existing rights), minimization of vehicle routes of travel, and fencing if deemed necessary to protect these endangered plants. Private lands that may be acquired will be withdrawn from mineral entry.
Parish's Phacelia	898	Prohibit vehicle travel on the series of dry lakes with occupied habitat. Acquire private lands with occupied habitat.
Pisgah	19,828	Designate an ACEC that includes the eastern half of the existing Pisgah Crater Research Natural Area and lands to the northeast that include sensitive plant habitat. Designate routes of travel, including the Johnson Valley to Parker race corridor on a specified route partially within the ACEC. Change the CDCA Plan multiple use class from M to L. Allow existing mineral extraction operations to continue.

2.2.1.1.5 Open Space Corridors

(HCA-4) Three open space corridors are proposed to protect critical linkages and wildlife movement corridors (see foldout Map 2-1). These corridors include Big Rock Creek corridor, the Joshua Tree to Yucca Valley corridor and the Liebre Ridge to Antelope Valley Poppy Preserve State Park corridor.

Big Rock Creek: Conservation of Big Rock Creek wash in its natural state would preserve a known wildlife movement corridor for larger animals moving between the mountains and the desert. It also provides habitat connectivity for Saddleback Buttes State Park, which would otherwise be an isolated block of public (state) lands. Los Angeles County recognizes the Big Rock Creek open space corridor in both its existing and proposed system of Significant Ecological Areas. Conservation of Big Rock Creek was does not preclude development of mining operations within or adjacent to the wash, provided that such operations are conducted in a manner that will accommodate the movement of larger animals. Additionally, mining operations will be conducted in a manner that does not interfere with the natural processes (i.e. sediment transport) in the Big Rock Creek wash necessary for preservation of the Mojave fringe-toed lizard.

Joshua Tree to Yucca Valley: This linkage would connect Joshua Tree National Park (JTNP) and the San Bernardino Mountains and would enhance dispersal of bighorn sheep. It would also provide conserved lands for the endemic Little San Bernardino Mountains gilia, triple-ribbed milkvetch and the disjunct population of the Bendire's thrasher. The BLM has already taken steps to establish a linkage between the National Park and the mountains with the expansion of the Big Morongo ACEC, though several parcels of private land are included in the potential corridor. This area was identified as an open space corridor by the Town of Yucca Valley General Plan in 1994, and thus is consistent with Town policies. In addition, the Wildlands Conservancy has already acquired a substantial amount of land in this area.

Portal Ridge to Antelope Valley Poppy Preserve: Los Angeles County has included a linkage from the San Gabriel Mountains to the Antelope Valley Poppy Preserve State Park as part of its proposed San Andreas Rift Zone Significant Ecological Area. Alternative A would adopt the proposed SEA boundaries. This corridor would also protect remnant native grassland and wildflower fields plant communities and habitat for the burrowing owl. A habitat linkage would prevent the Poppy Preserve from being an isolated block of protected lands.

2.2.1.1.6 Special Review Areas (SRA)

There exist regions that are not well suited for inclusion within the Tortoise DWMAs, although they contain relatively high numbers of tortoises. The land ownership pattern may be too fragmented, and the size too small. While these areas are not suited for long-term conservation, enough tortoises are present to warrant a heightened level of environmental review for new projects.

The special management required for protection of the Little San Bernardino Mountains gilia also warrants designation of a Special Review Area.

(HCA-6) Three "Special Review Areas" would be established: the Brisbane Valley SRA (located between Interstate 15 and National Trails Highway), Copper Mountain Mesa SRA (located north of Highway 62, between Yucca Valley and Twentynine Palms), and the Joshua Tree SRA, located south of Highway 62 near the community of Joshua Tree. The first two areas contain relatively high numbers of tortoises, but are isolated, small and composed of fragmented land ownership patterns. Neither is particularly well suited for designation as a Tortoise DWMA. The Joshua Tree SRA would be established for conservation of the Little San Bernardino Mountains gilia. Conservation of the gilia would be an additional requirement within the Copper Mountain Mesa SRA.

Management within the tortoise SRAs would focus on take avoidance rather than on long term tortoise conservation. Clearance surveys would be performed throughout the SRA by tortoise biologist(s) authorized to move tortoises out of harm's way. Protective fencing may be needed to preclude tortoises from a development site in the absence of a biological monitor. BLM public lands would be managed as Category III tortoise habitat.

Management of the gilia SRA would require avoidance of known occurrences and a setback from the banks of desert washes within this area. Flood control would be by non-structural floodplain management and acquisition of easements rather than constructed improvements to stream channels.

2.2.1.2 Miscellaneous BLM Management Issues

Establishing the Habitat Conservation Area on public lands would require BLM to amend the multiple use class of numerous parcels of land, address issues associated with the wilderness designations of the California Desert Protection Act of 1994, establish new ACECs, and resolve several pending land use issues. These are described below. The discussion is organized as follows:

- BLM Multiple Use Class Changes
- California Desert Protection Act Non-Wilderness
- BLM Areas of Critical Environmental Concern
- Rand Mountains – Fremont Valley Management Plan
- Afton Canyon Natural Area
- Harper Dry Lake
- Western Mojave Land Tenure Adjustment Project
- Mojave River Wild and Scenic River Eligibility Determination

2.2.1.2.1 BLM Multiple Use Class Changes

Alternative A proposes several changes in the multiple use class (MUC) assigned by BLM's CDCA Plan to public lands within the planning area. These changes are indicated on Map 2-2 (see attached CD Rom). Multiple use class changes are listed in Table 2-4. Within DWMAs, current BLM class designations would be retained, except as specifically noted below.

Table 2-4
BLM Multiple Use Class Changes

LOCATION	MUC CHANGE	ACRES	COMMENTS
Western Rand –Fremont Valley Management Area (HCA-7)	M to L	34,835	Recommended in 1994 ACEC management plan.
Afton Canyon Natural Area (HCA-8)	M to L	1,225	Better reflects goals of 1989 ACEC management plan. T 11N, R 5E – E ½ of Section 14, portions of Sections 13, 23, and 24.
Bendire's thrasher conservation area (B-1)	M to L	717	North Lucerne Valley Kelso Valley
Carbonate Endemic Plants ACEC (HCA-9)	M to L	3,932	Class L better protects critical habitat.
Little San Bernardino Mountains Gilia habitat (P-35)	Unclassified to M	1,922	Lands adjoining Joshua Tree National Park.
Mojave Fishhook Cactus ACEC (HCA-12)	Unclassified to L	638	T 8N, R 4W – E ½ of Section 32 T 7N, R 4W – N ½ of Section 4
Mojave Fringe-toed Lizard Conservation Area (HCA-3)	Unclassified to L M to L	3,341 3,718	Mojave River parcels
Mojave Monkeyflower Conservation Area (HCA-3)	U to L M to L	10,448 25,351	Brisbane Valley Daggett Ridge
Inyo County (HCA-13)	M to Unclassified L to U I to U	3,532 2,534 26	Ten parcels. These lands would immediately become available for disposal or transfer to Inyo County or directly to private ownership in exchange for acquisition of habitat within HCA or other conservation areas identified in this plan. (Map 2-7)
Non-Wilderness Class C lands (HCA-14)	C to L C to M C to I	3,969 842 105	Intent is to reflect the California Desert Protection Act (CDPA), enacted in 1994 by the United States Congress. See section 2.2.1.2.2, below.
Land Tenure Adjustment within DWMA	U to L	21,902	Lands within DWMA removed from disposal under LTA and MUC changed to reflect adjacent retention or consolidation zone.
Land Tenure Adjustment within DWMA	M to L	48,666	Lands within DWMA changed from Retention Zone to Consolidation Zone under LTA and MUC changed.
Land Tenure Adjustment to prevent urban encroachment on EAFB	U to M	1,225	T 9N, R 12W - SW ¼ of Section 10. T 10N, R 12W – SW ¼ of Section 34. T 10N, R 11W – All BLM parcels in Sections 10 and 12.
Mohave Ground Squirrel Habitat (HCA-16)	Unclassified to L	181	Lands between Saddleback Butte State Park and Edwards AFB in Los Angeles County: T 8N, R 9W - Portions of Sections 27 and 30. T 7N, R 9W - Portions of Sections 3, 11, and 15.
Mohave Ground Squirrel Habitat (HCA-2)	M to L U to L	136,086 144	Lands in Inyo County south of Owens Lake.
Mohave Ground Squirrel Habitat	I to L	5,391	Linkage southeast of Searles Lake (SB Co.)
Desert Tortoise DWMAs	M to L U to L	365,485 34,566	Change all lands within tortoise DWMAs currently Class M, I or U to Class L.

LOCATION	MUC CHANGE	ACRES	COMMENTS
	I to L	1,983	
Searles Lake	I to Unclassified	40	T 25S, R43E, Section 21. Parcel to be sold or exchanged to facilitate landfill transfer.
Pisgah ACEC	M to L	13,524	Proposed ACEC Lands
Summit Valley Arroyo toad habitat (including critical habitat)	Unclassified to M	1,814	T 3N, R5W, portions of Sections 12, 16, 17, 20, 21, 22, 23, 24, 27, 28. T 3N, R 4W, portions of Sections 17, 18.
San Gabriel Mountains Foothills (B-9)	Unclassified to M	706	T 4N, R 8W - portions of Section 17 T 4N, R 9W – portions of Sections 2, 3, 11, 14, and 15.
Los Angeles County SEAs (HCA-17, B-9)	Unclassified to M	164 316 93 38 234 395 75 326 265	SEA #47: T 8N, R 9W – NW ¼ Section 30. SEA #48: T 5N, R 9W - S ½ of Section 6. SEA #51: T 7N, R8W - Portions of SW ¼ Section 19. SEA #52: T 7N, R 9W - Portions of Sections 31. SEA #54: T 7N, R 9W - Portions of Section 32. SEA #55: T 4N, R 8W - portions of Sections 3, 4, 10, 13, and 24. T 6N, R 8W - Portions of S ½ of Section 33. SEA #56: T 6N, R 13W - Portions of Section 13. SEA #58: T 7N, R 15W -Portions of Sections 13, and 14. SEA #61: T 5N, R 12W- Portions of Sections 26 and 35.
North Edwards Conservation Area (HCA-18)	Unclassified to M	1,134	Lands NW of Kramer Junction. T 11N, R 7W - Section 26, Portions of Section 28.

2.2.1.2.2 California Desert Protection Act Non-Wilderness

The BLM's 1980 CDCA Plan identified wilderness study areas and recommended certain of them for designation by Congress as wilderness (multiple use class C (controlled) lands). In 1994, Congress determined which of the public lands should be designated as wilderness, taking into consideration BLM's recommendations and other factors. This designation occurred through enactment of the 1994 California Desert Protection Act. Congress did not, however, designate all class C lands as wilderness. In such cases, the CDCA Plan provides as follows:

> Areas not approved by Congress would, unless Congress directed specific management in lieu of wilderness, return without [multiple use class] designation. They would immediately become part of a Plan amendment proposal and a public planning process would ensue as part of that year's input into the land use decision as well as consideration by the District Multiple Use Advisory Committee. In the interim between Congressional rejection and the District Manager's decisions, areas would be managed under the Class "L" guidelines. [CDCA 1982 Plan Amendment Numbr 53]

Congress failed to designated 4,839 acres of class C lands as wilderness. Accordingly, CDCA Plan multiple use class changes would be made to reflect the decisions of Congress in 1994 (see Table 2-3, HCA-14). These new designations would be based on sensitivity of resources, kinds of uses, and other criteria identified in this alternative. In total, this would involve a change of 3,997 acres from class C to Class L, and 842 acres from Class C to Class M.

None of the prohibited uses in wilderness are specified as components of either Alternative A or any of the alternatives. Should any such prohibited uses in wilderness (e.g., construction of structures or use of motorized equipment) become necessary to implement the plan, then a site specific environmental assessment would be prepared. An alternative that does not require any of the prohibited uses would be included in that analysis.

Specific changes proposed include the following:

- Bighorn Wilderness - near Rattlesnake Canyon. 290 acres from Class C to Class L.
- San Gorgonio Wilderness - Upper Big Morongo Canyon and upper Little Morongo Canyon - N of Highway 62. 126 acres from C to L.
- Sheephole Valley Wilderness - A small strip south of Highway 62 and north of Joshua Tree National Park. 51 acres from C to M.
- Rodman Mountains Wilderness - Small strips of land on boundaries plus the Red Top Cinder Mine "cherrystem". 242 acres from C to L, and 240 acres from C to M.
- Newberry Mountains Wilderness - 219 acres from C to L. 50 acres from C to M.
- Golden Valley Wilderness - 52 acres from C to L. 501 acres from C to M. 105 acres from C to I.
- El Paso Mountains Wilderness - 362 acres from C to L.
- Owens Peak and Sacatar Trail Wildernesses - 2707 acres from C to L.

2.2.1.2.3 BLM Areas of Critical Environmental Concern

Implementation of Alternative A would create 14 new BLM ACECs, modify the boundaries of two others, and result in the modification of the management strategies presented in 26 existing ACEC management plans. Five ACECs would not be affected. The West Mojave Plan would serve as the ACEC management plan for each of the new ACECs. In addition, all necessary amendments of existing ACEC management plans would be set forth in the West Mojave Plan. Appendix D lists all new and amended ACECs, and presents new and amended management strategies for each ACEC.

In the event of a conflict between an ACEC management prescription and a CDCA Plan multiple use class guideline or a provision of a CDCA Plan element, the ACEC management prescription takes precedence and will apply.

2.2.1.2.4 Rand Mountains – Fremont Valley Management Plan

The BLM's 1994 Rand Mountains – Fremont Valley Management Plan (Rand Plan) determined that four amendments of the BLM's CDCA Plan were necessary to allow full implementation of the Rand Plan. These changes are incorporated as components of Alternative A, and are depicted on Map 2-3. They follow:

- (HCA-19) Expand the Western Rand ACEC by 13,120 acres.

- Change the CDCA Plan multiple use class designation of the 13,120 acres of class M lands in the Western Rand ACEC expansion area to class L (see Table 2-4, HCA-7).

- (HCA-20) Close the entire management area to off highway vehicle use except for 129 miles of designated open routes.

- (HCA-21) Categorize a portion of the Rand Mountains – Fremont Valley management area as Desert Tortoise Category I habitat.

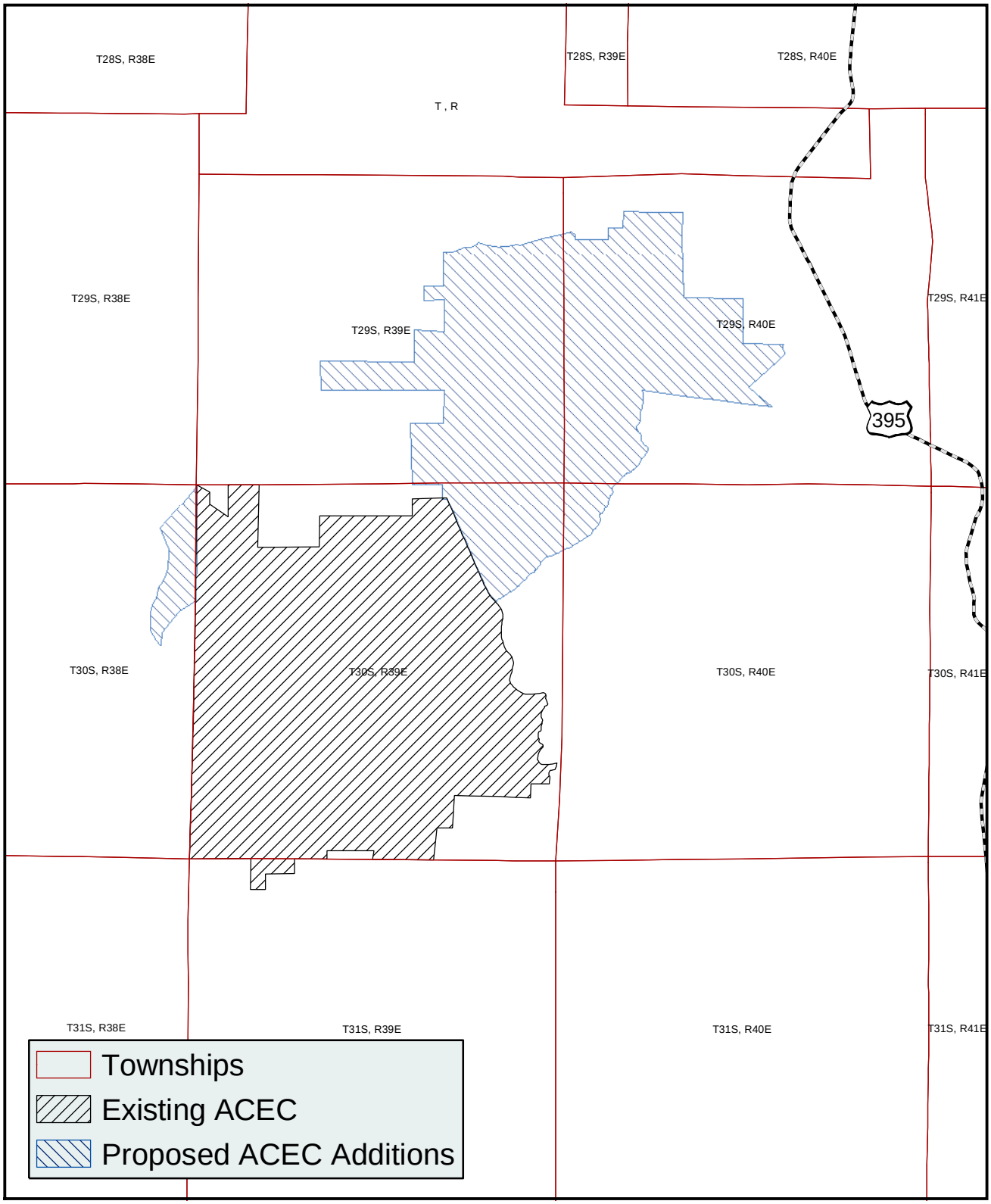
- (HCA-22) In addition, 32,590 acres within the Rand Mountains – Fremont Valley management area would be withdrawn from mineral location and entry. The 6,090-acre Koehn Lake and an additional 8,320 acres within the management area would remain as class I and open to mineral entry.

(HCA-22a) Implement a visitor use permit program. Those desiring to use vehicles in the Rand Mountains would be required to obtain permits prior to entering the management area. The permit would authorize visitors to utilize the Rand Mountain motorized vehicle access network. To obtain a use permit for the Rand Mountains, visitors would complete a short educational orientation program and, once this is accomplished, could purchase a permit. The details of the visitor use permit program will be developed in consultation with the Kern County Planning Department, the Kern County Sheriff's Department and affected stakeholders.

The educational orientation program would provide an overview and explanation about the Rand Mountains designated route network. It would include information about vehicle use safety, sensitive restoration areas, habitat values and recreation opportunities. The goal would be to increase compliance with applicable rules and regulations.

Payment of a fee would be required to obtain a use permit. This fee would be applied to cover the administrative costs of managing the permit program and, thereby, increase visitor compliance with and contribution towards goals of the Rand Plan.

Rand Mountains CDCA Plan Amendment



West Mojave Plan FEIR/S
Map 2-3

Scale: 1 : 150,000

0 1 2 3 Km

0 1 2 3 Miles

7/28/04

2.2.1.2.5 Afton Canyon Natural Area

The Afton Canyon Natural Area management plan (1989) was prepared in cooperation with the CDFG under the Sikes Act. It covers a larger area than the Afton Canyon ACEC. The plan protects the riparian community in the Mojave River, the scenic values of the canyon, and the adjacent desert habitat in the Cady Mountains, which is occupied habitat for bighorn sheep and contains nest sites for prairie falcon and golden eagle.

The 1989 management plan determined that amendments of the BLM's CDCA Plan were necessary to implement the 1989 plan. These amendments (See Map 2-4) would be made through the West Mojave planning process:

- (HCA-23) The boundary of the ACEC would be expanded by 3,840 acres and 480 acres would be deleted, making the expanded ACEC 8,160 acres in size.

- The CDCA Plan multiple use class designations would be changed from M to L on certain lands within the expanded ACEC (see Table 2-3, HCA-8).

- Adopt the network of vehicle access routes identified by the ACEC plan as a component of the CDCA Plan's motorized vehicle access network (see section 2.2.7, below).

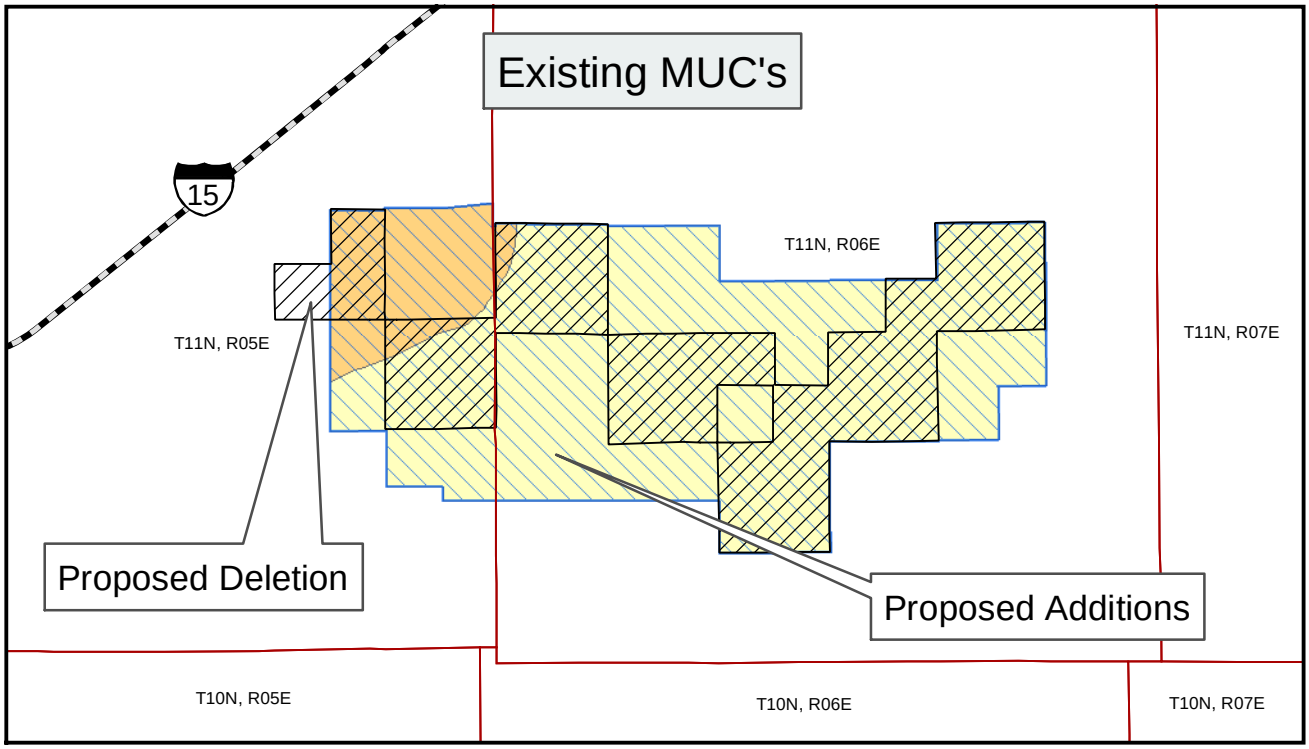
- (HCA-24) In addition, all lands within the expanded ACEC boundary would be withdrawn from mineral location and entry.

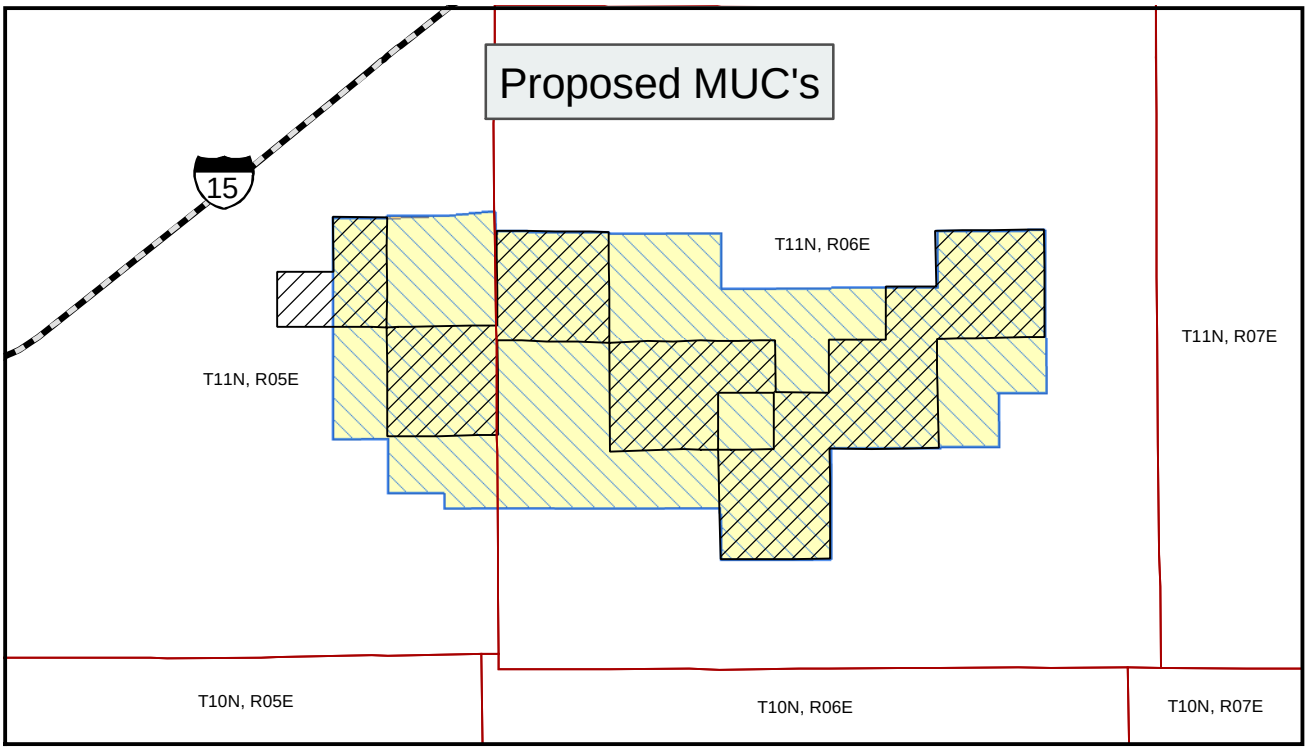
2.2.1.2.6 Harper Dry Lake

Recent improvements to the Harper Dry Lake ACEC include provision of surface water to the remnant marsh, and establishment of a parking area, kiosks, and restrooms. In order to accommodate these facilities, BLM would take the following step:

- (HCA-25) Change the existing ACEC boundary by including 110 acres of public lands on the south boundary and deleting 110 acres on the northern boundary (Map 2-5). The southern expansion includes the Watchable Wildlife Site improvements and the northern deletion contains barren lakebed.

Afton Canyon CDCA Plan Amendments





Townships
Existing ACEC
Proposed ACEC
Limited
Moderate

West Mojave Plan FEIR/S

Map 2-4

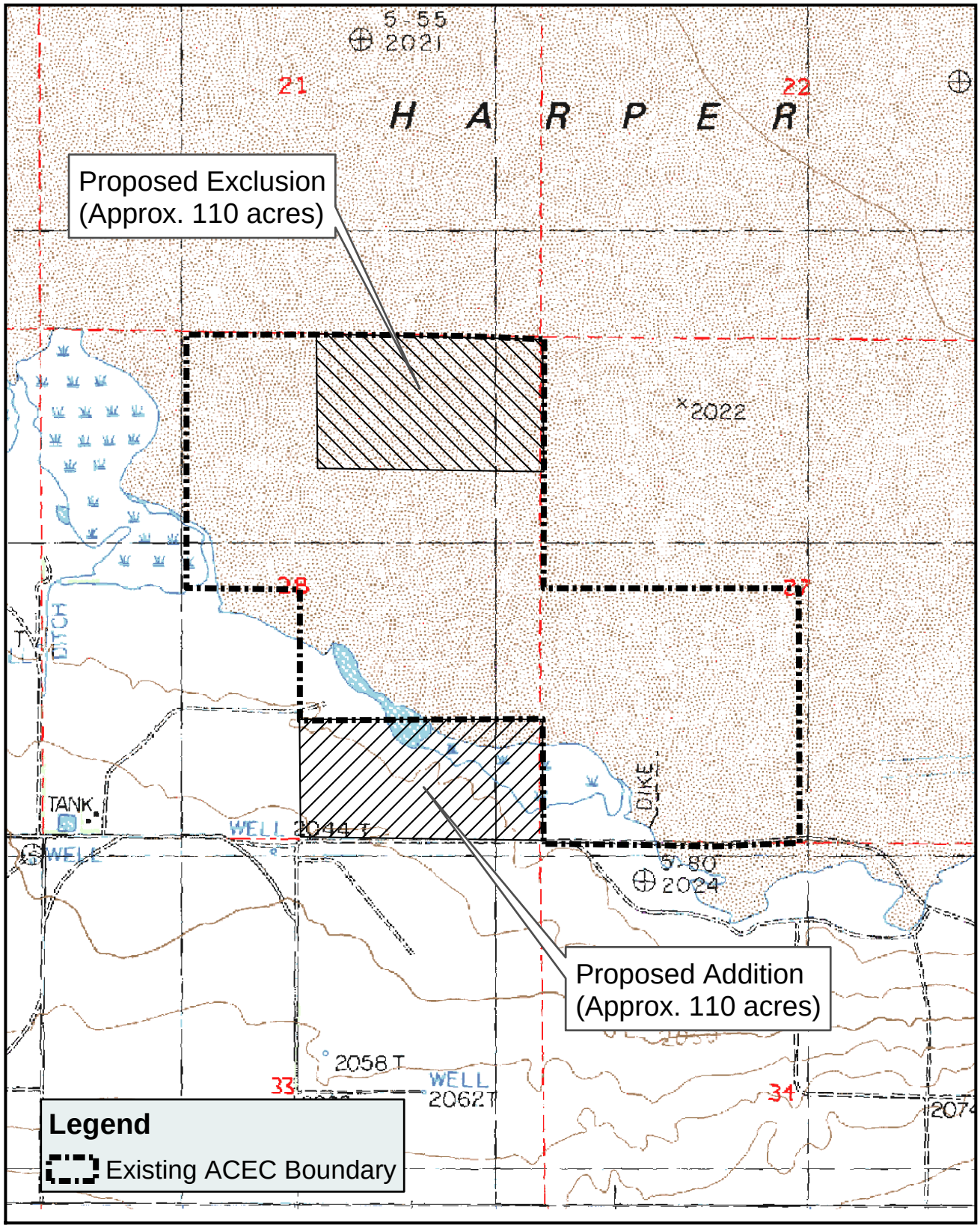
Scale: 1 : 110,000

0 1 2 Km

0 1 2 Miles

7/28/04

Harper Dry Lake CDCA Plan Amendments

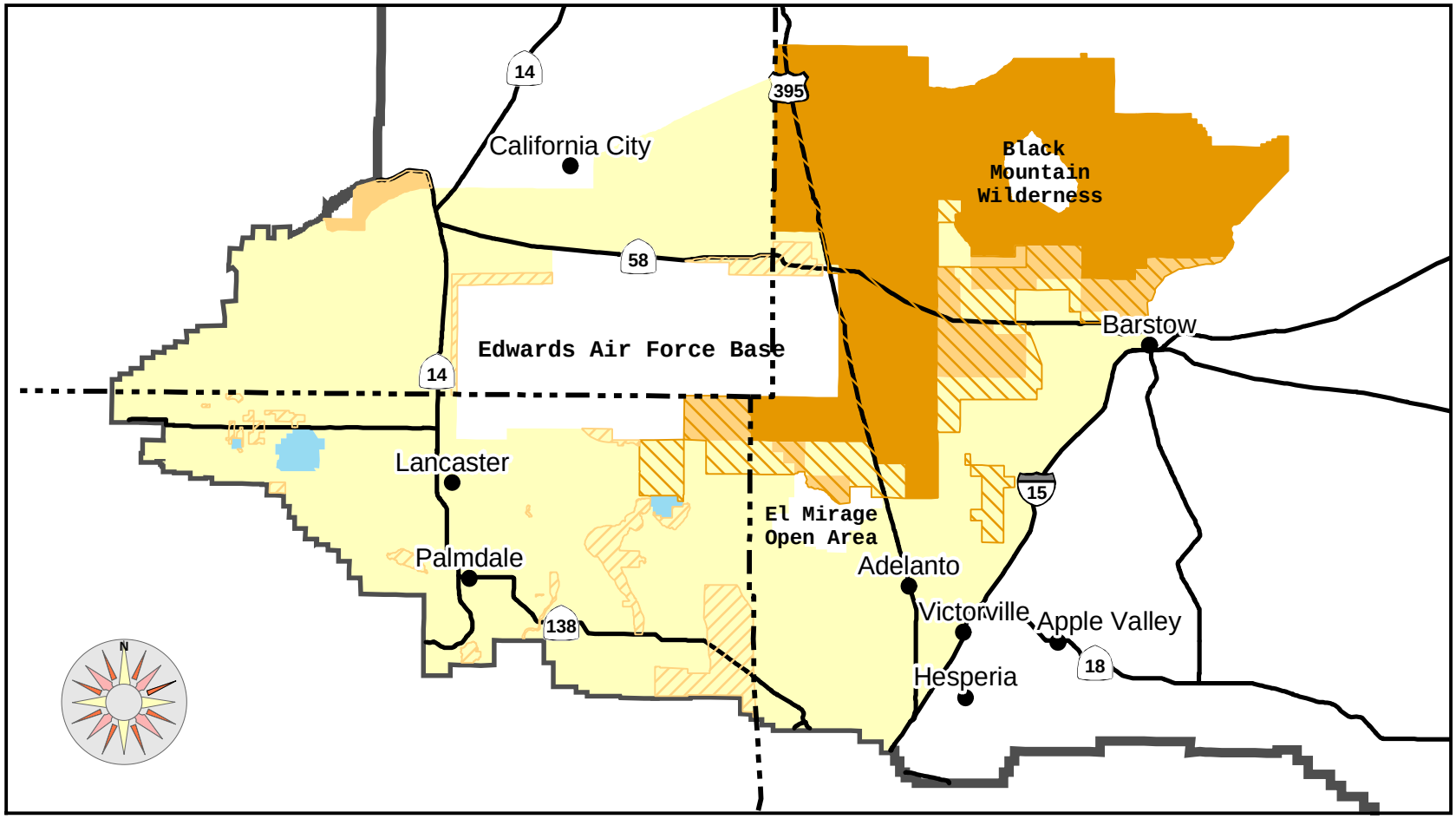


West Mojave Plan FEIR/S
Map 2-5

Scale: 1 : 18,000
0 0.25 0.5 Km
0 0.25 0.5 Miles

7/29/04

New Land Tenure Adjustment Project Zones



County Lines
Highways
Plan Boundary
Proposed Consolidation Zone
Proposed Retention Zone

LTA Project Zones

Consolidation Zone
Retention Zone
Disposal Zone
State Park Lands

West Mojave Plan FEIR/S

Map 2-6

Scale: 1 : 960,000

0 10 20 30 Km

0 10 20 30 Miles

7/29/04

2.2.1.2.7 Western Mojave Land Tenure Adjustment Project

(HCA-26) Boundaries of retention, consolidation and disposal zones established by the BLM – Edwards AFB 1991 Land Tenure Adjustment Project would be modified so that no disposal zones are included within the HCA. Scattered parcels that provide habitat for San Gabriel Mountains foothills species or are within an existing SEA are also removed from the disposal zone of the LTA. Scattered BLM lands bordering Edwards AFB on the northwest and west boundaries would be removed from disposal under the LTA to prevent urban encroachment. Other lands within the existing disposal zone would remain available for disposal (including many isolated [or "orphan"] parcels in the Antelope and Victor Valleys). These are indicated on Map 2-6 and in Table 2-4.

2.2.1.2.8 Mojave River Wild and Scenic River Eligibility Determination

In accordance with the Wild and Scenic Rivers Act of 1968 (PL 90-542), the BLM must identify and evaluate all rivers that have potential for wild and scenic river designation. To be eligible for designation, a river must be free flowing and contain at least one Outstandingly Remarkable Value (ORV), i.e. scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar value. A "river" means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills and small lakes. "Free-flowing" is defined as "existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping or other modification of the waterway." Rivers with intermittent or non-perennial flows may be eligible for designation.

Rivers are designated 1) when requested by Congress, 2) through an agency planning process, or 3) by the National Park Service when requested to include a State designated river in the national system. The eligibility determinations made in the West Mojave Plan arise through the planning process. In addition, the CDCA Plan litigation settlement with the Center for Biological Diversity, Sierra Club and Public Employees for Environmental Responsibility stipulated that BLM would perform an eligibility determination for the Mojave River.

The National Wild and Scenic River System (NWSRS) study process includes three regulatory steps:

- Determination of what river(s) and/or river segment(s) are eligible for designation;
- Determination of eligible river(s) and/or segment(s) potential classification with respect to wild, scenic or recreational designation or any combination thereof; and
- Conducting a suitability study of eligible river(s) and/or segment(s) for inclusion into the NWSRS via legislative action.

The eligibility of the Mojave River for inclusion in the NWSRS was determined as indicated in Table 2-5. The report documenting the determination according to federal standards is presented in Appendix F.

Table 2-5
Mojave River Wild and Scenic River Eligibility

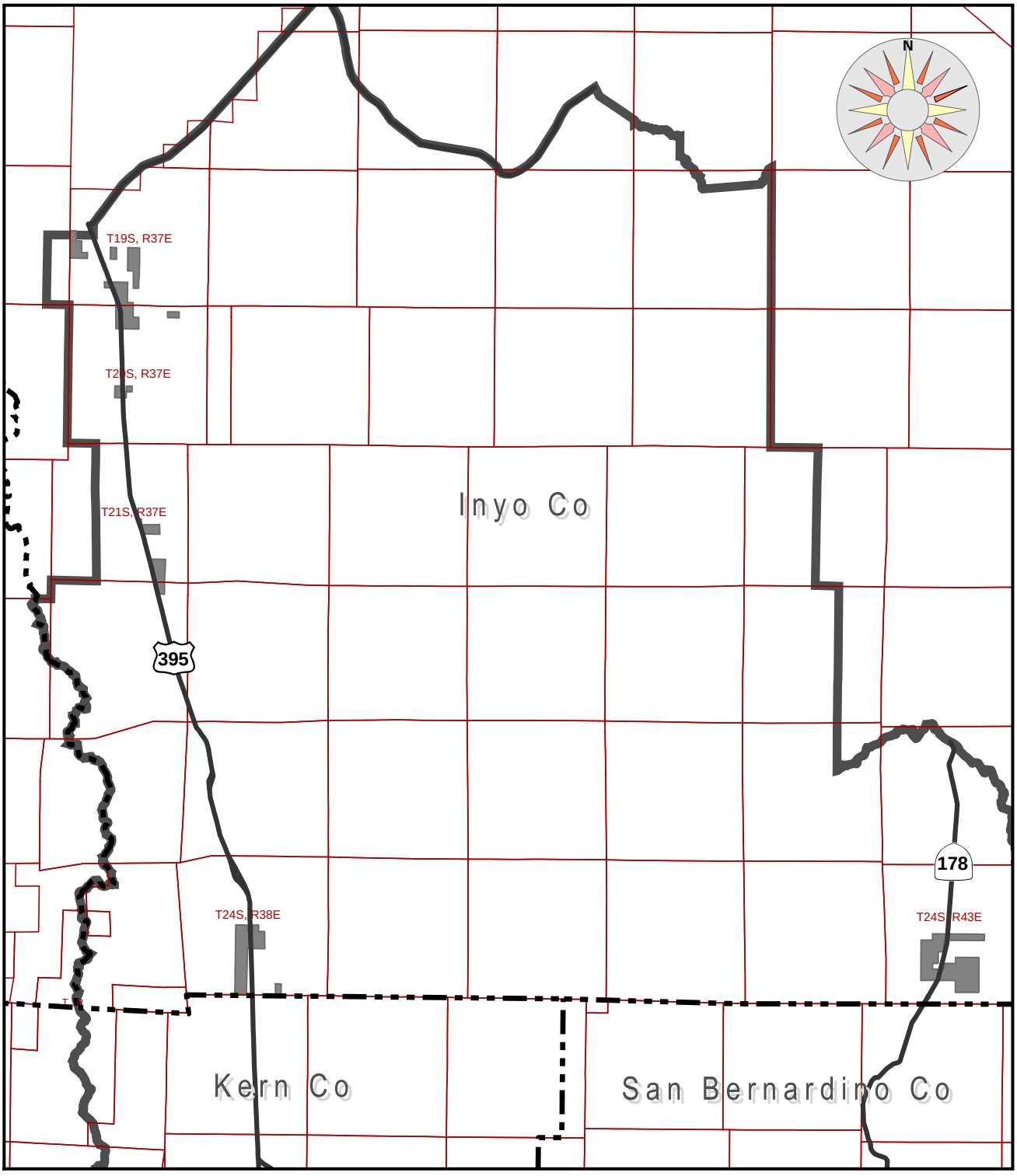
RIVER REACH	LENGTH	COMMENTS
Mojave Forks Dam to Spring Valley Lake	11 miles	Not eligible – no free flowing water. Public land limited to two parcels totaling 0.375 miles.
Spring Valley Lake to Interstate 15 bridge	3.5 miles	No determination. No public land.
Interstate 15 bridge to Oro Grande	4.5 miles	No determination. No public land.
Oro Grande to Helendale	10 miles	No determination. No public land.
Helendale to Barstow	19 miles	Not eligible – no free flowing water. Public land limited to 2.25 miles in three parcels.
Barstow to Harvard Road crossing	22 miles	Not eligible – no free flowing water. Public land on 8.0 miles in 5 separate parcels.
Harvard Road crossing to Basin Road	22.5 miles	Eligible in part. Free flowing water for 2.9 miles. Recommended classification of "Recreational" for this segment. Outstanding remarkable scenic, geologic, recreational, wildlife, cultural and historic values. Public land limited to 14 miles in this reach. Seven miles are within Afton Canyon ACEC and one mile is within Manix ACEC.
Basin Road to Soda Lake (Mojave National Preserve)	8 miles	Not eligible – no free flowing water. Public land covers 7 river miles within Rasor Open Area.

Selected other river segments have been evaluated for wild and scenic river status within the West Mojave Plan area. The Coachella Valley Amendment to the BLM CDCA Plan determined that public land portions of Whitewater Canyon and Mission Creek (main channel, North Fork, South Fork and West Fork) were eligible for designation as wild and scenic rivers. Portions of Big Morongo Canyon and Little Morongo Canyon within the West Mojave Plan area were determined to be not eligible.

2.2.1.2.9 Inyo County Land Disposal Tracts

Ten parcels of land, encompassing approximately 6,400 acres, and located adjacent to existing major highways and towns, have been identified for disposal in Inyo County. The intent of this measure is to encourage development to locate close to existing transportation and urban facilities, rather than in conservation areas. These are indicated on Map 2-7.

Inyo County Land Disposal Tracts



Legend

- County Lines
- Highways
- Plan Boundary
- Disposal Tracts

West Mojave Plan FEIR/S

Map 2-7

Scale: 1 : 410,000

0 5 10 Km

0 5 10 Miles

7/29/04

2.2.1.3 Allowable Ground Disturbance (AGD)

(HCA-27) Establish a "one percent" threshold for new ground disturbance within the Habitat Conservation Area, applicable for the 30-year term of the West Mojave Plan. New ground disturbance includes any clearing, excavating, grading or other manipulation of the terrain for which a local government permitting process exists, occurring after adoption of the West Mojave Plan whether or not a permanent use is proposed for the site, unless such disturbance is conducted pursuant to existing permitted or vested mining operations. This threshold would be calculated separately for those portions of the HCA under the jurisdiction of each agency or local government participating in the Plan. This acreage would constitute the jurisdiction's *allowable ground disturbance*, or "AGD." Once a jurisdiction's or an agency's AGD is exceeded: (1) Private land applicants seeking permits from a jurisdiction must obtain incidental take permits from CDFG and USFWS on a case-by-case basis, and could not utilize the streamlined permitting program established by the West Mojave Plan; (2) Case by case Section 7 consultations may be required to process BLM permits.

- **Continuous Accounting.** Acreage of new ground disturbance would be tracked on a continuing basis, separately for each jurisdiction. Baseline acreage would be set as of time of Plan adoption. The baseline acreage will specifically include those lands subject to existing permits and approvals, as well as those lands included within the scope of vested operations. AGD accounts would be adjusted to reflect transfers of land from the jurisdiction of one agency or government to another.

- **Non-Participating Agencies.** AGD would apply only to projects permitted by agencies participating in the West Mojave Plan. If an agency not covered by the West Mojave Plan approved a project that disturbs HCA lands, the project's ground disturbance acreage would not be deducted from the affected member jurisdiction's available AGD.

- **Habitat Credit Component.** Existing disturbed habitat could be restored, and credits granted which would raise a jurisdiction's AGD ceiling, once specified success criteria have been met.

- **Periodic Review.** Rate of new ground disturbance, effects on wildlife and plant populations and the success of restoration programs would be assessed on a periodic basis and the Plan amended as necessary.

Table 2-6 indicates approximate AGD acreages, by jurisdiction.

Table 2-6
Allowable Ground Disturbance (AGD) by Jurisdiction[1]

JURISDICTION	APPROXIMATE AGD (IN ACRES)
BLM	18,499
Inyo County	No private land in HCA
Kern County	819
Los Angeles County	546
San Bernardino County	4,142
California City	139
Caltrans	1,833

The West Mojave Plan would provide coverage for the Caltans projects listed in Tables 2-6 and 2-12. The 1,833 would serve as the Caltrans Allowable Ground Disturbance. The West Mojave Plan would cover these Caltrans projects so long as total new ground disturbance created by the Caltrans projects does not exceed 1,833 acres. Undisturbed lands located between an existing and new highway alignment would be considered to be "disturbed" for purposes of calculating the acres to be applied against the CalTrans AGD.

AGD Examples. (1) At the time it adopts the West Mojave Plan, County A has permitting jurisdiction over 150,000 acres of private lands within a tortoise DWMA. The AGD for County A would be 1,500 acres. (2) A new project is approved and constructed within County A. As a result, 250 acres of these lands are disturbed. County A's AGD would be reduced to 1,250 acres. (3) A party successfully restores 300 acres of previously disturbed habitat within the HCA. The AGD for County A would be increased to 1,550 acres.

2.2.2 Compensation Framework

2.2.2.1 Administrative Structure

(HCA-28) The agencies participating in the West Mojave Plan would establish an Implementing Authority to oversee the implementation of the habitat conservation plan. This authority would be established through an interagency agreement (such as a memorandum of agreement or MOA) or a Joint Powers Agreement as determined by the agencies participating in the plan. This agreement would define the composition of the governing board for the authority.

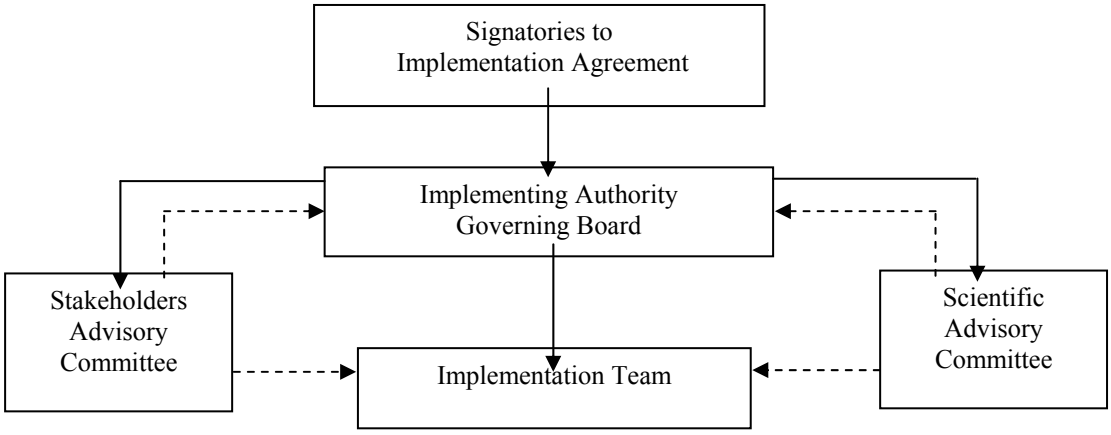
It is expected that the governing board would be composed of elected officials representing the cities and counties as well as representatives of the BLM, Caltrans, and other public entities signatory to the agreement. USFWS and CDFG would participate on the governing board as ex officio, non-voting members. Staff reporting to the governing board would conduct day-to-day oversight for implementation.

1 AGD acreage figures are approximate. Final AGD would be calculated prior to issuance of Biological Opinion and Section 10(a) permits.

The Implementation Team would be physically located in an office in the West Mojave planning area to facilitate communication and to provide a single location for public contact on plan issues. USFWS and CDFG may consider co-locating their staff with the Implementation Team to further facilitate communication and streamlining of the permit process.

In addition, two advisory committees would be established. A Stakeholders Advisory Committee would advise staff and the Governing Board on issues affecting the various interest groups and general public. A Scientific Advisory Committee would provide professional, scientific review and advice to the Implementation Team and Governing Board. The composition and duties of the Governing Board, Implementation Team, and advisory committees are detailed in Figure 2-1.

Figure 2-1
Implementation Structure



2.2.2.2 Mitigation Fee

(HCA-29) To replace the existing array of complex and time-consuming mitigation formulas, enhancement and endowment fees (including the current CDFG endowment fee), and survey requirements, a single mitigation fee would be established as compensation for habitat disturbance within the West Mojave planning area. The fee would apply to new ground-disturbing activities located on public and private lands under the jurisdiction agencies participating in the HCP including the BLM, Caltrans, cities, counties and special districts. This mitigation fee would be based on the average value of an acre of the private lands to be acquired for the implementation of this plan. The average value would be determined prior to finalization of the Implementation Agreement.

There would be three levels of compensation. Within the Habitat Conservation Area the fee would be based on a compensation ratio of 5:1 (five times the average value of an acre of land within the HCA). Outside of the HCA on lands delineated as disturbed habitat, the mitigation fee would be based on a compensation ratio of 0.5:1 (one half the average value of an acre of land within the HCA). Within all other areas outside of the HCA, the mitigation fee

would be based on a 1:1 compensation ratio. The criteria utilized to delineate disturbed habitat is shown in Table 2-7. Map 2-8 graphically displays the three compensation areas.

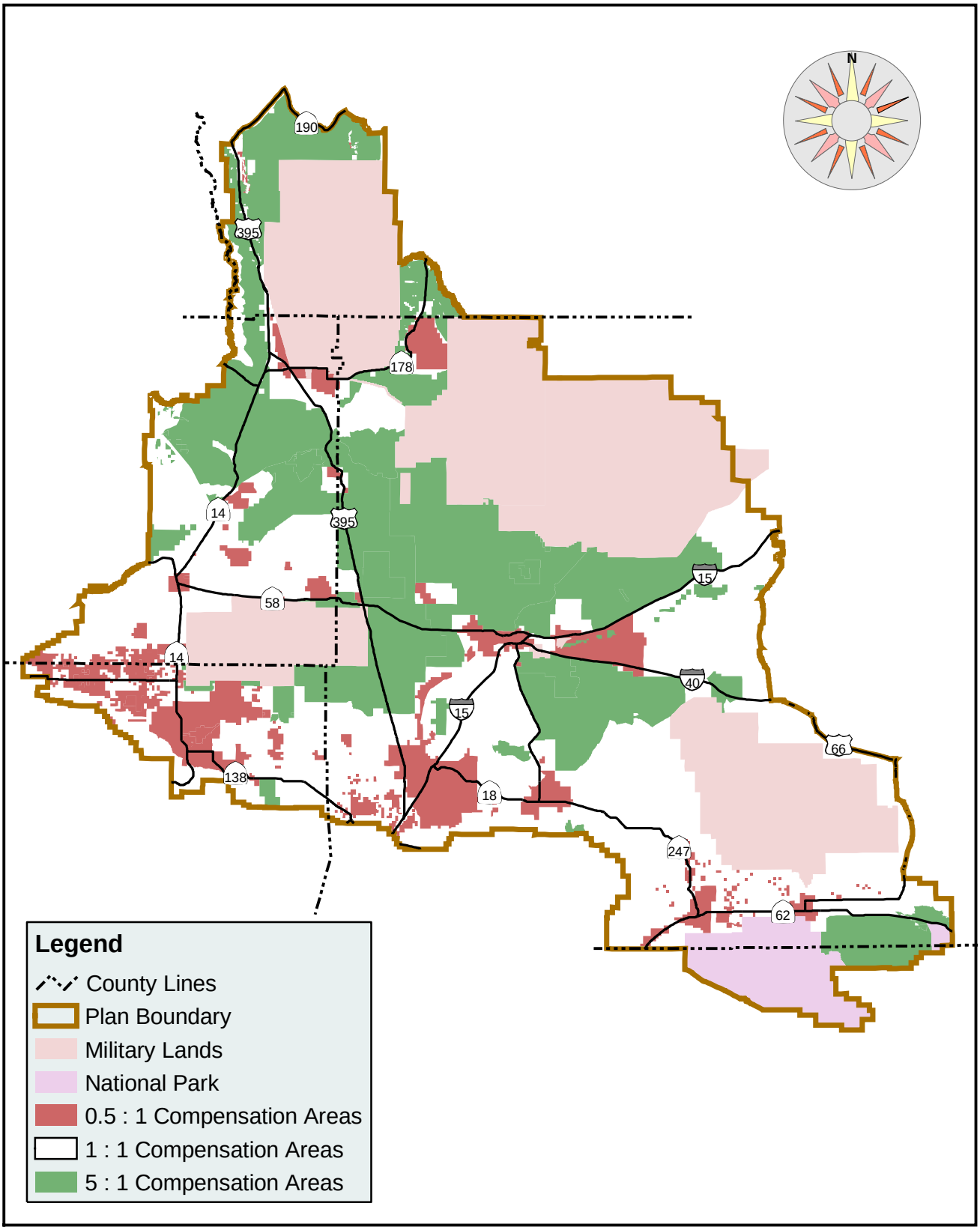
The mitigation fee would be applicable to development and/or loss of habitat on both private and BLM administered public lands, and would be considered to be the complete compensation for loss of habitat. On private lands, the mitigation fee would apply to all new land disturbing development subject to a grading and/or building permit and would be collected by the local jurisdiction at the time of permit issuance. On BLM lands, the mitigation fee would apply to all new land disturbing projects subject to federal permits, and would be collected by the BLM at the time of permit issuance. The mitigation fee would not be additive where multiple species exist on site, or where conservation areas for species overlap.

Table 2-7
Criteria Used to Delineate Disturbed (0.5 to 1) Areas

1) Agriculture (active & fallow) Fallow land is any land that has ever been cultivated and is not, at any given time, in current use for crop production. Evidence of prior cultivation includes, but is not limited to, crop surveys by government agencies, aerial photographs, statements by eyewitnesses, and contemporaneous documentation.
2) Defensible boundaries (nearest 1/4 section lines encompassing development; follow roads or other physical features such as aqueduct, railroad line, power line; don't split legal boundaries)
3) Clustered/concentrated development (includes urbanized areas, areas where infrastructure to support urban development exists, and areas developed at a density of approximately 25 structures per 1/4 section or greater)
4) Impaired habitat (direct & indirect; not viable; mined lands where 80 acres or more have been disturbed)
5) Contiguity to existing development
6) Outside military land, NPS and State Parks boundary (no other jurisdiction)

(HCA-30) The compensation structure for the Brisbane Valley portion of the Mojave Monkeyflower Conservation Area would differ somewhat from the compensation framework described above. Within the Brisbane Valley portion of the conservation area, the mitigation fee would be based on a compensation ratio of 5:1. Surrounding this conservation area, a Survey Incentive Area would be established. The compensation ratio within the Survey Incentive Area would vary from 1:1 to 2:1 depending on whether a botanical survey is conducted and results of that survey. (See Section 2.2.4.10.13 for a detailed description of the conservation strategy for the Mojave monkeyflower.)

Fee Compensation Areas



West Mojave Plan FEIR/S
Map 2-8

Scale: 1 : 1,750,000
0 10 20 30 Km
0 10 20 30 Miles

7/29/04

(HCA-31) A different method of compensation would be utilized for mining projects within the Carbonate Endemic Plants management area. The provisions of compensation for take of undisturbed habitat in this area are described in the separate interagency Carbonate Habitat Management Strategy (CHMS). The CHMS provides incentives for donations, land exchanges and conservation of occupied habitat, and applies a 3:1 mitigation ratio for compensation lands to replace habitat lost to mining. Non-mining projects within the management area would follow the mitigation fee provisions of the West Mojave Plan.

Certain uses would be exempt from the established mitigation fee. The development of a single-family residence on a lot of record outside of the HCA, and maintenance activities within an existing and previously improved road or utility right-of-way, are examples of uses exempt from payment of the mitigation fee. A complete listing of uses exempt from fee payment on private land is displayed in Table 2-8. Uses exempt from the mitigation fee on BLM administered land are shown in Table 2-9.

Table 2-8
Activities/Uses Exempt from Fees on Private Land

EXEMPT ACTIVITIES AND USES
• Single family residential dwellings and associated accessory structures, including non-discretionary second dwelling units that are permitted pursuant to California state law. Exemption applies to single family residential dwellings and non-discretionary second dwelling units on legal lots of record created prior to (date of enactment of fee ordinance). Residential construction on lots created after (date of enactment of fee ordinance) would be subject to the fee. This exemption does not apply within the Habitat Conservation Area. • Remodels and renovations totaling no more than 25% of pre-existing development. (Note: Fee applies only to those classes of construction that generally represent new ground disturbance.) • Demolitions • Mobilehome replacements and reconstruction of any structure damaged or destroyed by fire or other cause. • Maintenance activities within an existing and previously improved road or utility right-of-way. For the purposes of this section, "maintenance" includes paving, repaving, grading, and laying of gravel or other base, as long as these activities take place within an already graded road right of way. • Any project for which a discretionary or ministerial approval was granted by the local jurisdiction prior to (date of enactment of fee ordinance), and any project for which a Vesting Tentative Map or Development Agreement approved prior to (date of enactment of fee ordinance) confers vested rights under a local jurisdiction ordinance or State law to proceed with development. Projects subject to this exemption must comply with all provisions of State and Federal law. (Note: This exemption is intended to apply to already approved projects where the application of subsequently adopted fees would be in conflict with State law.) • Development that has already obtained required permits from the State Department of Fish and Game and/or U.S. Fish and Wildlife Service. • Any project occurring on an area that was legally paved, landscaped, or graded and covered with a base prior to adoption of the West Mojave Plan.

Table 2-9
Activities/Uses Exempt from Fees on BLM Land

EXEMPT ACTIVITIES AND USES
• Any project included on the BLM CX List (list of Categorical Exclusions) as incorporated into the DOI NEPA manual at 516 DM6, Appendix 5, Section 5.4 (effective 5/19/92), unless the project is found to have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species (Exception 2.8, DOI NEPA manual at 516DM2, Appendix 2 [effective 9/26/84]). • Any project for which required permits from the U.S. Fish and Wildlife Service were obtained prior to the Record of Decision for the West Mojave Plan. • Any project for which habitat compensation requirements were established prior to the Record of Decision for the West Mojave Plan. Any such project would comply with the mitigation requirements established through the NEPA process. • Any project accomplished by the BLM, or its authorized agent, to implement provisions of the West Mojave Plan.

On private lands, the mitigation fee would be based on the size of the parcel to be developed. Development on parcels less than one acre in size would be charged on a pro rata basis. The mitigation fee for residential development on parcels between one acre and 2 ½ acres in size will be based on either one acre of development that represents the typical amount of direct disturbance for rural residential land use on 2 ½ acres parcels within the Plan area, or the actual amount of grading associated with the individual residential project, whichever is greater. Commercial and industrial development will pay a mitigation fee for the actual acreage to be disturbed in the same manner as development on parcels greater than 2 ½ acres in size. The fee for projects on private land parcels greater than 2 ½ acres may be calculated by determining the acreage of land actually disturbed, if steps are taken by the project proponent to ensure that the remainder of the parcel would remain undisturbed (e.g. the project area is fenced off from the remainder of the parcel and a conservation easement is granted for the remaining land). For projects occurring on public land, the mitigation fee would be based on the total acreage of land to be disturbed.

(HCA-32) In order to identify the loss or disturbance of habitat without compensation, a base line aerial photo data set would be established to identify those properties that were developed prior to the adoption of the Plan. An owner of property that is developed subsequent to the adoption of the plan would be subject to payment of the mitigation fee. Although no fee would be required for agriculture and other uses that do not require a development or building permit, the conversion of existing agricultural land, either under current cultivation or fallow, to any use that requires a development or building permit would be subject to the mitigation fee.

Administration of Mitigation Fees: An Implementing Authority established by agreement among the participating jurisdictions would administer mitigation fees collected on private lands. Mitigation fees collected on BLM lands would be managed by the BLM and maintained in a special account established for the acquisition of mitigation lands within the HCA, as well as for monitoring, enhancement and management of those lands. Appendix C (Implementation Plan) identifies priorities for the acquisition of land within the HCA.

Mitigation funds could also be expended on other implementation measures established by the Plan. Appendix C lists those measures and provides an initial prioritization for implementation. The Implementing Authority and BLM would coordinate the acquisition of mitigation lands and funding of other measures after reviewing and adjusting as necessary the Land Acquisition Priority Map and Implementation Priority Table. The interagency agreement establishing the Implementing Authority and the Implementation Agreement with the wildlife agencies would provide the specifics regarding the Implementing Authority's decision making process and coordination responsibilities to ensure that lands and measures most critical to species conservation are acquired or implemented early on.

2.2.2.3 Habitat Rehabilitation Credits

(HCA-33) Habitat Rehabilitation Credits (HRCs) would be awarded to a person or entity that successfully rehabilitates degraded habitat of covered species. The West Mojave Implementation Team would identify degraded habitat suitable for rehabilitation. Rehabilitation sites would be located within the Habitat Conservation Area. Successful rehabilitation would be determined by whether rehabilitation success criteria are attained. The Implementation Team would make this determination, following consultation with the Scientific Advisory Panel. HRCs are considered a secondary means to mitigate impacts, and should not result in extensive areas of re-created habitat that are intended to functionally replace previously undisturbed habitat.

Award and Use of HRCs: The West Mojave Implementing Authority would award HRCs, following the determination by the Implementation Team that success criteria have been attained. One HCR would be awarded for every acre of land restored. An award of HRCs would have two results:

- The AGD for the entity having jurisdiction over the rehabilitated lands would be increased immediately, by one acre for every HRC awarded.

- The person or entity to which the HRC was awarded is designated as the □holder□ of that HRC. The holder may take the following actions concerning the HRC: (1) retain the HRC for future use; (2) transfer the HRC to another person or entity; or (3) when compensating for any new ground disturbance, apply the HRC to reduce the required compensation.

The reduction of required compensation would be accomplished by applying the following formula:

$$\text{Compensation} = ((\text{CR} \times \text{DA}) - (\text{Number of HCRs})) \times \text{L}$$

CR is the applicable compensation ratio, DA is the number of disturbed acres, and L is the average cost of land within the HCA. Examples of the application of an HRC to reduce compensation ratios are presented in Box 2-1.

Tracking HRCs. The Implementation Team would maintain a record of all HRCs awarded by the Implementing Authority.

Projects Not Eligible for HRCs. Habitat Rehabilitation Credits would not be awarded for revegetating sites disturbed by new projects. Revegetation is currently a standard requirement for mitigating ground disturbing impacts. Pipeline proponents, for example, are typically required to salvage and replant cacti and *Yucca* species, stockpile topsoil, scarify the ground (i.e., usually imprinting), redistribute the topsoil over the impact area, reseed the disturbed right-of-way with locally collected seed stock, and in some cases apply mycorrhizal spores over the disturbed area. This is current management, and successful mitigation along such a pipeline would NOT be eligible for an award of HRCs.

Box 2-1
Application of HRCs

Example 1. Smith proposes a two-acre project within the HCA. Smith holds three HRCs. Assume L is $500. Smith applies all three credits. The compensation is ((5 x 2) - 3) x $500, or $3,500.

Example 2. Jones proposes a ten-acre project within the disturbed fee zone. Jones holds three HRCs. Assume L is $500. Jones applies all three credits. The compensation is ((0.5 x 10) - 3) x $500, or $1,000.

The acquisition of land from private landowners and its donation to a jurisdiction or agency, or its placement under a conservation easement or other conservation management, is not eligible for an award of HRCs. Only those activities that rehabilitate degraded habitat in a manner that meets the rehabilitation success criteria may earn HRCs.

Identification of Degraded Habitat: The Implementation Team would determine whether a property constitutes "degraded habitat" eligible for an award of HRCs. This may be done proactively by the Implementation Team, which could identify and maintain a list of degraded habitat within the HCA. Alternatively, a project proponent may propose a site for rehabilitation. The Implementation Team would then determine whether the proposed site is an acceptable candidate for rehabilitation, and whether it is appropriately situated within the HCA.

If a project proponent seeks to rehabilitate lands to mitigate a specific project (rather than to prospectively rehabilitate degraded habitat and bank the HRCs for future use), the rehabilitation site should be located in a region where species affected by the project would be benefited. Where a person or entity wishes to earn HRCs as a form of mitigation banking, it is still important that the rehabilitation sites occur within regions where there is the greatest net benefit to the conservation of covered species in that area.

Goals. Once the Implementation Team identifies degraded habitat, the person or entity seeking HRCs would employ state of the art rehabilitation techniques to realize the following goals:

- *Goal 1*. If the intent is to mitigate on-site impacts to one or more covered species, rehabilitation off-site must benefit those same species. If the intent is to obtain and hold HRCs as a form of banking, the site must be rehabilitated so that success criteria for that region and its covered species are being met.

- *Goal 2*. The short-term goal is to eliminate existing conditions that are not conducive to species conservation and recovery. This may entail (a) eliminating mine pits, trash dumps and other existing conditions that adversely affect covered species; (b) visually reducing or eliminating the impact area so that it is not targeted for additional human uses that are not conducive to conservation of covered species (i.e., use of an old mine site as a motorcycle play area); (c) securing the soil through scarification, imprinting, or other methods to reduce the amount of fugitive dust; and (d) eliminating hazardous materials from old mine and other sites where the contaminants are potentially adversely affecting covered species.

- *Goal 3*. Long-term goals include (a) restoring vegetation native to the area in the relative same species composition, density and cover as found in native, undisturbed habitats adjacent or nearby; (b) rehabilitating the site so that other constituent elements become re-established (i.e., provide for natural topsoil cover, replenish the seed bank of native plant species, regrowth of mycorrhizal fungi, etc.); and ultimately, (c) providing conditions that would result in the use of the site by covered species. Rehabilitation that results in establishing fields of non-native species such as mustards (i.e., *Descurania* ssp., *Sisymbrium* ssp., etc.) or Russian thistle (*Salsola tragus*) does not satisfy these goals, as these exotic species are seldom associated with occupied habitats of most covered species. The ultimate success of rehabilitation should be judged, in part, by reoccupation of the site by the targeted covered species.

Any successful rehabilitation project should ultimately reflect pre-disturbance conditions, which should, in most cases, be judged relative to non-degraded habitats immediately adjacent to the site. Creating conditions that support native biodiversity, and maintaining such sites so that they eventually function has habitat for covered species, are two components of successful rehabilitation.

Unique features that provide crucial habitat components for covered species should not be ignored. If Joshua Trees, for example, are a component of adjacent undeveloped habitats, rehabilitation should strive to replace them on the site at densities similar to adjacent areas.

Success Criteria: The following success criteria must be met prior to an award of HRCs. The West Mojave Implementation Team, in consultation with the West Mojave Scientific Advisory Panel, would determine whether these criteria have been attained.

- *Sustainability.* Native vegetation should maintain/replace itself over time. The vegetation should not be dependent on artificial water, fertilizers, or labor (weed removal, etc). Recruitment of native plants or production of a viable seed bank are two ways to judge the sustainability of a given rehabilitation site.

- *Resistance to exotics.* Disturbance often lends itself to the establishment of exotic annual plant species. A healthy ecosystem would resist invasion of non-native plants so long as new disturbances are eliminated or adequately curtailed.

- *Nutrient retention.* It is important to keep nutrients in the cycle and avoid having them leak off-site. In the desert most nutrients are tied up in the plant material, and sufficient biomass must be maintained in different age stands and vegetation types (e.g., native annual forbs and perennial shrubs) to enhance and maintain nutrient cycling.

- *Full complement of biotic interactions.* Successful rehabilitation should (a) re-establish mycorrhizal associations throughout the affected soil layer; (b) re-establish topsoil and, eventually, soil crusts; (c) attract native pollinators; and (d) provide habitat for natural ecosystem functions (i.e., support everything from key abiotic elements in the soil, soil movers (ants, small burrowing mammals, etc.), and (eventually) the covered species to be benefitted by the rehabilitation effort.

Partial Credit. It may require decades to judge the success of a rehabilitation program, and the process may require the investment of considerable funds before success is achieved. Therefore, as an incentive to undertake and continue the implementation of a rehabilitation program, partial credit would be awarded as certain milestones are met. These milestones follow:

- One-third (1/3) credit would be awarded when all existing structures, pits, and debris are removed; the surface is scarified; the site is reseeded; and salvaged plants are returned to the rehabilitation area.

- Two-thirds (2/3) credit would be applied once the site supports natural ecosystem functions (i.e., perhaps judged by the density and diversity of native plants, the occupation of the site by ants and small burrowing mammals, etc.).

- Full (100%) credit would be awarded once the site supports the targeted covered species and other pertinent criteria are met.

The process would be applied in the following manner:

1. Applicant contacts Implementation Team to determine possible rehabilitation sites.
2. Applicant selects a site, and obtains permission from underlying fee owner to initiate process (BLM or private property owner or other).

3. Applicant submits Rehabilitation Plan to property owner and Implementation Team for review and approval and to obtain any required permits. The Implementation Team would refer the plans to the appropriate land use authority for review and comment.
4. Plan accepted or revisions required by Implementation Team after consultation with the Scientific Advisory Panel.
5. Implementation Team recommends appropriate action to the Implementing Authority on the plan, including the number of credits to be issued upon completion, and the work that must be accomplished in order to obtain partial credits. To approve a proposed rehabilitation plan, the Implementing Authority must find that the proposal is consistent with the goals stated in this section.
6. Applicant initiates rehabilitation work.
7. Once milestones for partial credit are reached, applicant requests a review by the Implementation Team. If Implementation Team, after consultation with the Scientific Advisory Panel, concurs that milestones have been met, then the Implementation Team would recommend to the Implementing Authority that it award the partial HRCs to the applicant.

2.2.3 Incidental Take Permits

2.2.3.1 Covered Activities and Terms of Permits

Alternative A assumes that Section 10(a) and Section 2081 incidental take permits would be issued to participating cities, counties and special districts, for a term of thirty years. Activities covered by the permits could include Caltrans projects, utility maintenance activities, private activities subject to the permitting authority of a participating city or county, public activities undertaken by a participating city or county, and expansions of mining operations pursuant to vested rights. Incidental take permits do not cover activities on public lands, which are addressed by "Section 7" consultations. Caltrans would also need to comply with Section 7 requirements for projects involving federal funds.

An incidental take permit covers only those activities that are subject to a building or development permit from a participating agency. If a non-covered activity is expected to result in the take of a listed species, the project proponent must obtain a separate take permit from the USFWS and/or CDFG.

Activities covered and not covered by the permits are listed in Table 2-10.

Table 2-10

Activities Covered And Not Covered By The Incidental Take Permit
Covered Activities include: • Private activities subject to the permitting authority of a city or county participating in the HCP. (Examples: building permits, conditional use permits, and subdivisions.) • Public activities undertaken by a participating city or county. (Examples: road improvement projects, construction of public buildings.) • Specified Caltrans maintenance activities (See Appendix W) and projects. • Activities on public lands. • Utility maintenance activities, raven nest removal and potential raptor electrocutions Activities Not Covered include: • Public and private activities undertaken or permitted by agencies not participating in the HCP. • Private activities not subject to a development or building permit or other form of entitlement, unless such activities are conducted pursuant to valid non-conforming uses or vested rights. This may include the following examples: Agricultural uses such as row, field and tree crops Land grubbing and clearing Weed abatement Construction of certain accessory structures

2.2.3.2 Treatment of Unlisted Species and Federal "No Surprises" Assurances

All unlisted species addressed by the West Mojave Plan would be "covered" by the Section 10(a) permit, and added to the Section 2081 permit should they be listed in the future. In this manner, it is the intent of this Plan to obviate the need for listing these species in the future. To provide an incentive for implementing conservation strategies, including programs for unlisted species, USFWS offers federal "no surprises" assurances to parties seeking incidental take permits.

The USFWS adopted its "no surprises" policy to allow permittees to remain secure regarding the agreed upon cost of conservation and mitigation set forth in the Section 10(a) permit. If the status of a species addressed by an HCP unexpectedly worsens, the primary obligation for implementing additional conservation measures would be the responsibility of the Federal government or non-federal landowners who have not yet developed an HCP.

"No surprises" assurances can be issued for unlisted species. Providing that the HCP is being properly implemented and the species was adequately covered by the conservation plan, the protections provided by the assurances would apply – even in the event the unlisted species is later listed. USFWS may ask a permittee to voluntarily address a problem, but it cannot demand such assistance. In the event such assistance is not forthcoming, USFWS may address the problem with its own funds.

These assurances can be issued only to incidental take permittees. They do not apply to federal lands, nor can they be issued to federal agencies, such as the BLM. Should conditions change, federal agencies can be required to take additional actions to protect a species.

The 2081 permit authorizes the take of species listed by the State of California. Should an unlisted species that is covered by the Plan become listed, the species could be authorized for take but only if the CDFG makes an independent finding that the species protection measures in place under the permit still provide for full mitigation of impacts to the species, and that the conservation measures continue to be adequate given the status of the species at the time of listing.

In the event that a species not covered in the Plan is subsequently proposed to be listed as threatened, rare, or endangered under FESA or CESA, USFWS and CDFG shall provide at least sixty (60) days notice to the permittees and meet with them prior to taking action on the listing proposal to ascertain whether this Plan and the environmental documentation for it shall be deemed to be adequate and appropriate documentation to support an application for a takings permit. USFWS and the permittees shall deem the Plan and accompanying environmental documentation adequate for the species so long as the species' habitat is adequately protected in the conservation areas, and the Plan is being properly implemented. CDFG would need to determine that the Plan meets all of the permit issuance criteria for that particular species, and that the permit would need to be amended to authorize incidental take. In that event, the application for revised incidental take permits to cover the additional species shall be treated by USFWS and CDFG as a Draft HCP that has been prepared in compliance with applicable state and federal laws, and shall treat the environmental assessment as an adequate environmental document under CEQA and NEPA to support the issuance of incidental take permits. If the finding is made that the species proposed for listing is not adequately protected by the conservation areas, USFWS and CDFG shall cooperate with the permitees to identify additional conservation measures that would be necessary to amend the Plan and incidental take permit applications to include the proposed species.

2.2.3.3 Take Authorized by Incidental Take Permits

Table 2-11 indicates the take to be authorized for each covered species and the conservation measures that are intended to minimize and mitigate the take. Take for all listed species other than desert tortoise is specified as either acres of habitat or number and location of known occurrences. Take would also be permissible for new occurrences found on private land outside the Habitat Conservation Area. Conservation efforts would keep pace with take, and habitat losses will not be allowed to outpace on-the-ground mitigation work. This will require tracking new ground disturbance. A mechanism to ensure that take does not outpace conservation will be included in the Implementing Agreement.

The permits would authorize take of listed species on private land outside the Habitat Conservation Area, subject to provisions of monitoring and adaptive management. Species not

currently listed cannot be authorized for take until they are listed. The Plan, however, can treat them as if they are listed and include them as covered species. Baseline data for many species is incomplete and an exact acreage of habitat subject to incidental take cannot be calculated.

A few of the unlisted species would not be exempt from additional biological surveys outside HCAs. These are bats and the burrowing owl under specified conditions, and two plant species in specified areas (Little San Bernardino Mountains gilia, triple-ribbed milkvetch). Incidental take for these plants and animals is limited, and additional take is dependent on survey results in the future.

Take of Desert Tortoises: All lands developed within tortoise DWMAs and in tortoise survey areas outside of tortoise DWMAs would constitute authorized loss of habitat (i.e. take), whether occupied or not. Development of No Survey areas would be tracked, but authorized development would not constitute loss of habitat (i.e. take).

Table 2-11
Authorized Take Of Species

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Alkali mariposa lily	Take allowed within Lancaster city limits and on private lands outside of conserved populations. Lancaster: 17,051 acres Los Angeles and Kern counties: Unknown portion of 23,810 acres. Isolated sites: Green Springs (Kern Co.), Playas 28-32 and Turner Springs (S. B. Co.)	Los Angeles and Kern counties: 23,810 acres from interim conservation areas plus 3,629 acres in Habitat Conservation Area. Isolated sites: Paradise Springs, Box S Springs, Cushenbury Springs, and Rabbit Springs. The Plan recognizes the significant conservation now present at Edwards AFB, which encompasses the majority of the range within the West Mojave.
Barstow woolly sunflower	Take would be allowed within the Barstow city limits and on private lands throughout the range. Very low amount of take possible within utility corridors. Lands within the HCA subject to 1% cap on allowable ground disturbance.	North Edwards Conservation Area totals 14,337 acres. New ACEC within the Fremont-Kramer DWMA totals about 36,211 acres.
Bats California leaf-nosed bat, Townsend's big-eared bat	Take of bats and their roosting habitat limited to sites harboring ten or fewer bats. Incidental take permits would not cover the loss of significant roosts. Specific procedures must be followed for surveys and to allow for safe exit of bats.	Eight significant roosts on BLM lands. The Plan recognizes conservation of nine significant roosts on military lands. New discoveries of significant roosts conserved on case-by-case basis.
Brown-crested flycatcher	No take anticipated.	All riparian habitat in the Mojave River if groundwater criteria are met. All riparian habitat at Mojave Narrows Regional Park, Cushenbury Spring and Big Morongo Canyon ACEC. All riparian potential habitat at Big Rock Creek HCA.

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Burrowing owl	Take (eviction from burrows) allowed within city limits and in County urban areas. No direct take (killing) of any owls.	Acquisition of occupied habitat in Antelope Valley, along Mojave River, and possibly Brisbane Valley. Conservation must match take on an annual basis.
Carbonate endemic plants Cushenbury buckwheat, Cushenbury milkvetch, Cushenbury oxytheca, Parish's daisy, Shockley's rockcress	Take of the species would be allowed outside the ACEC boundaries and west of Highway 18. Take of Parish's Daisy would be allowed in Yucca Valley city limits.	New ACEC east of Highway 18. Grazing exclosures constructed in Rattlesnake Canyon cattle allotment. Compliance with interagency Carbonate Habitat Management Strategy.
Charlotte's phacelia	Take allowed on private and public lands outside ACECs, Wilderness and El Paso Mountains. No substantial take anticipated; take limited to 50 acres.	Managed in El Paso Mountains by route designation. Protected within Sand Canyon and Short Canyon ACECs. Protected within Owens Peak Wilderness. Protected within Red Rock Canyon State Park.
Crucifixion thorn	Take allowed on private land within its range, as long as it does not degrade the conservation areas. Only two private land point occurrences are known.	All known occurrences on public land. Point occurrences near Pisgah Crater and crucifixion woodland south of Fort Irwin.
Desert cymopterus	Take allowed on private land outside DWMAs and North Edwards Conservation Area. Take limited to 50 acres.	Avoidance of all occurrences on public land in DWMAs. All lands within North Edwards Conservation Area, subject to 1% AGD.
Desert tortoise	1% Allowable Ground Disturbance in the Tortoise DWMA; this take statement addresses loss of habitat, and it would be necessary to keep track of how many tortoises are actually affected to determine the take of animals. 100% of all tortoises and habitat from the Tortoise Survey Area, including Special Review Areas. Take is not anticipated for the No Survey Area.	All land in DWMAs subject to 1% AGD
Ferruginous hawk	No take of individuals allowed. Take of foraging habitat allowed throughout the planning area.	Plan calls for raptor-safe power lines, addressing the major threat to this species.
Gray vireo	Take allowed on private lands throughout the range. Known sites south of Phelan subject to take.	Conserved within Big Rock Creek Conservation Area, Carbonate Endemic Plants Conservation Area, Joshua Tree National Park. Potential habitat conserved within Bighorn and San Gorgonio Wilderness. Los Angeles County would allow conservation and take on a case-by-case basis within Antelope Valley Significant Ecological Area.

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Inyo California towhee	Take allowed on private land at the edge of the towhee's range, such as at Crow Canyon. Less than 2% of the occupied habitat is on private land. Two water diversions may continue, subject to determination of valid existing rights.	All occupied habitat on public (BLM) lands.
Kern buckwheat	Take only allowed incidental to restoration projects for this species. Very minimal.	Middle Knob ACEC; avoidance of all known occurrences required. Restore specific sites.
Lane Mountain milkvetch	No take on public lands. Take on private lands would be prohibited unless economic use of the parcel is precluded.	All known occupied habitat on public land outside Fort Irwin expansion. Acquisition of private land with occupied habitat.
Least Bell's vireo	No take anticipated.	All nesting habitat in Mojave River if groundwater criteria area met. All nesting habitat at Big Morongo ACEC.
LeConte's Thrasher	Take allowed within all city limits and in all County areas outside the tortoise DWMAs and other HCAs. Development on county lands outside the DWMAs is estimated as 5% of the private lands. Within the HCAs, a 1% limitation on new ground disturbance would limit the acreage of take.	Over 1.5 million acres of occupied habitat conserved within the DWMAs and other HCAs.
Little San Bernardino Mountains gilia	Take allowed on private land in San Bernardino County near Yucca Valley and the community of Joshua Tree, not exceeding 50 acres.	The single known occurrence within Bighorn Wilderness. All occurrences within Joshua Tree National Park. Nearly all known occurrences along secondary drainages outside Park between Joshua Tree and Twentynine Palms.
Long-eared owl	No take of individuals, but take of foraging habitat allowed throughout planning area.	All habitat within the Argus Mountains and Big Morongo Canyon ACEC. All riparian habitat at Big Rock Creek. All known nest sites in other areas.
Mohave ground squirrel	Habitats and resident squirrels outside the MGS CA could be taken; Within the CA, take of habitat and resident squirrels would be authorized on up to 1 percent of the land surface, or 17,235 acres.	All land within the MGS Wildlife Habitat Management Area
Mojave monkeyflower	Take allowed on non-federal land throughout the range. Acreage not determined.	Brisbane Valley = 10,633 acres, all BLM. Eastern Conservation Area = 36,424 acres, including 9,831 acres (27%) private, 25,997 acres (71%) BLM, and 596 acres (2%) State land.

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Mojave fringe-toed lizard	Take allowed at the fragmented populations in the Mojave Valley, along portions of the Mojave River, at El Mirage and Rasor Open Areas and within Twentynine Palms city limits.	Occupied habitat conserved at Sheephole Wilderness and adjacent National Park Service and BLM lands. All known habitat and supporting ecosystem process lands at Big Rock Creek and Saddleback Butte State Park. Occupied habitat on public land conservation area along Mojave River between Barstow and Rasor Open Area. Private land within Mojave River wash. Habitat within Pisgah Crater ACEC.
Mojave River vole	Take allowed for flood control maintenance activities described in existing biological opinion.	All potential habitat in Mojave River outside flood control maintenance areas if groundwater criteria are met.
Mojave tarplant	50 acres of take allowed for new populations found on private land throughout the range. Little development pressure now exists near known occurrences and it is unlikely that large new populations would be found on private land.	Short Canyon ACEC and Cross Mountain. Potential habitat at Red Rock Canyon State Park. Fifty percent of newly detected populations must be conserved.
Nine-mile Canyon phacelia	50 acres of take allowed on private land.	All public land occurrences and 50 percent of newly detected populations.
Parish's alkali grass	No take anticipated. If acquisition of Rabbit Springs is unsuccessful, take allowed on private land as long as 90% of the existing population is conserved.	All known occupied habitat would be conserved, assuming acquisition at Rabbit Springs is successful.
Parish's phacelia	Take allowed on private land within the range of this species but not exceeding 50 acres. About 149 acres of the occupied habitat is found on private land.	Within the Parish's Phacelia Conservation Area are 386 acres (43%) of private and 512 acres (57%) of public land. Occupied habitat on private land proposed for acquisition.
Parish's popcorn flower	No take anticipated. If acquisition of Rabbit Springs is unsuccessful, take allowed on private land as long as 90% of the existing population is conserved.	All known occupied habitat would be conserved, assuming acquisition at Rabbit Springs is successful.
Prairie falcon	No take of individuals unless permitted for falconry by CDFG. Unavoidable take of active nest sites only in non-nesting season. Take of foraging habitat allowed throughout planning area.	All known occupied nest sites.
Red Rock poppy	No take anticipated. 50 acres of take authorized only for newly discovered occurrences on private land.	All known occurrences protected by State Park management and route designation in the El Paso Mountains. Fifty percent of newly detected populations would be conserved.

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Red Rock tarplant	No take anticipated. 50 acres of take authorized only for newly discovered occurrences on private land.	All known occurrences protected by State Park management route designation in the El Paso Mountains. Fifty percent of newly detected populations would be conserved.
Salt Springs checkerbloom	No take anticipated. If acquisition of Rabbit Springs is unsuccessful, take allowed on private land as long as 90% of the existing population is conserved.	All known occupied habitat would be conserved, assuming acquisition at Rabbit Springs is successful.
San Diego horned lizard	Take allowed outside the two major conservation areas.	Big Rock Creek Conservation Area and Carbonate Endemic Plants Conservation Area. Other occupied habitat conserved within Bighorn Wilderness, San Gorgonio Wilderness, and Joshua Tree National Park.
Short-Joint beavertail cactus	Take allowed on private land outside the conservation area boundaries. An estimated 5% of the San Bernardino and Los Angeles County lands would be developed with rural residences over the term of the incidental take permit.	Big Rock Creek Conservation Area. Los Angeles County would review development proposals within the Significant Ecological Areas and provide conservation measures on a case-by-case basis.
Southwestern pond turtle	Take allowed outside the conserved habitat. This is expected to consist of small tributaries of Amargosa Creek near Palmdale. Take allowed for flood control maintenance activities in portions of Mojave River.	All habitat at Mojave Narrows Regional Park outside flood control maintenance areas, all habitat at Afton Canyon ACEC, Camp Cady Ecological Reserve. Los Angeles County would review proposals within the Significant Ecological Areas (San Andreas Rift Zone) and provide conservation on a case-by-case basis.
Southwestern willow flycatcher	Take allowed by existing biological opinion for portions of the Mojave River.	Migratory stopover habitat conserved at nearly all riparian areas in West Mojave, e.g. east Sierra canyons. All potential habitat at Big Morongo Canyon ACEC. All potential habitat in Mojave River outside flood control maintenance areas if groundwater criteria are met.
Summer tanager	Take allowed (but not expected) at Yucca Valley golf course, Ridgecrest golf course.	All riparian habitat in the Mojave River if groundwater criteria are met. All habitat at Mojave Narrows Regional Park. All habitat at Big Morongo Canyon and Whitewater Canyon ACECs. All riparian habitat at Big Rock Creek HCA. All habitat at Cushenbury Springs and Camp Cady.

SPECIES	AUTHORIZED TAKE	HABITAT CONSERVED
Vermilion flycatcher	Take allowed (but not expected) at Yucca Valley golf course, Ridgecrest golf course, Cerro Coso College.	All riparian habitat in the Mojave River if groundwater criteria are met. All habitat at Mojave Narrows Regional Park. All habitat at Big Morongo Canyon and Whitewater Canyon ACECs. All riparian habitat at Big Rock Creek HCA. Wetlands regulations would protect habitat in Leona Valley.
Western snowy plover	Take of habitat allowed on private lands throughout the planning area. Development pressure on the playa edge-nesting habitat is minimal and sometimes compatible, such as at the former Saltdale site. No known occurrences proposed for incidental take.	Public lands nesting habitat at Searles Lake and Harper Dry Lake ACEC. Private land nesting habitat conserved at Searles Lake according to agreement with CDFG. Other private land nesting areas protected during nesting season.
Western yellow-billed cuckoo	No take anticipated.	All riparian habitat in Mojave River if groundwater criteria are met. Migratory stopover habitat in east Sierra canyons. Riparian potential habitat on public lands in Kelso Valley.
White-margined beardtongue	Take would be allowed for maintenance of existing facilities within the BLM utility corridor and on private land within its range. Limited to 50 acres of occupied and potential habitat.	All known occurrences in washes south of Cady Mountains. Known occurrences within the proposed Pisgah Crater ACEC.
Yellow-breasted chat	No take anticipated.	All habitat at Cushenbury Springs, Mojave Narrows Regional Park, Big Morongo Canyon and Afton Canyon ACECs, Camp Cady. Potential habitat at Big Rock Creek HCA.
Yellow warbler	No take anticipated.	All habitat in east Sierra canyons. All habitat at Big Morongo Canyon, Whitewater Canyon, Sand Canyon, and Afton Canyon ACECs. All habitat at Camp Cady and Mojave Narrows Regional Park. All riparian habitat in the Mojave River if groundwater criteria are met. All riparian habitat at Big Rock Creek CA.
Yellow-eared pocket mouse	Limited to 100 acres of occupied and potential habitat. Private lands throughout the range. Development expected to be minimal.	Sand Canyon, Jawbone-Butterbredt ACECs. Potential habitat within Short Canyon ACEC, Owens Peak and Kiavah Wilderness, Kelso Valley Monkeyflower Conservation Area.

2.2.3.4 Military Lands

Lands managed by the Department of Defense provide important conservation benefits for many "covered" species. The current management of these lands has been considered in the development of the boundaries and management of the HCA. However, the Department of Defense cannot commit management of its lands in perpetuity to conservation purposes because the mission of the installation could change at any time and thereby alter the degree of conservation that may occur within an area. Therefore, the primary burden of ensuring the conservation of species would fall on the public lands and other areas that are managed for this purpose. If the mission of an installation changes in a manner that would reduce the level of species conservation, the West Mojave participating agencies would evaluate whether these changes would require a change in management within the HCA to ensure the survival and recovery of the affected species.

2.2.4 Species Conservation Measures

Alternative A proposes ecosystem-scale conservation with the establishment of four very large DWMAs and additional lands for the Mohave Ground Squirrel Conservation Area. The tortoise and Mohave ground squirrel are "umbrella species", a term used to describe protection of many other species under the "umbrella" of conservation for important wide-ranging species. The size of the DWMAs and Mohave ground squirrel conservation lands insures adequate protection for selected plant communities, and for common and unique elements of the desert flora and fauna. The focus on conservation of threatened and endangered species sometimes neglects the importance of maintaining viable populations of the common species, which function in the ecosystem as food plants, prey, pollinators, seed dispersers, or regulators of population size. Protection of species at all levels (trophic levels) of the food pyramid or web recognizes the interdependency of species that is the basis of ecology, and makes conservation of selected rare and endangered species easier, since ecosystem components are kept intact.

Several narrow endemic plant species are found within the DWMAs and Mohave Ground Squirrel Conservation Area. These include Mojave monkeyflower, Barstow woolly sunflower, desert cymopterus and Lane Mountain milkvetch. Other plants found as local disjuncts (occurring at locations outside their primary range) are protected within the DWMAs, including Parish's phacelia, white-margined beardtongue, and crucifixion thorn. The desert tortoise and Mohave ground squirrel habitat umbrella effect thus is intended to preserve several diverse and unique elements of the western Mojave Desert flora. An additional protection measure for these species is take limitation of 50 acres. The take limitation could be revised based on results of monitoring and on adaptive management.

The large conservation land base also protects unique and declining wildlife, particularly the LeConte's thrasher, Bendire's thrasher, Mojave fringe-toed lizard, many species of bats, and the golden eagle and prairie falcon.

Despite the benefits of large conservation areas, HCPs must also provide for the protection of special sites that support unusual communities or restricted-range species. Alternative A establishes several smaller conservation areas to insure that locally important sites are conserved. In addition, linkages to the National Forests, National Parks, and other conserved landscapes outside the plan boundaries are also important to maintain ecosystem integrity within both jurisdictions.

Protective management prescriptions are an integral component of the West Mojave Plan's habitat conservation strategy. A prescription could include "take avoidance" measures intended to minimize the impacts of a new development, as well as proactive management programs to be undertaken by land management agencies (for example, raven control at head starting sites).

Management prescriptions identified below are intended to *minimize* direct and indirect impacts associated with authorized development and land uses, and *mitigate* the impact by establishing conservation areas, collecting compensation fees and managing those areas for species recovery and conservation. Minimization measures are those actions that reduce the level of impact onsite, while mitigation measures are those actions that provide for species conservation offsite.

Minimization measures are those that occur at the construction site or in association with an authorized land use, and are generally referred to as *take avoidance measures.* For site development, minimization measures have included take avoidance measures, such as awareness programs, clearance surveys, site delineation, fence installation, reduced speed limits, and onsite biological monitoring. For authorized land uses, such as a dual sport event, minimization measures have included awareness programs, route delineation, seasonal restrictions, regulated speed limits, and monitoring. The intent of these measures is to minimize the onsite impact associated with the authorized activity.

Mitigation measures are those that occur in appropriate habitats offsite to offset the loss or degradation of habitat resulting from the authorized activity. Proactive management programs are considered one form of mitigation. Mitigation measures have included offsite habitat acquisition and management of those lands for the conservation of the affected species.

2.2.4.1 Species Conservation Measures Applicable Throughout the HCA

Agriculture: (HCA-34) The conversion of habitat to those agricultural uses that are allowed by the local agency without issuance of a discretionary permit is exempt from payment of the compensation fee described above. If conversion would result in take of species listed by the state or federal government, then appropriate permits must be obtained from the CDFG and/or the USFWS. The Plan would not cover this activity.

Fire Management: Current management and implementation of future adaptive management actions are considered sufficient. "Current Management" includes the following:

- Wildland fire management should be allowed in all management areas.

- Fire suppression should be a mix of aerial attack with fire retardant, crews using hand tools to create firebreaks, and mobile attack engines limited to public roads and designated open routes.

- Use of earth-moving equipment or vehicle travel off public roads and designated open routes should not be allowed except in critical situations where needed to protect life and property.

- Incoming fire crews unfamiliar with habitat protection should receive an awareness program to minimize impacts.

- Post-suppression mitigation should include rehabilitation of firebreaks and other ground disturbances using methods compatible with management goals.

- Emergency route designation may be required to direct vehicle use to identified routes and minimize impacts, such as vehicle-induced erosion, to the recovering habitat.

Highways: (HCA-35) In general, there would be no new paved highways in DWMAs, except for the projects listed in Table 2-12. The West Mojave Plan would provide coverage for the projects listed in Table 2-12, and that acreage (1,833 total) would serve as the CalTrans Allowable Ground Disturbance (see section 2.2.1.3). Additional proposals for paved roads would not be covered by the West Mojave Plan, and would be subject to separate consultations.

Table 2-12
Caltrans Highway Improvements Within the HCA

Highway	County	Acres Disturbed in HCA
SR 190	Inyo	0
US 395	Inyo	1 (Rehabilitate roadway)
US 395	Kern	0
SR 14	Kern	0 (within existing R/W)
SR 138	Los Angeles	1
SR 178	San Bernardino	0
US 395	San Bernardino	6
US 395/SR 58 Junction	San Bernardino	1466 acres of new R/W
SR 58	San Bernardino	258
I-15	San Bernardino	69
I-40	San Bernardino	3

Highway	County	Acres Disturbed in HCA
I-40 Rest Area	San Bernardino	5
SR 247	San Bernardino	24
SR 62	San Bernardino	0

Land Acquisition Within the HCA: (HCA-36) The primary goals for land acquisition are to maintain existing public lands insofar as possible in an unfragmented state, to acquire private lands for conservation purposes in the HCA, and to manage those areas for species recovery. Insofar as possible, the Implementation Team would utilize the following criteria to determine the priority for acquisition of private land within the HCA:

Non-biological Criteria:

- Private lands surrounded by public lands are preferred over lands adjacent to private property.
- Undisturbed lands are preferred over disturbed. Exceptions may be made for HCA lands that are currently threatened by certain uses.
- Lands threatened by development, often at the edge of the HCA, are preferred over lands with little or no threats. Higher priority would be given to HCA lands closer to existing development.
- Lands with willing sellers or in large parcel sizes are preferred over small lots.
- Parcels within the LTA consolidation zone are preferred over those that are not.
- Parcels that facilitate other programs, particularly motorized vehicle access by the public, law enforcement, fencing, signing, raven and feral dog management would receive a higher priority than those not contributing to these management programs.
- Cost.

Biological Criteria:

- Lands with known occurrences or high tortoise sign counts are preferred over lands containing only suitable habitat.
- Areas containing several species are preferred over areas with a single species.

The land acquisition process would seek to maintain the stability of local tax bases. The goal would be to assure that there would be no net loss of the total assessed valuation of private

lands within the planning area. Acquisitions would be from willing sellers only. With prior approval by the Implementation Team, conservation easements may be used as an alternative to land acquisition.

Lands acquired by the BLM that are within the external boundaries of an ACEC become a part of the designated ACEC upon acquisition without further CDCA Plan amendments.

Acquisition of private lands within the HCA must be followed immediately by meaningful land management actions (e.g., route designation, biological monitoring and implementation) that satisfy pertinent laws and promote the conservation and recovery of the target species.

Mining Exploration Access: (HCA-37) Use of earth-moving equipment or vehicle travel off public roads and designated open routes would not be allowed except under a BLM-approved Plan of Operations for exploration activities conducted in accordance with the General Mining Law of 1872. The operations would meet the requirements of all applicable federal, State of California, and county laws and regulations, including applicable regulations set forth in 43 CFR 3809.1-3.

(HCA-38) Exploration drilling and the development of access routes to drill sites are considered temporary disturbances. If the access route is closed within one hundred twenty (120) days of commencement of surface-disturbing activities, all such activities are appropriately monitored to minimize impacts as they occur, and any surface disturbance at the drill site is reclaimed, these activities would not be counted against the one percent AGD for the HCA. Temporary disturbances would be counted against the one percent AGD until such time as rehabilitation standards are met.

Native Plant Harvesting: (HCA-39) Native plant harvesting would not be allowed within the HCA. The term "plant harvesting" does not include plant salvage from ground disturbing activities, seed or propagule collection, eradicating non-native weeds or research. Outside of the HCA, plant harvesting would be regulated in accordance with the California Desert Native Plant Protection Act, the Native Plant Protection Act and CESA.

Recreation: (HCA-40) No vehicle speed events would be allowed in the portion of the HCA that lies within the DWMAs and the MGS Conservation Area.

(HCA-41) BLM would continue to implement the existing biological opinion on dual sport events, subject to the following guidelines:

- Dual sport events would be allowed seasonally *in DWMAs* (including the Rand Mountains). Dual sport events would be allowed from **1 November to 1 March** while **most** tortoises are hibernating. Existing education materials would be supplemented to indicate that very young tortoises may be encountered during the fall and winter, at the time of the event, and should be avoided.

- Dual Sport events in those portions of the *MGS Conservation Area outside of the DWMA* would be allowed in the period of **September through February** only. The prescriptions given in the biological opinion for tortoises would apply.

- Subject to the requirements of the biological opinion, dual sport events *outside of DWMAs and the MGS Conservation Area* would be allowed **year-round.** Within the Carbonate Endemic Plants and Pisgah Crater Research Natural Area ACECs, specific stipulations, to be developed at the time of event application, would apply.

- BLM would revise its educational materials provided to dual sports participants to indicate that (1) both adult, and particularly hatchling, tortoises may be active at Thanksgiving and (2) riders should watch for and avoid such animals.

- Dual sport events must be evaluated on a case-by-case basis, including full NEPA compliance.

- Dual sport events must use designated open routes (only).

(HCA-42) Minimum impact recreation (e.g., hiking, equestrian uses, birdwatching, photography, etc.) would be allowed within the HCA.

Wildlife Water Sources: (HCA-43) Existing springs, seeps, and artificial water sources (guzzlers, drinkers, tanks) would remain in place. Water sources at natural springs and seeps shall not be diverted and native riparian vegetation shall not be removed to create artificial water sources for wildlife. The BLM, USFWS, CDFG and non-profit organizations, such as Quail Unlimited, would be allowed access to the waters for maintenance and for removal of invasive vegetation, subject to existing restrictions (e.g. vehicle travel in wilderness areas). Retention of livestock water sources would be at the discretion of the grazing allottee.

2.2.4.2 Desert Tortoise

2.2.4.2.1 Take-Avoidance Measures

Commercial Activities: (DT-1) Commercial activities, such as commercial filming that result in ground disturbance or adverse effects are allowed in the DWMAs but only if take avoidance measures applicable to temporary construction impacts are applied.

(DT-2) On public lands, BLM's current management is considered appropriate for future filming activities. In addition the following measures would apply:

- The BLM would develop a brochure, to be provided to the proponent (likely location manager), showing DWMAs and higher density areas within DWMAs that should be avoided insofar as possible

- Where filming activities may occur equally well on alternative sites, the BLM would first direct proponents to lands outside DWMAs. Within DWMAs, BLM would direct proponents to lower density areas

- Preplanning, including measures given above, would rely on BLM biologist's expertise to help the location manager choose sites where the fewest and least significant impacts would occur

- If biological monitoring shows that filming is adversely affecting tortoises inside DWMAs, the Implementation Team will consider remedial actions, which if deemed necessary could include limitations or prohibitions on filming activities within DWMAs.

(DT-3) On private lands, the CEQA Lead Agency would continue to ensure that filming activities do no constitute a significant impact to species covered by the Plan. The following measures would apply:

- Cities and counties would report take of tortoises annually, including loss or damage to habitat, to the Implementation Team for reporting purposes and adaptive management.

- Special filming activities that require pyrotechnics, cross-country travel, and habitat loss would be referred by the lead agency to the Implementation Team for review and recommendation prior to permit issuance.

Domestic and Feral Dogs: (DT-4) Dogs off leash that are accompanied by and under the control of their owners would be allowed except where prohibited (e.g. construction sites in DWMAs).

(DT-5) Within two years of Plan adoption, the Implementation Team, BLM, county animal control, and other applicable entities would develop a Feral Dog Management Plan (FDMP). The FDMP would, among other things, determine control measures and identify an implementation schedule. If feral dogs continue to be a significant threat to tortoises and other covered species, the earliest phase(s) of the FDMP would be implemented within three years of Plan adoption.

Highway Construction and Maintenance: (DT-6) Proponents wishing to construct new roads or railroads are encouraged to locate them outside of DWMAs. Proponents should implement designs and maintenance procedures that are consistent with the existing terms and conditions identified in various biological opinions for roads; locations of such roads should consider reserve design relative to the DWMAs and other factors.

(DT-7) Maintenance operators must be aware of tortoises and avoid them. Seasonal restrictions may be appropriate (November 1 through February 1 may be the best time for these activities). Any such activities should consider tortoise densities in the area and adjacent

management areas. If the Implementation Team judges that these or other measures are not avoiding take of tortoises, a biological monitor may be necessary.

(DT-8) As far as possible, roadbeds should not be lowered and berms should not exceed 12 inches or a slope of 30 degrees. Helendale Road, Fossil Bed Road, Camp Rock Road, and Copper City Road were identified as particular problems. Consider alternatives to grading, such as chain drag. Berms are likely barriers to vehicle straying into adjacent habitats, and should not necessarily be identified for complete removal. These specifications would be adjusted accordingly if it is determined that tortoises (particularly subadults) are still being trapped within roads having such dimensions."

(DT-9) Invasive weeds should not be used in landscaping within or adjacent to DWMAs (e.g., non-native species should not be used in re-seeding programs).

Hunting and Shooting: Hunting would be allowed in all areas as regulated by current legislation.

(DT-10) The shooting or discharge of firearms would generally be permitted on public lands except in specified areas (e.g. off highway vehicle open areas), as long as State and local laws permit such activity. On public lands within DWMAs, the only firearms discharges allowed would be during hunting season in pursuit of game, and target practice using retrievable targets only (such as paper targets). These activities are regulated in order to minimize conflicts and resource impacts.

Utility Construction and Maintenance: The CDCA Plan's network of designated utility corridors and use restrictions is consistent with Alternative A's tortoise conservation strategy.

(DT-11) The Implementation Team would review new linear utility projects within the HCA at the time they are proposed. The Implementation Team would consider the following guidelines during its review:

- To the degree possible, new utility right-of-ways in BLM-designated, active and contingent corridors would be situated as closely together as practical given engineering specifications, human safety, and other limiting factors.

- If an option is available, Corridor W will be used rather than Corridor H in the Ord-Rodman DWMA.

- If at all possible, future utilities will be located in an alternative corridor rather than Corridor Q, or as given above, be situated to minimize the width of impact between existing and new utilities.

- Within existing corridors, areas that are already disturbed will be used rather than undisturbed areas within the two- to three-mile wide corridor.

- Pipelines within DWMAs will be revegetated after installation. Construction rights-of-way will be narrowed, to the degree possible, in all management areas. In DWMAs, the effects of ground disturbance caused by projects will be restored in a manner that: (a) stabilizes soil surfaces to control erosion by wind and water; (b) minimizes or eliminates future vehicle use in areas to be revegetated; (c) minimizes or eliminates future vehicle use of adjacent, undisturbed areas; (d) curtails the spread of exotic weeds; and (e) provides habitat for the target species (see success criteria discussion given in Section 3.4.2). Revegetation is customarily applied to those portions of a given right-of-way that are not within the designated access road. Revegetation is typically applied to those portions of a newly-disturbed right-of-way that are adjacent to the official access road. Access for maintenance and normal operating procedures is generally provided along the access road, not in adjacent areas where revegetation would be appropriate.

- A standardized revegetation plan would be developed by the Implementation Team or its appointee and applied equitably throughout DWMAs. The revegetation plan will clearly state goals, methods based on the best available scientific information and success criteria that are realistic for desert restoration. A technical advisory team of regulatory personnel, restoration experts, knowledgeable utilities personnel, and others will be assembled to devise and write guidelines for the standardized revegetation plan.

- Maintenance of existing utilities would be allowed, and impacts to tortoises and their habitats must be avoided. Maintenance crews must remain on existing access roads except for the point location of maintenance-related disturbance. Take of tortoises during maintenance activities is not authorized under this Plan. Such take must be authorized on a case-by-case basis.

- In DWMAs, non-emergency maintenance of utility right-of-ways resulting in ground disturbance should occur between November 1 and March 1. Juvenile tortoises may be active during this time and must be avoided. If maintenance during this period is infeasible and is required between March 2 and October 31 in DWMAs, a biological monitor must be present, or the proponent must provide an assessment that clearly shows that tortoises would not be affected.

- The Implementation Team would facilitate issuance of applicable salvage permits, of as long duration as possible, to participating utility companies to enable them to remove raven nests from transmission lines and other facilities.

2.2.4.2.2 Survey and Disposition Protocols

Background: Before commencing new ground disturbing activities, tortoise surveys must be conducted. Two survey techniques are utilized: (a) *presence-absence surveys* to USFWS protocol (1992) and (b) *clearance surveys*, where tortoises are removed from a site immediately prior to construction.

In the past, project proponents were required to conduct both surveys in all areas. The long-term intent of Alternative A is to reform the survey requirement based on existing and new survey data so that surveys would not need to be conducted in areas outside of DWMAs where the available data indicate that tortoises have been extirpated or would not normally occur (e.g. urbanizing areas, habitats above 5,000 feet elevation, playas, etc.).

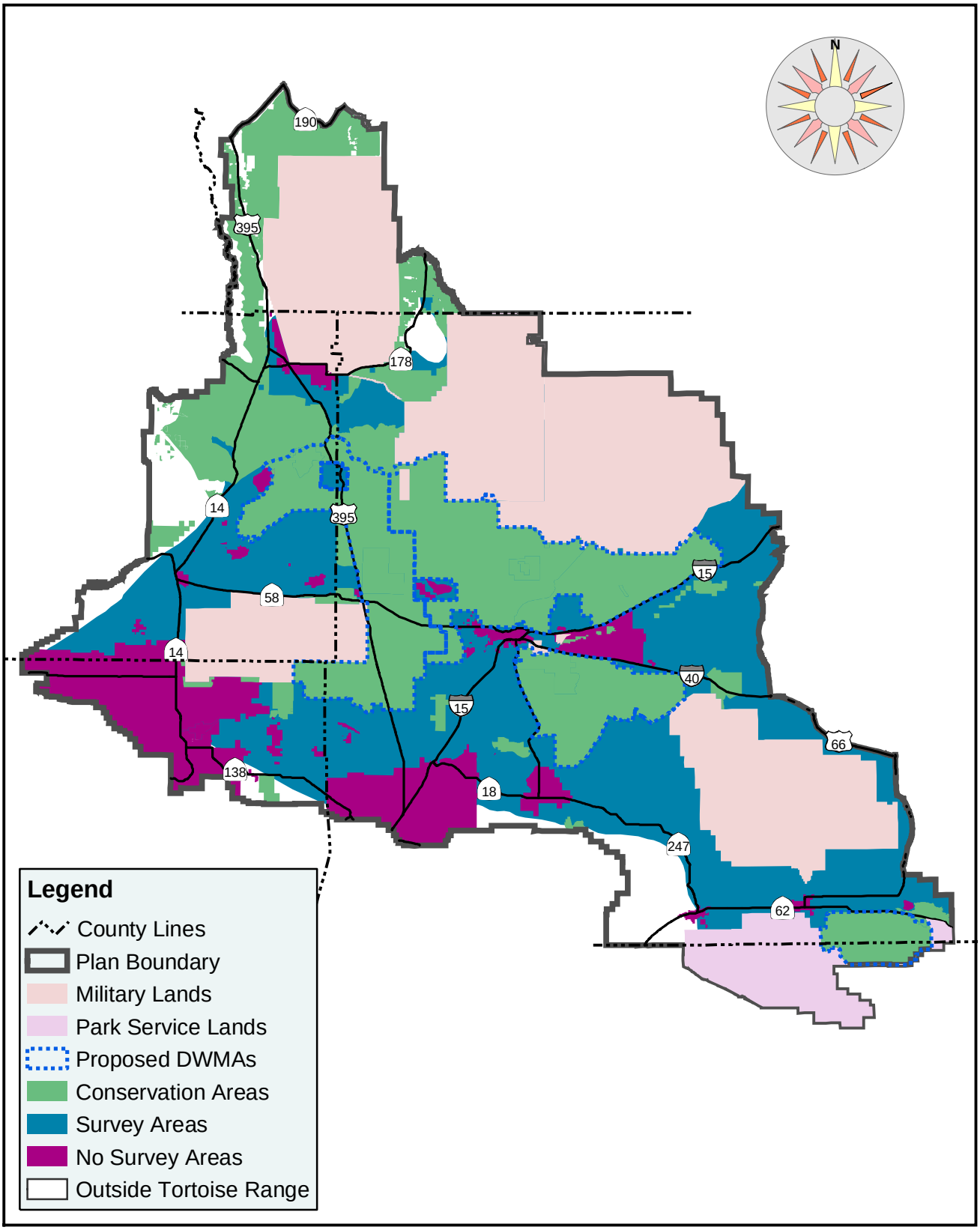
To this end, a total of 1,412 data points were collected from focused desert tortoise surveys submitted to local cities and counties between 1990 and 2002. The purpose of this review was to make a tortoise presence or absence determination for areas outside of DWMAs. "Presence" is generally characterized as lands with evidence of tortoise use or residency, including animals, droppings, burrows, tracks, eggs, etc.; carcasses are noted, but may not constitute occupied tortoise habitat. Based upon this review, tortoise Survey Areas or No Survey Areas have been identified.

Henceforth, survey requirements would be subject to the following guidelines.

Inside DWMAs: (DT-12) Both presence-absence and clearance surveys must be conducted prior to the commencement of any new ground disturbing activities for which a discretionary permit must be obtained from a local jurisdiction or agency, except where No Survey Areas are identified.

Outside DWMAs: (DT-13) Only clearance surveys would be required, and only within designated Survey Areas (Map 2-9). No surveys would be required in No Survey Areas.

Tortoise "Survey" and "No Survey" Zones



West Mojave Plan FEIR/S
Map 2-9

Scale: 1 : 1,750,000
0 10 20 30 Km
0 10 20 30 Miles

10/1/04

- Survey Areas. Survey Areas comprise lands where there is some likelihood that tortoises occur. Within Survey Areas, tortoise clearance surveys would be conducted prior to any new ground disturbance for which a discretionary permit was required. Surveys should follow USFWS protocol (1992) as modified herein. The Implementation Team would prepare a standard data sheet to record how many, if any, tortoises are moved from harms way. The Implementation Team should use these data to determine the actual harassment and mortality take of tortoises authorized by the Plan. The Implementation Team would also reassess these data annually, and modify Survey and No Survey Areas accordingly.

  It would still be appropriate to perform presence-absence surveys for projects in Survey Areas located outside DWMAs where there may be several alternative sites or alignments. This would make data available to choose the site that best meets the project proponent's needs while minimizing impacts to tortoises and habitat.

- No Survey Areas. Neither presence-absence nor clearance surveys would be required. A hotline number would be provided by the local jurisdiction so that the Implementation Team can be contacted if a tortoise is found on the site at the time of ground disturbance.

Other Species: (DT-13a) The biologist conducting the tortoise clearance survey will report any covered species seen to the local jurisdiction so that potential take can be tracked by the Implementing Authority.

Best Management Practices (BMP) for Construction Projects: (DT-14) Ground disturbing construction projects authorized by the West Mojave Plan must be conducted in accordance with the "Best Management Practices" (see Appendix I). BMPs would be implemented in DWMAs and in Survey Areas outside DWMAs when:

- Tortoise sign is found during the clearance survey; or

- The Authorized Biologist determines that there is a reasonable likelihood that a tortoise may enter into the construction site, use area, or other zone of impact.

Projects subject to BMPs may include, but are not limited to, the following: construction of pipelines, utility lines, fiber optic cables, wind energy development, solar energy development, flood control facilities, new mine sites, expansion of existing mine sites into tortoise habitat, cross country mineral exploration, discretionary commercial, industrial, or residential development (excluding single-family residences outside of DWMAs), new road construction, widening or realignment of existing roads, and mineral exploration which involves vegetation disturbance. BMPs normally would not apply to authorized recreation events (e.g., Dual Sport), most maintenance activities along existing linear corridors (unless such activities result in additional loss or degradation of tortoise habitat), and filming activities on lands administered by the BLM (which are covered by a separate set of take avoidance measures).

The Implementation Team should determine the best application of the BMPs, consider them as guidelines, and modify them as necessary. In DWMAs, application of the BMPs should be determined by the Implementation Team on a case-by-case basis, and rely on the results of the newly completed presence-absence survey. In Survey Areas outside DWMAs, a standardized set of BMPs should be developed and distributed by local jurisdictions over the counter when the discretionary permit is issued.

Linear construction projects (e.g., pipelines, transmission lines, fiber optic cables, etc.) may disturb ground both inside and outside DWMAs. The BMPs that are applicable to any particular portion of such a project are determined by the location of the disturbed ground. Thus, DWMA BMPs apply to the portion of the project that lies within the DWMA, but not elsewhere.

The BMPs identify tasks to be performed by authorized biologists and environmental monitors. The recommended experience level for each of these and a summary of many of their responsibilities is presented in Table 2-13. The Implementation Team or pertinent regulatory agency must approve all environmental contractors prior to the performance of the activities listed below.

Table 2-13
General Experience Level and Responsibilities for Authorized Biologists and Environmental Monitors Overseeing Ground-Disturbing Construction Activities in DWMAs in the West Mojave Plan Area

TITLE	GENERAL EXPERIENCE LEVEL	GENERAL RESPONSIBILITIES
Authorized Biologist	1. Approved by the pertinent regulatory agencies. 2. Have BA, BS, MA, MS, etc. in biological sciences and/or previously handled tortoises during authorized projects; or 3. Sixty (60) days in the field working under the supervision of an Authorized Biologist, assisting in locating and processing (without necessarily handling) desert tortoises in occupied habitat. 4. The Authorized Biologist would be considered qualified for that position if previously approved by the USFWS to monitor construction in tortoise habitat under Section 7.	1. Authorized to perform all BMPs that require tortoise surveying or handling. 2. Have authority to temporarily stop any construction activity likely to harm a tortoise, or which is in violation of pertinent BMPs. 3. Function as the Field Contact Representative (See measures 7, 8, and 39 in Appendix I). 4. Be responsible for quality control and primary author of monitoring reports (with assistance from environmental monitors, as needed).
Environmental Monitor	1. Approved by the pertinent regulatory agencies. 2. Ranges from □no experience□ to less experience or education than cited above for Authorized Biologist	<u>May</u>: 1. Handle tortoises only in emergency situations; 2. Perform clearance surveys only in the presence of an Authorized Biologist; 3. Perform monitoring activities in the absence of an Authorized Biologist, and maintain constant communication should a tortoise need to be handled;

TITLE	GENERAL EXPERIENCE LEVEL	GENERAL RESPONSIBILITIES
		4. Administer a tortoise awareness program if an Authorized Biologist is not available; and, 5. Have authority to temporarily stop any construction activity likely to harm a tortoise, or which is in violation of pertinent BMPs. <u>May Not</u>: 1. Routinely handle tortoises in non-emergency situations; 2. Perform clearance surveys in the absence of an Authorized Biologist; 3. Monitor in high-density tortoise concentration areas where tortoises are more than likely to be moved from harms way; 4. Perform Zone of Influence Surveys, unless in immediate contact with the Authorized Biologist; should remain on the subject property being surveyed.

Handling Guidelines: (DT-15) The following handling guidelines apply as indicated:

- In all areas, (a) injured, recently dead, ill and dying tortoises would be collected and disposed in accordance with the June 2001 disposition protocol (*Salvaging Injured, Recently Dead, Ill, And Dying Wild, Free-roaming Desert Tortoises (Gopherus agassizii*)) developed by Dr. Kristin Berry ("Berry Salvage Protocol"); and (b) It is suggested that tortoises be handled by authorized biologists as given in the Desert Tortoise Council's (1999) protocol, *Guidelines for Handling Tortoises During Construction Projects.*

- Within DWMAs, Tortoises should be moved from the immediate area of impact to adjacent suitable habitat (or burrow). In general, tortoises should be moved no further than 1,000 feet from the impact area. The potential for these animals to wander back into harm's way should be taken into account, and the distance given above modified by the Authorized Biologist, as necessary. Temporary or permanent fences may be needed to prevent tortoise immigration into the impact area.

- Within designated Tortoise Survey Areas, (a) If only a small portion of a given site is to be developed then tortoises should be moved to portions of the site that are not to be developed; (b) Tortoises may be moved onto BLM lands if such lands are within (1/2) mile of the impact area; (c) If options (a) and (b) are not available, then tortoises can be moved into the edge of a DWMA that occur within one mile of the site; and (d) If options (a), (b) and (c) are not available then, with input from the Implementation Team, tortoises should be made available for research, educational purposes, captive breeding, zoo placement, adoption through recognized organizations (e.g. California Turtle and

Tortoise Club), moved to areas within SRAs referred to above or, if clinically ill, dealt with in a manner consistent with the Berry Salvage Protocol.

- If the Implementation Team determines that the above scenarios are not accommodating all wild tortoises removed from impact zones where there is permanent loss of habitat, then it should consider establishing translocation sites into which animals can be placed. These areas may accommodate displaced tortoises from the western and eastern portions of the planning area, respectively.

- Within No Survey Areas, (a) Develop telephone tech support for the general public to deal with free-roaming tortoises; and (b) with input from the Implementation Team, free roaming tortoises should be made available for research, education, captive breeding, zoo placement, adoption through recognized organizations (e.g. California Turtle and Tortoise Club) or, if clinically ill, treated in a manner consistent with the Berry Salvage Protocol.

2.2.4.2.3 Proactive Tortoise Management Programs

Disease: (DT-16) The disease management program's focus would include but not be limited to the following: (1*)* Infectious diseases including URTD (*Mycoplasma agassizii, Mycoplasma cheloniae*, etc.), herpesvirus, shell diseases (cutaneous dyskeratosis, necrosing, fungal disease, etc) and others; and (2) Presumed noninfectious diseases including heavy metal and other elemental toxicants.

Issues relative to disease would be considered at the level of the interagency desert tortoise Management Oversight Group (MOG). Disease research is encouraged, and coordination between the Implementation Team and the appropriate MOG contact should be maintained. Any breakthrough relative to disease management should be incorporated into the West Mojave Plan through adaptive management provisions.

(DT-17) A potential disease management program that could be implemented by the participating agencies is presented in Table 2-14. Primary reliance, however, would rest upon measures implemented by the MOG. Implementation of the program suggested by Table 2-14 would occur only after all other tortoise management programs established by this Plan have been funded and implemented.

Table 2-14
Suggested Tortoise Disease Management Strategy

Management	**Vector Control**	-- Install boundary fencing at urban/desert interface and along critical habitat boundary -- Develop a biologically based quarantine management protocol -- Define criteria that trigger quarantine management -- Implement quarantine in those areas where this trigger has already been met -- Delineate potential boundaries for quarantine fencing (could be effectively combined with dog management) -- Implement head starting or appropriate re-introduction protocols in critical habitat areas with few to none remaining diseased tortoises to protect reintroduced tortoises from contact with infected tortoises.
	Education	-- Address relocation issues, user issues (stress importance of curtailing incompatible human activities) and captive issues (including deliberate and accidental releases)
	Emergency Trust Fund	Establish a trust fund, in the amount of at least $100,000, to be spent only in an emergency situation where immediate actions were required to deal with a disease epidemic. Would be available to implement emergency measures identified through research and endorsed by USFWS, CDFG, MOG and the Implementation Team. Funds would not be available for general research.
	Maintain Genetic Diversity	-- Develop an Assurance Colony protocol to ensure that the heterogeneity of the West Mojave Recovery Unit is maintained -- Establish criteria that trigger implementation of the protocol -- Establish captive Assurance Colonies to protect the few remaining animals in critical areas
	Promote Tortoise Health	-- Improve habitat conditions -- Ensure adequate nutrition by improving quality of forage in critical habitat (reduce weed dispersal by reducing motorized vehicle route density; reduce biomass of non-native plants by reducing/eliminating ground disturbance) -- Eliminate sources of excess nitrogen (sludge, biosolids) from critical habitat vicinity -- Eliminate sources of windborne toxicants (sludge, biosolids) from critical habitat vicinity -- Field trials of experimental interventions (water, feed supplementation
Monitoring		-- Monitor dust emissions from mining sites, agricultural fields, road edges, disturbed playas for toxic elements such as: As, Cd, Cr, Hg, Pb, Zn, Cu, Mo, Se, etc -- Monitor tortoise health status -- Necropsy all ill, dying and recently deceased tortoises as per salvage protocols
Research		-- Epidemiological studies of URTD, herpes virus and other diseases. -- Studies to determine phylogeny of the West Mojave Recovery Unit tortoises -- Studies to investigate relationship between toxicants, depression of immune system and disease -- Head-starting/demography studies -- Disease transmission studies -- Develop a scientifically-based ELISA test for herpesvirus

Fencing: Tortoise mortality along highways remains a significant, persisting threat. This threat can be minimized by the construction of fencing adjacent to highways that is designed to preclude access to highways by tortoises.

(DT-18) Unless new information reveals a better order of priority, the following roads, which are all bounded by proposed DWMAs, would be fenced on both sides in the following order: (i) Highway 395 between Kramer Junction and Shadow Mountain Road; (ii) Highway 395 between Kramer Junction and 20 Mule Team Road; and (iii) the remaining portions of Highway 58 between Kramer Junction and Hinkley.

Generally, both sides of the road would have tortoise fencing.

Placement of tortoise fences along paved roadways would be coordinated among the Implementation Team, Caltrans, BLM, county road departments and others to ensure that access is provided to those motorized routes designated by BLM as "open" that intersect with roads to be fenced. The Implementation Team would ensure that the latest, state-of-the-art gate designs are used at designated portals.

(DT-19) Other potential problem roads, some of which are identified in the tortoise Recovery Plan, include *paved roads* (National Trails Highway between Helendale and Lenwood; Highway 247 between Barstow and Lucerne Valley; Fort Irwin and Irwin roads; Shadow Mountain Road; Red Rock-Randsburg Road; and Garlock Road) and *dirt roads* (Camp Rock Road; Copper City Road; Fossil Bed Road; and unpaved portions of Helendale Road); there may be others. The Implementation Team would monitor tortoise mortality along these and other roads and identify measures such as fencing, culverts, signs, or speed regulators to reduce or avoid unacceptable mortality levels.

(DT-20) Within DWMAs, when roads are fenced to preclude entry by desert tortoises, culverts of appropriate design and spacing to allow desert tortoises to pass under the road would be installed to avoid habitat fragmentation and to allow continued gene transfer from one side of the road to the other.

(DT-21) The Implementation Team, working with Caltrans, BLM, county road departments and others would ensure that fences and culverts are appropriately monitored, and that fence integrity and unobstructed culverts are maintained throughout the life of this Plan.

Immediate fencing is preferable, and would have demonstrable results. The Implementation Team would coordinate with Caltrans and others to fence identified easements as major construction projects occur. If an opportunity exists to fence a road but culverts cannot be installed at the time of fencing, the fencing should proceed because reducing mortality of desert tortoises is a more immediate need than promoting genetic interchange. Culverts would be constructed at the time of widening.

(DT-22) The Implementation Team would initiate a working group with the Silver Lakes Association to determine if fencing or public education is the best means to eliminate impacts on the Fremont-Kramer DWMA created by off highway vehicle use originating in that community. The working group would also strive to minimize impacts by pets and feral dogs originating from that community. Once an approach is agreed upon, the efficacy of the solution should be monitored and adaptive management employed if impacts are not being curtailed. The Implementation Team may require fencing of other areas as deemed necessary to address threats.

(DT-23) DWMA boundaries should be signed or otherwise designated to identify boundaries and facilitate enforcement. Signs are critical to law enforcement, enabling officers to deal with an informed public who knows about designated uses and applicable prohibitions. The Implementation Team would ensure that boundary signs are appropriately worded and spaced to maximize their usefulness. An appropriate number of signs (to be determined) should be strategically placed between the two OHV open areas (Stoddard Valley and Johnson Valley) and the adjacent, Ord-Rodman DWMA. Strategic signing is important to direct motorized vehicle users to proper areas to ride, such as open areas and designated vehicle routes, and to indicate conservation areas, as appropriate. A quick field check should determine if boundary is adequately signed.

(DT-24) Additional law enforcement (ranger patrols) and educational outreach (recreation technicians) would be used in concert with fencing and signs to inform the public of appropriate and inappropriate activities in conservation areas.

(DT-25) A standard fence would be placed along pertinent portions of the western boundary of the Johnson Valley Open Area to prevent OHV use in the Ord-Rodman DWMA to the west and to minimize use in the Cinnamon Hills.

Headstarting: (DT-26) Implement a headstarting program in areas where tortoises have apparently been extirpated or numbers significantly reduced. These could include but are not limited to areas west and south of Fremont Peak (although the Hamburger Hill region northwest of Fremont Peak should be avoided), Fremont Valley, and the Desert Tortoise Research Natural Area. Goals for the headstarting program follow:

- Headstarting would be less experimental and more applicable.

- The short-term goal for headstarting is to minimize predation on tortoise nests and introduce new tortoises onto landscapes that can support them.

- The long-term goal for headstarting is to reintroduce tortoises into DWMAs where they have apparently been extirpated to attain the Recovery Plan goal of a minimum density of 10 adult female tortoises per square mile.

- In unprotected landscapes, it is better to use the short-term program for immediate introduction of a relatively large number of hatchling tortoises into the wild. The short-term method is preferred to meet the stated goals.

- The Implementation Team would ensure that predation by ravens and other predators does not compromise the integrity, function, and success of the headstarting program funded and implemented by this HCP.

- Longitudinal monitoring of tortoises released into the wild through headstarting technologies should persist a sufficient amount of time (suggest at least 15 years) to see if released tortoises are reproducing and adding viable offspring into the study area.

The initial headstarting site would be located immediately adjacent to the BLM's Fremont Peak permanent study plot, where tortoise declines have been documented. This site is particularly well suited because (1) there are data that document tortoise densities and declines in the immediate area; (2) sheep grazing was eliminated from the area in 1991, and no other prevalent human impacts are known at this time; and (3) the site is sufficiently far from Highway 395 to minimize the impact of that road on young, dispersing tortoises, and Highway 395 should be fenced by the time the animals are attaining sufficient sizes to move that far.

Landfills: (DT-27) With the exception of the Barstow Landfill expansion, the planning of which has already been initiated, counties and cities would ensure that no new landfills are constructed inside DWMAs or within five miles of them. The Ord-Rodman DWMA boundary does not include lands within the Barstow Landfill expansion area.

Law Enforcement: (DT-28) A minimum of eight (8) Law Enforcement officers and eight (8) maintenance workers would be assigned to the DWMAs. Of these, BLM would provide two (2) law enforcement Rangers and two (2) maintenance workers; the remainder would be provided by the Implementing Authority.

- Officers should be dedicated full time to natural resource enforcement work within the DWMAs
- Law enforcement may be provided by BLM Rangers or by other officials with law enforcement authority
- Maintenance workers should be dedicated full time to the implementation of this Plan.
- Officers and maintenance workers would be based in the communities closest to the DWMAs in order to reduce travel time and facilitate relationships within those communities.
- Avoid diverting rangers from other duties; new personnel are recommended.
- Law Enforcement officers should work closely with the Implementation Team to facilitate Plan implementation, enforcement, and adaptive management

(DT-29) The following guidelines are suggested as a guide to law enforcement activities in DWMAs. Insofar as possible, law enforcement officers and maintenance workers would prioritize their natural resource patrol activities using the following guidelines. Increased presence in following regions (in decreasing order of priority) is currently preferable:

- Higher density tortoise areas that coincide with higher density human use areas (higher priority), which would result in more enforcement where illegal activities (poaching, vandalism, and pet release) are likely to affect relatively more tortoises (west of Silver Lakes to Kramer Hills, northeastern Iron Mountains, north of Hinkley, and Coyote Corner south of Fort Irwin)
- In DWMAs adjacent to Johnson Valley, Stoddard Valley, and El Mirage BLM open areas, which would provide for increased education of open area users, minimized cross-country travel in DWMAs, and better fence and sign maintenance.
- Higher density tortoise areas that coincide with lower density human use areas
- Higher density human use areas in lower density tortoise areas, which would provide relatively more benefit to habitats than to tortoises, due to depressed population levels (Rand Mountains and Fremont Valley)
- Elsewhere within DWMAs not meeting the variables given above (lower priority)

These guidelines would be modified as needed to address changing patterns in human use and tortoise occurrence, but would make law enforcement more efficacious for the first few years, when it would most likely be needed to educate the public on new management prescriptions.

On private lands, land use enforcement would be by the land use agencies, which work on complaint basis. BLM law enforcement rangers would refer problems to these agencies if seen in the field. Code enforcement agencies (rather than law enforcement) would deal with, for example, illegal grading, and illegal dumping.

Ravens: The following raven management guidelines should be considered in developing a raven control program in the West Mojave. Where headstarting is implemented, ensure that predation by ravens and other predators does not compromise the integrity, function, and success of the program.

The following *habitat alteration* measures should be implemented:

(DT-30) Reduce the population density of ravens and number of birds that may take tortoises by reducing the availability to ravens of solid wastes at sanitary landfills. Reduce raven access to organic wastes at landfills: (i) ensure effective cover of waste multiple times each day (either < six (6) inches cover or complete cover of garbage with tarps temporarily), (ii) erect coyote-proof fencing, (iii) render raven-proof all sources of standing water at the landfill, and (iv) keep truck cleaning areas and temporary storage facilities clean and free from standing water and organic wastes (e.g., food material,

biosolids, mixed solid waste, and other materials that may be consumed by common ravens and not including "green material" as defined in Section 17852 by the California Integrated Waste Management Board).

(DT-31) Reduce the availability to ravens of organic wastes outside of landfills. Take the following steps: (i) Encourage the use of self-closing trash bins at transfer stations and roadside rest stops, and behind restaurants, gas stations, and grocery stores; use raven-proof garbage drums at houses and other facilities; and avoid use of plastic bags for street-side pick up in residential areas; (ii) Encourage livestock operators to reduce availability of cattle feed, carcasses, afterbirths, and insects at feedlots and dairy farms; (iii) Use public education and other means to reduce the number of citizens who purposely feed ravens or who inadvertently do so by leaving pet food out where ravens can easily access it; and (iv) clean up illegal dump sites that contain organic wastes. These educational efforts should include, but not be limited to, business and agriculture.

(DT-32) Reduce the availability of carcasses of road-killed animals along highways in tortoise habitat. As some ravens derive most of their food from road kills, erect barrier fences (1/2 to 1/4 inch mesh hardware cloth; Boarman and Sazaki 1996) along roads and highways specified in the fencing table to prevent animals from getting killed on roads. Recommendations may be modified as more information and evaluation becomes available.

(DT-33) Reduce the population density of ravens and number of birds that may take tortoises by reducing the availability of water to ravens while being mindful of the needs of other species.

(DT-34) Reduce the impact ravens have on tortoise populations at specific locations by removing raven nests. Remove raven nests (i) in specific areas where raven predation is high and tortoise populations are targeted for special management, and (ii) do so during the egg-laying phase of the raven's breeding cycle. Any nestlings found should be euthanized using standard humane measures.

(DT-35) Avoid constructing new nesting structures and reduce the number of existing nesting structures in areas where natural or anthropogenic substrates are lacking. Reduce availability of nesting sites by observing the following. (i) Within and adjacent to DWMAs, prevent the construction of new structures (e.g., power towers, telephones, billboards, cell phone towers, open warehouses or shade towers, etc.) where alternative natural nesting substrates (e.g., Joshua trees, cliffs) do not already exist within approximately 2 miles. (ii) If they must be built, design such structures in such a way as to prevent ravens from building nests on them. (ii) Remove unnecessary towers, abandoned buildings, vehicles, etc., within tortoise management areas that may serve as nesting substrates unless natural structures are in abundance.

(DT-36) The following *lethal actions* against individual ravens should be implemented:

L1: Remove ravens that are known to prey on tortoises. Selectively shoot individual ravens in areas of high tortoise predation. Ravens would be shot by rifle or shotgun if they show a likelihood of preying on tortoises (e.g., tortoise shells showing evidence consistent with raven predation found beneath or within approximately 1 mile a nest or perch). Ravens would be trapped and humanely euthanized where shooting is not possible (e.g., on powerlines or in residential areas) or unsuccessful. Young ravens found in nests of removed adults would be euthanized humanely if they can be captured safely. Poisoning with DRC-1339 or other appropriate agent may be used against targeted ravens in these limited areas if it is shown by results of the research proposals discussed below to be safe for other animals. Poisoned carcasses would be removed if they can be located.

L2: Facilitate recovery of critically threatened tortoise populations by removing ravens from specific areas where tortoise mortality from several sources is high, raven predation is known to occur, and the tortoise population has a chance of benefiting from raven removal. Remove all ravens foraging within specific areas (e.g., Desert Tortoise Research Natural Area, DWMAs, pilot headstarting sites, etc.) of historically high tortoise mortality and raven predation, particularly where demographic analyses indicate that juvenile survivorship has been unusually low. Ravens would be shot by rifle or shotgun if they are found foraging, hunting, roosting, or nesting within 0.5 miles of the specific targeted area. Where shooting is not possible (e.g., on powerlines or in recreation and residential areas), ravens would be poisoned (if shown by the research programs recommended below to be safe) or trapped and humanely euthanized. Young ravens found in nests of removed adults would be euthanized humanely if they can be captured safely.

(DT-37) The following raven *research measures* should be implemented.

R1: Determine behavior and ecology of ravens as they pertain to predation on tortoises. Data would be collected by direct observations, radio tracking, diet analysis, wing tagging, and non-invasive behavioral manipulations.

R2: Conduct regional surveys of the California deserts to locate and map ravens and their nests and communal roosts. Inventories would include private and public lands. Project proponents and other interested parties would contribute funds to a coordinated surveying program that would concentrate both on specific sites and broad regional patterns.

R3: Methods would be developed, tested, and implemented to determine effectiveness of and need for raven removal efforts for enhancing recruitment rates of juvenile desert tortoises into adult age-classes.

R4**:** Determine efficacy and cost of shooting as a method of eliminating raven predation and increasing tortoise survival. Data have already been collected and partially analyzed.

R5: Determine if eating hard-boiled eggs may adversely impact animals other than ravens laced with the avicide DRC-1339.

R6: An experiment should be conducted concerning methyl anthranilate (a non-toxic, grape-flavored food additive, but it is disliked by several species of birds) to determine if: (i) ravens are repelled by the chemical; (ii) it can be applied efficiently at landfills and other raven concentration sites, and on sources of water used by ravens (e.g., septage ponds, stock tanks, etc.); (iii) its repeated application prevents ravens from using the resource (e.g., garbage, water, etc.), and (iv) if methiocarb (Avery et al. 1993, Conover 1984), carbachol (Avery and Decker 1994, Nicolaus et al. 1989) or other compounds work better than methyl anthranilate.

R7: Determine if: (i) raven dependence on human-provided perches and nest sites aids hunting, nesting, and overall survival; (ii) modifying raven perches, roost sites, and nest sites on a localized basis is an effective way of reducing raven predation on tortoises; and (iii) removal of raven nests early in the breeding cycle would prevent ravens from renesting in that season.

R8: Determine: (i) if live trapping is a cost effective means of catching ravens, (ii) the relative effectiveness of different live trapping techniques, (iii) where ravens can be relocated practically and legally, and (iv) if relocated ravens would return to the capture site or other desert tortoise habitat.

R9**:** Develop a demographic model of raven populations to predict the effect various management alternatives might have on raven populations.

R10: Determine the extent ravens use commercial and municipal compost piles, then develop and test modifications to composting practices to make them inaccessible to ravens if a problem exists. Develop and test other methods to prevent ravens from accessing food and waste items.

R11: Determine whether availability to ravens of anthropogenic sources of water could be reduced by modifying sewage and septage containment practices in three possible ways: (i) covering the water, (ii) altering the edge of the pond with vertical walls, (iii) placing monofilament line or screening over the entire pond or (iv) adding methyl anthranilate, or other harmless taste aversive chemicals to standing water sources. Emphasis should be placed on the reduction of water availability during the spring, when ravens are nesting, and summer, when water demands for ravens are high but natural sources are low.

Implement the following *adaptive management* actions.

(DT-38) Establish two work groups to oversee management direction, review information, coordinate with other agencies/groups, solicit funding for implementation of specific management measures, and distribute information/data. The work groups would meet annually or as needed to discuss raven management actions. One work group would be an Interagency Task Force to coordinate implementation of the program. This group would identify specific areas where lethal removal would be implemented using the criteria outlined above. The other would be a technical and policy oversight team to evaluate the progress of the Plan, interpretation of data, and recommend changes in the overall program based on scientific data. This group would help to determine what thresholds of predation and recruitment are necessary to trigger implementation of a cessation of lethal actions. There would be data sharing between adjacent bioregional plans and resource management plans. The goals of the work groups would be to (i) increase efficiency, effectiveness, and scientific validity of raven management in the California deserts, and (ii) ensure that future phases are developed and implemented in accordance with results of research and monitoring outlined above.

(DT-39) Monitor both raven status and effectiveness of management actions at reducing predation rates on juvenile tortoises.

Weed Abatement: (DT-40) The Implementation Team would cooperate with known weed abatement specialists and organizations (including the Kern County Weed Management Agency, the Mojave Desert Resource Conservation District, and the California Exotic Pest Plant Council) to fund, coordinate, encourage, implement, and facilitate weed abatement/management programs that contribute to the conservation of plant or animal species covered by the Plan. Goals to guide weed abatement are provided in the BLM action plan *Partners Against Weeds* (BLM 1996).

Other Measures: (DT-41) The Implementation Team would require a study that would sample quail guzzlers in the West Mojave, in all four DWMAs, to determine if there is a tortoise mortality problem. If the tortoise mortality level were considered unacceptable, then a study would be designed to determine the best method of eliminating tortoise entrapment while not impairing the function of the guzzler. The study should also assess use of quail guzzlers by common ravens, feral dogs, coyotes, and foxes.

2.2.4.3 Mohave Ground Squirrel

2.2.4.3.1 Take-Avoidance Measures

Applicable Tortoise Measures: (MGS-1) The following take-avoidance measures discussed above for application within the DWMAs would also be applied within the MGS Conservation Area: Commercial Activities, Hunting and Shooting, and Utility Construction and Maintenance.

General Construction and Maintenance: (MGS-2) Measures identified for DWMAs and Tortoise Survey Areas and No Survey Areas apply where those areas overlap the Mohave Ground Squirrel Conservation Area, including tortoise survey requirements.

2.2.4.3.2 Pre-Construction Surveys

(MGS-3) CDFG would not require Cumulative Human Impact Evaluation Forms (CHIEFs) to be completed, nor would trapping of Mohave ground squirrels be required.

2.2.4.3.3 Proactive MGS Management Programs

Research and Monitoring Program: (MGS-4) A monitoring strategy would be designed and implemented by the Implementing Team, in coordination with the MGS Technical Advisory Group, to ensure that the management program for this species is accomplishing its objectives.

Kern County Study Area: (MGS-5) Trapping studies should be undertaken in the northern portion of the Antelope Valley in Kern County, on the 23 sections of public land located within a region generally bounded by the Tehachapi Mountains to the northwest, an unpaved road accessing Little Oak Creek Canyon to the west, the Los Angeles aqueduct to the southeast, and the Tehachapi - Willow Springs Road to the northeast. Upon the recommendation of the Mohave Ground Squirrel Technical Advisory Group (based on their review of the survey results) and through the adaptive management provisions of the West Mojave Plan, the MGS Conservation Area boundary could be adjusted to include this area, if justified.

Military Coordination Group. (MGS-6) A group should be established to coordinate with, and assist if requested, staff of the China Lake Naval Air Weapons Station, the National Training Center at Fort Irwin, and Edwards Air Force Base in devising and implementing MGS conservation programs on those installations. The Implementation Team should meet annually with representatives of these installations and the Mohave Ground Squirrel Technical Advisory Group to discuss management needs for MGS conservation.

2.2.4.4 Mojave River Bioregion

Incidental take permit coverage could be provided to ten species that are dependent on conservation of riparian habitat in the Mojave River bioregion. These are:

- Southwestern pond turtle
- Brown-crested flycatcher
- Least Bell's vireo
- Southwestern willow flycatcher
- Summer tanager
- Vermilion flycatcher
- Yellow-breasted chat
- Yellow warbler
- Western yellow-billed cuckoo
- Mojave River vole

Groundwater Criterion. (MR-1) Existing wetland and riparian habitat laws and regulations are sufficient to provide conservation of the riparian vegetation. However, the water supply to the river is not assured. Alternative A proposes a criterion for incidental take permit coverage of the riparian species. This would entail the maintenance of groundwater levels in accordance with the Mojave Basin Adjudication (Physical Solution/Stipulated Judgment & Interlocutory) of April 1993.

Incidental take permit coverage would be provided for the ten Mojave River - dependent species if certain groundwater criteria are met. In order to maintain the riparian habitat for the covered species within the Mojave River bioregion, groundwater must be maintained at the levels indicated in Table 2-15, derived from the Mojave Basin Adjudication. However, no reliance for permit coverage is placed specifically on the adjudication itself.

Table 2-15
Mojave River Groundwater Levels

Zone	Well Number	Maximum Depth Below Ground
Victorville/Alto	H1-1	Seven feet
Victorville/Alto	H1-2	Seven feet
Lower Narrows/Transition	H2-1	Ten feet
Harvard/Eastern Baja Riparian Forest Habitat	H3-1	Seven feet
Harvard/Eastern Baja Surface Water Habitat	H3-2	1705 msl (Plus one foot)

Note: Wells are monitored quarterly. Depths are the minimum groundwater levels necessary to support riparian growth, hence must be maintained at all seasons, especially during the warm-weather growing season.

In the event that all groundwater depth criteria are met for four consecutive quarters, incidental take permit coverage would be provided. Subsequent to this, in the event that a criterion is not met for two consecutive quarters, coverage would be revoked.

Maintenance activities of the San Bernardino County Flood Control District in selected areas of the Mojave River have received a non-jeopardy Biological Opinion from USFWS for potential impacts to the least Bell's vireo and southwestern willow flycatcher. This permitted allowance for take, conservation and restoration of riparian habitat in the Mojave River would remain in effect.

Some of these riparian species are found in smaller numbers elsewhere in the West Mojave. At these other locations, current management is adequate for conservation or specific management measures are prescribed for the riparian species.

Small construction projects and invasive species removal: Riparian habitat containing the nine riparian birds in the Mojave River may be altered by habitat enhancing projects, including removal of invasive species such as Russian olive and tamarisk or by construction of trails, including the Mojave Greenway Trail. At sites where the least Bell's vireo and Southwestern willow flycatcher are known to be nesting, invasive weed removal projects will not take place during the nesting period.

Project proponents constructing within occupied habitat of the Mojave River vole will be required to fence the outer limits of construction and trap and remove voles from harm's way prior to commencement of construction. Voles will be placed in the nearest suitable habitat.

2.2.4.5 Bats

The Plan seeks to protect significant roosts of all bat species and requests incidental take permits under the habitat conservation plan for Townsend's big-eared bat and California leaf-nosed bat.

(Bat-1) Protect all significant roosts by installing gates over mine entrances and restricting human access.

- This, the primary conservation strategy for bats, would be dependent on adaptive management, which would apply to newly-discovered significant roosts. If significant roosts were found, either on public or private lands, protection would be provided by placement of barriers to human entry to the roost, while allowing access for bats. This measure applies to all types of significant roosts, including mine openings, buildings, trees, bridges, cliffs and crevices.
- Although Alternative A recognizes the conservation measures proposed for military installations (which have many of the known significant roosts), incidental take permit coverage is not dependent on military protection.

- Conservation for bats is limited to significant roosts and procedures for take avoidance at non-significant sites. All maternity and hibernation roosts containing more than ten Townsend's big-eared bat or California leaf-nosed bats or 25 bats of the other four species are considered significant roosts.

Of the eighteen significant roosts, seven are on military lands, one is on NPS land, one is just outside the planning area on private land and nine are on public land managed by BLM. The West Mojave Plan will address conservation of the nine significant roosts on BLM managed land. These roosts have reported the following species:

- Roost 1. Maternity roost for pallid bat, Townsend's big-eared bat, California myotis, Western pipistrelle.

- Roost 2. Maternity roost for Townsend's big-eared bat. Public water reserve controlled by Los Angeles Department of Water and Power.

- Roost 3. Maternity roost for big brown bat.

- Roost 4. Maternity roost for California leaf-nosed bat.

- Roost 5. Maternity roost for pallid bat.

- Roost 6. Hibernation roost for Townsend's big-eared bat.

- Roost 7. Hibernation roost for Townsend's big-eared bat.

- Roost 8. Hibernation and maternity roost for California myotis, pallid bat and California leaf-nosed bat.

- Roost 9. Unspecified roost for California myotis.

(Bat-2) Within in the Pinto Mountains, the BLM will protect roosts on public land by gating known and new significant roosts. BLM will notify claim holders on BLM lands containing significant roosts.

(Bat-3) Riparian habitat would be protected within five miles of known or newly discovered maternity roosts for Townsend's big-eared bat. Water diversions and woodcutting would be prohibited. Grazing, if present, would be monitored to assure no undue degradation of the riparian habitat. Elimination of significant roosts for any species of bat will be considered as undue degradation of public lands under the West Mojave Plan.

(Bat-4) Desert wash vegetation within three miles of known or newly discovered maternity and hibernation roosts of California leaf-nosed bats would be protected. Motorized

vehicle use of washes in these locations would be assessed on a case-by-case basis to determine if vehicles harm the desert wash vegetation. If substantial damage from vehicle use is determined to be present, alternative access routes would be developed and the wash routes would be closed or limited.

(Bat-5) BLM would continue fencing around (but not over) open abandoned mine features to provide bats access to roosts and to reduce hazards to the public.

(Bat-6) Applicants seeking discretionary permits for projects which would disturb natural caves, cliff faces, mine features, abandoned buildings or bridges would be required, as a condition of those permits, to conduct surveys to determine use of these features by bats.

- An initial survey would determine if any features that might support significant roosts are present. If additional surveys were warranted, a qualified bat biologist would be retained.

- Surveys at locations where significant roosts are likely should be conducted both in winter and in summer to determine if bats utilize a potential roost for hibernation or for maternity colonies. Surveys that indicate a roost is used during one of the seasons should be repeated during the other season to determine if bas use the roost for both functions.

- Colonial bats may move between roosts, or abandon roosts if disturbed. If the disturbance is eliminated, the bats may return. Therefore, a roost with substantial deposits of bat guano is assumed to be a significant roost, even if bats are not present. "Substantial deposits" would be determined by a qualified biologist and verified by CDFG.

(Bat-7) Prior to disturbance or removal of a non-significant roost, a project sponsor would provide for safe eviction of any bats present by a qualified biologist in consultation with CDFG. Safe procedures include:

- Eviction during the appropriate season. No eviction should occur during maternity or hibernation seasons for the species.

- Temporary closure of the roost after the evening exit flight, then entering the roost and capturing any remaining bats, as feasible.

- Repetition of this procedure for at least two nights to insure that all bats have been removed safely.

(Bat-8) A field review of open routes involving OHV interests, CDFG staff, and BLM staff would be conducted of desert wash vegetation within three miles of significant roosts for California leaf-nosed bats, and determinations of substantial damage would be made at that time.

Routes could be closed, limited, or re-routed to avoid desert wash vegetation. This measure would be applied adaptively to foraging areas near newly detected roosts.

2.2.4.6 Other Mammals

2.2.4.6.1 Bighorn Sheep

The conservation plan for bighorn sheep recognizes the accomplishments and planned management of habitat in the Integrated Natural Resource Management Plans for the National Training Center at Fort Irwin, the China Lake Naval Air Weapons Station, and the Twentynine Palms Marine Corps Air Ground Combat Center. The re-introduction of bighorn at China Lake NAWS and Twentynine Palms MCAGCC holds high potential to augment and increase size. Incidental take permits for bighorn sheep are not sought by the local governments under the habitat conservation plan and cannot be issued by the State for this fully protected species.

Few direct threats now exist to western Mojave Desert bighorn. The primary conservation needs are maintenance of water sources, maintenance of open space linkages between mountain ranges, and prevention of barriers to movement. In addition, domestic sheep can transmit disease to bighorn, so sheep grazing must not overlap bighorn range.

The conservation strategy would enact the following measures:

- (Mam-1) Natural water sources in permanent habitat would be protected and diversions at bighorn springs would be prohibited.

- (Mam-2) Helicopter overflights near lambing areas would be minimized, at least seasonally (January 1 to June 30).

- (Mam-3) BLM would manage sheep grazing allotments to comply with the "nine-mile rule", which is the standard for separation of domestic sheep and bighorn.

- (Mam-4) Removal of burros in the Argus Mountains would continue because of damage to springs.

- (Mam-5) Mitigation measures for mining proposals within occupied bighorn habitat in the San Bernardino Mountains and the San Gabriel Mountains would include funds to monitor potentially impacted sheep herds or to provide additional water sources.

- (Mam-6) The responsible agencies would provide methods for crossing new freeways, aqueducts and canals that otherwise would impede movement of bighorn between seasonal and permanent occupied habitat.

- (Mam-7) BLM and the counties would require fencing of proposed heap leach pads if in occupied bighorn habitat or proven linkages.

2.2.4.6.2 Yellow-Eared Pocket Mouse

(Mam-8) The management plans for the Jawbone-Butterbredt and Sand Canyon ACECs would be amended to incorporate protection of the yellow-eared pocket mouse as a goal of each plan. Recommendations for monitoring, adaptive management, and acquisition priorities (see sections 2.2.8 and 2.2.9) would be incorporated into the plans.

(Mam-9) Overlap with the Kelso Valley Monkeyflower Conservation Area in the Kelso Valley would provide protection for the pocket mouse on public lands at those locations. Land acquisition within the Kelso Valley would be directed to areas where multispecies benefits are most effective. Funds used to purchase lands for the Kelso Creek monkeyflower would also benefit the yellow-eared pocket mouse.

(Mam-10) Grazing by cattle, which degrades the habitat to some extent, would be monitored to prevent excessive loss of topsoil and depletion of shrubs, which are utilized by the yellow-eared pocket mouse for food. Compliance with the BLM regional rangeland health standards is the standard for conservation of yellow-eared pocket mouse habitat on public lands.

(Mam-11) Incidental take for ground-disturbing projects on private lands within the range would be limited to 100 acres until such time as acquisition proceeds, to insure that take does not exceed conservation.

2.2.4.7 Raptors

Raptors addressed by the Plan include burrowing owl, ferruginous hawk, golden eagle, long-eared owl, and prairie falcon. The primary threat to birds of prey within the western Mojave Desert is disturbance at nest sites. An additional threat to the larger species is electrocution from electrical distribution lines. The raptor conservation strategy is designed to address these two threats. Proactive measures to protect regions with concentrations of nest sites include designation of lands as ACECs or Key Raptor Areas and continued acquisition of private lands within designated wilderness.

All raptors are protected by state law under Section 3503.5 of the Fish and Game Code, which makes it unlawful to take, possess or destroy any bird of prey or to take, possess or destroy the nest or eggs of birds of prey.

2.2.4.7.1 Generally Applicable Raptor Prescriptions

(Rap-1) All construction of new electric utility lines throughout the planning area must be raptor-safe. A variety of methods are available, including increasing spacing of conductors,

different placement of conductors on crossbars, insulation of certain conducting links, and installation of artificial perches or perch guards. Approved raptor-safe designs contained with the industry and scientist joint publication *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (Avian Power Line Interaction Committee 1996) would be required for all new electrical distribution lines in the entire planning area. Re-permitting of rights of-way for existing lines would require raptor safe designs at specific sites where electrocutions are known to be a problem or where large raptors are known to concentrate (e.g. Key Raptor Areas, ferruginous hawk wintering areas).

(Rap-2) Development projects, including new mines, must stay 1/4 mile away from occupied golden eagle, long-eared owl and prairie falcon nests unless the line-of-sight from the edge of development is obscured. No construction within the sight line and within 1/4 mile of nest sites would be allowed during the nesting season.

(Rap-3) For new mines near golden eagle and prairie falcon nests, blasting must be avoided within 410 feet of occupied aeries and peak noise levels must not exceed 140 decibels at the aerie. No more than three blasts should take place on a given day nor more than ninety blasts during the nesting season.

(Rap-4) BLM would establish a new Key Raptor Area encompassing the Argus Mountains.

2.2.4.7.2 Burrowing Owl

The burrowing owl conservation strategy consists of: specified survey requirements; education; take minimization measures to prevent owls from being killed in their burrows; land acquisition; a research program; and take limits. Because incidental take cannot be predicted with certainty, the take would be limited until future surveys and monitoring provide better definition of permanent conservation areas.

Survey requirements: (Rap-5) Within the western Mojave Desert, the burrowing owl is found most often in urban settings or at the urban fringe. These locations correspond with incidental take areas for the desert tortoise and most, if not all, other species. For lands where no desert tortoise clearance survey is required, the jurisdictions would provide applicants for discretionary permits with an educational brochure.

(Rap-6) For lands where desert tortoise surveys are required, a concurrent abbreviated survey for the burrowing owl would also be conducted. This survey would consists of an inspection to detect live owls and occupied and potential burrow nest and shelter sites.

(Rap-7) Within the DWMAs, a- survey utilizing the four-visit CDFG protocol would be conducted.

(Rap-8) If the clearance survey or protocol survey within a DWMA shows burrowing owl to be present, the applicant would be required to institute the minimization measures of eviction and burrow closure.

Education: (Rap-9) All jurisdictions would provide applicants for discretionary permits with an informational brochure with an illustration of a burrowing owl, a description of its burrows and how they can be recognized, and a summary of the bird's life history. If at any time prior to grading the applicant becomes aware of burrowing owls on the site, he would be instructed to call a number where a biologist can respond quickly by instituting the minimization measures. This would be a staff member of the Implementing Authority.

Take Minimization: (Rap-10) Burrowing owls can be excluded from a site by eviction, followed by collapse and filling of the burrows. The expectation for evictions is that incidental take (killing of the owls) would be avoided and that the owls would re-establish in a suitable location nearby of their own accord. Procedures are in place where a one-way door is placed in front of all occupied burrows and monitored daily. When the owls are known to have left, the burrows are filled. This procedure would only take place during the non-nesting season. During the nesting season, which extends from approximately February 15 to August 31, the owls must be allowed to complete incubation and rearing of the fledglings. The exact status of nesting owls would be determined on a case-by-case basis. Evictions would take place if burrow searches showed that a single owl was using the burrow, rather than a nesting pair or a female with eggs or young.

In some cases burrowing owls can be relocated into artificial nest sites. This procedure has been employed along farm drainages, flood control channels, and in areas where sufficient open space remains to provide for foraging and a nest site that is not frequently disturbed by human intrusion or by pets. Relocations into artificial nest sites would not be required, but would be encouraged in cases where minimal habitat requirements are met and where the applicant and the CDFG staff agree on sharing of costs and on the relocation site.

Land Acquisition: (Rap-11) Because the burrowing owl is a grassland species, acquisition of habitat would focus on conserving remnant grasslands where they are found in the western Mojave Desert. This raptor is also very well adapted to inhabiting edges of agricultural operations, especially near water, so these limited areas would also be prioritized for acquisition. Acquisition would take place only where other species benefits are evident or where the lands provide essential linkages for the Plan. Three areas within the West Mojave Plan meet these criteria. These are in the Antelope Valley adjoining the California Poppy State Park, along the borders of the Mojave River between Victorville and Barstow, and, to a limited extent, in the Brisbane Valley. The recommended linkage between Liebre Ridge and the Poppy Preserve contains small areas of native grasslands and wildflower fields, and is known to support burrowing owls. This area would be the top priority for acquisition to compensate for loss of burrowing owl habitat.

Research Program: (Rap-12) The Implementation Team would track all new sightings and new nest locations of burrowing owls as they are detected in the future. Burrowing owls conserved within DWMAs or other HCAs would be counted as habitat conserved, with 13 acres counted for each nesting pair. Baseline acreage of habitat conserved would be established within two years of the Plan's adoption and would be used as a reference for the amount of incidental take to be allowed. Detection of occupied habitat in new locations may result in shifting of the acquisition priorities. The first priority for determining presence or absence of burrowing owls would be in the Liebre Ridge-Poppy Preserve linkage, followed by sites along the Mojave River.

Limitations on Take: (Rap-13) For the incidental take permit to remain in effect, conservation of habitat by acquisition must match the take of habitat where nesting owls are evicted or relocated. Mitigation fees and other funds would direct acquisition to sites where burrowing owls are known. Take of habitat would be calculated by parcel size being developed or as 13 acres for each evicted owl (single owls or nesting pairs), whichever is smaller. Successful relocation of owls would not count as take of habitat. Take would be limited as follows:

- The baseline acreage of conserved burrowing owl habitat would be established in the first two years
- Take of occupied habitat, including nest sites, would not exceed the baseline acreage at any time
- Acquisition of occupied habitat would add to the baseline conservation acreage
- Prior to the establishment of the baseline conservation acreage, take would be allowed only within city limits.

2.2.4.7.3 Ferruginous Hawk

(Rap-14) Existing electrical transmission and distribution lines located near regular ferruginous hawk wintering areas would be retrofitted to meet current design standards which prevent electrocution. Retrofitting applies to problem poles identified through monitoring and to voluntary proactive programs of the utility companies.

2.2.4.7.4 Golden Eagle

Incidental take permits would not cover golden eagles under the habitat conservation plan. The CDFG cannot currently issue incidental take permits for golden eagle, which is a fully protected species under the California Fish and Game Code. If new legislation removes the fully protected designation, and the golden eagle is listed under CESA, the golden eagle could be covered by incidental take permits under CESA assuming the requirements described in Section 2.2.3.2 (above) are met. BLM and the local governments will take the following conservation actions:

(Rap-15) Removal of golden eagle nests on transmission lines or in places where direct conflicts exist with resource extraction or recovery, such as mining, would be allowed in accordance with existing federal law. Nest removal or relocation must take place outside the nesting season and be otherwise permitted by the USFWS.

The CDFG cannot currently issue incidental take permits for golden eagle, which is a fully protected species under the California Fish and Game Code. If new legislation removes the fully protected designation, and the golden eagle is listed under CESA, the golden eagle could be covered by incidental take permits under CESA assuming the requirements described in Section 2.2.3.2 (above) are met.

(Rap-16) New mines located where mineral deposits preclude adherence to the restrictions above would initiate a nest relocation effort in cooperation with the wildlife agencies.

(Rap-17) BLM would continue to purchase inholdings within designated Wilderness.

(HCA-3) BLM would establish the Middle Knob ACEC, which would offer additional protection for eagle nests at that location. Provisions of the management plan for the Middle Knob ACEC that provide better conservation for the golden eagle include: 1) a prohibition on the expansion of wind energy projects on public lands, and 2) designation of motorized vehicle routes as open or closed. The plan would also incorporate the monitoring and adaptive provisions of the West Mojave Plan.

2.2.4.7.5 Long-eared Owl

The Plan would establish the Big Rock Creek Conservation Area (see HCA-3). The conservation of this riparian habitat protects suitable nesting and communal roost sites for the long-eared owl. Development buffers as specified in Rap-2 would apply to long-eared owl.

2.2.4.7.6 Prairie Falcon

(Rap-19) Vehicle access would be restricted at selected locations. BLM would enforce seasonal road closures where practical and necessary to protect nesting falcons (e.g. Robber's Roost, El Paso Mountains, Owl Canyon). Prior to limiting vehicle access, a site-specific evaluation would be made to determine if nest locations are within the line-of-sight of vehicles and if seasonal closures are necessary.

(HCA-3) BLM would establish the Middle Knob ACEC, which would offer additional protection for prairie falcon nests at that location (see HCA-3). Provisions of the management plan for the Middle Knob ACEC that would provide better conservation for prairie falcon include: 1) a prohibition on the expansion of wind energy projects on public lands, and 2) designation of vehicle routes as open or closed. The plan would also incorporate the monitoring

and adaptive management provisions of the West Mojave Plan.

(Rap-20) BLM would amend the ACEC management plans for Jawbone-Butterbredt, Rainbow Basin and Great Falls Basin to specify protection of nesting prairie falcons as a goal of the ACECs. The plans would also incorporate the monitoring and adaptive provisions of the West Mojave Plan.

2.2.4.8 Other Birds

2.2.4.8.1 Bendire's Thrasher

A monitoring and census study was performed in 2001 on all Bendire's thrasher habitat within the western Mojave Desert, which was compiled in 1986 and 1987 through extensive surveys by BLM. Of the six identified habitats, Bendire's thrashers were located on only two in 2001. This species has been removed from the list for which incidental take coverage is requested until additional studies are able to demonstrate specific private lands in need of conservation. The conservation strategy for Bendire's thrasher is based on conservation of habitat on public lands where thrashers were seen in 2001 or were abundant in the mid 1980s and conditions appear unchanged.

(B-1) Establish a four-unit conservation area for the Bendire's thrasher. These units would be located in Joshua Tree National Park, northern Lucerne Valley, Coolgardie Mesa, and the southern Kelso Valley. Public lands within this BLM managed conservation area, which total 28,046 acres, would be designated as an ACEC and the multiple use class would be changed to Class L. No change in management is needed within Joshua Tree National Park, where 106,710 acres are designated as habitat. The management of the BLM lands is detailed below.

(B-2) The Kelso Valley Conservation Area (7,678 acres) is within the existing Jawbone-Butterbredt ACEC. BLM would amend the ACEC management plan to include protections and monitoring specifically addressing the Bendire's thrasher (Appendix D). Public lands would be consolidated in the Kelso Valley through land exchanges, if the private landowners are willing. The existing route designation for the Jawbone-Butterbredt ACEC would remain in place.

(B-3) BLM would retain lands within the Town of Apple Valley sphere of influence. This applies only to lands within the North Lucerne Valley portion of the Bendire's Thrasher Conservation Area. Motorized vehicle route designation for northern Lucerne Valley would integrate protection for the Bendire's thrasher.

(B-4) The conservation area on Coolgardie Mesa (13,354 acres) is entirely within the Superior-Cronese DWMA and the Mohave Ground Squirrel Conservation Area. It is contiguous with the Lane Mountain Milkvetch Conservation Area (Map 2-10). Private lands would be purchased on Coolgardie Mesa from willing sellers, and because this region contains several

protected species, these lands would receive a high priority for acquisition. Route designation would reduce the number of open routes to benefit this vehicle-sensitive species.

(B-4a) Harvesting of Joshua trees, yucca and cacti in the conservation areas would be prohibited.

2.2.4.8.2 Gray Vireo

The gray vireo's range within the western Mojave Desert lies along the boundaries of the Angeles and San Bernardino National Forests. It approximates the range of the short-joint beavertail cactus and the San Diego horned lizard. Most of the known occupied habitat is on private land, while a large acreage of potential or suitable habitat is found on public lands.

BLM would establish a new ACEC for protection of the carbonate endemic plants (see HCA-3). This area also serves to protect potential habitat for the gray vireo.

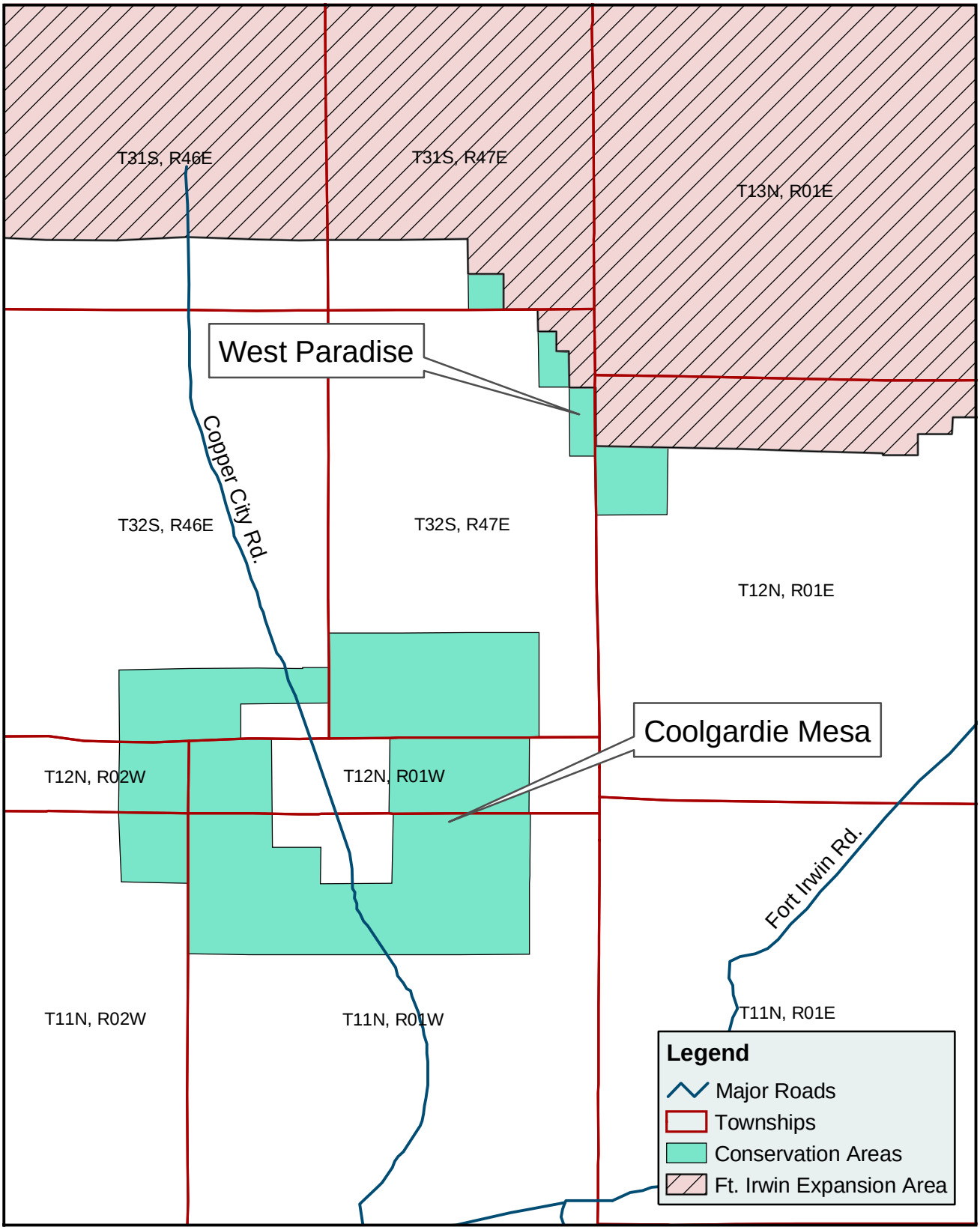
(B-5) BLM would amend the management plan for the Juniper Flats ACEC to incorporate protection of the gray vireo as a goal of the plan. Monitoring and adaptive management provisions of the West Mojave Plan would be added to the management plan for Juniper Flats.

(B-6) Alternative A proposes the establishment of a Big Rock Creek Conservation Area (see HCA-3). Known occupied habitat for the gray vireo is found within this area. Acquisition funds would be directed toward willing sellers of land within the Big Rock Creek Conservation Area. Additional lands within existing Significant Ecological Areas would be conserved by the zoning limitations and development review process established by Los Angeles County. The SEA boundaries may change in the future, providing additional protection to this species.

(B-8) San Bernardino County would review land division and development proposals in the Oak Hills area to insure minimization of impacts to gray vireo habitat.

(B-9) BLM would remove scattered parcels within existing SEAs containing suitable and occupied habitat from the LTA Program disposal zone and change the multiple use class from Unclassified to M. BLM would implement these same measures for parcels outside the SEAs in the San Gabriel Mountains foothills. These lands may be leased or transferred to the jurisdiction of the Los Angeles County Regional Parks Department in the future.

Lane Mountain Milkvetch Conservation Areas



West Mojave Plan FEIR/S
Map 2-10

Scale: 1 : 130,000

0 2.5 5 Km

0 2.5 5 Miles

10/1/04

2.2.4.8.3 Inyo California Towhee

The BLM manages approximately one third of the occupied habitat for this endemic bird, with the remainder managed by China Lake NAWS. A small acreage of occupied habitat is found on private lands and on lands managed by CDFG. Management on military lands is compatible with conservation, but incidental take permits and the Biological Opinion on BLM proposals is not dependent on actions of the military.

Several habitat improvements were implemented by the BLM during 2001 and 2002. BLM would continue its habitat improvement program by taking the following additional protective measures:

- (B-10) Enhance habitat by excluding burros at Peach Spring. Because Peach Spring is within the Argus Mountains Wilderness, fencing of the area would only be undertaken if the burro removal program were shown to be ineffective. Monitoring at this site would determine what actions are necessary.

- (B-11) Remove salt cedar and *Phragmites* at designated springs and replant with native willows. Springs where towhees have been sighted and the invasive plants are present on BLM lands are in Great Falls Basin (Arrastre Spring, Twin Springs, Site #2, Site #3), Mumford Canyon (No Name Spring), Bruce Canyon (Dripping Spring, Rock Spring), Sidehill Spring, Austin Spring, Nadeau Spring, and Bainter Spring. Phragmites is also present at two spring sites where towhees were recorded in Indian Joe Canyon and one in Water Canyon (Side Canyon B) on State lands. Several other spring sites with these invasive plants are present on Navy lands.

- (B-12) Continue removal of feral burros from the Argus Mountains with a goal of zero.

- (B-13) Install signs indicating the China Lake NAWS boundary at Benko Spring and Ruby Spring (in cooperation with China Lake NAWS)

- (B-14) Determine legality and effect of water diversions at Alpha Spring and Bainter Spring and cease diversion if necessary, subject to valid existing rights. Secure water rights at all other springs in Argus Mountains.

2.2.4.8.4 LeConte's Thrasher

The conservation strategy for the LeConte's thrasher recognizes that the establishment of the DWMAs and other conservation areas provides sufficient habitat protection for this bird with few additional measures. Since LeConte's thrasher is sensitive to vehicle disturbance during the nesting season (February - June), the motorized vehicle route designation process within the DWMAs is an important management component to protect this species. Acquisition of lands within the conservation areas would facilitate public land management.

2.2.4.8.5 Western Snowy Plover

Because the current occupied nesting habitat for snowy plover is not well known, much of the conservation for this species would be a result of adaptive management. The known important nesting sites on Searles Lake are protected through an agreement between IMC Chemical Corporation, BLM, Lahontan Regional Water Quality Control Board and CDFG.

Biological surveys of several playas in the western Mojave Desert in 2001 did not detect this species. However, reports from Harper Dry Lake in 2004 indicated the plovers were nesting. The following conservation measures apply to Harper Dry Lake and any newly detected nesting areas.

- (B-16) If nesting populations are discovered, human and vehicle disturbance would be restricted for a distance of 1/8 mile from nest sites during the nesting season (April 1 - August 1).

- (B-17) Projects in nesting habitat should allow the birds to complete the nesting season before construction begins.

- (B-18) BLM would continue working towards provision of a permanent water supply to the marshes at Harper Dry Lake ACEC.

2.2.4.9 Reptiles

2.2.4.9.1 Mojave Fringe-toed Lizard

Conservation of the Mojave fringe-toed lizard requires protection of the dune, hummock, and sand sheet habitat occupied by this species as well as of the sand sources and sand transport system. The ecological process of sand transport by flooding followed by sand sorting into smaller particle sizes and deposition onto occupied habitat by wind must be maintained where these processes are still present. In some cases, blowsand habitat along the margins of playas and lakes was formed in the Pleistocene era, and active sand transport is no longer present.

A conservation area composed of four parts is proposed for the fringe-toed lizard (see HCA-3). Three of these involve designation of ACECs on BLM managed lands, and one, Big Rock Creek, requires acquisition of private lands and cooperation by BLM, California Department of Parks and Recreation, Caltrans and Los Angeles County. BLM would retain public lands within the Mojave River wash and change the multiple use class from Unclassified to L. In addition, three other areas would be managed for compatibility with fringe-toed lizard conservation. These are the slope of Alvord Mountain and the Manix and Cronese Lakes ACECs.

The new proposed conservation area for the Mojave fringe-toed lizard is located at (1) Saddleback Butte State Park, including Big Rock Wash, Piute Butte, Alpine Butte and potential park expansion lands; (2) Dale Lake; (3) Mojave River east of Barstow, which consists of several separate parcels of public land; and (4) the Pisgah area.

Specific conservation actions are listed below:

- (R-1) Prohibit flood control structures that would impede sand transport at Big Rock Creek, Sheep Creek, and the Mojave River.

- (R-2) Aggregate mining in these drainages would be regulated to assure continued passage of sand downstream during flood flows.

- (R-3) Widen the bridge over Big Rock Creek when Highway 138 is improved to allow better sand and water flow and enhance the wildlife corridor between the desert and the San Gabriel Mountains. The existing double channel divided by fill material should be converted into a single long and high span.

- (R-4) Acquire occupied habitat adjacent to the northeast and west edges of Saddleback Butte State Park. BLM would retain scattered parcels within the Big Rock Creek blowsand ecosystem.

- (R-5) Suggest that the boundaries of the Big Rock Creek Significant Ecological Area in Los Angeles County be changed to the consultant's recommendations for the new Antelope Valley Significant Ecological Area.

- (R-6) Acquire specific lands on the slope of Alvord Mountain. Designate routes in this area, part of the Coyote subregion, as closed within the occupied habitat.

- (R-7) Amend the Cronese Basin and Manix ACEC Plans to include protection of the Mojave fringe-toed lizard as a primary goal.

- Designate portions of the Pisgah Crater area as an ACEC (see HCA-3).

- Designate a new conservation area near Dale Lake consisting of public lands within Joshua Tree National Park, the Sheephole Wilderness, and BLM managed lands adjacent to the Wilderness (see HCA-3).

- (R-8) Designate vehicle use on the conserved public lands with occupied habitat as closed.

- (R-9) Restrict the construction of windbreaks upwind of occupied habitat.

2.2.4.9.2 Panamint Alligator Lizard

Conservation of the Panamint alligator lizard parallels that of the Inyo California towhee because of the overlap in range and habitat preferences. No substantiated records of this species exist for the West Mojave Plan area, but it is known from the China Lake NAWS in the canyons of the Argus Mountains, and it very likely to occur within the Great Falls Basin ACEC, the Argus Mountains Wilderness, the Indian Joe Canyon Ecological Reserve (CDFG), and potentially on private lands in Homewood Canyon. Habitat for this species would be conserved and managed by BLM, as specified under the discussion of Inyo California towhee, but it would not be covered by incidental take permits under the habitat conservation plan.

The BLM would continue the removal of feral burros from the Argus Mountains with a goal of zero. In addition, the following new conservation actions adopted for the Inyo California towhee, would benefit the habitat of the Panamint alligator lizard:

- (B-10) Enhance habitat by excluding burros at Peach Spring. Because Peach Spring is within the Argus Mountains Wilderness, fencing of the area would only be undertaken if the burro removal program were shown to be ineffective. Monitoring at this site would determine what actions are necessary.

- (R-10) Amend the Great Falls Basin ACEC management plan to incorporate protection of the Panamint alligator lizard as a goal of the Plan. Include the monitoring and adaptive management provisions of the West Mojave Plan in the ACEC management plan.

2.2.4.9.3 San Diego Horned Lizard

(R-11) BLM would amend the management plans for the Juniper Flats Area of Critical Environmental Concern to incorporate protection of the San Diego horned lizard as a goal of the plan. Monitoring and adaptive management provisions of the West Mojave Plan would be added to the management plan for Juniper Flats.

BLM would establish a new ACEC for protection of the carbonate endemic plants (see HCA-3). This area also serves to protect suitable habitat for the San Diego horned lizard.

Alternative A proposes the establishment of a Big Rock Creek Conservation Area that would protect known occupied habitat for the San Diego horned lizard (see HCA-3). Acquisition funds would be directed toward willing sellers of land within the Big Rock Creek Conservation Area. Additional lands within existing Significant Ecological Areas would be conserved by the zoning limitations and development review process established by Los Angeles County. The SEA boundaries may change in the future, providing additional protection to this species.

(B-9) BLM would remove scattered parcels within existing SEAs containing suitable and occupied habitat from the LTA Program disposal zone and change the multiple use class from Unclassified to M. BLM would implement these same measures for parcels outside the SEAs in the San Gabriel Mountains foothills. These lands may be leased or transferred to the jurisdiction of the Los Angeles County Regional Parks Department in the future.

2.2.4.9.4 Southwestern Pond Turtle

The Southwestern pond turtle is found in only a few locations within the west Mojave, and the Plan's goal for this species is to conserve all existing occupied habitat. The largest populations appear to be those found in the Mojave River, both at Mojave Narrows Regional Park and at Afton Canyon ACEC. Another large population is in the San Andreas Rift Zone at Lake Elizabeth and Lake Hughes in Los Angeles County. The Plan boundary bisects Lake Elizabeth and excludes Lake Hughes.

BLM would amend the management plan for the Afton Canyon ACEC to incorporate protection of the Southwestern pond turtle as a goal of the plan. Monitoring and adaptive management provisions of the West Mojave Plan would be added to the management plan for Afton Canyon. BLM will maintain Proper Functioning Condition of riparian areas in occupied habitat (Objective 3). The riparian restoration and removal of salt cedar will continue at Afton Canyon and Camp Cady.

The local governments would strive to maintain the groundwater levels specified in the Mojave Basin Adjudication in order to maintain the riparian habitat and current location of surface water. Riparian restoration via removal of invasive plants will assist in water conservation along the river.

2.2.4.10 Plants

Wet Season Surveys: (P-1a) In unusually high rainfall years, the Implementing Authority will have the discretion to fund "wet season" regional surveys for annual plants whose detectability is dependent on rainfall. The survey will search for the covered plant species within suitable habitat throughout their known range.

2.2.4.10.1 Southern Sierra Plants

Seven species of restricted-range plants are found within the wilderness of the southern Sierra Nevada Mountains, primarily the Owens Peak Wilderness. These species are not proposed for coverage by incidental take permits, but would be conserved by the BLM in order to prevent future CESA or FESA listings. The southern Sierra species are:

- Ertter's milkvetch
- Owens Peak lomatium

- Hall's daisy
- Muir's raillardella
- Sweet-smelling monardella
- Dedecker's clover
- Gillman's goldenbush

No current threats to these plants have been identified, although previous work on the Pacific Crest Trail damaged populations of some species. This has led to a program of modified trail maintenance and monitoring of the sites by the Ridgecrest Field Office of the BLM. The sites are remote, requiring a 7 mile one-way hike, and are not affected by cattle grazing, vehicles, or timber sales. Conservation for these plants would consist of continuing the BLM program of education of trail maintenance volunteers.

Because these plants are all on federal lands and would not be covered by incidental take permits, no requirements are imposed for monitoring or adaptive management. However, the database established and maintained by the Implementing Authority would be updated to incorporate new sightings and locations would be reported to the CDFG's Natural Diversity Data Base.

2.2.4.10.2 Carbonate Endemic Plants

Carbonate endemic plants are those whose ranges are restricted to limestone and other surfaces with high carbonate content. Four federally listed species are found on the north slope of the San Bernardino Mountains, and another six species, one of which would be covered by incidental take permits, occur in this area near Lucerne Valley. Most species occur at the higher elevations on Forest Service lands, but range in lesser numbers onto the BLM and private lands north of the San Bernardino National Forest boundary.

(P-1) BLM, in cooperation with the Forest Service, USFWS, mining industry, California Native Plant Society, and other claimholders and landowners held meetings over a four year period to develop a Carbonate Habitat Management Strategy (CHMS). This planning document would be implemented by actions in the West Mojave Plan. The CHMS includes very specific criteria for conservation, land acquisition, and mining. The strategy will receive a separate Biological Opinion applying to both federal agencies. The outlines of this plan and the BLM implementing actions are described below, except for the revegetation standards, which are contained in Appendix S.

Carbonate Plants Management Zone: The four listed species of carbonate endemic plants, as well as the unlisted Shockley's rock cress, would be conserved by applying prescribed management within a designated management zone. This area encompasses approximately 42 sections (25,400 acres) in the CDCA, including 28.5 sections (18,250 acres) of federal land and 80 acres of state land.

The management zone consists of: 1) conserved lands, where protection of the carbonate endemic plants is the mandate, 2) managed lands, which allow uses compatible with the conservation of carbonate endemics, and 3) industrial lands, where mining and other extractive uses are the dominant use.

The conservation goal is protection of the surface from mining and relinquishment of existing claims in two large unfragmented populations contiguous with Forest lands.

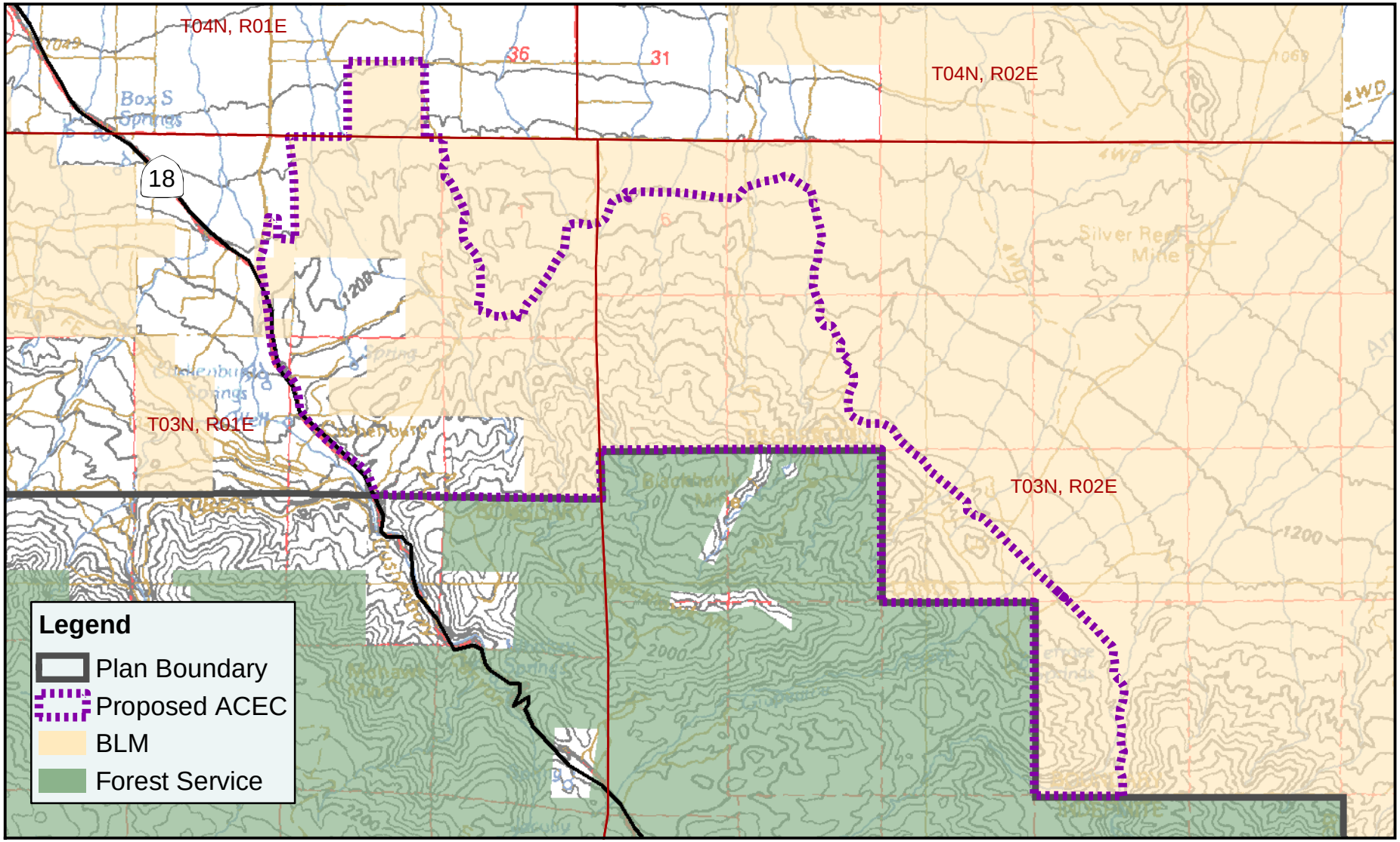
Objective 1: Within the management zone are the two first priority units of the Carbonate Endemic Plants Conservation Area: the area north of Monarch Flats and the area surrounding Round Mountain. These two locations support dense viable populations of all of the listed species. They are separated by the Blackhawk slide, which contains a continuous band of several of the carbonate endemics, although these are present in lower densities. The Blackhawk slide is considered to be an essential link between the major populations, and is the second priority for acquisition or relinquishment of claims. These three areas comprise the conserved lands for the carbonate endemics on BLM lands. Most of the conserved lands are designated critical habitat for these species.

Conserved federal lands (4,393 acres) within the management zone would be designated as the Carbonate Endemic Plants Research Natural Area ACEC (see HCA-3 and Appendix D). Activities within the ACEC would be required to be compatible with protection of the listed carbonate endemic plants. The multiple use class for lands within the ACEC would change from M to L (HCA-9). All existing routes of travel on public land within the proposed ACEC would be designated as open, limited or closed. Access roads would be gated in several places, with access limited to non-motorized users including equestrians and hikers. Vehicle entry would be limited to claimholders and landowners, research activities, permitted recreation events and emergency access, such as fire, rescue, or enforcement access. The ACEC boundaries are shown on Map 2-11.

Objective 2: Three options are presented for acquisition of private land (762 acres) and relinquishment of claims. All three methods may be implemented to achieve the objective.

- Option 1. The BLM would proceed with acquisition of the highest priority private lands. A land exchange could assist with consolidation of lands within each management classification. Public lands bordering the rail spur south of Lucerne Valley would be exchanged for private lands east of Highway 18. The lands along the railway would then be available to mining interests or industrial uses, and the acquired lands east of Highway 18 would be withdrawn from mineral entry.

Carbonate Endemic Plants CDCA Plan Amendment



Scale: 1 : 60,000

0 2 4 Km

0 1 2 3 Miles

West Mojave Plan FEIR/S
Map 2-11

10/1/04

- Option 2. Mining companies may acquire lands within the ACEC as mitigation for use of lands west of Highway 18. "Acquisition" can include purchase of mining claims on public lands as well as purchase of fee title to private lands. The claims or title would be conveyed to the BLM, and the acquired lands would be not be opened to mineral entry.

- Option 3. BLM and Forest Service would prepare an application for Congressional funding in fiscal years 2004 and beyond through the Land and Water Conservation Fund. Any funds appropriated through this process would be used to purchase private fee lands within the proposed ACEC and the National Forest. Acquired lands would be unavailable for mineral entry.

Fencing along the eastern boundary of the proposed ACEC would be installed to prevent cattle from trampling the listed plants on small portions of the Rattlesnake allotment and to prevent cattle from entering Forest lands near Terrace Springs. The fencing would be constructed along the east side of Arrastre Canyon.

Within the management zone, specific reclamation standards would apply. These standards, detailed in Appendix S, would be used as guidelines for BLM and County permitting of mining plans. They would be required standards for reclamation of disturbed sites within the proposed ACEC.

Private lands within the management zone include operating mining properties and undisturbed lands containing populations of the listed species. No changes are contemplated for the operating properties. Certain lands west of Highway 18 would be available for mining and other uses without restriction upon approval of the West Mojave Plan, subject to terms of the biological opinion.

2.2.4.10.3 Alkali Wetland Plants

(P-2) Three target species of alkali wetland plants would be conserved with acquisition of specific springs from private willing sellers. Rabbit Springs near Lucerne Valley and Paradise Springs near Fort Irwin would be acquired to conserve this very rare plant community and the rare plant species found at these sites, together with water rights. Rabbit Springs is the only known site within the planning area for Parish's alkali grass, Parish's popcorn flower, and Salt Springs checkerbloom. This site also has records of alkali mariposa lily. Paradise Springs has extensive numbers of alkali mariposa lily, as well as non-target species of plants, including Cooper rush, giant orchid, black sedge and hot springs fimbristylis. Widening of the road that bisects Rabbit Springs would be specifically excluded from the West Mojave Plan's incidental take permit coverage.

The alkali wetlands have been identified as one of the highest priorities for surveys and monitoring of unlisted species within the Plan. Additional alkali wetland sites may be

considered for acquisition through adaptive management if the survey and monitoring effort detect substantial occurrences of covered species.

There would be a requirement of 90% conservation of occupied habitat of the three target species at newly found sites, along with maintenance of the hydrological regime. If this goal cannot be achieved, incidental take authority will not be provided for these species.

2.2.4.10.4 Alkali Mariposa Lily

Conservation of the alkali mariposa lily, which is found primarily on private land, is based on the goals of preserving the species within the Rosamond Lake Basin and preserving significant isolated springs, seeps, and meadows. The conservation strategy for this species has modified in response to Draft EIR/S comments offered by the City of Lancaster and the Los Angeles County Sanitation Districts. The goals for alkali mariposa lily remain the same. Rapid land use changes and treatment and disposal of wastewater altered the options available for conservation. The new proposed conservation areas have been enlarged, and serve the purpose of buffering Edwards Air Force Base from urban encroachment as well as protecting this rare plant.

Objective 1. Rosamond Lake Basin: (P-3) Retain the flood discharge capability of Amargosa Creek to the extent feasible (recognizing that much of the creek is already channelized through Lancaster). Retain the capacity for sheet flow over the alkali floodplain north of Lancaster and west of EAFB.

(P-4) Acquisition of private lands north and possibly northeast of Lancaster is suggested for establishing conserved lands for the alkali mariposa lily that would meet the federal and state standards for permit coverage under an HCP. The goal is acquisition of 50% of the suitable habitat, defined as undisturbed saltbush scrub containing known occurrences. One area is known to be desirable for permanent conservation, and four additional areas are suggested for evaluation with the goal of establishing additional conserved lands. Both surveys and studies of the local hydrology are necessary within the lands to be evaluated in the interim period. The acquisition targets and methods are suggested below.

- **Designate an Alkali Mariposa Lily Conservation Area.** (See Map 2-12). This would be located in three parts along the boundary of EAFB. The first would be remaining undisturbed lands west of EAFB, from the military boundary to Sierra Highway, and from Avenue B on the south to the Kern County line (see HCA-3). The second area would be a strip of land south of the base boundary extending from the discharge channel of Amargosa Creek east for a distance of six miles. This segment lies between Avenues E and F, and Sierra Highway and 40th Street East and encompasses primarily undisturbed and moderately disturbed saltbush scrub. Two known occurrences of Hoover's woolly-star, a rare plant recently removed from the federal threatened species list, are within this proposed conservation area. One section of land between the base boundary at Avenue D

south to Avenue E between 40th Street East and 30th Street East would also be included. The proposed agricultural area to be supplied with wastewater from the Los Angeles County Sanitation Districts forms the eastern boundary of this part of the conservation area.

The third segment would extend between Avenues D and E from 100th Street East to 1.5 miles east of 120th Street East at the base boundary.

- Existing structures and dwellings and occupied residential lots are not part of the proposed conservation area. The ultimate boundaries may change via adaptive management, depending on the results of surveys, changing land uses and the ability to acquire lands from willing sellers.

- (P-7) Establish an **Incidental Take Area (ITA)** within the City of Lancaster. Developments within the ITA would be required to provide mitigation fees as provided by Section 2.2.2.2 (above).

- (P-8) Suggest that the consultant's recommended boundaries for the Antelope Valley Significant Ecological Area in Los Angeles County be adopted.

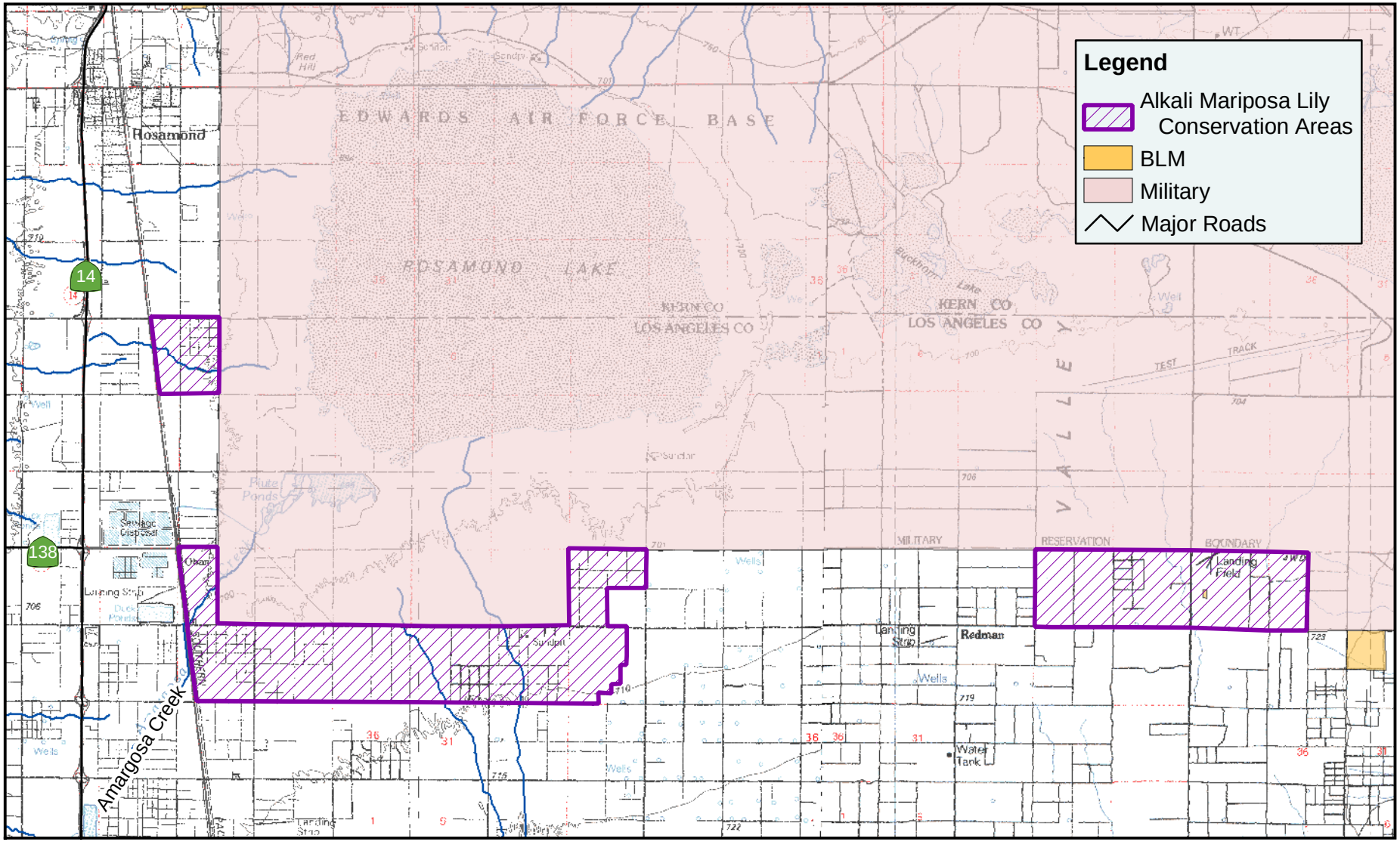
Objective 2. Isolated alkali springs, seeps, and meadows: Acquire Paradise Spring through land exchange or purchase if private owner is willing. Conserve the smaller seeps on BLM lands adjacent to Paradise Spring. Acquire Rabbit Springs or arrange for the conservation of the alkali seep with the private landowner. (See P-2)

(P-9) Lacking willing sellers of Paradise Springs and Rabbit Springs, San Bernardino County would review any proposals for discretionary permits and require avoidance of the rare plant habitat and protection of the water sources supplying the wetland habitat. Proposals for development, mining, or water extraction near the springs along the Helendale Fault (Box S Springs, Cushenbury Springs and Rabbit Springs) would be reviewed by San Bernardino County for compatibility with protection of the mariposa lilies and the surface water supply. Botanical surveys should be required in these areas, which may support additional rare species of alkali-adapted flora.

2.2.4.10.5 Barstow Woolly Sunflower

Conservation of Barstow woolly sunflower is based on establishment of a core reserve containing the best habitat and most of the known populations outside Edwards Air Force Base (EAFB). The current compatibility of military operations at EAFB with conservation of the Barstow woolly sunflower, as outlined in the EAFB Integrated Resource Management Plan, is recognized but is not part of the analysis of conservation and incidental take considered by Alternative A.

Alkali Mariposa Lily Conservation Areas



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West Mojave Plan FEIR/S
Map 2-12

Scale: 1 : 120,000

0 1 2 3 Km

0 1 2 3 Miles

Outside the core reserve, other occurrences would be managed by establishment over time of a secondary reserve northwest of Kramer Junction, acquisition of isolated occurrences within the Fremont-Kramer DWMA, and by site-specific measures applied by BLM to public land users. In addition, reduction of the existing road network within the DWMA should benefit the Barstow woolly sunflower. The main populations are within the Fremont, Kramer, and Superior subregions for route designation.

Alternative A's grazing program would allow for voluntary relinquishment of cattle allotments, which is expected to result in the elimination of the Pilot Knob allotment from the CDCA Plan. This would protect sunflower populations near Cuddeback Lake.

Objective 1. Create a core reserve: (P-10) A core reserve would be created by deletion of the existing ACEC, which is an inappropriate size for protection of this plant, and replacing it with a conservation area within the Fremont-Kramer DWMA (see HCA-3). This conservation area would include existing CDFG mitigation lands, the existing ACEC, and additional adjacent public lands. This area totals 36,211 acres.

(P-11) BLM would exchange lands with CDFG so that a contiguous state ownership is achieved. (Ownership in the proposed conservation area is now a checkerboard pattern of state and federal holdings, with a smaller proportion of private lands.)

(P-12) The central portion would be managed by CDFG as an Ecological Reserve, while surrounding lands would consist of conserved public (BLM) lands and private parcels prioritized for acquisition from willing sellers.

Objective 2. Acquire private lands within the DWMA: (P-13) Most of the distribution of this species is conserved within the Fremont-Kramer and Superior-Cronese DWMAs proposed for the desert tortoise. The Implementing Authority would identify parcels within the DWMA containing both tortoises and Barstow woolly sunflowers for first priority acquisition. Private lands would be purchased from willing sellers over time using compensation funds. Five general areas are currently identified that meet these criteria: 1) North Harper Lake, 2) Harper Lake Road, 3) Waterman Hills, 4) along the Kramer to Harper Lake transmission line, and 5) additional lands adjacent to the core reserve northeast of Kramer Junction.

Objective 3. Establish a secondary reserve: The only known occurrences outside the proposed DWMA are on private lands west of Kramer Junction. These are between Highway 58 and EAFB, and adjacent to the solar facility north of Highway 58. These two areas also support the west Mojave endemic desert cymopterus. Existing land use is vacant, but includes well fields supplying water to the U. S. Borax Company facilities. This use for wells is compatible with conservation of Barstow woolly sunflower.

(P-14) Secure a conservation easement from landowners in the area so that more permanent protection is achieved.

(P-15) Designate the area west of Kramer Junction that has known occurrences of Barstow woolly sunflower as the North Edwards Conservation Area. This location is an extension of large known populations on EAFB. Because of the existing disturbance, such as the Kern County landfill, and the scattered locations of known occurrences, the boundaries are expected to change based on monitoring and additional botanical surveys. Until permanent boundaries are established, botanical surveys would be required for new projects and the cap on disturbance and mitigation formula for the conservation area would apply. A goal of contiguity of conserved parcels and connectivity with EAFB applies to the North Edwards Conservation Area.

(P-16) The North Edwards Conservation Area totals 12,702 acres, including 1,143 (9%) acres of public (BLM) land and 11,159 (91%) acres of private land. The designation of the two BLM parcels in the Land Tenure Adjustment Project would be changed from "disposal" to "retention." This designation could revert to "disposal" when the final conservation area boundaries are determined.

Objective 4: Site-specific measures: (P-17) Prior to new construction within the utility corridors, surveys for Barstow woolly sunflower populations would be conducted. Newly located and previously known populations would be avoided to the maximum extent practicable. Utilities would narrow the width of the construction zone and utilize existing access roads to the maximum extent practicable.

(P-18) BLM would review Plans of Operation for proposed mines to achieve compatibility between mining and conservation of existing Barstow woolly sunflower sites. Existing populations would be avoided to the maximum extent practicable.

The outlying Coolgardie Mesa occurrences near Williams Well fall within the Coolgardie Mesa Conservation Area. Mineral withdrawals would be initiated for essential habitat of Lane Mountain milkvetch, which overlaps with occurrences of Barstow woolly sunflower.

2.2.4.10.6 Charlotte's Phacelia

Charlotte's phacelia is a West Mojave endemic with a very small distribution, nearly entirely within the planning area. Most of the sites (30 of 37) are under federal and state protection, within ACECs, Wilderness Areas, and Red Rock Canyon State Park.

(P-19) The conservation measures for Charlotte's phacelia are:

- Designate a network of open routes of travel in the El Paso Mountains that minimize parallel routes, hill climbs, and straying off established paths.
- Maintain regional standards of rangeland health in the East Sierra canyons.

Take of Charlotte's phacelia applies to new occurrences that may be detected in the future on private lands and to a potential small loss of plants from vehicle travel in the El Paso Mountains and grazing in the east Sierra Canyons. The limit on incidental take would be 50 acres.

2.2.4.10.7 Crucifixion Thorn

Crucifixion thorn is found within the western Mojave Desert as isolated plants or as disjunct communities of "crucifixion thorn woodland." Two occurrences of single plants are known from private land. Recent acquisition by BLM and The Wildlands Conservancy has placed the remaining occurrences into public ownership. The conservation plan relies on management of the sites where the plants are located and the designation of a new conservation area at Pisgah (Map 2-12B). Most known sites are within the Superior-Cronese DWMA established for protection of the desert tortoise. The occupied habitat lies within the Newberry-Rodman and Coyote subregions for route designation.

BLM would establish the Pisgah area as an Area of Critical Environmental Concern (see HCA-3). The existing mining operation at Pisgah Crater would not be restricted by these proposals.

(P-20) Larger populations would be signed to notify campers that firewood harvesting is prohibited.

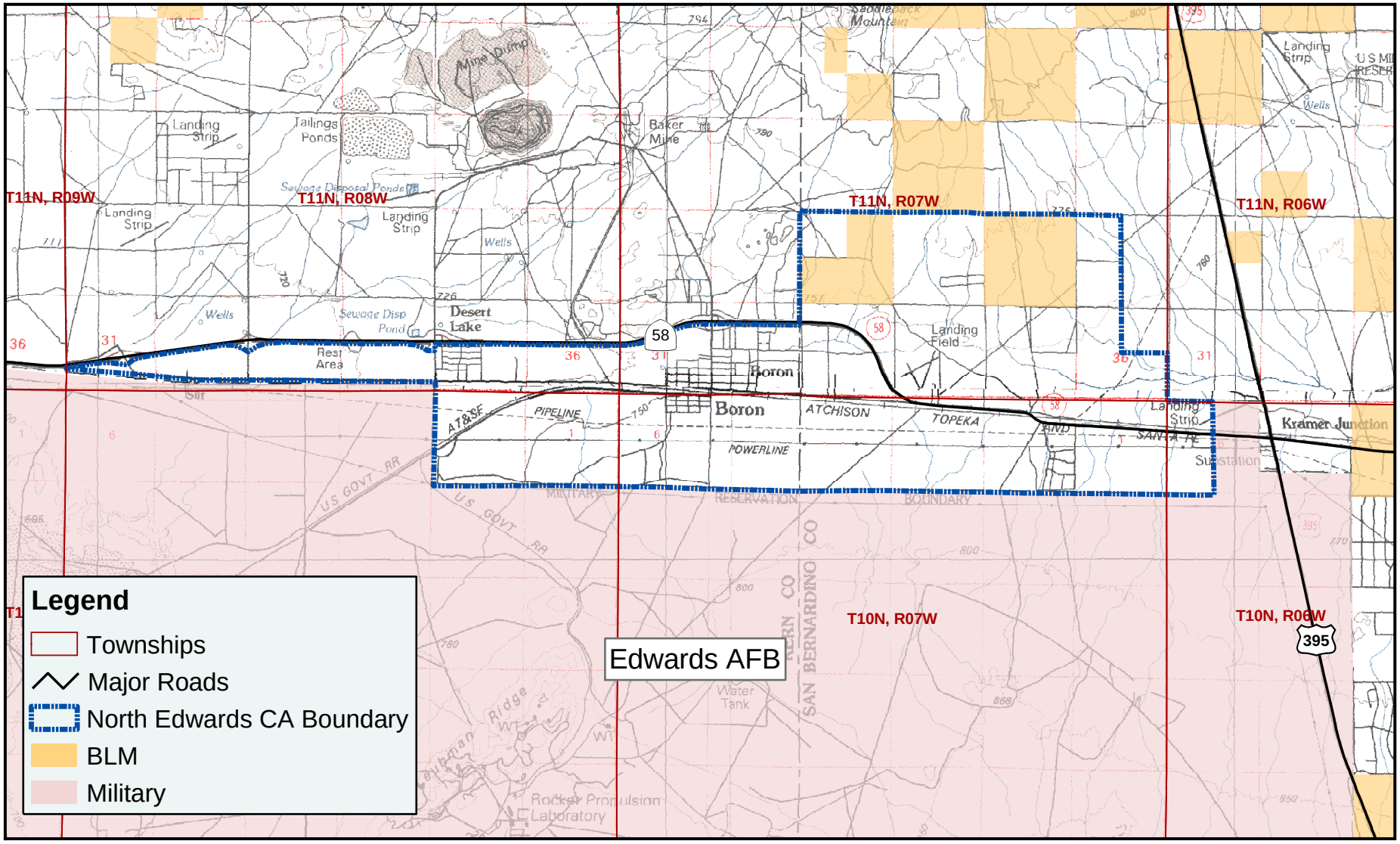
2.2.4.10.8 Desert Cymopterus

The West Mojave endemic desert cymopterus is found in widely separated locales of sandy soil formed by wind erosion off desert playas. The largest populations are on Edwards Air Force Base. Within the West Mojave Plan area, the plant is known from scattered occurrences west of Kramer Junction, north of Hinkley, near Cuddeback Lake, and in the Superior Valley.

(P-21) Land disturbing projects within suitable habitat located within the Habitat Conservation Area (which includes the North Edwards Conservation Area, the Fremont Kramer and Superior Cronese DWMAs) would be required to perform botanical surveys for this species, and if the plant is located, to avoid all occurrences to the maximum extant practicable. Incidental take would be limited to 50 acres.

(HCA-3) The proposed North Edwards Conservation Area would be established for protection of the desert cymopterus (see HCA-3 and Map 2-12A). This location is an extension of known populations on EAFB. Because of the existing disturbance, such as the Kern County landfill, and the scattered locations of known occurrences, the boundaries are expected to change based on monitoring and additional botanical surveys. Until permanent conservation area boundaries are established, botanical surveys would be required for new projects and the cap on new allowable ground disturbance and mitigation formula for conservation areas would apply.

North Edwards Conservation Area



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West Mojave Plan FEIR/S
Map 2-12A

Scale: 1 : 100,000

0 2 4 Km

0 1 2 3 Miles

A goal of contiguity of conserved parcels and connectivity with EAFB applies to the North Edwards Conservation Area. The communities of Boron and Desert Lake are excluded from the conservation area.

(P-22) BLM would maintain rangeland health standards in the Harper Lake allotment.

2.2.4.10.9 Flax-like Monardella

Flax-like monardella will be dropped as a covered species in the Plan because of insufficient information. However, this species could be amended into the Plan at a later date if new information is obtained.

The Middle Knob ACEC will provide some protection for the only known occurrence of this plant within the West Mojave Plan area. BLM will require the following measure for this species within the ACEC:

- Surveys for flax-like monardella in suitable habitat would be required for any public ground-disturbing projects in the Middle Knob Conservation Area.

2.2.4.10.10 Kelso Creek Monkeyflower

Kelso Creek monkeyflower is not proposed for incidental take permit coverage, but will be conserved and managed on public lands by the BLM. The primary conservation measure is the establishment of an ACEC on lands known to provide occupied habitat. In addition, the Implementing Authority will conduct wet year surveys of rare annual plants, including this species (measure P-1a). The detection of additional occurrence on public lands within the 1000 acres of unsurveyed potential habitat may result in additions to the ACEC. Because the local distribution of this species and many of the habitat requirements are unknown, the Plan provides for monitoring and adaptive management to adjust management over time. The monitoring and adaptive measures are:

(M-34) Conduct presence absence surveys on public land identified as potential habitat.

(LG-9) BLM would make an assessment of regional rangeland health on public lands in the Rudnick common allotment within two years of Plan approval.

(AM-32) If new populations are discovered then BLM will adjust boundaries of conservation area.

(AM-33) If open routes threaten occupied habitat, then change route designation in area.

(AM-34) If results of the rangeland health assessments in Kelso Valley indicate consumption or trampling of the flower, then adjust grazing practices.

(AM-35) If newly discovered populations on private land are found, then pursue land purchase or exchange on a high priority.

2.2.4.10.11 Kern Buckwheat

Kern buckwheat is a very narrow endemic species with substrate-specific habitat requirements found only in the Middle Knob region of Kern County. Conservation requires avoidance of all occurrences on private lands and restoration and enhancement of habitat on public lands. If wind turbines are replaced and subject to another discretionary permit from Kern County, mitigation measure requiring avoidance of the plants will be imposed. The plants will be fenced if necessary and feasible.

The major threat to the occupied habitat is vehicle intrusions. When the clay substrate is wet, deep ruts can be formed that cause long-lasting damage to the surface. Management of the habitat on public lands would involve:

- (HCA-3) Avoidance of this species would be required for any public land ground-disturbing projects in the proposed Middle Knob Conservation Area.

- (P-24) Construction of vehicle barriers along the main access road where it adjoins occupied habitat.

- (P-25) Fencing on both sides of the road near the Sweet Ridge population. A vehicle turnaround and parking area would be restored so that traffic passes by, rather than on, the buckwheat habitat.

- Establishment of the Middle Knob Conservation Area and ACEC (see HCA-3).

- (P-25a) Pebble plains habitat along the Pacific Crest Trail will be signed.

Conservation measures on private lands are:

- (HCA-3) Avoidance of this species would be required for any private land ground-disturbing projects in the proposed Middle Knob Conservation Area.

Take for Kern buckwheat would be limited to very small areas that might be impacted by restoration activities.

2.2.4.10.12 Lane Mountain Milkvetch

The conservation strategy for this species is to provide occupied habitat with reserve-level management. Two conservation areas would be designated: the Coolgardie Mesa Conservation Area and the West Paradise Conservation Area (see Map 2-10). The boundaries of the conservation areas, which are in two separate blocks, include all known populations and most of the granitic substrate on which they occur outside the Fort Irwin expansion area. The areas total 14,597 acres. Conservation measures would include the following:

- (P-26) BLM would require botanical surveys prior to issuing any use permits. No permits would be issued which allow take of this species (projects would have to be relocated).

- (P-27) No grazing would be permitted within the conservation area.

- (P-28) Route designation would identify acceptable open routes of travel. Closed routes would have a high priority for obliteration. Fencing of the approved routes would be installed as necessary, with signs advising the public that the area is closed to vehicle travel because of endangered species conservation.

- (P-29) All private lands within the West Paradise Conservation Area and occupied habitat within the Coolgardie Mesa Conservation Area would be acquired, to the extent feasible and from willing sellers only.

- (P-30) Lands within the conservation areas would be withdrawn from mineral entry. Claimholders with valid existing rights will be compensated.

- (P-31) The Management Plan for the Rainbow Basin Natural Area would be revised to incorporate specific measures that protect the Lane Mountain milkvetch. (See Appendix D on ACEC changes.) These measures include closing specified routes of travel, a small mineral withdrawal, and adding protection of the Lane Mountain milkvetch as a goal of the management plan.

- (P-32) Claimholders should be notified of the presence of endangered plants. Restrictions on casual use that involves ground disturbance within the Coolgardie Mesa Conservation Area would be developed as necessary.

2.2.4.10.13 Little San Bernardino Mountains Gilia

Conservation of this relatively unknown species is based on 1) limitation of take until additional information on distribution and habitat preferences is developed, 2) restrictions on disturbance within 100' of the banks of desert washes within the range, and 3) planning for flood control without channelization of the stream courses.

(P-33) Designate a Special Review Area, which would be in two parts. The first would be between Highway 62 and the northern boundary of Joshua Tree National Park from the west edge of the City of Twentynine Palms to the community of Joshua Tree west of Park Avenue. The second Gilia area would be the same area as that prescribed for the desert tortoise, called the Copper Mountain Mesa SRA. The City of Twentynine Palms and the Town of Yucca Valley are outside the proposed Special Review Area. Precise boundaries of the SRA would be one of the first implementation tasks.

Within the SRA, applicants for discretionary development within 100' of existing stream channels would be required to protect the integrity of the stream channels. BLM will retain parcels falling within this more narrowly defined boundary, unless land exchanges or sale would enhance gilia conservation. The existing hydrology should be maintained 1/4 mile away from Highway 62. Road crossings of washes should be at grade (Arizona crossings) instead of fill and culverts. San Bernardino County would require setbacks of 100' from the outer banks of washes within the species habitat and seek to avoid take of existing known populations. Flood control and conservation easements would be established on private lands containing this species. Surface-disturbing activities, including extraction of aggregate materials would be prohibited within easements. San Bernardino County Flood Control would utilize floodplain management rather than structural alternatives for flood control in washes supporting this species.

The standard for avoidance within the stream channel edges means that habitat compensation would not normally be required. Only in those cases where avoidance is proven to be infeasible, such as for reasons of public safety, would mitigation (habitat compensation) be chosen over minimization (avoidance and establishment of easements). In that case, the compensation ratio would be 5:1.

Incidental take would generally be limited to areas greater than 100' from washes occupied by the species and not exceeding 50 acres of occupied habitat. Conservation (via easements) would be required to keep pace with incidental take.

(P-34) Channelization of upper Big Morongo Creek, Little Morongo Creek, and Dry Morongo Creek northwest of Highway 62 would be prohibited in order to maintain fluvial processes supporting occurrences in the Coachella Valley. Improvements (e.g. culverts) within 1/4 mile of Highway 62 in these washes would be allowed.

(P-35) BLM would pursue land exchanges to acquire known sites near JTNP. BLM would retain scattered public lands south of Joshua Tree bordering Joshua Tree National Park and change the multiple use class from Unclassified to M.

2.2.4.10.14 Mojave Monkeyflower

Conservation of Mojave monkeyflower is based on establishment of two core reserves that include the majority of the known populations. These reserves would become Areas of

Critical Environmental Concern on BLM managed lands in the Brisbane Valley and west of the Newberry Mountains (see HCA-3).

Objective 1. Brisbane Valley Unit: BLM would retain 16.5 sections of public land, comprising approximately 10,633 acres, between the Mojave River and Interstate 15. This two-mile wide by seven mile long area would become one core reserve for the Mojave monkeyflower and would be designated an ACEC. Private inholdings within the conservation area would not be affected. Existing and proposed mining on these inholdings could continue under existing requirements of the local jurisdiction. Prescriptions specified in the ACEC Plan would include designation of routes of travel, retention of public lands for conservation, and mitigation and monitoring procedures. Ground disturbing activities in the conservation area would provide mitigation at a 5:1 fee amount ratio. Sheep grazing would be discontinued in the Conservation Area (LG-25).

(P-36) The ACEC lands would be removed from the land base available for exchange in the Land Tenure Adjustment program.

(P-37) To address uncertainty about the configuration of the conservation area, a "survey incentive" area would be established on all sides of the conservation area and would include all of the mining area. Within the "survey incentive" area, the following mitigation prescriptions would apply:

1. All ground disturbing activities where the applicant does not perform a botanical survey to determine the presence or absence of the Mojave monkeyflower would be required to provide mitigation at a 2:1 fee amount ratio.

2. Applicants who perform a botanical survey and do not detect the Mojave monkeyflower would provide mitigation at the planwide fee amount ratios (1:1 for undisturbed lands).

3. If the botanical survey detects Mojave monkeyflower and the ground disturbing activities would avoid the plants, no additional mitigation would be required.

4. If the botanical survey detects Mojave monkeyflower and the plants are to be eliminated, mitigation would be provided at a 2:1 fee amount ratio. This ratio would only be applied to the acreage of occupied habitat. San Bernardino County would make a determination of what constitutes a significant population requiring this ratio, and would determine or approve the occupied acreage where the ratio is applied. The County would consult with the Scientific Advisory Committee in determining what constitutes a "significant population".

5. No Mojave monkeyflower surveys would be required on 0.5:1 compensation lands, which reflect existing disturbance. Maps of 0.5:1 and undisturbed lands would be established prior to Plan approval, and would apply to the entire range of Mojave monkeyflower.

Botanical surveys must be performed in a year of sufficient rainfall so that the Mojave monkeyflower is evident and identifiable. Surveys should include inspection of known reference sites to determine the detectability of this species. The California Native Plant Society has prepared Botanical Survey Guidelines, which have been adopted by CDFG for projects undergoing CEQA review (CDFG, 2000). Use of these guidelines is recommended.

Mining Area: (P-38) In order to accommodate the unique operations of the mining industry, a mining area has been illustrated in the southern Brisbane Valley near Oro Grande. The mining area encompasses 9,358 acres, of which 62% (5,792 acres) is private land and 38% (3,566 acres) is public land. Mineral production from this area has a substantial economic benefit to residents of the western Mojave Desert and supplies essential materials to a wide market in southern California and beyond.

In the mining area, all existing Plans of Operation and SMRA Reclamation Plans are not subject to additional mitigation. Any discretionary permit involving modification or variances within a Plan of Operations or Reclamation Plan which does not affect additional lands with additional disturbance outside the originally permitted area would be exempt from new mitigation for the Mojave monkeyflower. Renewals of permits at the termination of the SMRA permit are exempt from mitigation if they do not involve additional lands.

At the discretion of the mining industry, a mitigation or conservation bank can be established in the mining area. After botanical surveys are completed, any landowner or group of landowners can designate a reserve containing substantial numbers of Mojave monkeyflowers within the mining area and receive credits for the conservation achieved. The terms of the compensation for the credits would be private and determined by the affected parties. The initial assignment of credits (such as one unit of credit per acre of occupied monkeyflower habitat) and the accounting of incidental take and credits applied to different projects would be reported to and approved by the Implementation Team and the wildlife agencies.

The mining industry can submit a proposal to the Implementation Team for conservation of the Mojave monkeyflower in the mining area as a whole and obtain approval as the ultimate and final requirements for conservation of this species in the mining area. The conserved lands would meet equivalent protective standards as those in the Brisbane Valley unit or could be an addition to the Brisbane Valley unit.

Objective 2. Daggett Ridge Unit: A second unit would include known occurrences west of the Newberry Mountains Wilderness near Daggett Ridge. Within this area of 36,424 acres, 27% (9,831 acres) of the land is private, 71% (25,997 acres) is BLM, and 2% (596 acres)

is state-owned. The BLM managed lands would be designated an Area of Critical Environmental Concern. These lands are within the proposed Newberry-Rodman Desert Wildlife Management Area established for the protection of the desert tortoise.

(P-39) Within this area, BLM would designate routes of travel with the goal of eliminating routes within washes, unnecessary parallel routes, and routes bisecting populations of Mojave monkeyflower. This network is contained within the Newberry-Rodman and Ord Mountains route designation subregions.

(P-40) Additional private lands would be acquired west of the Newberry Mountains as funds become available.

Objective 3. Site-specific management: The Waterman Hills occurrences are within a proposed DWMA. The 1% cap on developments within the DWMA, along with route designation and other measures to protect the desert tortoise, would also protect the Mojave monkeyflower.

(P-41) Proponents for development within one mile of the Waterman Hills occurrences would conduct surveys for Mojave monkeyflower to determine potential impacts to this species. Avoidance measures would be formulated on a case-by-case basis. Because the Waterman Hills population area contains desert tortoise, Barstow woolly sunflower, and Mojave monkeyflower, this area would receive a high priority for acquisition of private land within the Superior-Cronese DWMA.

Utility Corridor O traverses the western edge of the Brisbane Valley. Utility Corridor D, the Boulder Corridor, traverses the southeast edge of the Brisbane Valley unit and bisects the eastern part of the conservation area near Daggett Ridge.

(P-42) New utility projects, including proposals for wind energy development or communications sites, within the conservation areas would be required to perform botanical surveys and avoid existing populations to the maximum extent practicable. If avoidance is not feasible, mitigation must be provided at the 5:1 ratio for the area of new ground disturbance within the conservation area. The Implementation Team would determine if construction monitoring is necessary for new utility projects and prescribe monitoring requirements.

2.2.4.10.15 Mojave Tarplant

The known extant populations of Mojave tarplant within the western Mojave Desert are found in remote, protected locations and face no immediate threats. This plant is relatively unknown, so there is some likelihood that new occurrences would be detected. The conservation strategy is based on maintenance of existing protections and monitoring and adaptive management.

(P-44) Maintain the cattle guards and fencing at Short Canyon.

(P-45) Revise the ACEC Plan for Short Canyon to specify protection of Mojave tarplant as a goal of the plan. In addition, monitoring measures would be added to the Plan (see M-56).

(P-46) Perform an initial (within two years of Plan adoption) census estimating numbers and acreage of occupied habitat of at Short Canyon and Owens Peak to provide a baseline.

Take is proposed only for new locations where Mojave tarplant might be detected on private lands. A cap on the level of incidental take of 50 acres would be imposed and. the permit authority would cease when the cap is reached. Proposed incidental take on private lands must not eliminate more than 50% of the occupied habitat, with the remainder dedicated to conservation. Fifty percent of newly detected populations must be conserved.

2.2.4.10.16 Ninemile Canyon Phacelia

This plant is a West Mojave endemic with a very restricted range. It is found primarily on public lands.

Take is proposed only for new locations where Ninemile Canyon phacelia might be detected on private lands. A cap on the level of incidental take of 50 acres of occupied habitat would be imposed and the permit authority would cease when the cap is reached. Proposed incidental take on private lands must not eliminate more than 50% of the occupied habitat, with the remainder dedicated to conservation, including 50 percent of newly detected populations.

2.2.4.10.17 Parish's Phacelia

Designate a Parish's Phacelia Conservation Area (see HCA-3). The boundaries of this region correspond to the limits of the known distribution and the land between the playas. Ownership is 386 acres (43%) of private and 512 acres (57%) of public land. Incidental take would be limited to 50 acres of occupied habitat. Within the conservation area, the following prescriptions would apply:

- (HCA-3) The occupied habitat on private land within the conservation area (149 acres) would be acquired, assuming a willing seller.

- (P-48) San Bernardino County would insure that projects proposed on the dry lakes with occupied habitat for this species avoid and minimize take of this species to the maximum extent practicable.

- (HCA-3) Vehicle traffic would be prohibited on the playas. BLM would designate these dry lakes as closed to motor vehicle traffic and would place signs at the edge of the playas.

- (P-50) BLM would insure that new utilities using this portion of Corridors D and Q site facilities to avoid the known populations or require restoration of the playa habitat. Construction stipulations that have been effective in the past include stockpiling of the top six inches of soil in a manner where it is not subject to wind erosion, followed by respreading of this soil over the disturbed right-of-way.

2.2.4.10.18 Red Rock Poppy

Red Rock poppy is a narrow endemic plant found in the El Paso Mountains, with one reported outlier northeast or Red Mountain. The species is protected within Red Rock Canyon State Park. Within the BLM-managed lands in the El Paso Mountains, no significant threats are present. The conservation strategy for this species consists of designating a network of open routes of travel that minimize parallel routes, hill climbs, and straying off established paths.

Incidental take of Red Rock poppy would apply only to newly-detected populations found on private land. Take would be limited to 50 acres of occupied habitat. Fifty percent of newly detected populations would be conserved.

2.2.4.10.19 Red Rock Tarplant

Like the Red Rock poppy, the Red Rock tarplant is a narrow endemic plant found in the El Paso Mountains. The species is protected within Red Rock Canyon State Park. Within the BLM-managed lands in the El Paso Mountains, no significant threats are present. The conservation strategy for this species consists of designating a network of open routes of travel that minimize parallel routes, hill climbs, and straying off established paths.

Incidental take of Red Rock tarplant would apply only to newly detected populations found on private land. Take would be limited to 50 acres of occupied habitat. Fifty percent of newly detected populations would be conserved.

2.2.4.10.20 Reveal's Buckwheat

Botanists have reported a disjunct occurrence of Reveal's buckwheat on private land in the Jawbone Butterbredt ACEC, and additional locations could be detected in the future.

(P-51) Conservation of this species would be by avoidance of impacts at the known location, followed by monitoring and adaptive management. If additional botanical surveys better define the distribution of this species in the Jawbone Canyon area, a site-specific conservation plan would be developed. This could include posting signs to discourage off-road vehicle travel or placement of fences to keep out livestock.

2.2.4.10.21 Short-joint Beavertail Cactus

All known occurrences of the short-joint beavertail cactus are on private land in the San Gabriel Mountains foothills between Palmdale and the Cajon Pass. Existing rural housing in the Phelan and Oak Hills areas fragments habitat within San Bernardino County.

Conservation for short-joint beavertail cactus consists of designation of the Big Rock Creek Conservation Area, where a substantial unfragmented population can be protected (see HCA-3). Additional lands within existing Significant Ecological Areas would be conserved by the zoning limitations and development review process established by Los Angeles County. The SEA boundaries may change in the future, providing additional protection to this species.

(P-52) San Bernardino County would review land division and development proposals in the Oak Hills area to insure minimization of impacts to short-joint beavertail cactus habitat.

(B-9) BLM would remove scattered parcels within existing SEAs containing suitable and occupied habitat from the LTA Program disposal zone and change the multiple use class from Unclassified to M. BLM would implement these same measures for parcels outside the SEAs in the San Gabriel Mountains foothills.

Take would be allowed on private lands in all areas away from the designated washes, outside the Significant Ecological Areas and the Big Rock Creek Conservation Area, and within the Palmdale city limits.

2.2.4.10.22 Triple-ribbed Milkvetch

Triple-ribbed milkvetch occurs in the Morongo Valley region, extending to the San Bernardino Mountains and Little San Bernardino Mountains into the Coachella Valley where it borders the boundary of the West Mojave Plan. This species is so rare that no take is anticipated, with the possible exception of improvements to Highway 62 along the grade between Desert Hot Springs and Morongo Valley.

(P-53) BLM would protect this plant by requiring avoidance of all known locations on public lands. San Bernardino County Flood Control District would limit improvements to Big Morongo Creek and Dry Morongo Creek to areas within ¼ mile of Highway 62.

(P-54) Botanical surveys would be required for ground-disturbing projects on private lands located within five miles of existing known locations for this species. Proposed projects on private land where this plant is detected would be required to avoid the occupied habitat. These parcels would be identified as priorities for acquisition.

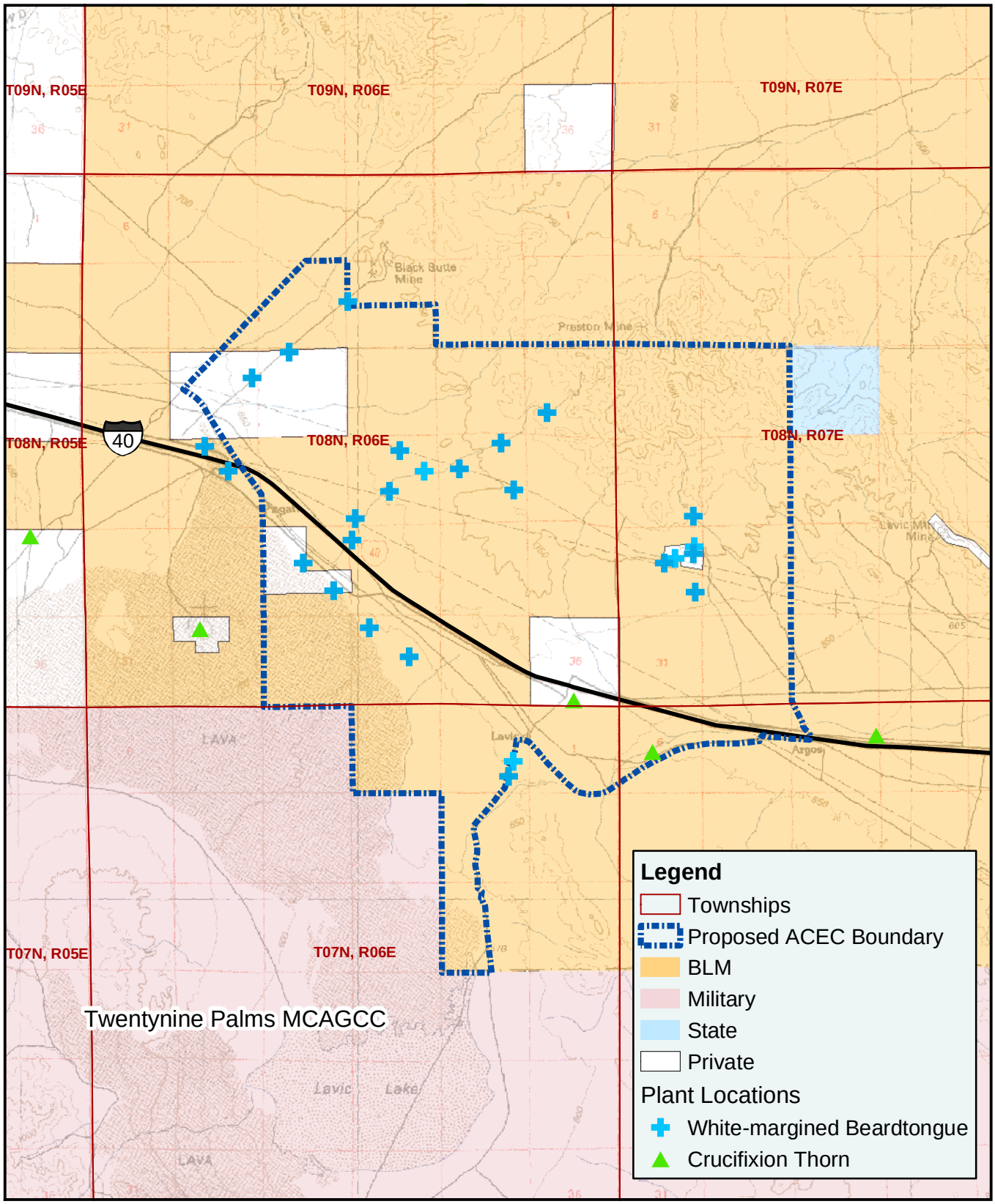
2.2.4.10.23 White-margined Beardtongue

This species is a disjunct with a very limited range within California, all within the West Mojave. Incidental take would be limited to 50 acres of occupied and potential habitat.

(P-55) Acquire one private parcel where this plant occurs within the proposed Pisgah ACEC if feasible.

Designate the Pisgah area as an ACEC (see HCA-3, Map 2-12B). Designate routes within the ACEC as open or closed and restore or block routes to be closed. Change the multiple use class from M to L.

Pisgah CDCA Plan Amendment



West Mojave Plan FEIR/S
Map 2-12B

Scale: 1 : 100,000
0 2 4 Km
0 1 2 3 Miles

10/1/04

2.2.5 Public Land Livestock Grazing Program

This program identifies conservation prescriptions to be implemented on public land within cattle and sheep allotments managed by the BLM in the West Mojave planning area. Where current management differs from that given in Alternative A, the alternative would prevail, and be authorized through amendments to the CDCA Plan. These prescriptions would become effective at the time the BLM's Record of Decision for the West Mojave Plan is signed ("plan adoption"). This section lists existing BLM Standards and Guidelines, terms and conditions of existing federal biological opinions, and new management prescriptions that would be implemented with plan adoption. The discussion is organized as follows:

- Regional Public Land Health Standards and Guidelines for Grazing Management
- Utilization of Key Perennial Species by Livestock
- Cattle Grazing Outside Tortoise Habitat and the MGS Conservation Area
- Cattle Grazing Within Tortoise Habitat and the MGS Conservation Area
- Cattle Grazing Within Desert Wildlife Management Areas
- Sheep Grazing Within All Allotments
- Sheep Grazing Within the MGS Conservation Area and the Mojave monkeyflower Conservation Area
- Sheep Grazing Within DWMAs
- Voluntary Relinquishment of Cattle and Sheep Allotments

2.2.5.1 Regional Public Land Health Standards and Guidelines for Grazing Management

Regional Public Land Health Standards and Guidelines regulate cattle and sheep grazing on BLM-administered lands. Standards and Guidelines are listed and described below.

BLM's grazing regulations in Part 43 CFR 4180 require that State Directors, in consultation with Resource Advisory Councils, develop Standards of Rangeland Health and Guidelines for Grazing management. The grazing regulations require that standards be in conformance with the "Fundamentals of Rangeland Health" (BLM policy developed in 1993) and that the standards and guidelines address each of the "guiding principles" as defined in the regulations. Standards and guidelines are to be incorporated into BLM's land use plans to improve ecological conditions. Improving ecological conditions is based upon attainment and maintenance of basic fundamentals for healthy systems. Standards and guidelines are defined as follows:

- A *Standard* is an expression of the level of physical and biological condition or degree of function required for healthy, sustainable rangelands.

- *Guidelines* for grazing management are the types of grazing management activities and practices determined to be appropriate to ensure that the standards can be met or significant progress can be made toward meeting standards.

Regional Standards apply to all BLM lands and programs, while the *Regional Guidelines* presented below apply only to livestock grazing. BLM staff, in consultation with the BLM's California Desert District Advisory Council, has developed the regional standards and guidelines to satisfy the requirements of BLM's strategic plan, comply with the fundamentals of rangeland health, and address each of the guiding principles as required by the grazing regulations. The development of guidelines for grazing management also addresses each of the guiding principles.

While the definition and adoption of standards and guidelines applies specifically and only to BLM lands, the spirit of initiative is reflected throughout the West Mojave planning area in developing the strategic approach to managing species and habitats.

Required Actions on Grazing Leases: Standards and grazing management guidelines apply to grazing related portions of activity plans, terms and conditions of permits, leases, and other authorizations, and range improvement activities such as vegetation manipulation, fence construction and development of water. For lands leased for grazing uses, the grazing regulations require the authorized officer to "take appropriate action" prior to the beginning of the next grazing season when standards or guidelines are not achieved and livestock grazing has been determined to be a significant factor in the failure to achieve the standard or comply with the guideline.

Application of Standards in Land Use Planning: Regional Standards of Public Land Health would be applied to all resources and uses of the public lands in the following manner:

- *Public Land Health Standards.* A single set of Public Land Health Standards would be applied desert-wide and to all resources and uses. Standards have their foundation in the physical and biological laws of nature. These laws are consistent regardless of the resource or use.

- *Assessment of Public Land Health.* The health of public lands and resources would be assessed using the Standards as the measurement of desired function.

- *Assessment Scale.* The health of public lands would be assessed on a landscape/watershed scale. While it may be useful and necessary to examine certain environmental components on a smaller scale, or at various scales, it is intended that overall Public Land Health be made at a landscape or watershed scale.

- *Health Determination.* Since Standards are a statement of goals for physical and biological function, determinations would be based strictly on the result of resource assessments and be independent of the uses on the public land.

- *Resource Objectives*. Resource management objectives are decisions made in consideration of resource values and capabilities and use needs through land use and activity plans. Public Land Health would be used to determine if resource management

objectives are being met. In some cases, particularly where intensive land uses are allowed, resource management objectives could be met while the Public Land Health determination may indicate non-conformance with the Standards.

- *Causal factors*. Where public land health assessments indicate that resource management objectives are not being met, a determination would be made as to the causal factors.

- *Action/Adaptive Management.* Where public land health does not conform to resource management objectives, appropriate action - including changes to land use or activity plans - would be initiated using existing regulatory authorities for each authorized activity. In the case of livestock grazing the regulations require that the authorized officer "take appropriate action" prior to the beginning of the next grazing season when standards or guidelines are not achieved and livestock grazing has been determined to be a significant factor in the failure to achieve the standard or comply with the guideline.

Application of Standards in NEPA Analysis: Analyses of resources and issues guided by Standards would help NEPA review of projects. Consideration of standards should improve identification and analyses of:

- Relevant resource conditions and ecosystem functions
- Actions in terms of affects on resources and ecosystem functions
- The relationship of biological and physical resources and functions
- The most important resources and functions
- Project design and mitigation
- Cumulative effects
- Short-term and long-term affects
- Project compliance

Goals and Objectives of Standards and Guidelines: Table 2-16 presents the goals and objectives of standards and guidelines.

Table 2-16
Goals and Objectives of Standards and Guidelines

GOALS AND OBJECTIVES	
Goals	Develop Standards that would meet or exceed the National policy for: • Watersheds • Ecological processes • Water quality • Habitats Develop Guidelines to meet National policy and the grazing regulations.
Objectives	Implement Standards as directed by National policy and grazing regulations. Implement Guidelines to conform grazing activities to achieve Standards.

Objective A -- Implement Standards: Manage all activities under the following Regional Standards of Public Land Health.

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;
- There is diversity of plant species with a variety of root depths;
- Litter and soil organic matter are present at suitable sites;
- Microbiotic soil crusts are maintained and in place;
- Evidence of wind or water erosion does not exceed natural rates for the site; and
- 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, Federally 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 sufficient litter;
- 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; and
- Populations and their habitats are sufficiently distributed and healthy to prevent the need for listing special status species.

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 would 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;
- Maintain shading of stream courses and water sources for riparian dependent species;
- 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; and
- Adequate organic matter (litter and standing dead plant material) is present to protect the site and to replenish soil nutrients through decomposition.

Water Quality.[2] Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State Standards, as indicated by:

- The following do not exceed the applicable requirements: chemical constituents, water temperature, nutrient loads, fecal coliform, turbidity, suspended sediment, and dissolved oxygen;
- Achievement of the Standards for riparian, wetlands, and water bodies;
- Aquatic organisms and plants (e.g., macro invertebrates, fish, algae, and plants) indicate support for beneficial uses; and
- Monitoring results or other data that show water quality is meeting the Standard.
-

Objective B – Conform Grazing Activities: Manage grazing activities with the following regional guidelines.

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

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

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[2]Management Objective: For water bodies, the primary objective is to maintain the existing quality and beneficial uses of water, protect them where they are threatened (and livestock grazing activities are a contributing factor), and restore them where they are currently degraded (and livestock grazing activities are contributing factor). This objective is of even higher priority in the following situations:

i. Where beneficial uses of water bodies have been listed as threatened or impaired pursuant to Section 303(d) of the Federal Clean Water Act;

ii. Where aquatic habitat is present or has been present for Federal threatened or endangered, candidate, and other special status species dependent on water resources: and,

iii. In designated water resource sensitive areas such as riparian and wetland areas.

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

4. Supplements shall be located a sufficient distance away from wetland systems so they do not conflict with maintaining riparian wetland functions.

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

6. Grazing management practices shall meet State and Federal water quality Standards. Where impoundments (stock ponds) and having 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.

7. In the California Desert Conservation Area all wildfires in grazing allotments shall be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk) prescribed burning may be utilized as a tool for restoration. Prescribed burns may be used as a management tool where fire is a natural part of the regime.

8. In years when weather results in extraordinary conditions seed germination, seedling establishment and native plant species growth shall be allowed by modifying grazing use.

9. Grazing on designated ephemeral rangeland 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, and adverse effects on perennial species are avoided.

10. During prolonged drought, range stocking shall be reduced to achieve resource objectives and /or prescribed perennial forage utilization. Livestock utilization of key perennial species on year-long allotments shall be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.

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

to ascertain future control measures.

12. Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of special status species including federally proposed, Federal candidates, BLM sensitive, or California State T&E to promote their conservation.

13. Grazing activities shall support biological diversity across the landscape and native species and micro biotic crusts are to be maintained.

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

Utilization of Key Perennial Species by Livestock: The following prescription would be adopted to govern utilization of key perennial species by livestock in continuous year-long operations:

- (LG-1) Based on Holechek's (et al., 1998) work or the best scientific information available, livestock utilization level of key perennial species in the Mojave Desert range type would 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 not meeting Standards shall not exceed 25 percent utilization of key species except as described in allotment management plans, decisions, or other management documents with a specific grazing strategy with prescribed level of perennial forage consumption. The utilization range between 25 and 40 percent is for those forage species with a proper use factor that would allow consumption up to and between 25 and 40 percent otherwise lower use limits would prevail. Until modified with current information, utilization of the following general range types as shown in Table 2-17 shall be prescribed for grazing use.

Table 2-17
Proposed Plan Grazing Guidelines for Range Types

RANGE TYPE	PERCENT OF USE OF KEY PERENNIAL SPECIES	
	POOR – FAIR RANGE CONDITION OR GROWING SEASON	GOOD – EXCELLENT RANGE CONDITION OR DORMANT SEASON
Mojave/Sonoran Desert Scrub	25	40
Salt Desert Shrub land	25	35
Semi desert Grass and Shrub land	30	40
Sagebrush Grassland	30	40
Mountain Shrub land	30	40
Pinyon-Juniper Woodland	30	40

Rangeland in good condition or grazed during the dormant season can withstand the higher utilization level. Rangelands in poor condition or grazed during the active growth season would receive lower utilization levels.

Monitoring of grazing allotments resource conditions would be routinely assessed to determine if Public Land Health Standards are being met. In those areas not meeting one of more Standards, monitoring processes would be established where none exist to monitor indicators of health until the Standard or resource objective has been attained. Livestock trail networks, grazed plants, livestock facilities, and animal waste are expected impacts in all grazing allotments and these ongoing impacts would be considered during analysis of the assessment and monitoring process. 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 from monitoring changes to grazing management required to meet Standards would be reviewed annually. During the final phase of the assessment process, the Range Determination includes the schedule for the next assessment of resource conditions. To attain Standards and resource objectives, the best science would be used to determine appropriate grazing management actions. Cooperative funding and assistance from other agencies, individuals, and groups would be sought to collect prescribed monitoring data for indicators of each Standard.

2.2.5.2 Cattle Grazing Outside Tortoise Habitat and the MGS Conservation Area

The following prescriptions would be implemented for all cattle allotments managed by the BLM in the planning area that are not located within either desert tortoise habitat or the Mohave Ground Squirrel Conservation Area. Affected cattle allotments include Double Mountain, Oak Creek and Round Mountain.

- (LG-2) Health assessments would be completed prior to authorizing a grazing lease or renewal of grazing lease for Double Mountain, Oak Creek, and Round Mountain.

- (LG-3) Within 12 months after completing a Health Assessment for a specific area (i.e., grazing allotment, watershed, etc.), the BLM would use field and office information to make a health determination, which would serve as baseline information to develop corrective management strategies. Where a determination indicates that standards are not being achieved, changes in grazing management would be implemented that may result in new terms and conditions to achieve standards and conform to guidelines. Although not reiterated below, this same regulatory process would be required following specified time frames given for the health assessments that follow.

The West Mojave Plan's cattle grazing program affects public lands only; it does not address the grazing of cattle on private land.

2.2.5.3 Cattle Grazing Within Tortoise Habitat and the MGS Conservation Area

The livestock grazing management prescriptions listed below would be implemented for all cattle allotments managed by the BLM in the planning area that occur in desert tortoise habitat and within the Mohave Ground Squirrel Conservation Area. Affected cattle allotments include: Cady Mountain, Cronese Lake, Darwin, Hansen Common, Harper Lake, Lacey-Cactus-McCloud, Olancha Common, Ord Mountain, Pilot Knob, Rattlesnake Canyon, Rudnick Common, Tunawee Common, and Walker Pass Common.

Unless otherwise noted, all protective measures identified in Section 2.2.5.3 would be implemented in desert tortoise habitat and the MGS Conservation Area.

2.2.5.3.1 Management under Existing Federal Biological Opinions

In June 2002, the USFWS issued a biological opinion for the CDCA Plan, entitled *Biological Opinion for the California Desert Conservation Area Plan [Desert Tortoise] (1-8-01-F-16)*. The reasonable and prudent measures set forth in the biological opinion, and terms and conditions to implement them, are applicable to the West Mojave planning area. The BLM must ensure that any permittee or lessee (hereafter referred to as lessee) complies with terms and conditions, which implement reasonable and prudent measures.

The second term and condition references the March 1994 opinion entitled, *Biological Opinion for Cattle Grazing on 25 Allotments in the Mojave Desert, Riverside and San Bernardino Counties, California (1-8-94-F-17)*. A summary of applicable terms and conditions for cattle activities are listed in Appendix O.

2.2.5.3.2 New Management Prescriptions

The following prescriptions comprise new management that would be implemented through plan adoption.

- (LG-4) The Lacey-Cactus-McCloud allotment boundary would be modified to exclude those portions that occur on China Lake NAWS.

- (LG-4a) Livestock kind and use designation in the Darwin Allotment would be converted from horse to cattle and the allotment would be incorporated within the Lacey-Cactus-McCloud Allotment.

- (LG-5) All cattle carcasses would be removed and disposed of in an appropriate manner (i.e., not buried) within two days of being found or, if this is not practicable, such reasonable time as is acceptable to the BLM authorized officer. Cross-country vehicle travel to remove cattle carcasses must have prior approval from the BLM.

- (LG-6) In all cattle allotments occurring in tortoise habitat outside of DWMAs, ephemeral authorization would only be granted when ephemeral production exceeds 230 pounds per acre. The Cady Mountain and Rudnick Common Allotments are outside DWMAs, but significant areas of high quality desert tortoise habitat are found within the allotment. Grazing use would continue until lessee voluntarily relinquishes all grazing use (see Section 2.2.5.8).

- (LG-7) New cattle guards would be designed and installed to prevent entrapment of desert tortoises. All existing cattle guards in desert tortoise habitat would be modified within three years of plan adoption to prevent entrapment of desert tortoises.

- (LG-8) Any hazards to desert tortoises that may be created, such as auger holes and trenches, would be eliminated before the rancher, contractor, or work crew leaves the site.

2.2.5.3.3 Health Assessments

(LG-9) Cady Mountain, Hansen Common, Lacey-Cactus-McCloud, Olancha Common, Rattlesnake Canyon, Rudnick Common, Tunawee Common, Walker Pass Common, and Whitewater Canyon Allotments would receive the highest priority for health assessments following adoption of the plan. Cady Mountain and Rudnick Common would be scheduled for assessment of public land health subject to a two-year review period. Allotments not relinquished after 24 months from adoption of the plan would be scheduled for public land health assessment within 18 months.

2.2.5.4 Cattle Grazing Within DWMAs

The livestock grazing management prescriptions listed below would be implemented for all cattle allotments managed by the BLM in the planning area that are located within tortoise DWMAs. Unless otherwise noted, all prescriptions identified in Sections 2.2.5.3 and 2.2.5.4 would also be implemented in DWMAs. Affected cattle allotments include Cronese Lake, Harper Lake, Ord Mountain and Pilot Knob; Valley Well allotment would not be affected.

2.2.5.4.1 Proposed Management Prescriptions

The following prescriptions comprise new management that would be implemented through plan adoption.

- (LG-10) No ephemeral authorizations would occur in DWMAs. Allotments currently capable of authorizing ephemeral and perennial forage for cattle use would be designated for perennial forage use only. Therefore, Pilot Knob Allotment would no longer be available for cattle grazing and all ephemeral production would be available for tortoise recovery and conservation. Authorizations related to grazing activities (e.g., range improvements) on the Pilot Knob Allotment would be cancelled and the allotment designation would be removed from the CDCA Plan.

- (LG-11) Issuance of temporary non-renewable (TNR) grazing permits would be prohibited in DWMAs for all lands below an elevation of 4,000 feet.

- (LG-13) When ephemeral forage production[3] is less than 230 pounds per acre, cattle would be substantially removed from portions of the allotment within the DWMA referred to as "Designated Exclusion Areas" (see Map 2-13) from March 15 to June 15.

3 The *ephemeral production threshold* should not be confused with *ephemeral authorization*. The 230-pound *ephemeral production threshold* is intended to avoid competition between cattle and tortoises in years of poor rainfall and plant growth. *Ephemeral authorization* is different, in that it allows the lessee to increase the stocking rate during years when ephemeral plant growth is abundant. Whereas, ephemeral authorization would allow more cattle to be grazed (only outside DWMAs), the ephemeral production threshold would trigger the removal of cattle from Exclusion Areas (only inside DWMAs).

- (LG-14) Cattle may remain past March 15 in expectation of ephemeral forage production over 230 pounds per acre. If this level of forage is not attained when weather conditions (e.g., warming of the soil) are appropriate, cattle must be substantially removed from Designated Exclusion Areas until such time as 230 pounds per acre ephemeral forage is achieved or June 15, whichever is earlier. This determination would be made based on the evaluation and judgment of the BLM authorized officer. If cattle must be removed, the operator would be given two weeks to remove them from the designated exclusion area.

- (LG-16) The term "substantially removed" recognized that a few individual cattle might wander into the Designated Exclusion Areas despite the operator's best efforts and regardless of management facilities (e.g., fences, water sources) that are in place.

- (LG-17) The grazing strategy would be developed within a year and implemented within two years of plan adoption. The strategy would be a written plan detailing the area of removal, natural cattle movements, existing and potential improvements, and other constraints of cattle management.

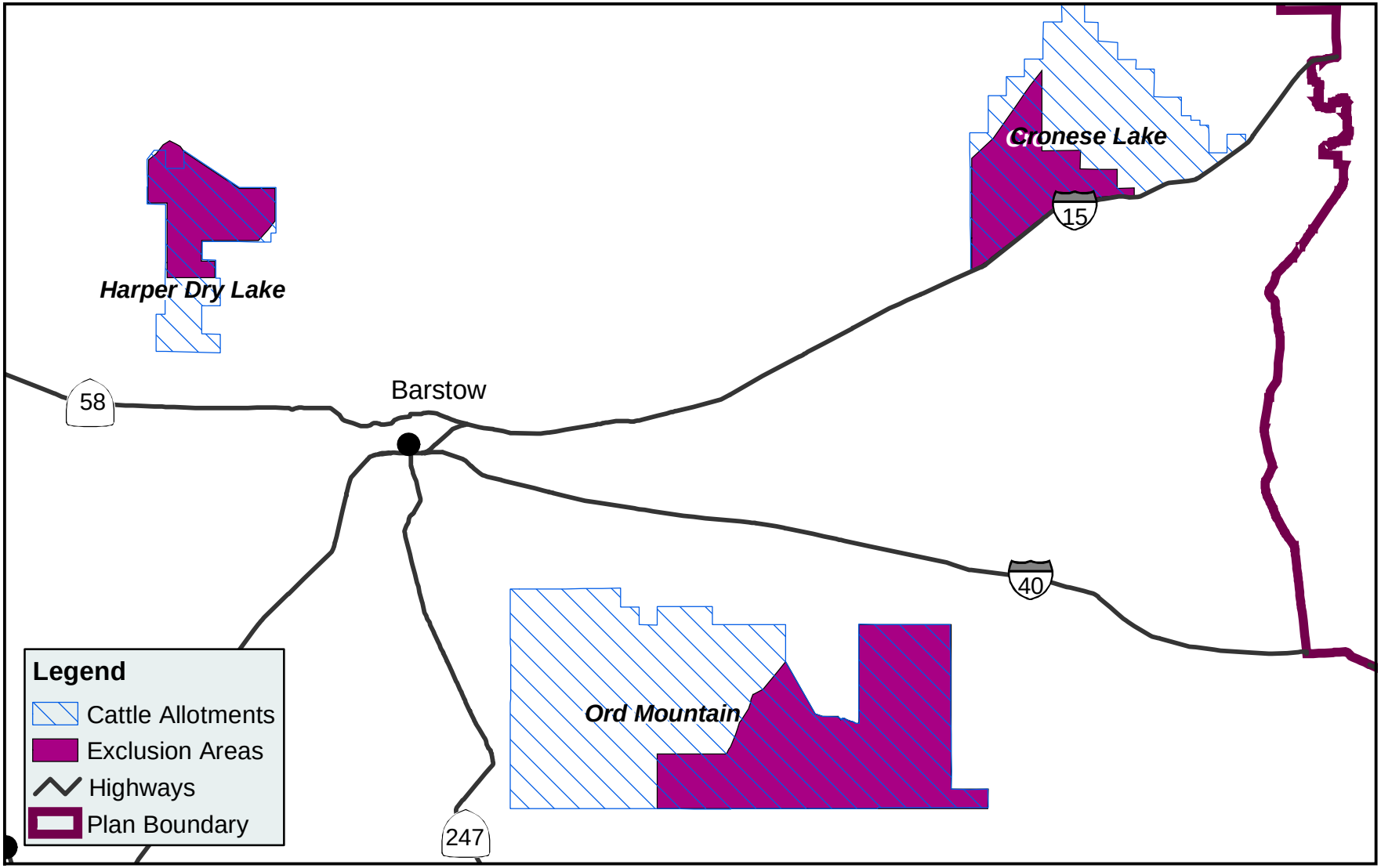
- (LG-17a) The Ord Mountain Allotment Management Plan will be revised after adoption of the West Mojave Plan. As part of the implementation of the revised AMP, based upon available funding, range fences would be installed in two places to exclude cattle from high concentration tortoise areas round adjacent to the Ord Mountain Allotment: (a) along the southern boundary of the allotment, west of the Cinnamon Hills, in northern Lucerne Valley; and (2) along the eastern boundary of the allotment, in the vicinity of Box Canyon.

2.2.5.4.2 Health Assessments

(LG-18) Cronese Lake, Harper Lake, and Ord Mountain Allotments would be scheduled for assessment of public land health subject to a two-year review period. Allotments not voluntarily relinquished after 24 months from adoption of the plan would be scheduled for public land health assessment within 18 months.

- (LG-19) Based on concerns expressed by management and grazing lessee(s), conduct a study of tortoise nutritional ecology in relation to livestock grazing, comparable to studies performed in the Ivanpah Valley during the later 1990s. If appropriate, modify grazing program in response to study findings.

Cattle Allotments with Grazing Exclusions



West Mojave Plan FEIR/S
Map 2-13

Scale: 1 : 520,000
0 10 20 Km
0 10 20 Miles

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2.2.5.5 Sheep Grazing Within All Allotments

The prescriptions identified in this section would be implemented for all sheep allotments managed by the BLM in the planning area. Affected sheep allotments include: Antelope Valley, Bissell, Boron, Buckhorn Canyon, Cantil Common, Goldstone[4], Gravel Hills, Hansen Common, Johnson Valley, Lava Mountains, Monolith-Cantil, Rudnick Common, Shadow Mountains, Spangler Hills, Stoddard Mountain (East, Middle, West), Superior Valley, Tunawee Common, and Warren.

The West Mojave Plan's sheep grazing program affects public lands only; it does not address the grazing of sheep on private land.

2.2.5.5.1 Management under Existing Federal Biological Opinions

The June 2002 biological opinion on the CDCA Plan requires the BLM to implement terms and conditions but did not specify the same term and condition for sheep allotments. Therefore, terms and conditions given in the 1994 *Biological Opinion for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16)* identify measures required of the BLM as part of current management. They are not reiterated herein, but are included in Appendix O.

2.2.5.5.2 Proposed Management Prescriptions

The following prescriptions comprise new management that would be implemented through plan adoption.

- (LG-20) Turnout of sheep in all allotments would not occur until 230 pounds (air-dry-weight) per acre of ephemeral forage is available. The lessee would be required to remove sheep from the area or the entire allotment if production falls below 230 pounds per acre. This prescription is not applicable to those allotments that authorize sheep use of perennial forage.

- (LG-21) Following the removal of lambs, when multiple sheep bands are typically combined, there would be no more than 1,600 adult sheep in a combined band.

- (LG-22) Cantil-Common, Bissell, Boron, Monolith-Cantil, Buckhorn Canyon, Spangler, Stoddard Mountain, Lava Mountains, and Rudnick Common Allotments are wholly or partially outside of DWMAs, but have significant high quality desert tortoise habitat. Grazing use in these allotments would continue until the lessee(s) voluntarily relinquishes the grazing lease. It is understood that all lessees of "Common" allotments (as opposed to any one lessee) must agree to voluntarily relinquish all grazing use on the allotment before the action could be implemented (see Section 2.2.5.8).

4 Although the Goldstone sheep allotment is included in this list, Congress recently transferred those lands from the BLM to the Army, in support of the Fort Irwin expansion. As such, management prescriptions would not apply to the Goldstone Allotment.

2.2.5.5.3 Health Assessments

(LG-23) Health assessments would be performed within five years of plan adoption for all sheep allotments, or portions thereof, available for grazing (e.g., areas of allotments outside DWMAs). Health assessments would not be required for allotments that would no longer be available for grazing (e.g., areas of allotments inside DWMAs and relinquished allotments). Cantil Common, Bissell, Boron, Monolith-Cantil, Buckhorn, Spangler, Stoddard Mountain, Rudnick Common, and Lava Mountains Allotments are designated for potential relinquishment, and these allotments are scheduled for public land health assessment subject to a two-year review period. Allotments not relinquished after 24 months from adoption of the plan would be scheduled for public land health assessment within 18 months.

2.2.5.6 Sheep Grazing Within the MGS and the Mojave Monkeyflower Conservation Areas

The prescriptions identified in this section would be implemented on sheep allotments located within the MGS Conservation Area and the Mojave Monkeyflower Conservation Area. Unless otherwise noted, all prescriptions listed in Section 2.2.5.6 for sheep allotments would also be implemented in these areas. Affected sheep allotments include: Buckhorn Canyon, Cantil Common, Gravel Hills, Hansen Common, Lava Mountains, Monolith-Cantil, Rudnick Common, Shadow Mountain, Spangler Hills, West & Middle Stoddard Mountain and Superior Valley.

The following prescriptions comprise **new management** that would be implemented through plan adoption.

- (LG-24) To avoid competition between sheep and the Mohave ground squirrel once the ephemeral forage is no longer available and both species rely on perennial forage, all sheep would be removed from the Mohave Ground Squirrel Conservation Area when ephemeral plants are no longer the primary forage being utilized by sheep.

  Based on research conducted by Dr. Phil Leitner in the Coso region of the West Mojave, key species have been identified as important to the foraging ecology of the Mohave ground squirrel. These are listed in Table 2-18.

Table 2-18
Key Perennial Plant Species Important ToMohave Ground Squirrel Foraging Ecology

COMMON NAME	SCIENTIFIC NAME
Winterfat	*Krascheninnikovia lanata*
Spiny Hopsage	*Grayia spinosa*
Saltbush	*Atriplex* spp.

Sheep grazing would be removed from those portions of the Mohave Ground Squirrel Conservation Area when the species-specific, maximum utilization levels set forth in Table 2-19 are met. Percentages in the third column refer to the percentage of the year's current perennial growth that may be consumed before sheep would be removed from the allotment or portions thereof.

Table 2-19
Maximum Utilization Levels For Sheep Grazing In The Mohave Ground Squirrel Conservation Area

COMMON NAME	SCIENTIFIC NAME	MAXIMUM UTILIZATION LEVELS
Winterfat	*Krascheninnikovia lanata*	30%
Spiny hopsage	*Grayia spinosa*	25%
Four-winged saltbush	*Atriplex canescens*	25%
Shadscale	*Atriplex confertifolia*	25%
Allscale	*Atriplex polycarpa*	25%

To facilitate adaptive management, if future research shows that key species different from those listed above are important to the Mohave ground squirrel, those additional species would be added to the monitoring program. Similarly, if a key species identified above is not considered important to the Mohave ground squirrel in another part of its range (i.e. outside the Coso region), that species may be dropped from the list.

- (LG-25) Sheep grazing would be prohibited from the Middle Stoddard Mountain Allotment where it coincides with the Mojave monkeyflower Conservation Area. The BLM would work with the lessee to clearly identify monkeyflower habitat to be avoided.

2.2.5.7 Sheep Grazing Within DWMAs

The following prescriptions comprise **new managemen**t that would be implemented through plan adoption. Except in two areas listed below, seep grazing would be removed from DWMAs, which would be in effect two years following plan adoption.

- (LG-26) The following allotments, found entirely within DWMAs, would no longer be available for sheep grazing: Goldstone, Gravel Hills, and Superior Valley (see Map 2-14). All ephemeral production would be available for tortoise conservation and recovery. Authorizations related to grazing activities (e.g., range improvements) would be cancelled and the allotment designation would be removed from the CDCA Plan.

- (LG-27) Boundaries would be modified in the following allotments so that areas within DWMAs would no longer be available for sheep grazing: Buckhorn Canyon, Lava Mountains, Monolith-Cantil, and East and West Stoddard Mountain. Consistent with the 1994 biological opinion, small portions of Shadow Mountains and Cantil Common Allotments would continue to be grazed (see Map 2-14) within a DWMA, however, sheep use would not occur elsewhere in the DWMA.

  Sheep grazing use would be authorized in portions of DWMAs in the Shadow Mountains and Cantil-Common Allotments under the following conditions and those conditions summarized in Appendix S:

  1. Turnout of sheep would not occur until 350 pounds (air-dry-weight) per acre of ephemeral forage is available. The lessee would be required to remove sheep from

an area of the allotment if ephemeral forage production falls below 350 pounds per acre.
2. The last day of sheep use would be June 1.
3. Watering and loading and unloading would occur at established previously disturbed sites.

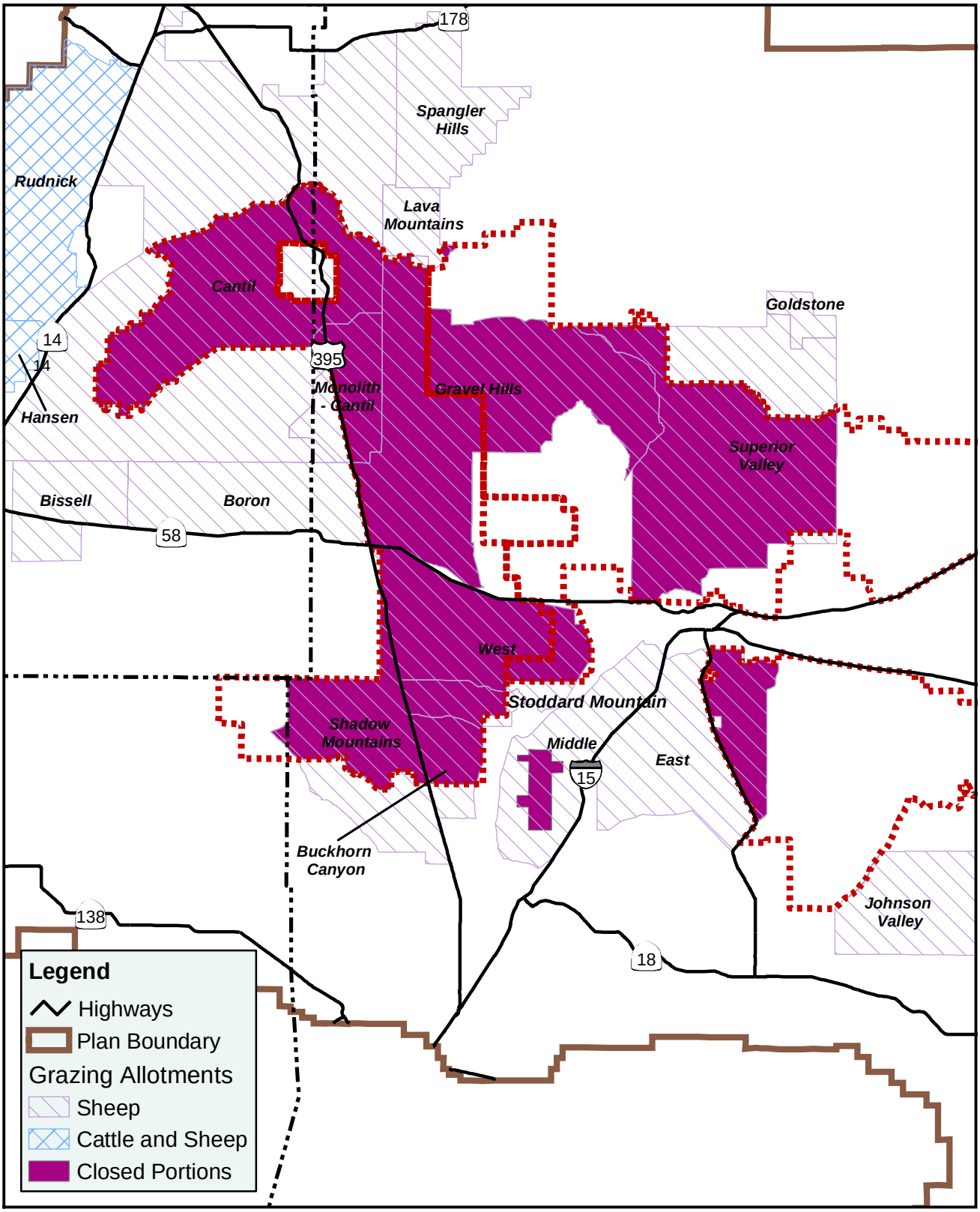
- (LG-28) Following plan adoption, the lessees would be given two years notification pursuant to 43 CFR 4110.4-2(b) before measures identified in Section 2.2.5.8 are implemented.

2.2.5.8 Voluntary Relinquishment of Cattle and Sheep Allotments

(LG-29) The BLM's CDCA Plan does not currently provide for voluntary relinquishment of BLM cattle and sheep allotments, but would be amended to allow for this action.

Voluntary relinquishment of a grazing permit or lease, combined with a decision in the West Mojave Plan designating selected public lands not available for livestock grazing, is an important method for achieving conservation goals for desert tortoise and other sensitive species. By itself, voluntary relinquishment has no effect on whether an allotment may be grazed. BLM may transfer the forage made available as a result of the relinquishment to a new permittee or lessee if grazing is an allowable use under the existing land use plan. Any qualified applicant can apply for the available forage. When combined with a land use planning decision designating public lands not available for livestock grazing, voluntary relinquishment can result in long-term reduction or elimination of grazing on public lands. Land use planning decisions are not irreversible, however, and a decision to designate lands as available or not available for livestock grazing can be changed through a subsequent plan amendment or revision.

Allotments or Portions of Sheep Allotments Not Available for Sheep Grazing



West Mojave Plan FEIR/S
Map 2-14

Scale: 1 : 800,000

0 10 20 30 Km

0 10 20 Miles

7/29/04

Upon approval of the West Mojave Plan, allotments identified for voluntary relinquishment would continue to be available for livestock grazing under the terms and conditions of the plan until: (1) a permittee or lessee submits a written request for voluntary relinquishment, (2) BLM and the permittee or lessee agree on a timeframe, and (3) BLM complies with all statutory requirements including issuance of a grazing decision in accordance with 43 CFR 4160.1 based on site-specific environmental review, consultation with affected parties, and such other procedures as may be required by statute or regulation. A grazing decision can be appealed.

BLM has been contacted by third parties who have expressed an interest in acquiring the grazing preference and permit/lease in the West Mojave planning area for purposes other than livestock grazing. Private parties may utilize a variety of financial arrangements and sale contracts to acquire ranches and transfer the associated grazing permit. BLM is not a party to these private agreements. While BLM may acknowledge an agreement in the planning process in connection with a voluntary request for relinquishment, BLM conducts its own analysis and makes its own independent decision about devoting public rangelands to a use other than livestock grazing.

BLM's decision whether to identify an allotment for voluntary relinquishment and subsequent designation of the public lands as not available for grazing is based on criteria set forth in the BLM Land Use Planning Handbook, H-1601-1, Appendix C. A separate plan amendment or revision will not be required where voluntary relinquishment is identified below as a management action for an allotment.

Grazing use would continue until the lessee voluntarily relinquishes its grazing preference and lease. Upon relinquishment, BLM would, without further analysis or notice: not reissue the lease; remove the allotment designation; assume any and all private interest in range improvements located on public land; and, designate the land within the allotment as no longer available for livestock grazing.

Voluntary relinquishment would only occur where the action would ultimately result in direct conservation benefits for special-status plant and animal species covered by the West Mojave Plan. Table 2-20 lists the grazing allotments and covered species that would benefit from this action. The BLM Handbook defines special status species as those that are listed as threatened or endangered, proposed for listing, or are candidates for listing.

Allotments identified as "Common" (e.g. Rudnick Common) are so-named because multiple lessees have grazing rights on those allotments, and several of them are identified for both cattle and sheep grazing. Lessees may request voluntary relinquishment of the portion of common allotments they are permitted to graze where use areas have been identified through an allotment management plan, or where management areas or pastures have been assigned by BLM in accordance with 43 CFR 4110.2-4. Where common allotments are not divided into use areas, voluntary relinquishment must be requested by all lessees permitted to graze the allotment.

Table 2-20
Special-Status Species That Would Benefit From
Voluntary Relinquishment of
Cattle and Sheep Allotments

CATTLE ALLOTMENT	SPECIAL-STATUS SPECIES
Cady Mountain	Desert tortoise, bighorn sheep
Cronese Lakes	Desert tortoise
Harper Lake	Desert tortoise, Mohave ground squirrel, desert cymopterus,
Ord Mountain	Desert tortoise, Mojave monkeyflower
Pilot Knob	Desert tortoise, Mohave ground squirrel, desert cymopterus
SHEEP ALLOTMENT	SPECIAL-STATUS SPECIES
Bissell	Desert tortoise, Mohave ground squirrel, alkali mariposa lily
Boron	Desert tortoise, Mohave ground squirrel, desert cymopterus
Buckhorn Canyon	Desert tortoise, Mohave ground squirrel
Cantil Common	Desert tortoise, Mohave ground squirrel, Red Rock poppy, Red Rock tarplant
Lava Mountains	Desert tortoise, Mohave ground squirrel
Monolith-Cantil	Desert tortoise, Mohave ground squirrel, Barstow woolly sunflower
Shadow Mountains	Desert tortoise, Mohave ground squirrel
Spangler Hills	Desert tortoise, Mohave ground squirrel
Stoddard Mountain, East	Desert tortoise, bighorn sheep, Mojave monkeyflower
Stoddard Mountain, Middle	Desert tortoise, Mojave monkeyflower
Stoddard Mountain, West	Desert tortoise, Mohave ground squirrel, Barstow woolly sunflower
CATTLE & SHEEP ALLOTMENT	SPECIAL-STATUS SPECIES
Rudnick Common	Desert tortoise, Mohave ground squirrel, Red Rock poppy, Red Rock tarplant, Kelso Creek monkeyflower, yellow-eared pocket mouse

2.2.6 Public Land Motorized Vehicle Access Network

2.2.6.1 Background

On June 30, 2003 The BLM issued a Decision Record that designated a network of motorized vehicle access routes in the western Mojave Desert, and amended the CDCA Plan to include the route network as a component of the CDCA Plan. This decision followed the publication, in March 2003, of an environmental assessment (EA) for the *Western Mojave Desert Off Road Vehicle Designation Project* ("Designation Project"). The Designation Project EA assessed the environmental effects of adopting the motorized vehicle access network developed

through the West Mojave planning process. Consideration of the access network in advance of the publication of the West Mojave Plan EIR/S was required to meet a court-mandated deadline for the BLM to issue a decision regarding route designation in the West Mojave plan area by June 30, 2003.

Because the motorized vehicle access network is also a component of the West Mojave Plan's conservation strategy, the analysis presented in the Designation Project EA was included in the West Mojave EIR/S. Comments regarding the network and suggested minor modifications were offered during the public review of the Draft EIR/S. This is important because the West Mojave Plan will also amend the CDCA Plan. Thus, the motorized vehicle access network that was incorporated into the CDCA Plan on June 30, 2003 could be modified by CDCA plan amendment at the time the West Mojave Plan is approved. For the Final EIR/S, Alternative A incorporates several minor network modifications that were suggested by the public during the review of the Draft EIR/S. These are described in Sections 2.2.6.7 and 2.2.6.8 (below).

Since 1980, when the CDCA Plan was adopted, BLM designated a number of motorized vehicle routes on public lands within the western Mojave Desert. The most far-reaching designation effort took place in 1985 and 1987, and encompassed most of the West Mojave planning area. Other significant route designations occurred both before and after 1985-1987 as part of various planning efforts, primarily in connection with the preparation of various ACEC plans, the Rand Mountains – Fremont Valley Management Plan and the "pilot" designation process for the Ord Mountain Planning Unit[5].

During the Designation Project, this existing network of designated motorized vehicle access routes was reviewed and, where necessary, revised prior to the second step of the process: the amendment of the CDCA Plan to incorporate the network of open and limited routes into the CDCA Plan. The following steps were taken:

- **Redesign Area -- Tortoise Critical Habitat:** Because most of the existing network was designated prior to the listing of the desert tortoise, the network was extensively revised within desert tortoise critical habitat. This involved field surveys to map existing vehicle routes, and the design of a route network that would provide motorized vehicle access, where appropriate and compatible with tortoise conservation.

- **Redesign Area -- Other Sensitive Locales:** Field inventories and the design of a route network compatible with sensitive resources were undertaken in the Middle Knob area.

- **Retention of Existing Route Network Elsewhere:** In all other areas, the existing motorized vehicle access network has been retained (excepting certain minor revisions and corrections, discussed below). These areas include the remaining portions of the 1985

5 In addition, in 2001, as stipulated by court order, BLM implemented an interim route closure within the Fremont, Kramer, Red Mountain, Newberry/Rodman and Superior subregions. These closures were to remain in effect until the issuance of a Record of Decision regarding route designation in the West Mojave, at which time they will be replaced by the route network that was adopted on June 30, 2003, together with any modifications of that network developed through the West Mojave Plan EIR/S.

and 1987 networks, the ACEC networks, the Rand Mountains – Fremont Valley Management Plan network and the Ord Mountain network.

The following discussion of the motorized vehicle access network is organized as follows:

- Criteria
- Methodology
- Take avoidance measures
- Competitive Event Corridors and Race Courses
- El Paso Collaborative Access Planning Area
- Juniper Subregion
- West Mojave EIR/S Route Network Modifications
- California Back Country Discovery Trail
- Implementation
- Modification of Route Network

2.2.6.2 Criteria

Within the redesign area, the route designation process employed successful aspects of past efforts, sought to avoid their pitfalls and involved the public extensively in its development. Consultation with the architects of past designation efforts, other land use planners and extensive conversations and meetings with the public identified a number of issues and concerns that needed to be addressed if a designation process were to be successful. As a result, it was decided to base the route designation revision on the following:

- A variety of data, including biological, cultural, and recreational resources, commercial uses and land ownership.

- Current ground-truthed maps that displayed not only route location, but also route type, use level, and recreational points of interest such as campsites and staging areas.

- A process that
  - Is standardized, repeatable and that can be logically followed.
  - Assesses each route on its own merits and issues, and documents that assessment.
  - Identifies desired future condition and implements a process to attain that condition.
  - Creates a system of routes that work together in positive synergy.
  - Systematically assesses both individually and cumulatively the effects of each route on biological, cultural and recreational resources, as well as the general access requirements of commercial and private property interests.
  - Establishes a clear link between the route designation decision and the rationale for that decision.
  - Involves the public and clearly incorporates their input.
  - Considers the history of use, public safety, the intensity and season of use and the effect of concentrating versus dispersing use.

- Takes into account the variety of recreational visitors by offering a variety of routes (e.g. 4WD vs. motorcycle).
- Considers the length of the typical visitor's stay by providing enough recreational opportunity for that stay (which would decrease route proliferation).
- Protects or maintains "feeder" and historic routes, as well as commercial and private property access.

The process would consider: (1) the level of impact of each route; (2) the number, density and intensity of use of each route and its relationship to habitat fragmentation and cumulative effects; and (3) ways to minimize the number and intensity of conflicting land uses (e.g. urban interface, noise, dust, visual impacts).

Recognizing and attempting to address the issues and concerns raised by the public represents only one, albeit very important, aspect to be considered in the development of a route designation process. A second aspect included compliance with statutory guidelines. An abbreviated summary of the primary legal requirements and their most important criteria relative to route designation is presented in Table 2-21.

A third principal aspect of a successful designation process is the inclusion of steps that ensure that the eventual system or network of routes helps significantly in achieving the desired future condition.

The final principal aspect is the inclusion of steps that carefully consider area specific planning issues and challenges, and then carefully weighs how management protocols designed to remedy those issues can best be implemented.

Table 2-21
Statutory Route Designation Criteria

STATUTE	PRINCIPAL GUIDING CRITERIA AFFECTING MOTORIZED ACCESS
FESA CESA	-Section 7 requires that the plan (i.e. "action") include steps to assist in the "recovery" of the federally threatened or endangered species.
NEPA CEQA	- Fully disclose to the public the purpose, the full range of issues and considerations (including environmental) and details of the proposed action and a reasonable range of alternatives to the public. -Carefully evaluate the cumulative effects of the proposed action. Such an analysis is to include: both the current situation, as well as the foreseeable future; evaluate both direct and indirect impacts both within the geographical borders of the action, as well as beyond and; include as part of its cumulative impact analysis not only an evaluation of biological and cultural factors, but also include an evaluation of economic and sociological factors (including recreation).
FLMPA	- Manage public lands on the basis of multiple use and sustained yield; resource values to be protected; certain lands are to be preserved in their natural condition; wild, as well as domestic habitat is to be provided for; provide for a balanced and diverse combination of recreational uses; provide for human occupancy and use; provide for economic uses (e.g. range, timber, minerals). - Comply with Section 601 provisions for the CDCA, including Congressional findings that (1) rare and endangered species of wildlife, plants and fishes and numerous archaeological and historic sites are "seriously threatened" by "pressures of increased use, particularly recreation use", and (2) BLM can and should provide present and future use and enjoyment "particularly outdoor recreation uses, including the use, where appropriate, of off-road recreational vehicles."
National Historic Preservation Act	-Protect identified significant cultural sites; -Confer with Native American Nations on project or action (i.e. Nation to Nation conference)
Code of Federal Regulations 43 CFR 8342.1	-Trails shall be located in a manner to minimize impacts to the physical resources (i.e. soils, watershed, vegetation, air and other resources) and to prevent impairment of wilderness suitability; -trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention would be given to protect endangered or threatened species and their habitats; -trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.
Taylor Grazing Act Mining Acts	-Guarantee the conditional issuance of permits allowing the use of public lands for livestock grazing and mining.
State Fish & Game Codes	-Establishes requirements protecting nesting birds of prey, particularly with respect to governing allowable levels of disturbance; -Establishes requirements protecting riparian habitat, particularly with respect to governing allowable levels of disturbance.

Landscape Factors: There are many factors that go into deciding which existing vehicle routes should be designated as open. The final designated route network needs to provide for the needs of public land users as much as possible while also minimizing potential vehicle use impacts. Routes that are retained as open are those that provide the best public access through public lands, routes that provide access to significant points of interest and those that have inherit value for recreational driving (i.e. a challenging 4-WD road through a scenic area).

The topography of the west Mojave region varies greatly from sandy bajadas to rugged rock mountains. The process of inventorying routes of travel revealed several observations that offer insight into the management of vehicle travel in the desert. Generally, it was found that

there was a higher density of routes in areas with steeper slopes and higher elevations than those without it. In flat bajada areas, routes were generally long and straight, leading from one destination to another, often from one set of hills to another. Routes traversing through hills and mountains tended to be shorter and windier. Routes in hills and mountains typically either circumnavigate the hills, wind their way to the top of the mountains for a view, or go to some destination such as a spring in a canyon, a mine, a cabin, etc. In some cases, the routes are there only to provide a challenging recreational opportunity. The mountains and hills also provide shelter; therefore, campsites were more prevalent where there was topography.

The development of the route network utilized these observations to provide access to these recreation destinations and opportunities while eliminating superfluous routes that did not add to the network by providing necessary access or opportunities.

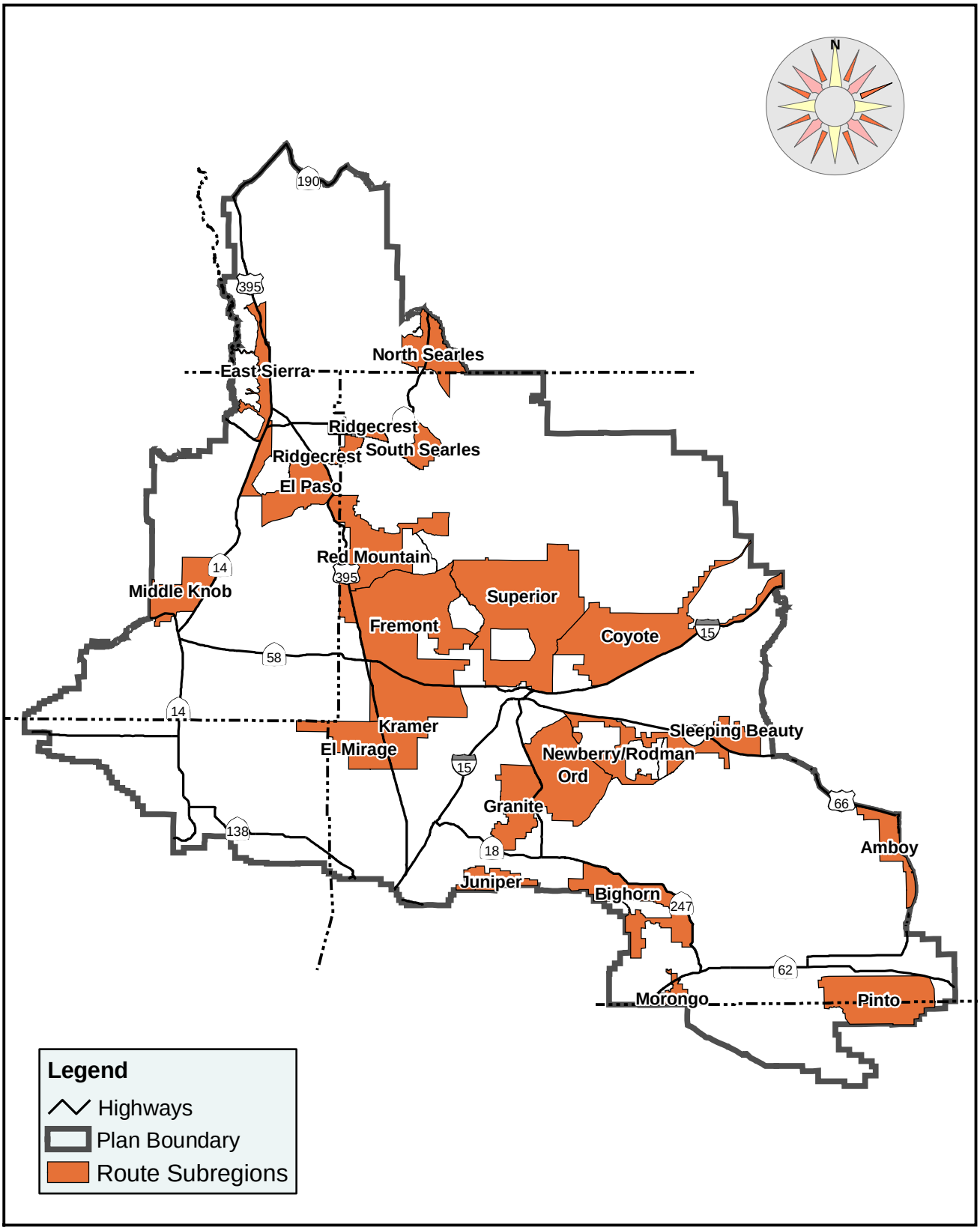
2.2.6.3 Route Designation Methodology

Given the enormity of the task of designating all motorized routes in the West Mojave planning area, the region was divided into manageable and recognizable route designation planning units. These included twenty-one "subregions," as well as the numerous ACECs for which designations have been completed, the Ord Mountain Pilot Area, and subdivisions of the remaining areas covered by the1985-87 designation effort (see Table 2-22, Map 2-14A and maps on attached compact disk). Each of the previous route designation efforts was assessed to determine its need for updating to ensure that its routes meshed smoothly with the network designated on adjacent lands.

Table 2-22
Route Designation Planning Units

SUBREGIONS	OTHER PLANNING UNITS
Amboy	Afton Canyon ACEC
Bighorn	Amboy Crater National Natural Landmark
Coyote	Barstow Woolly Sunflower ACEC
East Sierra	Bedrock Spring ACEC
El Mirage	Big Morongo Canyon ACEC
El Paso	Black Mountain ACEC
Fremont	Calico Mountain Early Man Site ACEC
Granite	Christmas Canyon ACEC
Juniper	Cronese Basin ACEC
Kramer	Desert Tortoise Research Natural Area ACEC
Middle Knob	Fossil Falls ACEC
Morongo	Great Falls Basin/Argus Range ACEC
Newberry-Rodman	Harper Dry Lake ACEC
North Searles	Jawbone/Butterbread ACEC
Ord	Juniper Flats ACEC
Pinto	Last Chance Canyon ACEC
Ridgecrest	Manix ACEC
Red Mountain	Mojave Fishhook ACEC
Sleeping Beauty	Rainbow Basin/Owl Canyon ACEC
South Searles	Red Mountain Spring (formerly Squaw Spring)
Superior	Rodman Mountains Cultural Area ACEC
	Rose Spring ACEC
	Sand Canyon ACEC
	Short Canyon ACEC
	Soggy Dry Lake ACEC
	Steam Well ACEC
	Trona Pinnacles ACEC
	Upper Johnson Valley ACEC
	Western Rand Mountains ACEC
	Whitewater Canyon ACEC
	1985-87 Inyo County
	1985-87 Cady Mountains

Route Subregions



West Mojave Plan FEIR/S
Map 2-14A

Scale: 1 : 1,750,000
0 10 20 30 Km
0 10 20 30 Miles

7/29/04

Redesign Areas: Based upon various new and significant concerns (e.g. desert tortoise and other sensitive species habitat) eleven of the sub regions were selected for detailed designation updates. These eleven sub regions are (from north to south): Ridgecrest, El Paso, Middle Knob, Red Mountain, Fremont, Kramer, El Mirage, Superior, Coyote, Newberry-Rodman and Juniper. The Red Mountain, Fremont, Kramer, Superior and Newberry-Rodman sub regions were selected because they include a large portion of the tortoise DWMAs, and because they are the subregions for which interim networks were established in response to court order. The El Mirage and Coyote sub regions were selected because they too are part of the tortoise DWMAs. The Middle Knob sub region was selected because of its diverse assemblage of threatened, endangered and sensitive plant species and Juniper sub region was primarily selected because of the interests expressed by the general public. Nine of the subregions were redesigned through the Designation Project. The Ridgecrest and El Paso sub regions would be designated as a Collaborative Access Planning Area, identified for additional follow-on planning (see section 2.2.6.6 below) because of their significant recreational opportunities, proximity to the City of Ridgecrest, and sensitive cultural resource and ecological values.

The first step in developing the route designations was to conduct a detailed field inventory in ten of the eleven subregions[6]. This inventory took place between September 2001 and March 2002, and recorded 4,422 miles of motorized routes. By utilizing sophisticated Trimble Pro XRS Global Positioning System (GPS) units, motorized routes were mapped for location to within sub-five meter accuracy. Coincident with the mapping of the routes, information was collected on the type of route (e.g. two-track versus single-track), route condition (e.g. graded vs. rough) and estimated level of use (based upon woody vegetative cover, e.g. low-intermediate to high-intermediate use). Additionally, the data dictionary used to collect route information was also designed to allow for the collection and storage of information about various points encountered along the route (e.g. campsites, staging areas, mine claims, utility facilities, etc.). These data collected by this field effort were downloaded into Geographic Information System (GIS) database where it could be integrated with other GIS coverages (e.g. desert tortoise data) to construct the maps that were then utilized as part of the route designation process.

Mileage of off highway vehicle routes mapped by the survey teams within each subregion follows; figures in parentheses are the miles of routes designated open by BLM in 1985 and 1987: Coyote 411 (178), El Mirage 292 (49), El Paso 465 (324), Fremont 582 (214), Kramer 642 (254), Middle Knob 91 (n/a), Newberry-Rodman 210 (142), Red Mountain 733 (234), Ridgecrest 328 (106) and Superior 668 (396).

Once the field data were collected, designation teams began the work of identifying a revised network of open, closed and limited routes. The eight surveyed subregions were divided into Motorized Access Zones (MAZ). These MAZs typically reflected areas with similar management issues or constraints. The boundary of each MAZ was delineated by routes of travel, highways, ACEC boundaries, environmental polygons of concern or topographical constraints.

6 The Juniper sub region was not subjected to a detailed field inventory prior to June 30, 2003 due to time constraints and the availability of existing route inventory data. In response to public comments, a detailed field inventory was conducted in the fall of 2003 and the network was redesigned; see Section 2.2.6.7 below.

Management issues and goals were identified for each MAZ. Whenever possible, areas with similar management goals or issues were delineated as one MAZ. Issues and goals address both the conservation of sensitive species and public access needs (including recreation, commercial and business concerns) (see Table 2-23).

Table 2-23
Motorized Access Zones (MAZ) Issues and Goals

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Coyote	MAZ-1	-Includes a portion of Paradise Valley, an area of greater than average tortoise sign. -Dispersed commercial mining interests.	-Facilitate tortoise recovery, giving special attention to lands in Paradise Valley and lands to the west and north of Coyote Lake. -Maintain access to active mine sites.
Coyote	MAZ-2	-Recognize historical use of Manix Tank route.	-Maintain access via the Manix tank route.
Coyote	MAZ-3	-Commercial mining interests.	-Maintain access to Alvord mine & other active claims.
Coyote	MAZ-4	-Active cattle allotment.	-Allow routes for the maintenance of the ranching operation and its facilities.
Coyote	ALL	-Dispersed private property. -Many non-competitive organized OHV events. -Communication & Electrical Transmission Tower Sites throughout region. - CBDT System planned through the sub-region. -Sub region is part of Desert Tortoise DWMA.	-Provide adequate private property access. -Maintain adequate route network for continuation of special events. -Provide adequate, non-redundant access for maintenance of numerous utility sites. -Allow for connectivity of the CBDT system through this sub region. -Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met.
El Mirage	MAZ-1	-Shadow Mtn's south side motorcycle routes create noise and visual impacts to the community of Shadow Mtn. -Shadow Mtn private property owners conflicts with off-road MC use. -Shadow Mtn communication towers.	-Close redundant routes and particularly those that are impacting community of Shadow Mtn. - Allow recreational opportunity while minimizing land use conflicts. -Provide adequate access for maintenance of communication towers
El Mirage	MAZ-2	-Edwards Bowl Management Plan Issues	- Address issues in the Edwards Bowl Plan to the extent possible.
El Mirage	ALL	-Area of occupied private lands known to have conflict with MC use. -Dispersed private property checker-boarded with BLM lands. -Tortoise DWMA: significant areas of greater than average tortoise sign. -The California Back Country Trail System would cross the sub-region. -Provide for continuation of non-competitive organized OHV events.	-Minimize private land use/ownership conflicts. -Provide adequate private property access. - Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
		-Dispersed private property.	opportunities in those areas with less desirable Desert Tortoise habitat. -Allow for connectivity of the CBDT system. -Allow for continuation of events where appropriate (i.e. with particular respect to Desert Tortoise concerns).
Fremont	MAZ-1	-Zone surrounds Harper Lake ACEC and abuts the southern portion of Black Mountain ACEC. -Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities. -The CBDT System is planned through the sub-region.	-Protect the intent of the ACEC and minimize creation of "volunteer" access routes into the ACEC. - Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in the more mountainous terrain found in portions of MAZs 3 and 4. - Allow for connectivity of the CBDT system.
Fremont	MAZ-2	-Includes Desert Cymopterus populations and CDFG lands set aside for its protection. -Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. Topography generally consists of slopes of less than 20%, conducive to tortoises but generally not as desirable for many recreational activities.	-Maximize protection for desert cymopterus populations. Minimize fragmentation of its range and maximize the integrity of the CDFG lands. - Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in the more mountainous terrain found in portions of MAZs 3 and 4.
Fremont	MAZ-3	- Abuts the western boundary of the Black Mtn. ACEC. - Location of long-term popular use by campers and motorcyclists, much of which is on/around mountainous terrain (i.e. slopes greater than 20%). -The CBDT System is planned through the sub-region.	- Protect the intent of the ACEC and minimize the creation of "volunteer" access routes into the ACECs. - Minimize route redundancy, yet provide enough network connectivity to minimize the creation of "volunteer" routes. - Allow for connectivity of the CBDT.
Fremont	MAZ-4	Zone is the location (e.g. "Hamburger Mill", Gravel Hills) of long-term popular use by campers, motorcyclists, etc. much of which is on/around mountainous terrain (i.e. with slopes greater than 20%).	-Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes.

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Fremont	MAZ-5	-Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities. -The CBDT System is planned through the sub-region.	-Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in the more mountainous terrain found in portions of MAZs 3 and 4. -Allow connectivity of the CBDT system through this sub region.
Fremont	ALL	-Provide for continuation of non-competitive organized OHV events. -Part of Desert Tortoise DWMA; significant areas of historic and current greater than average tortoise sign. -Dispersed private property.	-Allow for continuation of events where appropriate (i.e. with particular respect to Desert Tortoise, Desert Cymopterus and other T,E&S concerns). - Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Provide adequate private property access and minimize land use conflicts.
Kramer	MAZ-1	-Route proliferation from the adjoining private lands at Silver Lakes. -Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities.	-Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat
Kramer	MAZ-2	-Rock hounding and target shooting in the Kramer Hills -Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. -The CBDT System is planned through the sub-region.	-Allow access to historic rock-hounding areas, and consolidate and minimize the proliferation of shooting areas. -Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met -Allow for connectivity of the CBDT system.

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Kramer	MAZ-3	-Light use relative to other zones within Kramer. Many of the existing single-track routes created by competitive events in the 1970's before most of those activities were shifted over to the Open Areas. -Location of significant areas of current greater than average tortoise sign. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities. -The CBDT System is planned through the sub-region.	-Provide adequate private and commercial access and maintain intraregional network connectivity. -Eliminate routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat (e.g. portions of the more mountainous terrain found in MAZs 3 and 4). - Allow for connectivity of the CBDT system.
Kramer	MAZ-4	-Varied use, including dispersed camping from neighboring Hinkley into the Iron Mtns. -The CBDT System is planned through the sub-region.	-Provide varied opportunity and network connectivity particularly in those areas of rougher terrain. -Allow for connectivity of the CBDT system.
Kramer	ALL	-Part of Desert Tortoise DWMA: Zone is location of significant areas of historic and/or current greater than average tortoise sign. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities. -Sub region is the location of permitted non-competitive organized OHV events. -Dispersed private property.	- Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Allow for continuation of permitted non-competitive events where appropriate. -Provide adequate private property access and minimize land use conflicts.
Middle Knob		-Pacific Crest Trail passes through area. -Area known for high biodiversity. -Location of the very rare Kern buckwheat -Dispersed private property. -Location of significant wind-farm facilities.	-Allow access to the PCT; minimize conflicts with other uses. -Minimize real or potential impacts to sensitive species. -Avoid occupied habitat of Kern buckwheat -Provide adequate private property access and minimize land use conflicts. -Provide adequate access for maintenance of facilities (including fire protection).
Newberry – Rodman	MAZ-1	-Surrounds Wilderness Area. -Location of numerous Golden Eagle and Prairie Falcon nests.	-Provide wilderness access while minimizing motorized wilderness trespass. -Minimize the impact to nesting raptors.
Newberry – Rodman	MAZ-2	-Surrounds Wilderness Area. -Subject to ranching by permitees.	-Provide wilderness access while minimizing motorized wilderness trespass. -Minimize land-use conflicts (ranching-recreation-resource protection).
Newberry – Rodman	MAZ-3	-The CBDT System is planned through this zone. -Adjoins Wilderness Area.	-Allow for connectivity of the CBDT system. -Provide wilderness access while minimizing motorized wilderness trespass.

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Newberry - Rodman	ALL	-Part of Desert Tortoise DWMA. -Rock-hounding opportunity, sightseeing, and dispersed camping. -Dispersed commercial mines and private property.	- Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Allow for the diverse range of recreational opportunities, yet is protective of the resources by eliminating unnecessary and/or redundant routes. -Maintain adequate access to commercial and private properties.
Red Mountain	MAZ-1	-Location of historic popular use by miners, campers, motorcyclists, etc. -Much of this zone is mountainous terrain (i.e. with slopes greater than 20%).	-Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Recognize that better tortoise habitat is typically found in areas with slopes less than 20%; therefore allow for adequate recreational, commercial, private property access, yet eliminate duplicity in order to minimize impacts to physical, biological and cultural resources (43 CFR 8342.1).
Red Mountain	MAZ-2	-Substantial historic and current commercial mining activity. -Much of this zone is mountainous terrain (i.e. with slopes greater than 20%).	-Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Recognize that better tortoise habitat is typically found in areas with slopes less than 20%; therefore allow for adequate recreational, commercial, private property access, yet eliminate duplicity in order to minimize impacts to physical, biological and cultural resources (43 CFR 8342.1).
Red Mountain	MAZ-3	-Northwest portion of zone is location of historic popular use by miners, campers, motorcyclists, etc. -Southern portion of zone is location of historic high tortoise sign densities. -Location of Cuddeback Dry Lake, utilized by for commercial photography/filming, sight seeing, OHV recreation.	-Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Allow adequate access for commercial and recreational interests, but eliminate redundant routes in order to minimize impact to historically important tortoise habitat.

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Red Mountain	MAZ-4	-Northeast portion of this zone is mountainous (i.e. with slopes greater than 20%). -Northeast portion of this zone has dispersed occupied private in-holdings. -Zone partially encircles Wilderness Area.	-Recognize that better tortoise habitat is typically found in areas with slopes less than 20%; therefore allow for adequate recreational, commercial, private property access, yet eliminate duplicity in order to minimize impacts to physical, biological and cultural resources (43 CFR 8342.1). -Allow adequate private property access, yet minimizes land use conflicts. -Provide access to wilderness area in a manner that minimizes motorized incursions.
Red Mountain	ALL	-Part of Desert Tortoise DWMA. -Rock-hounding opportunities, sightseeing, and dispersed camping. -Dispersed commercial mines and private property.	- Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Allow for the diverse range of recreational opportunities, yet is protective of the resources by eliminating unnecessary and/or redundant routes. -Maintain adequate access to commercial and private properties.
Superior	MAZ-1	-Significant illegal dumping from the local community of Barstow. -Mountainous terrain interspersed with bajadas characterized by higher than average of tortoise sign. -Illegal activities (e.g. “party spots”, “meth” labs) due to proximity to urban areas. -Provides primary access to Rainbow Basin and Owl Canyon.	-Minimize illegal dumping (e.g. close short route spurs that do not serve camping, trailhead or other legitimate opportunities.) -Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Eliminate isolated loops or spurs that are not otherwise utilized for legitimate recreational or commercial use or private property access -Maintain access to these popular recreation areas (e.g. camping, equestrian, hiking, photography, geologic interpretation, etc.) in the most efficient manner possible in order to minimize habitat degradation. .

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Superior	MAZ-2	-Zone abuts the northeastern boundary of the Black Mtn. ACEC and eastern boundary of the Black Mtn. Wilderness Area. -Location of long-term popular use (i.e. just east of the very popular Gravel Hills area in the Fremont sub region) by campers, motorcyclists, etc. much of which is on/around rough terrain (i.e. with slopes greater than 20%). -Mountainous terrain interspersed with bajadas characterized by higher than average of tortoise sign.	-Protect the intent of the ACEC (i.e. to protect its cultural resources) and the wilderness area by minimizing the likelihood of the creation of new "volunteer" routes. -Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Facilitate tortoise recovery. -Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat.
Superior	MAZ-3	-Some of highest densities of tortoise sign in the planning area. Topography is generally with slopes less than 20%, conducive to tortoises but generally not as desirable for many recreational activities. -Abuts the eastern boundary of the Black Mtn. ACEC and southeastern boundary of the Black Mtn. Wilderness Area. -Includes the northwest portion of the Lane Mtn Milkvetch Conservation Area.	-Eliminate routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable desert tortoise habitat. -Protect the intent of the ACEC (i.e. to protect its cultural resources) and the wilderness area by minimizing the likelihood of the creation of new "volunteer" routes. -Minimize redundancy while providing enough network connectivity to minimize the creation of "volunteer" routes. -Provide adequate commercial and private property access. Provide adequate intraregional connectivity in recreational route network in order to minimize the proliferation of "volunteer" routes. Eliminate routes that are redundant and don't meet the above criteria. -Avoid Lane Mountain milkvetch
Superior	MAZ-4	-Northern portion is occupied by Paradise Valley, an area characterized by some of the highest historic and current densities of tortoise sign in the planning area. -Southern portion is characterized by both substantial historic and current commercial mining activity.	-Eliminate routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Maintain access to active mines and patented claims.

SUB-REGION	MAZ	MANAGEMENT ISSUES	GOALS
Superior	MAZ-5	-Includes West Paradise Valley Conservation Area. -Eastern portion of this zone is occupied by Paradise Valley, an area characterized by some of the highest historic and current densities of tortoise sign in the planning area.	-Provide adequate commercial and private property access. -Provide adequate intraregional connectivity in recreational route network in order to minimize the proliferation of "volunteer" routes. -Eliminate routes that are redundant and don't meet the above criteria. -Eliminate routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable desert tortoise habitat. -Avoid Lane Mountain milkvetch
Superior	ALL	-Sub region is part of Desert Tortoise DWMA. -Sub region is known for rock-hounding opportunity, touring of old mines, sight-seeing, and dispersed camping. -Dispersed commercial mines and private property. -Includes portions of the CBDT System. -Location of permitted non-competitive organized OHV events.	- Facilitate Desert Tortoise Recovery: Eliminate redundant routes, particularly those that are determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities is determined to already be adequately met or better met by maintaining recreational opportunities in those areas with less desirable Desert Tortoise habitat. -Allow for a diverse range of recreational opportunity, yet be protective of the resources by eliminating unnecessary and/or redundant routes. -Maintain adequate access to commercial and private properties. -Allow for connectivity of the CBDT system through this sub region. -Allow for continuation of permitted non-competitive events where appropriate.

Using 1:24,000 scale maps of each MAZ, the designation team was able to make full use of background data while determining whether a given route should be opened or closed. These data included existing as well as potential environmental concerns that might constrain a route network, such as:

- T&E and sensitive species and their habitats,
- Sensitive cultural sites,
- Highly erosive soils,
- Private property (to assess access needs as well as potential land use conflicts), and
- Commercial operations (e.g. ranching, mining and utility sites).

Access needs and other land use data were also mapped, including the following:

- Route information (e.g. route type [e.g. two-track vs. single track], condition [e.g. graded, rough, technical] and use level),
- Recreation point data (e.g. campsites, staging areas, viewpoints, rock hounding areas),
- Topographical and hydrological information (seeps, washes, springs, water tanks)
- Commercial information (mining sites, claims, debris), utility lines and facilities, ranching facilities (water tanks, out buildings) and land ownership (private, state, military, BLM).

A discussion of how data were managed is presented in Appendix R, Section R.1.

Maps also indicated areas of high biological importance ("biology polygons") and areas of high human disturbance ("disturbance polygons"). The basis for these two mapped units is described below:

- **Biology Polygons:** These were created using recent field survey data gathered from the proposed tortoise DWMAs. The polygons identify areas where tortoise sign (scat, burrows, live animals) was higher than average. Within biology polygons, special emphasis was to be placed on eliminating routes determined to be unnecessary for commercial or private property access or whose contribution to recreational opportunities was adequately or better met by maintaining recreational opportunities in other areas with either less tortoise sign or habitat of lesser quality.

- **Disturbance Polygons:** These were also created from recent field survey data. The polygons indicated areas within the DWMAs where the amount vehicle-related/dependent disturbance (roads, trails or tracks; dumping; evidence of shooting) was greater than average. Route designation within these polygons was conducted with a goal of reducing vehicle-related disturbance by closing redundant or unnecessary routes. Access would be provided to private property and commercial sites, but only at a level that would meet minimum requirements. Route redundancy was also taken into account, not only for private property and commercial access needs, but also for recreational opportunity. A route was closed if its contribution to recreational opportunities was better met by maintaining recreational opportunities in other areas with either less tortoise sign or habitat of lesser quality.

The next step involved the identification of a motorized vehicle access network using a decision-tree process (see Appendix R). BLM staff and management first reviewed each sub region and MAZ. Past, present and future management concerns and issues were considered, including the effect the use of various motorized routes was having on natural resource conservation, the distribution of recreation, types of recreation, resource impacts, law enforcement issues, land use conflicts, mineral development, livestock grazing and maintenance issues. Consideration also focused on changing use patterns and trends, specific problem areas and the effect of routes on adjoining non-BLM lands (e.g. Silver Lakes, El Mirage property owners). Based upon this, the decision tree was applied.

The decision tree was applied to each of about 5,200 enumerated vehicle routes within the redesign area. For each route, the decision tree poses a series of questions, which fall sequentially into the five following categories: (1) legal easements and rights-of–way; (2) T&E species; (3) other environmental issues; (4) the special qualities of a route, including safety concerns, recreational qualities and user conflict; and (5) route redundancy. The manner in which each question is answered determines which decision tree "limb" or pathway is followed. Footnotes to the tree identify other concerns that need to be taken into consideration as each question is answered. By following a decision tree pathway, the route designator would reach a recommended designation of "Open" or "Closed." Each answer is alphanumerically coded such that the exact sequence of questions, as well as how they were answered, can be recorded for each vehicle route. These codes then enable each recommended decision to be easily entered into a database for future use and analysis. The result was a systematic, documented and repeatable framework for the evaluation of each route. Appendix R includes a table that summarizes the reasons why each of the enumerated routes that were changed from the decisions in the Designation Project was recommended as open or closed.

Redesign Mileage: Total miles of recommended open routes within the redesign area's subregions follows – Coyote 255, El Mirage 91, Fremont 372, Juniper 97 (including 24 miles designated as limited) , Kramer 362, Middle Knob 83, Newberry-Rodman 171, Red Mountain 362 and Superior 417, collectively 2,265 miles. This compares to 3,604 miles surveyed, and 1,575 miles designated open by BLM in 1985-87 (a designation based upon a survey that did not record single-track routes).

Public Lands Not Included in Redesign Area: Lands outside the redesign area were reviewed to ensure that they were compatible with the West Mojave Plan's conservation strategy and were in compliance with federal regulations (specifically, 43 CFR 8342). In some cases, minor adjustments were necessary due, in part, to the comparatively incomplete nature of the field survey conducted for the 1985-87 network, which lacked modern GPS equipment and which did record many technical 4WD and motorcycle routes. Some examples of this updating follow:

- *North Searles Sub Region:* Route designations were updated to take into consideration changing visitor use patterns. To allow loop tours of the area by day users (e.g. picnickers), some new short routes were added. The addition of these short routes is intended to minimize some route proliferation through sensitive resources that is occurring as a result of the public's effort to create looping opportunities.

- *El Mirage Sub Region:* Route designations were altered to address land use conflicts between private property owners and public recreationists on BLM lands. A few routes that were designated open as part of the Edwards Bowl Plan were closed because of the manner in which they might inadvertently direct the public onto adjoining private lands. In order to maintain the looping touring recreation opportunities provided by those closed routes, other routes that had been designated closed by the Edwards Bowl Plan were opened. The net effect of these changes should be decreased conflicts between the private property owners and the public recreating on BLM lands.

This action was carried out in accordance with 43 CFR 8342.1(3): *Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.*

- *El Mirage Sub Region:* Route designations were altered to address new information regarding desert tortoise distribution. Specifically, those routes in areas of higher than average tortoise sign that were located on bajadas and that did not provide necessary access to private property or commercial interests (e.g. active mines) or that did not serve as intra- or inter-regional connectors for recreational opportunity were designated closed. However, those non-redundant routes above the bajadas, generally on slopes greater than 20% were designated open to provide greater recreational opportunity (e.g. on the northern and eastern shoulders of the Shadow Mountain complex).

- *Black Mountain ACEC:* Route designations were altered to reflect new route information gathered during the 2001 field inventory of the adjoining Fremont and Superior sub regions. Along the mountainous western boundary of this ACEC a few routes previously designated closed were re-designated as open. These minor alterations would create a route system or "network" that would have fewer dead-ends and greater inter connectivity between routes (e.g. more looping route opportunities). This part of the Fremont sub region is a very popular recreation area with a higher probability of route proliferation and incursions into sensitive areas (in this case cultural). Past experience has shown that by providing route systems that are interesting, challenging and logical as networks, compliance level can be substantially increased. These changes should result in greater compliance in spite of the increased use that this area is experiencing.

- *Edge-matching Designation Boundaries:* At twenty-five locations, the ACEC, 1985-87 and 2002 networks bounded each other. It was necessary to adjust the location of some routes at the borders to ensure that these networks, developed at different times and based upon differing field information, would constitute a single seamless and consistent motorized vehicle access network. This effort took into account the latest information concerning recreation uses and patterns, as well as new resource concerns (e.g. recently listed T&E species).

Maps of the Proposed Off Road Vehicle Designations: Appendix R includes a compact disk on which are maps of all proposed West Mojave Off Road Vehicle Designations. The maps depict the "No Action" network (the network adopted by BLM on June 30, 2003) and the "Proposed Action" network (incorporating minor modifications made in response to public comments on the Draft West Mojave EIR/S (see sections 2.2.6.7 and 2.2.6.8, below).

Total Mileage: Alternative A recommends a route network that includes 2,265 miles of open routes within the redesign area, 159 miles within the Ord Pilot region, 406 miles within ACECs for which route networks were designated after 1980, and 2,268 miles of remaining 1985-87 designations, or 5,098 miles overall, a total that includes single-track motorcycle routes. This compares to 4,260 miles currently designated open, although that network does not include all

single-track routes (many of which were not surveyed in 1985-7) and provided little or no designations for the Middle Knob, Amboy and Ord subregions. Proposed mileage of non-motorcycle routes in higher density tortoise population areas (see Chapter 3) would be 384, a decrease from the 439 miles currently open. The 406 miles within the ACECs would be a decrease from the current 427.

2.2.6.4 Take-Avoidance Measures

During 1998 meetings between the West Mojave Team and the wildlife agencies, management prescriptions were identified to facilitate motorized vehicle access in ways that are compatible with resource protection, recovery of listed species, and conservation of species covered by incidental take permits. The intent of these prescriptions was to decrease tortoise mortality associated with dirt roads and to minimize habitat degradation. Prescriptions follow:

Open Routes: (MV-1) Routes designated open would be available for a variety of use including commercial, recreational, casual access, and non-competitive permitted uses. No motorized vehicles would be allowed to travel off of designated routes, except in emergency situations, or with the explicit permission of the BLM, or as specifically noted below.

Speed Limits: (MV-2) With respect to speed limits on unimproved roads, current law would apply. Basic Speed Law (38305) of the 2001 Vehicle Code, Traffic Laws states: "no person would drive an off-highway motor vehicle at a speed limit greater than is reasonable or prudent and in no event at a speed which endangers the safety of other persons and property.

(MV-3) In DWMAs, there is no proposal to install speed regulators. However, if monitoring or studies show that certain unimproved roads are causing increased tortoise mortality, the Implementation Team should coordinate with BLM, county road departments, and others to consider ways, including speed regulators, to reduce or avoid that mortality.

Washes: (MV-4) On public lands, motorized vehicle travel in washes would be allowed only in those washes that are designated as "open routes" and signed as appropriate.

Stopping, Parking and Camping: (MV-5) Within DWMAs, on public lands administered by the BLM, (1) Motorized-vehicle-based camping would be allowed in previously existing disturbed camping areas adjacent to motorized vehicle routes designated "open," and (2) Motorized vehicle stopping and parking would be allowed within 50 feet of the centerline of the designated route.

(MV-6) Outside DWMAs, on public lands administered by the BLM, motorized vehicle stopping, parking and camping must occur within 300 feet of vehicle routes designated as open in accordance with existing regulations, which state that "no one may operate an off-road vehicle on public lands in a manner causing, or likely to cause significant, undue damage to or disturbance of the soil, wildlife, and wildlife habitat, improvements, cultural or vegetative resources or other authorized uses of public lands." Stopping, parking and camping must be accomplished in such a manner as to curtail uncontrolled widening of routes and to deter undue degradation of sensitive or fragile resources.

Volunteer Clean-ups and Projects: (MV-7) From time to time various groups volunteer to organize and complete various projects. These projects include the removal of trash and debris on desert lands, the installation of signs, fencing, barriers, and routine maintenance activities. Each of these projects require individual project NEPA compliance documents that often limits the projects that can be completed and the efficiency of the use of these volunteers. Standard programmatic stipulations follow. They are intended to allow these activities to go forward without separate NEPA documentation.

2.2.6.5 Competitive Event Corridors and Race Courses

Johnson Valley to Parker Race Corridor: The Johnson Valley to Parker race corridor would be retained. Routes designated open would enable the Johnson Valley to Parker race to continue as a permitted organized event, including the portion of the route within the proposed Pisgah Crater ACEC. Organized events such as this race require the issuance of a "special event permit" which would allow for the event as long as certain conditions are met. These conditions may address a number of concerns, including specific stipulations from the CDCA plan, as well as law enforcement, sanitation, safety and resource protection, and any necessary minor modifications of the route. One condition for use of the Johnson Valley to Parker corridor would apply where the route borders the edge of this DWMA: events at this location would be run subject to "yellow flag" conditions.

Stoddard Valley to Johnson Valley Connector Route: The existing competitive event corridor would be deleted, and replaced by a connector route. The connector route would be located on routes designated as open. Competitive events may be held that have a split venue, with one portion of the event located in the Stoddard Valley Open Area, and the other portion of the event located in the Johnson Valley Open Area. The Stoddard to Johnson Connector Route would provide a means for competitors to travel in a limited-speed, non-competitive manner from one open area venue to the other across the Ord-Rodman tortoise DWMA. Yellow flag conditions would apply and be strictly enforced.

Barstow to Vegas Race Course: In December 2002, the Record of Decision for the BLM's Northern and Eastern Mojave Plan amended the CDCA Plan to eliminate the portion of the Barstow to Vegas course located within the NEMO planning area, that is, the eastern three-quarters of the route. Accordingly, under Alternative A, the CDCA Plan would be amended to eliminate the western fragment of the old course.

2.2.6.6 El Paso Collaborative Access Planning Area

(MV-8) The public lands within the El Paso Mountains and Ridgecrest subregions possess many unique recreational attractions, and are located immediately adjacent to the City of Ridgecrest. As a result, these two subregions are very popular with the recreating public. Opportunities to encourage the growth of eco-tourism, special OHV events and commercial filming in this area could benefit the local economy. These two subregions also possess many sensitive and important natural and cultural features, including a National Register District and habitat for the state-listed Mohave ground squirrel and other sensitive species. Finally, there are a

number of private access needs that need to be addressed, including private parcels, commercial operations (such as quarries), and permitted facilities (guzzlers, water tanks, stock ponds and communications sites). Due to all of these factors, local community interest in the nature of the motorized access to be provided is very high.

The BLM, therefore, would establish the El Paso Collaborative Access Planning Area (El Paso CAPA) for the El Paso Mountains and Ridgecrest subregions. A motorized vehicle access network would be designed for the El Paso CAPA through the collaboration of the BLM with local jurisdictions (including the City of Ridgecrest and the County of Kern) and the general public. The intent is to adopt this network as a component of the CDCA Plan by no later than December 31, 2006.

The process would be conducted subject to certain biological and cultural resource criteria that would assure that the routes to be designated as open, closed, or limited would follow the principles of species and habitat protection used in the West Mojave Plan. These "sideboards" to the process are listed below:

- Adequate protection of raptor nests, particularly golden eagle and prairie falcon;
- Adequate protection of the Red Rock poppy and Red Rock tarplant, two species endemic to the El Paso Mountains;
- Protection of riparian habitat at water sources, both natural springs and artificial water sources (guzzlers) by use of the limited designation for routes of travel, and
- Protection of riparian habitat adjoining significant roosts for Townsend's big-eared bat (if any roost sites are located).
- Full compliance with the National Historic Preservation Act, and the cultural resources element of the California Desert Conservation Area Plan.
- Protection of significant cultural resources, including those listed in the National Register of Historic Places or within the boundaries of the Last Chance Canyon National Register District and Area of Critical Environmental Concern.
- Protection of unevaluated cultural resources until their significance has been determined through formal evaluation.
- Protection of the cultural landscape within the El Paso Mountains;
- Protection of significant fossil-bearing units within the El Paso Mountains.

The West Mojave Plan's Record of Decision would amend the CDCA Plan to adopt the existing 1985-87 network for the El Paso Mountains and Ridgecrest subregions, pending the completion of the collaborative planning effort.

A timeline for completing the El Paso CAPA process follows.

- December 31, 2005: Revised motorized vehicle access network developed through the El Paso CAPA process for the El Paso Mountains and Ridgecrest subregions.
- December 31, 2006: Subsequent NEPA analysis completed and Record of Decision signed, amending CDCA Plan to adopt the network developed through the El Paso CAPA process.

2.2.6.7 Juniper Subregion

The BLM's June 30, 2003 Decision Record for the Western Mojave Desert Off Road Vehicle Designation Project adopted a 152-mile route network for the Juniper subregion, a network that replaced the existing route network designated as part of the 1985-87 route designations (see above). This network was based upon information gathered during the 1985-87 effort, subsequent collaborative work with the general public, office records and aerial photography taken in 1996. This subregion was not included in the 2001 and 2002 field inventory due to a shortage of funds.

Draft EIR/S Comments: During the public review of the Draft West Mojave Plan EIR/S, many comment letters were received on the Juniper subregion. The comments and BLM review made it apparent that the designations from the 2003 Western Mojave Desert Off-Road Vehicle Designation Project were inadequate for both resource protection and recreational experience. In some cases, unauthorized routes, such as hill climbs and routes through riparian areas were designated as open. In other instances, popular riding routes were closed.

To resolve these shortcomings, BLM commissioned a field inventory of all active routes of travel in the Juniper subregion. This inventory, comparable to the 2001 and 2002 field inventories conducted for the redesign area, provided much higher quality information on which to base route designation decisions. The inventory identified 164 miles of existing routes. Each route was mapped with Global Positioning System devices, and attributes describing the routes were assigned. Attributes included single track, rough dirt road, good dirt road, graded road, hill climbs and other features. BLM also conducted an inventory of all water sources in the subregion, in the major drainages and at many isolated seeps and springs.

Additionally, BLM initiated a comment clarification process where Draft EIR/S commentators were brought together to discuss the issues raised in their comment letters. Three meetings were held, first to introduce the clarification process and to explain the new ground-truthing effort, secondly to share the inventory results and finally to share and receive further comments on preliminary route designation recommendations.

Several commentators requested a separate planning effort for the Juniper subregion, similar to the El Paso Collaborative Access Planning Area (see Section 2.2.6.6). This request was denied for several reasons including:

- The past deferral of a Coordinated Resource Management Plan had only led to confusion, distrust and dissatisfaction with BLM planning process.
- Route designations could be addressed through the new intensive inventory and route assessment effort completed prior to release of the final EIR/S.
- Implementation of route management in the Juniper subregion would be deferred if route designation were deferred to a later date. Uncontrolled use and confusion over allowable routes of travel requires a more prompt response.
- There was no identified source of funding for a separate route designation effort for the Juniper subregion.

- After route planning is completed, the Barstow Field Office may initiate a separate activity level plan for implementation. This plan would address specific route and recreation management issues including the development of trailheads, equestrian and hiking trail networks and the specific identification of motorcycle, ATV and 4X4 routes. Signing and route maintenance would be an important component of the implementation plan.

Issues Considered During Redesign of Juniper Network: Following the completion of the field inventory, the BLM redesigned the network of motorized vehicle access routes within the Juniper subregion. The decision tree methodology (see above) was applied to the Juniper subregion, using the data collected during the fall 2003 field survey. BLM addressed a number of access and resource protection needs during this process. These included the following:

- *Livestock Grazing:* The maintained roads provide access to the private ranches. Most of the subregion is also within the boundaries of the Round Mountain grazing allotment. Safe access is required by the rancher in conjunction with his winter cattle grazing operation and access to range improvements.

- *Commercial Access:* There is a need to provide for commercial access throughout the area. A major power transmission line bisects the Juniper sub-region. Access on the accompanying utility route is important for the inspection and maintenance of the utility system and as a major thoroughfare for recreationists.

- *County Maintained Roads*: BLM recognizes that roads within the County system will be designated as open where they cross public lands. This includes Bowen Ranch Road, Juniper Flats Road and Oak Springs Road.

- *Minimum Impact Recreation:* Access is needed for recreationists participating in hiking, bird watching, photography and other such recreational pursuits. The subregion is popular with equestrians, which require access and parking sufficient for horse trailers.

- *Deep Creek Hot Springs:* Safe access is required for the trailhead to Deep Creek Hot Springs, which is visited annually by hundreds of people from throughout the United States and other countries. Access to the Deep Creek Hot Springs has been a continuing issue for both the BLM and USFS. Access from the south traditionally was provided across private lands and through the Moss Mill site. The Moss Mill site was a 17-year occupancy trespass case that was resolved in December 1999 when a court order was obtained from the US District Court, Central California District in Los Angeles. The occupants were removed, the structures destroyed, and the area rehabilitated. The road into the trespass site crossed private land for approximately 0.3 miles before entering public land. Once the trespass had been resolved, the landowner fenced the property at Bowen Ranch Road and obliterated the road that crossed his private property. Since the Moss Mill site had such a long, involved history of problems, and since the road that remained on public land had no further utility and was not consistent with management goals for the area, the road was fenced at the south end and has since overgrown.

- *US Forest Service Routes:* A network of open routes around the Bowen Ranch and Los Flores properties provides access to the US Forest Service trailhead leading to Deep Creek Hot Springs. Those routes tie into the Forest Service route designated as 3N59A from several different directions. Forest Service route 3N59A includes a parking area at the trailhead.

- *Riparian Sites:* BLM has the responsibility of protecting the important riparian sites in Arrastre Canyon, Grapevine Canyon and at several isolated springs. A number of public comments addressed this issue. Although no listed species are known to occur within the Juniper subregion, the endangered least Bell's vireo could establish nest sites in the riparian areas if its population increased sufficiently. The nearest populations are in the Mojave River flood plain in Victorville and the numbers appear to be increasing.

  BLM contracted bird surveys in Arrastre and Grapevine Canyons in 2001 (Laymon, 2001). Sixty-one species were detected in Grapevine Canyon, of which 33 were probable breeders. Lower Arrastre Canyon supported 64 species (44 probable breeders) and upper Arrastre Canyon 58 species (41 breeders). Each of these sites was important to gamebirds, especially California Quail, Mountain Quail and Mourning Dove. Neotropical migrants were fairly abundant, and some nested at these locations.

- *Terrestrial Species:* Terrestrial species covered by the West Mojave Plan include the gray vireo and the Sand Diego horned lizard. The Devil and Willow fires damaged most of the gray vireo nesting habitat (junipers and large shrubs), though it will eventually recover. The horned lizard is a vehicle-sensitive species found throughout the area, but appears to prefer the flatter terrain with fewer rock outcrops where ants are more abundant.

- *Cultural Resources:* Vehicle disturbance must also avoid the known archaeological sites within the Juniper Flats ACEC. The most significant sites may be associated with the riparian areas, such as Cottonwood Spring. This specific site is fenced to prevent livestock and OHV intrusion.

- *Motorcycle Recreation:* An additional important need of the route network is to provide for recreation opportunities for local motorcycle riders. The Juniper subregion is sandwiched between the towns of Hesperia, Apple Valley and Lucerne Valley and the San Bernardino National Forest. According to past studies by the California Department of Parks and Recreation, over 13% of Californians participate in OHV use. Preliminary results of an update of this study show an increase to 18% of Californians. Local residents rely on the subregion for a place to ride their motorcycles and to access the National Forest. BLM has designed various temporary route networks for the Juniper subregion that have not included single-track motorcycle routes. In each instance, achieving compliance with these networks was difficult. BLM worked with local motorcycle recreationists to identify a few motorcycle routes that provide a challenging and satisfying experience. An honest and open approach to understanding and accommodating the needs of these visitors has significantly increased compliance with route use.

The single-track route numbered J1299 in the June 2003 Decision Record for the Western Mojave Desert Off Road Vehicle Designation Project was the subject of many comments on the Draft West Mojave plan EIR/S. BLM has reviewed this route carefully, considering the issues of the cultural resources within the ACEC, adjacent private land, Forest access and connectivity to other routes. The decision to continue to designate this route as Open reflects all facets of the controversy and need for recreational access. Barstow Field Office staff will monitor the use of this route to insure compliance, i.e. that vehicles are not straying from the designated route.

Revised Juniper Subregion Route Network: The final recommendation designates 73 miles of routes as open for use by all motorized vehicles and 24 miles of routes as limited to the use of single-track vehicles only (e.g. motorcycles). The remaining 67 miles of inventoried routes would be closed. The intent of the single-track vehicle limitation is to ensure that these existing narrow routes are not widened by long-term four-wheel drive vehicle use while providing the recreational touring loops desired by motorcycle users. Organized competitive events would not be allowed to use these routes.

The combined total of 97 miles of open and limited routes is 29 miles less than the 126 miles of routes opened by the 85/87 route designations and is 55 miles less than the 152 miles opened by the route network adopted by BLM's June 30, 2003 Decision Record.

The revised network is depicted on Proposed Action route network maps 69, 70, 72 and 73, on the attached compact disk. The re-inventory of routes necessitated new RJ (Revised Juniper) numbers for each route while discarding the previous numbering system.

2.2.6.8 Other Route Network Modifications

In addition to the Juniper Subregion, public comments received during the review of the Draft EIR/S suggested a number of minor modifications of the route network adopted by BLM on June 30, 2003. Those suggestions have been considered and the following would be incorporated into the West Mojave motorized vehicle access network:

- **Barstow Woolly Sunflower Conservation Area:** All or portions of routes F2053, F2077 and F2079 would be closed to enhance the effectiveness of the proposed conservation strategy (one mile total).

- **Lane Mountain Milkvetch Conservation Area:** All or portions of routes SU5042, SU5048, SU5061, SU5071and SU5077 would be closed to enhance the effectiveness of the proposed conservation strategy (six miles total).

- **Pisgah Conservation Area:** All or portions of routes NR3062C and NR3064 would be closed to enhance the effectiveness of the proposed conservation strategy (three miles total).

- **Haiwee Reservoir Eastern Access:** An existing, undesignated nine-mile route providing access to the eastern side of Haiwee Reservoir would be designated as opened.

- **Competition "C" Routes:** Many commentators suggested that the Ridgecrest Field Office's network of competition, or "C" routes, be retained, as proposed by Draft EIR/S Alternative E. A portion of the "C" route network would be retained, including the majority of "C" routes located to the northeast of the Spangler Hills Open Area (approximately 20 miles). The "C" routes formerly located adjacent to the southern boundary of the Spangler Hills Open Area would not be adopted; however, about ten miles of new open routes would be provided in this area to provide touring loops and access connections. In total, about fifteen miles of new open routes would be designated and twenty miles of open routes would be designated as "C" routes.

  To offset this, approximately thirty-five miles of currently open routes within the Fremont-Kramer tortoise DWMA (Red Mountain subregion) would be closed.

  The revised network, together with "C" routes, are depicted on Proposed Action route network maps 14, 18, 19, 22, 23 and 26, on the attached compact disk.

2.2.6.9 California Back Country Discovery Trail

Certain segments of the open route network would be nominated for inclusion by the California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation Division (OHMVRD) as part of the California Back Country Discovery Trail (CBDT), a part of the California Statewide Motorized Trail System. The CBDT is a system of existing motorized routes that when formally designated would offer long distinct backcountry touring opportunities from Mexico to Oregon and throughout the state of California. Utilizing an OHVMRD grant, the BLM California Desert District commissioned a study that identified a proposed system of routes for inclusion as part of the CBDT. That proposed system of routes would be included as a component of the West Mojave Plan.

2.2.6.10 Implementation

(MV-9) Past experience in the West Mojave has generally shown that the most effective signing protocol (i.e. greatest public compliance) is one in which the routes designated open would be signed. Closed routes would not be signed and would either be reclaimed naturally or vertically mulched. Due to monetary and staffing constraints, as well as the remoteness of much of the West Mojave region, most of the routes designated closed would be left to natural reclamation. In those areas where environmental concerns are more profound (e.g. in areas where the amount of tortoise sign is above average or within the desert tortoise biology polygons) or where the intensity of use is such that it is necessitated, vertical mulching to the line-of-sight would be favored over natural reclamation.

Each BLM Field Office would prioritize the areas (e.g. sub regions, MAZs) and the routes to be addressed first. The range of actions and their intensity would vary based upon a number of factors (assessed need, available resources) and could include law enforcement, various forms of public education and other means, as well as signing and vertical mulching. A BLM Field Office might choose to involve the public as it prioritized these efforts and could employ options like those discussed below for monitoring route needs or prioritizing the maintenance of routes.

Discussions regarding route implementation and maintenance often prematurely place too much emphasis on route rehabilitation. Although rehabilitation has its place in the set of "tools" available to a field maintenance crew, it should only be undertaken after other route maintenance options have been exhausted. Delaying rehabilitation of routes in favor of more proactive maintenance steps is necessary if a field maintenance team is to successfully avoid the pitfalls of engaging in a program (such as rehabilitation) that can quickly become a "black hole" for scarce personnel and resources (e.g. heavy equipment, plant material). Placing premature emphasis on rehabilitation often creates its own set of new larger logistical problems, reducing if not eliminating any chance of successful implementation. Although the rehabilitation of routes would always remain an option, due to the requirements of extensive commitments of staff and resources it should not be called upon until other more proactive means of route maintenance are exhausted.

The implementation of the route system and its maintenance would begin with a first phase consisting of route management actions such as:

- Open route signing.
- Open route maintenance, with an emphasis on making the open network of routes more obvious and attractive to use than the closed routes. Existing park ranger and maintenance staff would do this during route signing and sign maintenance.
- Hand raking and disguise of prominent closed routes, including lining small rocks across closed routes to help discourage use.

Route rehabilitation work would begin only as a second phase on those routes where the first phase has not proven to be successful or where route conditions were clearly beyond the capability of the first phase to address. Although rehabilitation is recognized as a second phase, planning for this phase, including the securing of funding, should begin early. Having route designations in place would enhance the availability of funds, and would allow the BLM to pursue external sources of rehabilitation funding such as OHMVR, the National Fish and Wildlife Habitat Fund (USFWS), and contributions of volunteer labor from local, state, and national interest organizations.

Specific prioritization of work areas/sites would be guided by four factors, all of which are related to the location of the route:

- Factor 1: Are located within DWMAs,
- Factor 2: Have above-average tortoise sign (i.e. located within biology polygons),
- Factor 3: Have higher than average vehicle disturbance (i.e. located within disturbance polygons) and
- Factor 4: Have significant urban interface issues.

Examples of areas where all of these factors come into play would include portions of:

- Kramer sub region west of the community of Silver Lakes;
- El Mirage sub region east of the Edwards Bowl area and
- Superior sub region northwest of Barstow.

The highest priority would be given to areas for which all four factors apply. The second priority would be those routes characterized by factors 1-3; the third priority would be routes characterized by factors 1 and 2; fourth priority to routes characterized by factor 1 only; and fifth priority to remaining routes.

Past experience, such as that obtained through the implementation of the Ord Mountain route designation pilot, can give valuable insight into not only which actions, but in what order they should occur. Implementation of the Ord Mountain Pilot plan revealed that the most effective short-term action taken was an increase in enforcement and visitor service patrolling, which resulted in a commensurate increase in visitor contacts. Through this increased number of contacts visitors realized that BLM was aggressively and successfully implementing the new network. Visitors generally responded to this in one of two ways. Those who were not receptive to staying on designated routes gradually moved to the "Open Areas" where they could continue to recreate in a more unrestricted manner. Others continued to recreate in the Ord Mountains.

The least effective short-term action taken in the Ord Mountains was signing the closed route network. Not only did this effort consume a great deal of staff time; in addition, signs were removed almost as quickly as they were put up. The need to resign routes placed additional demands on scarce staff time and material.

Given the lessons learned from the Ord Mountain experience, the successful implementation of a new route network should proceed by carrying out these steps in the following order:

- Pursue funding for signage and the staff necessary to implement the route signing effort (i.e. both law enforcement and maintenance staff).
- Pursue funding for route rehabilitation.
- Sign the open route network (do not sign the closed route network).
- Maintain the open route network with the principal goal being to make the open route network more attractive for use than the closed route network. Make ample use of the tools such as the York Rock Rake to shape, clear and contour the open route network.
- Install informational kiosks and interpretive signing where it would be most effective. Site these facilities where it would reach the greatest number of visitors and where it would target an audience that might be the most receptive to such facilities. For example, in the Kramer sub region such facilities might be most beneficial at major trailheads and campgrounds in the eastern portion of the sub region that are heavily visited by families enjoying camping.
- Develop and publish maps that are up-to-date, readily available and have a readily understandable and useful format. For example, many visitors are familiar with the informational format employed by USGS quadrangle sheets. The Friends of Jawbone have published a map which has proven very popular amongst users to that region and that might serve as a good "for purchase" template. The Off-Highway Motor Vehicle Recreation Division of California State Parks has produced a series of inexpensive pocket maps for each of its facilities that may serve as a good template for very inexpensive or free maps.
- Regularly maintain signs, kiosks, routes, maps and brochures.

At this point in the new route implementation process, if no new funding for law enforcement has been forthcoming, then all that can be done to obtain voluntary compliance has already taken place. Voluntary compliance would be slow in the beginning, but would increase over time (within the next 2 – 10 years).

At such time as additional funds are available for law enforcement and rehabilitation, the following steps should be taken:

- Begin route rehabilitation in priority areas.
    - Route rehabilitation would require active maintenance for at least 1 year.
- Initiate enforcement and visitor service patrols with the following caveats:
    - Do not over-commit; funding must be available to sustain the new patrol for a period of at least 2 years.
    - As enforcement efforts move into new areas, inappropriate use could migrate back to areas where the program had already been implemented. Address this by allocating more funding to new areas, as there would still be a residual cost to maintain the first (earlier implemented) area.
    - Keep in mind that it typically takes one year from the date funding becomes available until the time that a new fully delegated ranger is deployed into the field.
    - Consider that turnover amongst law enforcement staff is high, which will reduce the efficiency of enforcement efforts both due to vacancies and the need for new training.

Table 2-24 presents an implementation time frame. Table 2-25 lays out the cost of implementation actions.

Table 2-24
Implementation Time Frames

ACTION	COMPLETION TIME	COMMENTS
Pursue funding and FTE for enforcement, visitor services, and maintenance.	Year 3 - Ongoing	BLM works on a three-year budget cycle. There may be some infusion earlier.
Pursue funding for route rehabilitation.	Year 2 - Ongoing	This would likely come from both federal appropriations and external sources. Someone should be given this as a task.
Sign open route network.	Year 1- Ongoing	Assumes funding in year 1
Maintain open route network.	Year 1- Ongoing	Assumes funding in year 1
Install informational kiosks and interpretive signing.	Year 1- Ongoing	Assumes funding in year 1
Develop and publish maps and brochures.	Year 1- Ongoing	Assumes funding in year 1
Routinely maintain signs, kiosks, routes, maps, and brochures.	Year 2- Ongoing	Assumes ongoing funding

Table 2-25
Implementation Costs

ACTION	COST	PRIORITY
Pursue funding and FTEs for enforcement, visitor services, and maintenance.	$100,000 annually per Law Enforcement Officer w/vehicle X 5 $75,000 annually per Visitor Service Staffer w/Vehicle X 5 $75,000 annually per Maintenance Staffter. w/ Vehicle X 5 Total Annual funding needed: $1,2500,000	1
Pursue funding for route rehabilitation.	$100,000 annually	1
Sign open route network.	$10,000 one time cost	2
Maintain open route network.	Included in staff cost	2
Install informational kiosks and interpretive signing.	$50,000 one time cost	1
Develop and publish maps and brochures.	$20,000 one time cost	2
Routinely maintain signs, kiosks, routes, maps, and brochures.	$30,000 annually	2

2.2.6.11 Modification of Route Network

The West Mojave Record of Decision would amend the CDCA Plan to adopt the motorized vehicle access network as a component of that Plan. Any significant future modifications of the network, therefore, could only occur through an amendment to the CDCA Plan, including full NEPA compliance, public involvement, interagency coordination, and the preparation of a Record of Decision for the amendment.

Minor modifications of the network during plan implementation would be allowed, however, without the necessity of a formal plan amendment. FLPMA allows BLM resource management plans (such as the CDCA Plan) to be "maintained as necessary to reflect minor changes in data" (Section 1610.5-4.) Plan maintenance is limited, in that it cannot result in the expansion of the scope of resource uses or restrictions, or change the terms, conditions and decisions of the approved plan. It is limited to further refining or documenting a previously approved decision incorporated in the plan. In view of these limitations, "minor realignments" of the route network would be considered to be plan maintenance, and could be made without formal amendment of the plan. "Minor realignments" would include the following:

- Minor realignments of a route necessary to avoid cultural resources sites identified during the process of complying with Section 106 of the National Historic Preservation Act.
- Minor realignments of a route necessary to reduce impact on sensitive species or their habitats.
- Minor realignments of a route that would substantially increase the quality of a recreational experience, but that would not affect sensitive species or their habitat, or any other sensitive resource value.
- Opening or limited opening of routes where valid rights of way or easements of record were not accurately identified in the route designation process.
- Access to private inholdings, if such access could not be provided administratively.

Minor realignments could include the opening of an existing, but previously closed, route that serves the same access need as the open route that is to be "realigned." It does not include the construction of a new access route involving new ground disturbance, except where new construction is necessary to avoid a cultural resource site or sensitive species.

Minor realignments must be documented in the official record. The reason for the alignment change shall be recorded and kept on file in the affected BLM Field Office, and the change noted in the CDCA Plan.

Route designation on newly acquired lands would occur every five years (or sooner, if judged to be prudent by the Implementation Team), would comply with applicable federal regulations and statutes, and be incorporated into the overall route implementation process. New route networks on acquired lands would be required to facilitate conservation programs and be complimentary to the network resulting from alternative implementation

2.2.7 Education Program

The West Mojave Plan cannot be successfully implemented without the cooperation and support of the general public, desert stakeholders and others with an interest in the western Mojave Desert. This requires an understanding of both the conservation strategy and the resource needs of the desert.

2.2.7.1 Goals

An education program designed to accomplish this should be guided by the following program goals:

Goal 1: Increase public awareness, appreciation and knowledge of

- Desert ecology, sensitive species, and the need to preserve habitat and protect the desert environment
- Agency activities, laws and regulations (government and private conservation groups)
- Desert etiquette (minimizing deleterious effects on the desert environment)

- **Goal 2:** Increase public support for and participation in activities that benefit the desert ecosystem. Focus on opportunities rather than restrictions.

Goal 3: Support schools in educational efforts related to desert topics

Goal 4: Encourage scientific study of desert species and ecosystems

- Facilitate publication of information on desert species and environment
- Assist in building a repository of information on the Mojave Desert (books, journal articles, reports, bibliographies, photos)

2.2.7.2 Targets

The education program should be designed to reach a broad range of desert users. The following is a representative, but not an exclusive, list of groups to be targeted: (1) the general public; (2) schools; (3) special interest groups (off-highway vehicle recreationists, equestrians, hunters, campers, hikers, rockhounds, historical societies, biologists); (4) government agencies; and (5) development and commercial interests (construction firms, miners, film makers and the military).

2.2.7.3 Delivery

Utilize television, radio, and Internet web sites.

Distribute information and education materials

- Through schools, museums, private contractors and organizations
- At recreation vehicle shows, off highway vehicle events (e.g., dual sport), and dealer associations (Harley-Davidson, Honda, Suzuki, etc.).
- At convenience stores and other walk-in commercial interests. Consider using restaurant place settings and napkins as part of public outreach.
- Through existing portals, such as Friends of El Mirage and Friends of Jawbone.
- At the Planning Departments of each participating jurisdiction.
- At Resource Conservation Districts.
- At other non-profit environmental education centers (e.g. Wildlands Conservancy in Pioneertown, Summertree Institute in Morongo Valley.
- At BLM ACEC's such as Harper Dry Lake, Big Morongo Canyon, and Desert Tortoise Natural Area.

Finally, consider targeting users through green-sticker money, by distributing materials at the time the sticker is purchased through Division of Motor Vehicles.

2.2.7.4 Means

Education Coordinator: (E-1) A coordinator of educational programs should be identified. The education coordinator should work closely with the Implementation Team and/or appropriate regulatory agencies to approve the final education program, judge its efficacy, and ensure appropriate implementation.

(E-2) The first effort of the education coordinator should be to determine environmental education programs that already exist, and to determine gaps in the program. The coordinator should produce and implement the program to, in part, fill in these gaps. The education coordinator should take into consideration the experiences of successful desert education programs, such as the Sand Canyon Environmental Education Program, and the Hands Off Pardner program.

(E-3) The education coordinator should work with non-government organizations with an interest in the western Mojave Desert to better reach group members. The coordinator should work with off-highway vehicle groups to help fund existing programs and create new ones as needed to increase sensitivity to desert ecology.

(E-4) In drawing up a single, programmatic education program to be given to construction workers, the coordinator should review files maintained by the USFWS and CDFG to see the range of education materials that have been used since the listing of the tortoise, for example. Between 1990 and 1995, for example, such an approach resulted in rescuing 1,455 tortoises out of harm's way during construction of 171 federally-authorized projects in tortoise-occupied habitats (LaRue and Dougherty 1997-1998).

It is important that anyone designing and implementing an education program work with law enforcement personnel (including BLM, county animal control, USFWS enforcement agents and CDFG rangers) to identify problems and develop solutions.

School Education: (E-5) Develop displays, programs, and materials that can be provided to school districts in the West Mojave planning area. Fund and/or cooperate with existing programs (San Bernardino County Museum ecological study kits, etc.) to provide for enhanced outreach to schools in desert communities.

Schools should be targeted at the district level. Although schools in the western Mojave Desert area should be targeted first, it is important to reach the larger area, including the Inland Empire and Los Angeles County school districts.

Other Public Institutions: (E-6) Provide support to the efforts of museums, zoos, and other public institutions to develop pertinent desert tortoise exhibits, including:

- The San Bernardino County Museum's program to develop a desert tortoise exhibit.
- The Mojave Narrows Regional Park's development of an outdoor interpretive program involving a live-tortoise exhibit.
- Ongoing environmental education at the Lewis Center, other programs supported by Edwards Air Force Base, the BLM's community outreach program, etc.

Information Products: (E-7) The education program should include the preparation, distribution and/or installation of signs, interpretive kiosks, displays, maps, videos, education packets and brochures. Each of these is discussed below.

Proper *signing* on the ground is essential. A signing program should include the following:

- Strategically place an appropriate number of signs between the Stoddard Valley and Johnson Valley off highway vehicle open areas and the adjacent Ord-Rodman DWMA.

- Erect signs along DWMA boundaries. The Implementation Team, together with the education coordinator, should ensure that boundary signs are appropriately worded and spaced to maximize their usefulness.

- 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.

- Place information *kiosks* in pertinent parts of the desert.

- Work with Caltrans to design and install separate, freestanding, interpretive kiosks with desert tortoise protection information at highway rest areas.

- Target off highway vehicle use areas, such as El Mirage and Jawbone; distribute materials through volunteer groups associated with those areas.

Portable *displays* should be developed and produced, including a portable desert tortoise exhibit, for use at county fairs, shows, agency offices, shopping malls, museums, and the BLM's California Desert Information Center in Barstow. User-friendly *maps* should be prepared which show approved routes of travel. Work with university, media and corporate sponsor(s) to develop a quality *video* on desert tortoises for release to network, local, and cable television stations. Develop educational *packets* for use in classrooms. Produce a *brochure* to be distributed by jurisdictions that outlines the farmer's responsibilities under the endangered species act when developing habitat for target species. Produce a *brochure* to be distributed by jurisdictions describing the burrowing owl and its habitat features in urban areas.

Training: (E-8) As with the Desert Tortoise Council workshops, annual training for consultants and others working at construction sites should be provided to ensure that they have a foundation in training for monitoring.

(E-9) In addition, education programs should be provided, on a case-by-case basis, to train utility and Caltrans maintenance staff, personnel at mines, government employees, and others to conduct tortoise rescue actions at isolated sites.

Telephone Hotline: (E-10) Develop a telephone hotline, similar to the hotline program being implemented for the Clark County, Nevada desert tortoise program. The hotline

- Should provide information regarding pet adoption, not releasing pet tortoises, what to do if a tortoise wanders into your yard, regulations, and plan-based support information.

- Should also target construction personnel working in non-survey areas so that they may call in the event they find a tortoise in harm's way. Information should be available about the burrowing owl.

- Should not require a toll call.

Specific Information Needs: (E-11) Develop specific outreach plans for the following purposes:

- To maximize the effectiveness of fences that may be constructed along the interface between urbanizing communities and the HCA.

- To discourage poaching. In particular, target any communities that may practice tortoise collection for ceremonial or other purposes.

- To reduce raven - tortoise conflicts. The purpose would be to reduce the number of citizens who purposely feed ravens or who inadvertently do so by leaving pet food out where ravens can easily access it. These educational efforts should include, but not be limited to, business and agriculture.

(E-12) Develop local television outreach that talks about the plight of the tortoise and implementation of the West Mojave Plan. Several focal issues include discouraging release of pet tortoises, educating people about not poaching a Threatened species, and minimizing release of free-roaming dogs.

2.2.8 Monitoring and Adaptive Management

The success of the West Mojave Plan's conservation strategy would depend, to a great degree, on the ability of the participating agencies to ensure that its measures are being properly implemented, that its strategies are effective and that the plan is flexible enough to adapt to changing conditions and circumstances. This requires the establishment of a program to monitor the progress of plan implementation and success at attaining the biological goals and objectives of the plan.

(M-1) The West Mojave Implementation Team would maintain a database of survey reports and new records of occurrence of all species addressed by the Plan in cooperation with CDFG's Natural Diversity Data Base. Botanical surveys would conform to the CDFG *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG, 2000).

(M-2) It would also keep records of newly permitted activities issued within the conservation areas. Annual reports would record the amount of incidental take permitted and the conservation achieved for each species, whether by acquisition or by increased management.

(P-1a) The Plan would establish reference sites within Conservation Areas where populations of conserved species would be monitored on a periodic basis. Rare plant species would be monitored following wet years. The variability in abundance of annual plants makes the baseline for these species difficult to determine, and the reference population monitoring will assist in defining the baseline numbers and extent of occupied habitat, as well as assessing the success of conservation.

Adaptive management is an integrated method for addressing uncertainty in natural resource management. It is a structured process for learning by doing, examining strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned. An adaptive management program is essential for species with information gaps and biological uncertainty involving a potentially significant risk to the species. Therefore, Alternative A proposes an adaptive management strategy that is intended to (1) establish a monitoring program that is able to detect the necessary information for strategy evaluation; and (2) incorporate feedback loops that link implementation and monitoring to appropriate changes in management.

Specific monitoring and adaptive management actions proposed for each species are given in Table 2-26. Because these actions are designed to enhance the ability of the conservation strategy to meet each species' biological goals and objectives, the latter are also listed in Table 2-26.

Table 2-26
Monitoring and Adaptive Management Program

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
Alkali mariposa lily	Goal 1. Maintain the hydrological processes that support alkali mariposa lily at the Rosamond Lake Basin and outlying seeps, meadows and springs. Goal 2. Conserve and maintain the hydrological processes at outlying sites representative of alkali spring, meadow, and seep habitats. Goal 3. Identify additional springs, meadows, seeps, and playas supporting rare alkali plants.	Objective 1: Conserve a contiguous area of playa edge habitat on private lands adjacent to EAFB. Objective 2: Acquire Rabbit Springs and Paradise Springs (including water rights) through willing seller purchase or exchange. Objective 3: Conserve additional springs with occupied habitat as Conservation Area or ACEC. Objective 4: Maintain integrity of Amargosa creek to the extent feasible	Measure groundwater levels at existing nearby wells inside or within one mile of the Alkali Mariposa lily conservation area. If no wells exist in close proximity, the surface water level may be measured. (#2) (M-3) Conduct presence absence surveys at other alkaline springs, seeps, and playas within one year of plan adoption. (#1) Determine plant numbers and area of occupied habitat at new sites identified since plan adoption every five years. (#3) Monitor population numbers and measure groundwater levels in Conservation Area adjacent to LA County treatment ponds. (#1)	(AM-1) If surveys show substantial occurrences at isolated sites then the Implementing Authority will provide additional protection, which could include: acquisition, fencing or conservation area boundary modification. If population numbers are dependent upon groundwater levels at LA County treatment ponds, then acquire water rights to maintain groundwater levels.
Barstow woolly sunflower	Goal 1: Protect a contiguous habitat block with conserved populations on public lands throughout the species range Goal 2: Establish an additional reserve through adaptive management in the western part of the range. Goal 3: Manage the remaining outlying populations by site-specific measures.	Objective 1: Consolidate BLM and CDFG lands northeast of Kramer Junction to form a core reserve. The core reserve will be an expanded BLM ACEC and CDFG ecological reserve. Objective 2: Acquire private lands containing known occurrences within the core reserve. Objective 3: Establish a survey requirement area north of EAFB and northwest of Kramer Junction to identify reserve boundaries Objective 4: Require avoidance on a project basis.	BLM and CDFG will monitor OHV disturbance off designated open routes within the ACEC and Ecological Reserve area. (#2) Establish baseline population numbers and occupied acreage in conservation areas. (#2)	(AM-3) If new populations are identified through new survey information then adjust boundaries of Kramer and North Edwards Conservation areas to include those populations. . If adverse impacts to species are detected then revise road network or install fencing based on disturbance surveys within ACEC and Ecological Reserve Area. Adjust boundaries of Coolgardie Mesa Conservation Area based on new occurrences if appropriate.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
Bat: California leaf-nosed bat	Goal 1: Maintain and enhance viability of all bat populations in the planning area, regardless of species.	Objective 1: Install bat-accessible gates at the entrance of all significant roosts. Objective 2: Protect foraging habitat for California leaf-nosed bat. Objective 3: Adopt uniform survey requirements and mitigation measures. Objective 4: Establish baseline population numbers.	(M-6) Determine bat numbers in all significant roosts, using CDFG approved methods.(#3) (M-7) Approved projects that impact bats under the take limit would be reported annually to the CDFG and the USFWS. (Ongoing) (M-8) Conduct periodic surveys of mine openings in Pinto Mountains for Leaf-nosed bats in areas with high potential for containing significant roosts. (#2) (M-9) Effectiveness of mitigation measures providing for safe exit of bats should be reported. (Ongoing) Monitor population numbers using bat houses if installed. (#1)	(AM-5) If new significant roosts are found then gate mine. (AM-6) If populations decline or are threatened then install bat houses in locations where appropriate. (AM-7) If newly-detected significant roosts for California leaf-nosed bats are near open routes then provide case-by-case review of open routes within riparian and desert wash habitat. If the new roosts are impacted by open routes then take corrective action within the foraging habitat or establish a new route avoiding the habitat.
Bat: Townsend's big-eared bat	Goal 1: Maintain and enhance viability of all bat populations in the planning area, regardless of species.	Objective 1: Install bat-accessible gates at the entrance of all significant roosts. Objective 2: Protect foraging habitat for Townsend's big-eared bat and California leaf-nosed bat. Objective 3: Adopt uniform survey requirements and mitigation measures. Objective 4: Establish baseline population numbers.	(M-6) Determine bat numbers in all significant roosts, using CDFG approved methods.(#3) (M-8) Conduct periodic surveys in the northern part of planning area with high potential for containing significant roosts. (#2) (M-9) Effectiveness of mitigation measures providing for safe exit of bats should be reported. (Ongoing) (M-7) Approved projects that impact bats under the take limit would be reported annually to the CDFG and the USFWS. (Ongoing) Monitor population numbers using bat houses if installed. (#1).	(AM-5) If new significant roosts are found then gate mine. (AM-6) If populations decline or are threatened then install bat houses in locations where appropriate. (AM-7) If newly-detected significant roosts for Townsend's big-eared bat are near open routes then provide case-by-case review of open routes within riparian and desert wash habitat. If the new roosts are impacted by open routes then take corrective action within the foraging habitat or establish a new route avoiding the habitat.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
Bendire's thrasher	Goal 1: Protect *and enhance* known populations and habitat on public land.	Objective 1: Establish four Bendire's thrasher conservation areas. Objective 2: Establish baseline numbers for all portions of the Conservation Areas.	Monitor periodically population numbers and habitat disturbance in conservation areas. (#2)	(AM-8) If new populations are discovered then adjust conservation area boundaries. If surveys show presence of significant numbers of birds and undisturbed habitat, then consider addition of a conservation area near Yucca Valley
Brown-crested flycatcher	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Eradicate invasive riparian plants in suitable nesting habitat.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon and in Mojave River to determine number of nesting pairs. (#1) (LG-9) BLM will conduct a regional rangeland health assessment of the riparian area in the east Sierra Canyons within two years of Plan approval. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. . (AM-13) If rangeland health assessments in riparian areas of the east Sierra canyons do not meet Proper Functioning Conditions, then adjust grazing practices or eradicate invasive riparian plants. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage.
Burrowing owl	Goal 1. Prevent direct incidental take. Goal 2. Protect and enhance known populations and habitat on public land	Objective 1: Provide educational program for jurisdictions. Objective 2: Evaluate the feasibility of establishing grassland preserves. .	Complete baseline inventory of conserved habitat within two years (#1) (M-15) Compile annually record of take and conservation by acquisition and relocation. (Ongoing) (M-16) Survey sites in Antelope Valley and along Mojave River (#3).	(AM-15) If new owl nesting sites are discovered, then designate new conservation areas or adjust acquisition priorities. If preserve establishment is feasible, adaptive management will be engaged to protect and manage the habitat If research shows that active translocation is successful, then utilize this method to establish colonies in protected areas.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
Cushenbury buckwheat, Cushenbury milkvetch, Cushenbury oxytheca, Parish's daisy, Shockley's rockcress	Goal 1: Conserve two major unfragmented populations on BLM lands contiguous with populations on Forest Service lands. Goal 2: Protect outlying populations of parish's daisy from grazing.	Objective 1: Establish an ACEC where management is focused on protection of the carbonate endemic plants. Objective 2: Acquire fee title or conservation easements on private land within the ACEC. Objective 3: Adaptively manage populations on reclaimed mine sites.	(M-18) Monitor disturbance within ACEC. (#2) Report new populations of Parish's daisy within grazing allotments. (Ongoing) Evaluate revegetation and restoration of mined properties. (#2)	(AM-16) If the revegetation and restoration of mined properties is not successful, then adjust revegetation, per Carbonate Management strategy (AM-17) If specific occurrences of Parish's daisy need to be protected from grazing, then fence. If monitoring reveals OHV disturbance then sign and gate access routes.
Charlotte's phacelia	Goal 1: Maintain and enhance existing occurrences and habitat.		(M-19) Monitor populations in the Short Canyon and Sand Canyon ACEC's and at Red Rock Canyon State Park. (#2) Monitor disturbance to occupied habitat in El Paso Mountains. (#1) (LG-9) BLM will conduct a regional rangeland health assessment of the area in the east Sierra Canyons within two years of Plan approval. (#1)	(AM-18) If monitoring shows damage from OHV use in the El Paso Mountains and elsewhere fence occurrences as necessary. (AM-13) If rangeland health assessments in the east Sierra canyons do not meet requirements, then adjust grazing practices.
Crucifixion thorn	Goal 1: Preserve disjunct populations on public land and protect the crucifixion thorn woodland community.		(M-21) Record and report new locations to NDDB and San Bernardino County. (Ongoing)	(AM-20) If new locations of occupied habitat are found, then review route designation and prohibit firewood cutting. (AM-21) If monitoring of "woodland" site indicates damage, then construct fencing at strategic locations.
Desert cymopterus	Goal 1: Establish a conservation area containing known occurrences. Goal 2: Protect all known populations from disturbance, including grazing.	Objective 1: Identify potential and suitable habitat. Objective 2: Conduct surveys within potential and suitable habitat to establish baseline population numbers and acreage of occupied habitat.	(LG-18) Assess rangeland health on Harper Lake allotment. (#1) Monitor population numbers in occupied habitat every three years. (ongoing)	If rangeland health assessments indicate that more than half desert cymopturus flowering stalks are consumed, then adjust grazing practices, including fencing.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
Desert tortoise	Goal 1: Protect sufficient habitat to ensure long-term tortoise population viability.	Objective 1.1: Establish a minimum of three, preferably four, Desert Wildlife Management Areas that would be managed for the long-term survival and recovery of the desert tortoise, and which would also benefit other special-status plant and animal species. Objective 1.2: Ensure that at least one DWMA exceeds 1,000 square miles in size. Objective 1.3: Design DWMAs so that they are well distributed across the recovery unit, edge-to-area ratios are minimized, impediments to the movement of tortoises are avoided, and (where feasible) boundaries are contiguous.	Utilize results from the specific monitoring studies that follow to assess the effectiveness of DWMA configuration to maintain or increase tortoise population. (Ongoing)	If habitat continues to be degraded and tortoises continue to die at elevated numbers without any evidence of sustained recruitment, then IT, BLM, regulatory agencies, etc. should consider establishing new regions to be fenced that are at least 50 square miles in size, and managed similar to the DTNA. If results of pilot studies are successful, then headstarting could be used in these fenced areas to bolster the fenced population.
	Goal 2: Establish an upward or stationary trend in the tortoise population of the West Mojave Recovery Unit for at least 25 years.	Objective 2.1: Achieve population growth rates (lamdas) within DWMAs of at least 1.0. Objective 2.2: Attain a minimum average population density of 10 adult female tortoises per square mile within each DWMA. Objective 2.3: Establish a program for tortoise population monitoring that would detect an increase, decrease, or stable trend in tortoise population densities, and include an information feedback loop that ensures that necessary changes would be made in management.	(Population monitoring) Line distance sampling (page 2-160; 2-161) 2-163-165 (M-98) line distance sampling program in the DWMAs. (#1) Desert tortoise: Conduct continued studies at specified intervals on pertinent BLM permanent study plots including Kramer, Lucerne, DTNA, Fremont Valley, and Fremont Peak. (#1) Desert tortoise: Continue studies on the permanent study plots at the Goldstone Deep Space Tracking Station, and in the Alvord Mountains and elsewhere in the Superior-Cronese DWMA.(#1) Conduct studies to determine the effects of the removal of sheep grazing from the Fremont-Kramer DWMA on tortoise populations.(#4) To monitor OHV impacts, reinitiate	(Population monitoring) If the MOG, DMG, etc. recommend the use of the latest population census methods, then ensure that they are used. If the results of population studies indicate that recovery is not occurring, then adjust management practices as needed (Headstarting) If the headstarting program proves effective in bolstering population, then implement it in other places within DWMAs where tortoises have been extirpated.

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			studies at the Johnson Valley study plot. (#1) (Headstarting) Longitudinal monitoring for a minimum of 15 years to determine efficacy of program. (#1) Must monitor and minimize raven impacts on hatchling tortoises at nurseries.(#1)	
	Goal 3: Ensure genetic connectivity among desert tortoise populations, both within the West Mojave Recovery Unit, and between this and other recovery units.	Objective 3.1: Delineate and maintain movement corridors between DWMAs, and with the Eastern Mojave Recovery Unit, the Eastern Colorado Recovery Unit, and the Northern Colorado Recovery Unit. Objective 3.2: Ensure a minimum width of two miles for movement corridors, and include provisions for major highway crossings.		(Translocation) If the impermeable barriers between some DWMAs proves a hinderance to genetic connectivity and research shows that there is truly enough genetic difference among DWMAs, then translocation effort of individual tortoises should be considered. (Headstarting) If genetic difference between DWMAs is established then a headstarting program will be followed with collection of gravid females and the laying of pathogen-free eggs in established nurseries.
	Goal 4: Reduce tortoise mortality resulting from interspecific (i.e., raven predation) and intraspecific (i.e., disease) conflicts that likely result from human-induced changes in the ecosystem processes.	Objective 4.1: Initiate proactive management programs addressing each conflict, to be implemented by each affected agency or jurisdiction. Objective 4.2: Establish an environmental education program to facilitate public understanding and support for proactive management programs necessary to reduce tortoise mortality. Objective 4.3: Continue research programs and monitoring programs that assess the relative importance of human activities and natural processes that affect desert tortoise populations.	Monitor filming activities on private land within DWMAs to avoid or minimize impacts to tortoises and burrows. (ongoing) (Disease) (DT-17) Monitor for disease outbreaks concurrently with line-distance sampling and plot studies. (#1) Monitor dust emissions from mining sites, agricultural fields, road edges, disturbed playas for toxic elements. (#4) Monitor tortoise health status concurrently with line-distance sampling and plot studies. (#1) Necropsy all ill, dying and recently	DT-2: If biological monitoring shows that filming is adversely affecting tortoises inside DWMAs, the Implementation Team will consider remedial actions, which if deemed necessary, could include the prohibition of all filming activities from DWMAs. (Disease) (DT-16) If the Implementation Team, MOG, etc. identify any breakthrough in disease management, then it should be incorporated into the plan. If scientific studies show that the spread of disease can be curtailed through the closure of culverts, then consider closing culverts

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			deceased tortoises as per salvage protocols.(ongoing) Use data from line distance and other surveys to see if new die-off areas have extended further south of Highway 58 than what is reported in the Draft (#1) (Fences) (DT-19) IT monitor mortality along roads and identify measures such as fencing, culverts, signs, or speed regulators to be used to reduce or avoid unacceptable mortality levels.(#3) (DT21) Monitor fences and culverts to ensure fence integrity and unobstructed culverts.(ongoing) (DT-22) Monitor efficacy of solution worked out with Silver Lakes Association to address impacts on the Fremont-Kramer DWMA.(#1) Monitor integrity of new and old fences between BLM open areas and adjacent DWMAs (e.g., El Mirage's existing fence, Camp Rock Road's new fence.(ongoing) (Feral dog) Identify feral dog problem areas within DWMAs (concurrently done with tortoise population studies). (#1) Feral dog Management Plan should have a monitoring component that specifically looks at the distribution and intensity of feral dog problems. (#3) (Grazing) ·Conduct health assessments as scheduled.(ongoing) ·Monitor integrity and function of fences to maintain Exclusion Areas and minimize	along fenced roads. (Fences) (DT-22) If impacts to the Fremont-Kramer DWMA by OHV originating in the Silver Lakes community are not curtailed following the working group suggestions, then fencing may be necessary. (Feral dogs) If monitoring or other information shows that feral dog impacts are adversely affecting tortoises within DWMAs, then elevate the priority of this program. (Grazing) If range land health assessments identify areas of noncompliance, then implement corrective measures such as fencing, seasonal closures, pasture rotation.

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			cattle use outside the allotment (ongoing) · Allotment-specific studies should be performed to determine the threshold at which there would be sufficient ephemeral forage quantity and quality to promote healthy tortoises and habitat.(#1) (Guzzler) Conduct monitoring to see if tortoise mortality is an issue. Also attempt to ascertain use of guzzlers by known tortoise predators.(#3) (Incidental take) Presence-absence surveys will be used to (a) report level of authorized incidental take to regulatory agencies; (b) report level of 1% AGD attributed to each jurisdiction; (c) provide results of surveys to ensure appropriate boundaries for Survey and No Survey Areas (ongoing) (Law enforcement) The BLM will provide for DWMA-directed law enforcement and other public outreach through recreational technicians to help minimize incidences of poaching, vandalism, pet collection, etc.(#1) (Ravens) (DT-39) Monitor both raven status and effectiveness of management actions at reducing predation rates on juvenile tortoises.(#1)	(Guzzler) If guzzlers are determined to be a problem, then take appropriate steps to modify guzzlers while retaining their function to prevent further tortoise entrapment. Install predator prohibitive devices as needed. (Incidental Take) If the boundary lines for Survey versus No Survey Areas are not accurately portraying where tortoise are found, then modify the boundary lines using the data collected on where there is take. (Law Enforcement) Tracking of law enforcement activities: If there are problem areas identified (increased poaching, illegal target shooting), then identify issue-specific solutions (increased law enforcement presence). (Ravens) (DT-32) If the reduction of road kill is not reducing raven numbers and tortoise mortality, then modify recommendations based on information available. (DT-38) If the two interagency work groups established to oversee management direction and implementation of the raven management plan in the California desert recommend a change in policy, then ensure that future phases are developed and implemented in accordance with results of research and

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			(Route reductions) The efficacy of route closures to minimize impacts to tortoises must be monitored to determine if new roads are being created, closed routes are being used, route proliferation is resulting, etc.(ongoing)	monitoring. (Route reductions) If monitoring data indicates a problem with routes of travel (e.g. route proliferation, habitat degradation or increased tortoise mortality), then consider corrective measures as needed (increased law enforcement, fencing, modified route network).
Ferruginous hawk	Goal 1: Minimize electrocutions	Objective 1: Require raptor-safe electrical distribution lines for all new construction Objective 2: Identify problem poles on electrical distribution lines and retrofit as necessary.	(M-22) Coordinate with local bird clubs and electrical utilities to conduct winter population surveys. (#2). (M-23) Compile records of electrocutions from incidental sightings, reports from the public and reports from utilities to identify "problem poles". (Ongoing) (M-24) utilize results of winter surveys to update the BLM's Key Raptor Area database (#2).	(AM-22) If electrical towers are identified in wintering areas as causing electrocutions then retrofit the problem electrical towers or create safe perches.
Golden eagle	Goal 1: Maintain population numbers Goal 2: Preserve at least 90% of the baseline number of nesting territories. Goal 3: Minimize electrocutions.	Objective 1: Reduce disturbance at nest sites. Objective 2: Establish a new baseline number of nesting territories within five years of Plan adoption. Objective 3: Require raptor-safe electrical distribution lines for all new construction. Objective 4: Identify problem poles on electrical distribution lines and retrofit as necessary.	(M-26) Conduct surveys to determine occupancy and threats at all nests present in 1979 (#1). (M-27) Compile a record of electrocutions from the public and utilities. (Ongoing) (M-28) coordinate with utilities to monitor nests on transmission lines (ongoing). (M-24) Update Key Raptor Area database. (#2)	(AM-24) If new threats to nest sites are identified then take corrective actions. (AM-25) If electrocutions are occurring then retrofit problem electrical towers. (AM-26) If electrocutions are occurring then construct nest platforms on transmission line sites.

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Gray vireo	Goal 1: Conserve at least one core block of suitable nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Identify other occupied habitat.	Conduct surveys of nesting pairs in Conservation Area every five years. (#3) Identify and monitor threats to occupied habitat. (#3)	(AM-27) If cowbirds are found to be a threat, then initiate cowbird control. If threats are identified for new nest sites then manage that area to minimize threats
Inyo California towhee	Goal 1: Conserve and enhance all riparian habitat on public lands within the range of the Inyo California towhee	Objective 1: Remove non-native vegetation at springs with occupied habitat. Objective 2:Fence springs as necessary to protect the riparian habitat from damage by feral burros or excessive human use.	(M-32) Monitor spread of tamarisk and Phragmites at springs(#2) (M-33) Conduct surveys of population the Inyo California towhee in conjunction with China Lake NAWS every five years (#2) Identify threats or disturbance to occupied habitat, including parasitism by brown-headed cowbirds. (#2) Perform Proper Functioning Condition assessments in riparian areas every five years in conjunction with species surveys. (#2)	(AM-28) If Recovery Plan goals are met then initiate delisting. (AM-30) If monitoring indicates spread of invasive plants (Phragmites and tamarisk) over baseline conditions, then remove the invasives from the springs. The Bruce Canyon sites are within Wilderness and work would be performed by hand. (AM-31) If monitoring at Peach Springs indicates continuing burro damage, then install an exclosure fence. Because this site is within the Argus Mountains Wilderness, work must be performed by hand. If requirements of Proper Functioning Condition are not met, then adjust management If cowbirds are a threat to nesting towhees, then eradicate them.
Kelso Creek monkey-flower	Goal 1: Protect all occurrences and potential habitat on public lands as a Conservation Area.	Objective 1: Protect occupied habitat from disturbance.	(M-34) Conduct presence absence surveys on public land identified as potential habitat (#2). (LG-9) BLM would make an assessment of regional rangeland health on public lands in the Rudnick common allotment within two years of Plan approval. (#1)	(AM-32) If new populations are discovered then BLM will adjust boundaries of conservation area. (AM-33) If open routes threaten occupied habitat, then change route designation in area. (AM-34) If results of the rangeland health assessments in Kelso Valley indicate consumption or trampling of the flower, then adjust grazing practices.

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				(AM-35) If newly discovered populations on private land are found, then pursue land purchase or exchange on a high priority.
Kern buckwheat	Goal 1: Protect all known occurrences.	Objective 1: Protect occupied habitat from disturbance.	(M-36) Perform annual review of compliance with HCP protection measures, with an objective of detecting new disturbance in occupied habitat. (Ongoing)	If new disturbance proves to be a threat to occupied habitat then prevent disturbance, including fencing and route designation If monitoring shows that the habitat is damaged by wet weather off-road travel, the road will be closed during wet periods or during the rainy season, at the discretion of BLM's Ridgecrest Field Office.
Lane Mountain milkvetch	Goal 1: Protect viable unfragmented habitat throughout the limited range.	Objective 1: Acquire occupied habitat on private lands. Objective 2: Minimize potential impacts on public lands.	(M-36) Perform annual review of compliance with HCP protection measures, with an objective of detecting new disturbance in occupied habitat. (Ongoing) (M-38) Report annually on progress of acquisitions. (Ongoing)	(AM-36) If significant populations are found, then adjust boundaries of ACEC and withdraw from mineral entry.
Least Bell's vireo	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas Objective 4: Eradicate invasive riparian plants in suitable nesting habitat.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, Mojave River, and other known nest sites to determine number of nesting pairs. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in the riparian areas every five years (#2)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. (AM-27) If cowbirds prove to be a threat, then initiate cowbird control. If Proper Functioning Condition requirements are not met, then adjust management in the riparian areas such as eradication of invasive riparian plants.

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LeConte's Thrasher	Goal 1: Protect and enhance known populations and habitat.	Objective 1: Conserve habitat for thrasher within tortoise DWMAs. 1.1_ Objective 2: Establish a series of reserves representing all historic areas	Record new sightings in plan database. (Ongoing) Use the new sightings and records compiled over time to define the densest populations, and define specific areas where more intensive vehicle management is needed and where vehicle restrictions could be relaxed. (#3)	If there are OHV conflicts, then more intensive management is needed (signing, seasonal restrictions, law enforcement)
Little San Bernardino Mountains gilia	Goal 1: Protect all occurrences on public lands and 90% of the known populations on private land. Goal 2: Protect the drainages and fluvial processes that maintain the gilia populations.	Objective 1: Protect occupied habitat within 100 feet of the edges of dry washes on both sides as a Conservation Area. Objective 2: Limit channelization of washes with occupied habitat.	(M-41) Conduct presence absence surveys on BLM parcels near Joshua Tree, and north of Yucca Valley near Rattlesnake Canyon. (#3) Monitor occupied habitat for weed invasion, OHV disturbance, and other human-caused ground disturbance. (#2)	If new occupied habitat is identified then adjust boundaries of Conservation Area. (AM-42) If: (1) New populations are found and protected or (2) The dry wash conservation measures are in place (conservation easements, setbacks, and prohibitions on vehicle travel in occupied washes) then remove the limitation on take on private land. If new populations are discovered and the need for an increase in the take limit becomes apparent, then the Plan will be amended for this species. If occupied habitat is threatened, then take appropriate protective actions, which may include fencing, barriers to vehicle access or weed eradication.
Long-eared owl	Goal 1: Preserve all nest sites and communal roosts.	Objective 1: Maintain Proper Functioning Condition of riparian areas 1.2_ Objective 2: Minimize human disturbance at nest sites and communal roosts.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, Mojave River, Argus Mountains and other known nest sites, to determine number of nesting pairs. Report results to the BLM National Raptor Database. (#1) Perform Proper Functioning Condition assessments every five years in the riparian areas.(#2)	(AM-43) If new nest and communal roost sites are discovered then protect them. If Proper Functioning Condition requirements are not met, then adjust management in the riparian areas such as eradication of invasive riparian plants. If great-horned owls are impacting long-eared owls, then potential solutions might involve destruction of great-horned owl

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			Determine if great-horned owls are displacing or preying upon long-eared owls. (#4) Monitor disturbance of nest and communal roost sites. (#2)	nests. If disturbance is causing abandonment of nest or roost sites, then provide for seasonal or permanent closure of routes that may cause disturbance and or fencing
Mojave fringe-toed lizard	Goal 1: Establish Conservation Areas at eight of the fourteen occupied habitats.	Objective 1: Maintain blowsand ecological processes at the eight identified sites. Objective 2: Protect occupied habitat.	(M-50) Delineate blowsand habitat at Alvord Mountain, Pisgah, Cronese Lakes, and northeast of Harper Dry Lake. (#2) (M-52) Construction of windbreaks and exotic plants potentially affecting occupied habitat should be monitored. (#2) Monitor disturbance of occupied habitat by OHVs. (#1) Conduct periodic presence/absence surveys for the Mojave fringe-toed lizard at conserved sites. (#3) (M-51) Measure dune movement. (#3)	(AM-49) If important new blowsand processes are identified then adjust boundaries as necessary to protect drainages and wind transport area and extend conservation downwind if warranted. If occupied habitat is impacted by increased disturbance then increase law enforcement and/or signs.
Mohave ground squirrel	Goal 1 (habitat): Ensure long-term protection of unfragmented MGS habitat throughout the species range.	Objective 1.1: Establish management areas for the long-term conservation of MGS habitat: (a) the MGS Conservation Area and (c) heightened project review in northeastern Los Angeles County. Objective 1.2: Allow for adjustments to the MGS Conservation Area boundary based on findings of scientific studies. Objective 1.3: Implement appropriate actions to ensure the long-term protection of habitat in the MGS CA throughout the life of the Plan Objective 1.4: On a yearly basis,	A monitoring strategy would be designed and implemented by the IT, in coordination with the MGS Technical Advisory Group. (#1) Perform trapping studies in Kern County Study Area to see if MGS occurs west of Highway 14 and south of Highway 58.(#3) On a yearly basis, track the loss of MGS habitat compared to the conservation of MGS habitat resulting from Plan implementation (ongoing)	If scientific study shows that the MGS CA is too small to conserve the MGS, then IT and others should consider means of acquiring private lands (or easements thereon) to ensure the conservation area is sufficiently robust. (MGS-5) If trapping in Kern County Study Area identifies significant populations, then consider adding it to the conservation area. The conservation strategy should continue to evolve as new scientific information becomes available. If so-called “core areas” are identified, then IT and regulatory agencies should consider additional means of protecting and

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		track the loss of MGS habitat resulting from Plan implementation. Objective 1.5: Cooperate with military installations by sharing scientific information and reviewing management plans.		conserving that habitat. If current missions at either Edwards Air Force Base or China Lake Naval Air Weapons Station change substantially so that the current levels of protection are substantially reduced, then IT and regulatory agencies should reconsider the conservation strategy.
	Goal 2 (population): Ensure long-term viability of the MGS throughout its range.	Objective 2.1: Minimize and fully mitigate the impacts of the Plan's authorized incidental take of the MGS. Objective 2.2: Determine the following measurable biological parameters: (1) the regional status, (2) potential hot spots (refugia), (3) genetic variation throughout the range, and (4) the ecological requirements of the MGS.	On a yearly basis, track the loss of MGS habitat compared to the conservation of MGS habitat resulting from Plan implementation (ongoing) Establish long-term study plots throughout the range, including the Coso Range Plots, and annually monitor their MGS populations. Conduct presence/absence surveys in the northern portion of the Antelope Valley in Kern County.	If so-called "core populations" are identified, then IT and regulatory agencies should consider additional means of protecting and conserving those MGS. IT should consider the feasibility and conservation value of site-specific mineral purchase or withdrawal. Use the biological and population data from Goal 2, Objectives 2.2 to modify the management prescriptions, as necessary, to ensure the long-term viability of the species.
Mojave monkey-flower	Goal 1: Protect viable populations on public land throughout the range. Goal 2: Coordinate with mining companies to protect this species.	Objective 1: Establish a core reserve on public land in the Brisbane Valley. Objective 2: Establish a core reserve west of the Newberry Mountains. Objective 3: Provide site-specific management of occupied habitat on public lands outside the core reserves. Objective 4: Establish a private land mitigation bank	Incorporate results of monitoring by OHV commission into database (ongoing) (M-47) Monitor vehicle tracks to assess spillover effects, if any, from OHV open areas (#1) (M-48) Determine acres of occupied habitat in rainy years on public land in Brisbane Valley portion of conservation area between I-15 and Mojave River (#1). . (M-49) Continue presence absence surveys of remainder of core reserves and adjacent areas (#3). LG-18) Range land health assessments would be completed within one year of	(AM-44) If grazing proves to be a threat, then adjust grazing prescriptions in eastern conservation area with seasonal or area-specific restrictions. (AM-45) If significant new occurrences are found on public lands or if opportunity arises on two sections designated as "potential additions" or with Catellus land exchanges, then add to Brisbane Valley conservation area. If surveys prove flowers are absent, then delete lands from eastern conservation area. (AM-46) If OHV use proves to be impacting occupied habitat, then sign or fence habitat adjacent to Stoddard Valley Open Area. Fence as necessary in Brisbane Valley

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			plan adoption for Ord Mountain allotment. (#1) Mining companies will conduct surveys on mining lands. (#1)	If mining company surveys detect flowers within mining area then establish boundaries of mitigation bank.
Mojave River vole	Goal 1: Conserve all remaining riparian and wetland occupied habitat. Goal 2: Conduct research and monitoring programs.	Objective 1: Establish permanent study plots and conduct baseline studies. Objective 2: Monitor changes in vole populations and habitat. Objective 3: Identify, map and survey all appropriate habitat along the Mojave River corridor. Objective 4: Maintain groundwater levels in Mojave River that support the riparian habitat. Objective 5: Maintain Proper Functioning Condition of riparian areas Objective 6: Manage disturbance to riparian habitat, including visitor use. Objective 7: Remove non-native vegetation on public land and on private land where permission is granted.	Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform riparian area Proper Functioning Condition assessments every five years (#2)	If excessive damage is detected to occupied habitat, then manage visitor use by fencing areas. (AM-14) Cooperate with water agencies to provide additional water to Mojave River. If groundwater levels at monitoring wells are not maintained, drop permit coverage. If PFC assessments identify invasive plants as a threat, then eradicate them.
Mojave tarplant	Goal 1: Protect viable populations on public lands. These populations may be disjunct.	Objective 1: Require 50% conservation of newly detected populations on private land.	(M-56) Determine acres of occupied habitat at Short Canyon and Cross Mountain every five years. (#2) (LG-9) BLM will make a regional rangeland health assessment on public lands in the Rudnick common allotment within two years of Plan approval. (#1)	(AM-53) If Mojave tarplant are consumed or trampled in Short Canyon and on Cross Mountain, then adjust grazing practices with seasonal closures or fencing. (AM-54) If existing or new populations are threatened by vehicles or grazing, then protect them by providing barriers to vehicles or livestock. (AM-104) If significant new populations are found on public lands, then manage as an ACEC. If private land conservation is judged to be

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				necessary at new locations, then the sites will be given a high rating on the acquisition priority list maintained by the Implementation Team.
Ninemile Canyon phacelia	Goal 1: Protect viable populations on public land throughout the range.	Objective 1: Prevent or reduce damage from grazing. Objective 2: Require 50% conservation of newly detected populations on private land.	(LG-9) BLM will make a regional rangeland health assessment on public lands in the east Sierra Canyons within two years of Plan approval. (#1)	If Ninemile Canyon phacelia are consumed or trampled then adjust grazing practices with seasonal closures or fencing.
Parish's alkali grass	Goal 1: Conserve the single private land location. Goal 2: Determine if additional populations are present at other alkaline springs and seeps.	Objective 1: Acquire Rabbit Springs if willing seller.	(M-60) Establish baseline population numbers and acreage of occupied habitat at Rabbit Springs. (#2) (M-3, 95) Conduct surveys of other alkaline springs and seeps to determine if other populations are present in the planning area. (#1)	(AM-59) If new locations are found, then acquire, secure water rights or protect from grazing. (AM-103)) If species is found at private land at Oasis of Mara then acquire from willing seller.
Parish's phacelia	Goal 1: Preserve large intact populations on the publicly owned dry lakebeds. Goal 2: Conserve a public land corridor connecting the dry lakes.	Objective 1: Establish Conservation Area including occupied habitat and essential connectivity. Objective 2: Acquire private land within Conservation Area from willing seller. Objective 3: (HCA-3) prohibit vehicle traffic on playas within Conservation Area. Objective 4: (P-48) San Bernardino county will perform site-specific review for projects within occupied habitat. Objective 5: (P-50) BLM will require restoration of occupied habitat.	Census populations every five years, with an estimate of acreage of occupied habitat (#3) (M-59) Perform annual report describing vehicle traffic, if any, on playas. (#1)	(AM-58) If new locations are found, then protect with fencing or signing at edge of playas.
Parish's popcorn flower	Goal 1: Conserve the single private land location.	Objective 1: Acquire Rabbit Springs if willing seller.	(M-60) Establish baseline population size and area of occupied habitat at Rabbit Springs. (#2)	(AM-59) If new locations are found, formulate protection plans. Measures could include acquisition, securing water rights, or

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	Goal 2: Determine if additional populations are present at other alkaline springs and seeps.		(M-3) Conduct surveys of other alkaline springs and seeps to determine if other populations are present in the Planning area. (#1)	protection from grazing. (AM-103) If species is found at private land at Oasis of Mara then acquire from willing seller.
Prairie falcon	Goal 1: Preserve all nest sites. Goal 2: Maintain population numbers	Objective 1: Reduce disturbance at nest sites.	(M-26) Conduct surveys to determine occupancy and threats at all nests present in 1979 (#1). (M-24) Update Key Raptor Area databases at five-year intervals. (Ongoing) (M-66) Report on falconry take permits. (Ongoing)	(AM-24) If new threats to nest sites are identified then take corrective actions. If newly discovered nest sites are disturbed by vehicular traffic then implement seasonal closures.
Red Rock poppy	Goal 1: Conserve and maintain all occurrences in the El Paso Mountains.	Objective 1: Reduce or eliminate threats, including disturbance from OHV use. Objective 2: Require 50% conservation of newly detected populations on private land.	(M-67) Conduct review of effects of OHV use on known populations. (#1) (M-68) Coordinate population surveys with Red Rock Canyon State Park. (#2) Perform population census every five years. (#2)	(AM-62) If monitoring shows damage to occupied habitat, then provide barriers to vehicles. (AM-63) If significant population is discovered on public land then amend the desert plan to establish an ACEC that encompasses new populations.
Red Rock tarplant	Goal 1: Conserve and maintain all occurrences in the El Paso Mountains.	Objective 1: Reduce or eliminate threats, including disturbance from OHV use. Objective 2: Require 50% conservation of newly detected populations on private land.	(M-67) Conduct review of effects of OHV use on known populations. (#1) (M-68) Coordinate population surveys with Red Rock Canyon State Park. (#2) Perform population census every five years #2)	(AM-62) If monitoring shows damage to occupied habitat, then provide barriers to vehicles. (AM-63) If significant population is discovered on public land then amend the desert plan to establish an ACEC that encompasses new populations.
Salt Springs checker-bloom	Goal 1: Conserve the single private land location. Goal 2: Determine if additional populations are present at other alkaline springs and seeps.	Objective 1: Acquire Rabbit Springs if willing seller. Objective 2: Require 90% conservation of the Salt Spring checkerbloom occupied habitat at newly found sites, along with maintenance of the hydrological regime.	(M-60) Establish baseline population numbers and area of occupied habitat at Rabbit Springs. (#2) (M-3) Conduct surveys of other alkaline springs and seeps to determine if other populations are present in the Planning area. (#1)	(AM-59) If new locations are found, then formulate protection plans. Measures could include acquisition, securing water rights, or protection from grazing. (AM-103) If species is found at private land at Oasis of Mara then acquire from willing seller.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
San Diego horned lizard	Goal 1: Conserve unfragmented habitat within the range.	Objective 1: Conserve two large representative areas, Big Rock Creek and Mescal Creek, with connectivity of the overall range through the National Forests. Objective 2: Acquire lands within Antelope Valley Significant Ecological Area.	(M-74) Monitor surface disturbance at Big Rock Creek and Mescal Creek. (#3)	(AM-69) If conserved habitat is disturbed in an edge effect, then fence and post signs.
Short-joint beavertail cactus	Goal 1: Conserve unfragmented habitat within the range.	Objective 1: Conserve two large representative populations that are contiguous with National Forest lands. Objective 2: Acquire lands within Antelope Valley Significant Ecological Area.	(M-75) Establish baseline population numbers for Big Rock Creek and Mescal Creek areas. (#2) (M-76) Determine numbers and identity of beavertail cacti in eastern part of the range. (#3)	(AM-71) If beavertail cactus are disturbed during a project, then salvage and relocate plants within urban development areas. (AM-72) If development pressure increases, then create mitigation banks in the western part of the range. If the populations in the eastern part of the range prove to be distinct, then create smaller reserves as mitigation banks.
South-western pond turtle	Goal 1: Conserve all remaining populations throughout the range.	Objective 1: Identify new populations in suitable habitat. Objective 2: Conserve all remaining populations in the Mojave River, Lake Elizabeth and Amargosa Creek. Maintain groundwater levels in Mojave River that support the riparian habitat. Objective 3: Maintain Proper Functioning Condition of riparian areas in occupied habitat. Objective 4: Continue restoration at Camp Cady and Afton Canyon.	(M-79) Conduct presence absence surveys of Kelso Creek and Jawbone-Butterbredt ACEC in suitable habitat. (#2) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years. (#2)	If riparian area Proper Functioning Condition requirements are not met, then adjust management including provide barriers to vehicles or livestock.
South-western willow flycatcher	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon and in Mojave River to determine number of nesting pairs. (#1)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
		restoration and expansion by natural means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas in Kelso Valley and east Sierra Canyons. . Objective 4: Achieve regional public land health standards for grazing in Kelso Valley and in east Sierra canyons. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.	Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments of the occupied habitat in the Mojave River every five years. (#2) Initiate first riparian assessment in Kelso Valley and east Sierra Canyons within two years of Plan approval. (#1)	(AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If riparian area Proper Functioning Condition requirements are not met, then adjust management including eradicating invasive riparian plants, seasonal grazing restrictions and fencing. (AM-27) If cowbirds prove to be a threat, then initiate cowbird control.
Summer tanager	Goal 1: Conserve *and enhance* all *suitable* riparian nesting habitat outside developed areas.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in suitable nesting	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, other known nest sites and in Mojave River, to determine number of nesting pairs. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years (#2)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If Proper Functioning Condition requirements are not met, then adjust management including eradication of invasive riparian plants (AM-27) If cowbirds prove to be a threat, then initiate cowbird control.

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
		habitat.		
Triple-ribbed milkvetch	Goal 1. Prevent any loss of occupied habitat Goal 2. Conduct research and monitoring.	Objective 1. Require avoidance of known or newly-detected populations. Objective 2. Compile new information to determine best conservation strategy.	Record new locations. Census known locations periodically.	Acquire private lands with newly-detected occupied habitat
Vermilion flycatcher	Goal 1: Conserve *and enhance* all *suitable* riparian nesting habitat outside developed areas.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. . Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, other known nest sites and in Mojave River, to determine number of nesting pairs. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years (#2)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If Proper Functioning Condition requirements are not met, then adjust management including eradication of invasive riparian plants (AM-27) If cowbirds prove to be a threat, then initiate cowbird control.
Western snowy plover	Goal 1: Preserve all nest sites and maintain and enhance nesting and wintering habitat on public lands.	Objective 1: Prevent disturbance of nest sites during nesting season.	(M-84) Conduct periodic censuses to determine number of nesting pairs at Harper Dry Lake, and Dale, Koehn, and Searles lakes. (#3) Monitor disturbance at known nest sites. (Ongoing)	(AM-84) If nest sites are disturbed, then close playa edges to vehicular traffic in spring and provide temporary fencing of nest sites if warranted.
Western yellow-billed cuckoo	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural	(M-85) (M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, Mojave River, and other known nest sites to determine number of nesting pairs. (#1)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
		means. Objective 2: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 3: Maintain Proper Functioning Condition of riparian areas in Kelso Valley and east Sierra Canyons. . Objective 4: Eradicate invasive riparian plants in suitable nesting habitat.	Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years (#2)	to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If Proper Functioning Condition requirements are not met, then adjust management including eradication of invasive riparian plants
White-margined beardtongue	Goal 1: Preserve the wash and sand field habitat of the disjunct population on public land.	Objective 1: Establish Conservation Area near Pisgah Crater.	(M-87) Census plant populations at known locations (#2) (M-88) Monitor vehicle use of Argos Wash. (#2) Monitor the Johnson Valley to Parker race. (Ongoing)	(AM-89) If monitoring shows damage along utility corridors or in Argos Wash, then fence populations.
Yellow-breasted chat	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, other known nest sites and in Mojave River, to determine number of nesting pairs. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years (#2)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If Proper Functioning Condition requirements are not met, then adjust management including eradication of invasive riparian plants (AM-27) If cowbirds are found to be a threat, then initiate cowbird control

SPECIES	BIOLOGICAL GOALS	BIOLOGICAL OBJECTIVES	MONITORING	ADAPTIVE MANAGEMENT
		Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.		
Yellow-eared pocket mouse	Goal 1: Maintain and enhance existing habitat.	Objective 1: Manage grazing on public lands to maintain habitat values.	(M-93) Conduct presence absence survey in east Sierra Canyons and public land in Kelso Valley (#4). A trapping survey would be conducted in Kelso Valley as part of the Monitoring Plan. (#3) (LG-9, M-94) BLM would conduct rangeland health assessments for allotments within the range of the yellow-eared pocket mouse within five years of Plan approval. (#1)	(AM-13, AM-34) If rangeland health assessments in the east Sierra canyons and Kelso Valley indicate damage to occupied habitat, then adjust grazing practices. (AM-96) If new location data identifies populations on private land, then prioritize acquisition lands.
Yellow warbler	Goal 1: Conserve *and enhance* all suitable riparian nesting habitat.	Objective 1: Establish a conservation area at Big Rock Creek. Objective 2: Achieve and sustain groundwater levels in the Mojave River floodplain sufficient to maintain riparian habitat and allow its restoration and expansion by natural means. Objective 3: Manage disturbance to riparian habitat, including grazing and visitor use. Objective 4: Maintain Proper Functioning Condition of riparian areas. Objective 5: Eradicate invasive riparian plants in suitable nesting habitat.	(M-13) Cooperate with local bird clubs on annual censuses at Big Morongo Canyon, other known nest sites and in Mojave River, to determine number of nesting pairs. (#1) Obtain and analyze groundwater monitoring well records from Mojave Water Agency on an annual basis. (#1) Perform Proper Functioning Condition assessments in riparian areas every five years (#2)	If nesting pairs decline by 25% then identify and manage disturbance to habitat with fencing or restrictions on visitor use. (AM-14) If cooperating with water agencies to provide additional water to the Mojave River is not successful and groundwater levels at monitoring wells are not maintained, then drop permit coverage. If Proper Functioning Condition requirements are not met, then adjust management including eradication of invasive riparian plants (AM-27) If cowbirds are found to be a threat, then initiate cowbird control

2.2.8.1 Alkali Wetland Communities Supplementary Discussion:

Alkali springs, seeps, and meadows have the highest priority for community protection in the West Mojave Plan because of the potential for conservation of rare plant species and because these areas have not been extensively inventoried.

Table 2-26 includes the monitoring measure to conduct presence absence surveys at alkaline springs, seeps and playas (prescription M-3). Table 2-27 lists target and high interest species, and sites to be surveyed.

Table 2-27
Rare Plant Species Found InAlkali Wetland Communities

SPECIES	SITES CONTAINING ALKALI SPRINGS, SEEPS AND MEADOWS
Target Species	Rabbit Springs (Lucerne Valley)
Alkali mariposa lily (*Calochortus striatus*)	Paradise Springs (north of Barstow)
Black sedge (*Schoenus nigricans*)	Cuddeback Lake (east of California City)
Hot springs fimbristylis (*Fimbristylis thermalis*)	Cushenbury Springs (Lucerne Valley)
Lancaster milkvetch (*Astragalus preussii* var. *laxiflorus*)	Harper Lake wetlands (west of Barstow)
	Oasis of Mara (Twentynine Palms)
Parish's alkali grass (*Puccinellia parishii*)	Olancha
Parish's phacelia (*Phacelia parishii*)	Green Springs - Kelso Valley
Parish's popcorn flower (*Plagiobothrys parishii*)	Turner Springs - Victorville
Parry's saltbush (*Atriplex parishii*)	Red Rock Canyon (Red Rock Canyon State Park)
Salt Springs checkerbloom (*Sidalcea neomexicana*)	Box S Springs (Lucerne Valley)
	Koehn Lake (Kern County)
Other High Interest Species	Barrel Springs (Palmdale)
Cooper rush (*Juncus cooperi*)	San Andreas Rift Zone (Palmdale)
Tecopa bird's beak (*Cordylanthus tecopensis*)	Jack Spring (south of Fort Irwin)

2.2.8.2 Desert Tortoise Supplementary Discussion

Line Distance Sampling Surveys: (M-98) A line distance sampling program (or other scientifically credible method, if distance sampling proves ineffective) would be implemented in the Fremont-Kramer, Superior-Cronese, Ord-Rodman, and Pinto Mountain DWMAs. To date, this is the only method that has been identified to determine tortoise densities and population trends on a regional basis. It has full endorsement of the Management Oversight Group, consisting of the resource managers responsible for lands and resource protection throughout the listed range of the desert tortoise (i.e., USFWS, BLM, National Park Service, Department of Defense, and state wildlife agencies).

Although there are five delisting criteria given in the Recovery Plan, the primary criterion for delisting tortoises in the West Mojave Recovery Unit, which corresponds to the Plan area, is:

> As determined by a scientifically credible monitoring plan, the population within the recovery unit must exhibit a statistically significant upward trend or remain stationary for at least 25 years (one desert tortoise generation).

Although there are limitations associated with the data gained through distance sampling, it remains the best available method to determine if the Recovery Plan criterion is being met or not.

Each of the four DWMAs identified in the western Mojave Desert was surveyed by distance sampling in 2001 and 2002. Current proposals by the USFWS are to survey each recovery unit every year for five years, every other year during the next five years, then every year for five years, and so on, for the duration of the Plan, which is given as 30 years. As such, distance sampling would occur in the western Mojave Desert during the following years: 2003, 2004, 2005, 2007, 2009, 2011, 2012, 2013, 2014, 2015, 2017, 2019, 2021, 2022, 2023, 2024, 2025, 2027, 2029, 2031, and 2033.

Survey costs vary, as have the densities of surveyed transects, but in general the cost is about $175/kilometer surveyed. In 2001 in the western Mojave Desert, 870 transects or 1,392 kilometers were surveyed in the four DWMAs. Given the rough cost estimate of $175/kilometer, the distance sampling effort cost about $245,000 in 2001 in the western Mojave Desert. This cost was somewhat h6igher in 2002 when more kilometers were surveyed to obtain a sufficient sample size of at least 80 tortoises per DWMA, which was not attained in 2001.

Distance sampling is necessarily restricted to a regional level; it gives the density of tortoises and the trends in those densities over time for each DWMA surveyed. Therefore, after about five years of distance sampling a density of tortoises per DWMA would be available, but the upward, downward, or stable trends in those densities would require additional sampling. Even then, the regional distribution of tortoises in different portions of a given DWMA may not be determined from distance sampling, nor would the sampling effort be sensitive enough to indicate which management prescriptions are providing the most protection to tortoises; increases or decreases in tortoise abundance may not be explained by the sampling effort. As such, it is necessary to implement monitoring efforts that track the success and failures of management prescriptions implemented as part of the Plan, which follow.

Regional Responses of Tortoises to Implemented Conservation Measures: It is important to fund continued studies at specified intervals on pertinent BLM permanent study plots, including Kramer, Lucerne, Desert Tortoise Research Natural Area (DTNA) (2 or 3 plots), Fremont Valley, and Fremont Peak. In the past, a total of 60 person days was spent on each plot, conducting a capture (first 30 days) recapture (last 30 days) study that was intended, among other things, to determine the density of tortoises on that square mile (i.e., with the exception of one of the plots at the DTNA, the other plots are one square mile in size). Since distance sampling is intended to determine regional densities, it would be appropriate to modify the methodology for the study plots away from a density estimate, and rather focus on demographic, disease, human threats, and other associated data that have traditionally been collected.

It is important to replicate the study plots, perhaps on nearby, square kilometer plots (the tortoise Recovery Plan, Appendix A, presents one approach), so that statistical inferences can be drawn for a given region. Thus, additional, new study plots would be randomly situated throughout the region of interest. In the past, these plots have been surveyed at four-year intervals, although a new schedule needs to be considered. Each of the existing study plots is uniquely situated to gauge

continued threats and efficacy of conservation measures implemented as part of the Plan, as described in the following sections.

Kramer Study Plot: This plot is located several miles west of the community of Silver Lakes, in the southern portion of the Fremont-Kramer DWMA, which is bounded to the north by Highway 58, to the east by the Mojave River, to the south by Shadow Mountain Road (actually several miles south of this road), and to the west by Highway 395. Unlike the northern and northwestern portions of this DWMA, there still appear to be relatively high numbers of tortoises in this area. The Kramer plot and surrounding areas are characterized by above-average tortoise sign counts collected since 1998. Known threats include ravens, poaching, off highway vehicle traffic (some of it likely from the Silver Lakes community), dumping, and dirt roads. Monitoring at this and adjacent plots should be structured to see if positive benefits are associated with the following conservation programs: raven management, increased law enforcement, route reductions, urban interface fencing or other control measures at Silver Lakes and fencing Highway 395.

Lucerne Study Plot: This plot is uniquely situated on the urbanizing interface with Lucerne Valley to the south and the Johnson Valley Open Area to the east; the Stoddard Valley Open Area is not too distant to the west. It occurs in one of three tortoise aggregations found in the Ord-Rodman DWMA. Documented threats include OHV impacts, cattle trespass, bisection by a major transmission line inside a BLM-designated utility corridor, raven predation, tortoise collection and vandalism, and feral dogs. Proactive management prescriptions given elsewhere in this Plan call for signing boundaries in this area, fencing portions of the cattle allotment to prevent cattle trespass, monitoring Camp Rock Road, raven management, route reductions, restrictions to development of new utilities, increased law enforcement, and education of Lucerne Valley residents with regards to resource conservation. The monitoring program on this and replicated plots in the region should focus on the efficacy of these and other conservation programs implemented by the Plan.

Desert Tortoise Research Natural Area: Several BLM permanent study plots are found at the DTNA, although like other plots, they have not been regularly funded since the early 1990's. These plots are unique in that they occur in a relatively protected, fenced area in which densities of more than 200 tortoises per square mile were documented in the 1970's and mid-1980s, but where present densities are substantially lower. Monitoring of this plot provides a unique opportunity to see if tortoises can naturally recolonize protected habitats. The fenced DTNA is surrounded by existing impacts that likely serve as "sinks" for tortoises that are relatively protected until they venture into adjacent, unfenced areas. Some of these uses include sheep grazing, intensive OHV use, agriculture and wind-blown dust from the west, indirect impacts associated with mining to the north, feral dog problems both inside and outside the DTNA, release of captive tortoises, raven predation, intentional vandalism of tortoises, and pet collection. Monitoring efforts should consider the efficacy of route reduction, enforcing California City's sheep grazing policy (i.e., prohibition of sheep grazing within city limits;), increased law enforcement, feral dog management plan, raven management, and education of visitors to the area.

Fremont Valley: This study plot is located in the Fremont Valley, which is bounded to the north by the El Paso Mountains, to the south by the Rand Mountains, to the east by Red Mountain, and to the west by Koehn Lake. It is very similar to the DTNA plots in terms of observable disturbances, except it does not occur within the relative protection of a fenced area. All the programs mentioned above for the DTNA are also intended to recover tortoises in the Fremont Valley. Unique threats include road kill along Garlock Road, the direct and indirect effects of spreading biosolids in the desert, noise, vibration, and mortality effects of the nearby railroad. Monitoring of the study plot and replicated plots in the Fremont Valley should test the efficacy of conservation measures in bolstering tortoise populations in the northwestern portion of the Fremont-Kramer DWMA.

Fremont Peak: Like DTNA and Fremont Valley, the Fremont Peak study plot has experienced recent declines in tortoise numbers, although fewer tortoises occurred when the BLM's study plots were first surveyed in the 1970's. Unlike all other study plots mentioned above, the Fremont Peak plot is characterized as a saltbush scrub community (creosote bush scrub characterizes the other plots). Sheep grazing was removed from the area in 1991, although threats persist: natural recolonization of a population that has nearly been extirpated, raven and canid predation, effects of roads (several bisect the plot), and the indirect effects of Highway 395, which is located several miles to the west. Conservation measures are recommended by this Plan that would minimize impacts associated with these and other threats. Additionally, it is recommended that the pilot headstarting program occur in the vicinity of this plot, so that the beneficial effects of that program may be indirectly gauged by reviving studies on this and replicated plots within the region.

Other Plots: The spatial location of the plots given above fairly well covers the Fremont-Kramer DWMA and southern portion of the Ord-Rodman DWMA, but does not adequately represent the Superior-Cronese or Pinto Mountain DWMAs. The Army's National Training Center at Fort Irwin, in conjunction with USGS, has established permanent study plots at the Goldstone Deep Space Tracking Station, in the Alvord Mountains, and elsewhere in the Superior-Cronese DWMA. Continuing studies on these and on newly established plots could collect valuable information. There are no permanent plots in the Pinto Mountains, although Joshua Tree National Park has such plots nearby. If the BLM desires to monitor the effects of OHV activities on tortoises, it would be appropriate to reinitiate studies at the Johnson Valley study plot, the Stoddard Valley study plot should be relocated (i.e., it occurs on private lands), and new study plots should be established in other open areas (i.e., El Mirage and Spangler Hills open areas).

Region-Specific Monitoring Studies: Many proactive conservation measures have been recommended that can be tracked at the study plots given above, however it would be necessary to gauge the success and failures of specific conservation programs for their efficacy and modification through adaptive management. Some of these follow:

- *Highway Fencing:* Some of the desired effects of fencing highways that require monitoring include: (a) reduction of tortoise mortality; (b) tortoise recolonization of unoccupied habitats immediately adjacent to the highways or interstates; (c) reduction of other vertebrate mortality and its effects on raven predation, scavenging, and nesting within a mile of the fenced highway; (d) tortoise use of culverts to offset the fragmentation of the fenced

highway; and (e) reduction of human impacts associated with the highway (such as decreased poaching, pet collection and dumping). Additionally, the fences must be monitored to cure breaches and ensure fence integrity.

- *Grazing Management:* The Plan proposes to remove sheep grazing from all DWMAs, which would affect areas south of Shadow Mountain Road in the southern portions of the Fremont-Kramer DWMA. Areas north of Shadow Mountain Road have not been grazed since 1991. The removal of sheep from this area should be followed by studies to determine the efficacy of this measure. There are also opportunities to study the effects of sheep removal on lands north of Kramer Junction, where sheep continue to graze west of Highway 395 but were removed in 1991 east of Highway 395.

  Additionally, new management prescriptions would require modified grazing practices in the Ord Mountain, Harper Lake, and Cronese Lakes allotments. These include the exclusion of cattle from specific areas when dry ephemeral forage is below a threshold of 230 pounds/acre. This practice would require rest of certain pastures under these conditions, and would concurrently result in herding cattle onto other portions of the allotment. Another proposal is to strategically place waters so that cattle are concentrated in areas where the fewest tortoise-cattle impacts would occur. The effects of these and other management practices must be monitored to determine if the desired effects (i.e., decreased tortoise mortality and decreased habitat degradation) are being achieved.

- *Route Reductions:* Alternative A proposes the closure of a number of unpaved motorized vehicle routes, with the intent of reducing tortoise mortality and habitat degradation. There is widespread concern that reducing routes would lead to more habitat degradation along routes that are designated as "open." Data should be collected to address the following: (a) Is there more or less cross country travel before or after reductions? (b) Is there more use (and vandalism) on private lands where route reductions are not occurring? (c) Are new routes being created to replace old ones? (d) Are visitors using closed routes? (e) Given these and other data, where are the best places to focus limited law enforcement resources? (f) Has poaching, illegal target shooting, intentional vandalism, etc. been curtailed or facilitated? (g) Are new concentrated human-use areas (i.e., campsites, staging areas, dump sites, etc.) forming along open routes? and ultimately, (h) Has the route network resulted in more or less tortoise mortality and/or habitat degradation?

- *Raven Management Plan:* The efficacy of this plan needs to be monitored to determine which, if any, management actions have resulted in fewer tortoise mortalities. The monitoring effort may be linked with others: Are ravens predating more heavily on tortoises after highway fences are installed and road-killed vertebrates are less available to ravens?

- *Off Highway Vehicle Fencing:* Alternative A proposes installation of new fences to counteract the effects of Johnson Valley and Stoddard Valley on tortoise populations in the Ord-Rodman DWMA. As with the recently installed fences around the El Mirage Open Area and along the Mojave-Randsburg Road, monitoring would be needed to cure intentional vandalism of the fences. Educational outreach would be a high priority at the time of fencing and thereafter. The desired effects are to reduce tortoise mortality and begin

to repair degraded habitats (i.e., in the Cinnamon Hills and southern portions of the Ord-Rodman DWMA coinciding with northern Lucerne Valley), which should be monitored and adaptive management applied, as needed. Comparison of different fence and culvert designs would be needed.

- *Urban Interface Fencing Versus Educational Outreach:* Alternative A proposes that a working group be established by the Implementation Team to work with the Silver Lakes Association and others to minimize the OHV impacts associated with that community on the Fremont-Kramer DWMA, which occurs immediately to the west. Potential solutions include installing a fence line along the western boundary of the community or developing an intensive educational program to minimize and eventually eliminate the impact. The efficacy of either of these approaches must be monitored and adaptive management applied.

- *Disease Monitoring:* There is no coordinated effort at this time to monitor diseases in the western Mojave Desert. Permanent study plots described above provide one good means of tracking diseases, but are not necessarily indicative of disease prevalence throughout the region. Line distance sampling provides even less opportunity to study diseases, as the surveys are carried out in the spring, are transitory in nature, and rarely afford the opportunity to clearly observe disease symptoms, which are most often expressed in and around the eyes or around the nostrils and mouth (i.e., most tortoises have pulled into their shells by the time they are weighed and measured as part of distance sampling). Alternative A relies on the Implementation Team adopting disease monitoring protocols as they are identified and endorsed by pertinent experts and, likely, the Management Oversight Group.

Miscellaneous Tracking Needs: Alternative A proposes a number of proactive programs that would require tracking that may be loosely described as monitoring. Some of these follow:

- *Plan-Authorized Versus Unauthorized Ground Disturbance:* Incidental take authorized by the Plan is necessarily attached to existing political infrastructure. For example, the Plan would authorize projects subject to discretionary permits but would not track projects subject to ministerial permits. It is important that authorized and unauthorized ground disturbance is tracked by the Plan to determine actual loss of habitat relative to the 1% Allowable Ground Disturbance. Agricultural development in DWMAs, which is not currently covered by the Plan, must be tracked to determine its relative impact, if any. It is generally understood that aerial photographs would be used, in conjunction with reports from participating jurisdictions, to track these forms of ground disturbance.

- *Plan-Authorized Take of Tortoises:* The Implementation Team is tasked with producing a standard data sheet and developing a tracking system to determine how many tortoises are accidentally killed or incidentally harassed as a result of Plan implementation. Such take is most likely in DWMAs, less so in most Survey Areas, and is not anticipated in tortoise No Survey Areas. These data should be used, among other things, to determine if the boundary lines for Survey versus No Survey Areas accurately portrayed where tortoises do and do not occur, respectively. It is expected that an annual review of this information would enable the Implementation Team, in conjunction with participating jurisdictions, to modify these boundary lines as needed. Keeping track of the actual take of animals would also be

important to demonstrate to the regulatory agencies, particularly USFWS and CDFG, that impacts have been mitigated to the maximum extent practicable and fully mitigated, respectively.

- *Tracking of Law Enforcement Activities:* It is important that a feedback loop exist between law enforcement and the Implementation Team to identify problem areas, and in the spirit of adaptive management, to identify issue-specific solutions.

2.3 ALTERNATIVE B: BLM ONLY

2.3.1 Overview

All aspects of this alternative's conservation strategy would be as described for Alternative A, except as specifically noted below (see foldout Map 2-15). These include Alternative A's motorized vehicle access network, livestock grazing and education programs, and all proposed CDCA Plan Amendments. Multiple use class changes proposed by Alternative A would apply to this alternative except for the following: 1) Two parcels of BLM land within the North Edwards Conservation Area would not be removed from the LTA disposal zone and reclassified from U to M and 2) Several scattered parcels of BLM land in the San Gabriel Mountains foothills and within the Los Angeles County SEAs (Table 2-4) would not be removed from the LTA disposal zone and reclassified from U to M.

2.3.2 Habitat Conservation Area

(AB-1) The tortoise conservation area would consist of 1,038,711 acres of public lands (only). Four DWMAs would be established: Fremont-Kramer, Superior-Cronese, Ord-Rodman and Pinto Mountains. The exterior boundaries of the DWMAs would correspond to those proposed by Alternative A, but would consist only of the approximately one million acres of public lands within the outer boundaries (about 425,000 acres of private lands within the outer boundary would not be affected by the designation). The DWMAs would be designated as an ACEC.

(AB-2) A Mojave ground squirrel conservation area would be designated, consisting of the 1,308,877 acres of public lands within the outer boundary proposed by Alternative A. The 420,000 acres of private lands would not be affected by the designation. The MGS conservation area would be designated as a BLM Wildlife Habitat Management Area.

(AB-3) Eleven other conservation areas composed of BLM lands (only) would be established, and designated as ACECs. Public land prescriptions (only) and external boundary lines proposed for Alternative A would apply. The eleven conservation areas would include the following ACECs: (1) Barstow Woolly Sunflower; (2) Bendire's Thrasher; (3) Carbonate Endemic Plants; (4) Coolgardie Mesa; (5) Kelso Creek Monkeyflower; (6) West Paradise; (7) Middle Knob; (8) Mojave Monkeyflower; (9) Mojave Fringe-toed Lizard; (10) Parish's Phacelia; and (11) Pisgah. The Mojave fringe-toed lizard conservation area would be limited to three units (Dale Lake, Mojave River and Pisgah); Saddleback Butte/Big Rock Creek would not be part of this conservation area.

Conservation areas would not be established at either Big Rock Creek for several species or North Edwards for the desert cymopterus and Barstow woolly sunflower. The Alkali Mariposa Lily Conservation Area would not be designated. No Special Review Areas would be designated and the MUC designations would not change for scattered parcels adjoining Joshua Tree national Park. No tortoise relocation areas would be delineated. No habitat linkages or wildlife movement corridors would be established.

2.3.3 Compensation Framework

(AB-5) Compensation for disturbance of public lands within DWMAs would be required at a 5:1 ratio within desert tortoise habitat. Funds may be directed toward habitat enhancement or rehabilitation. All compensation is to be directed to the DWMA where the disturbance occurs. Compensation is required for most authorized uses. There would be no new compensation program for disturbance of lands outside of the DWMAs, such as lands within the northwestern portion of the MGS Conservation Area or within other newly established ACECs.

(AB-6) Cumulative new surface disturbance on public lands within any DWMA would be limited to 1 percent of the federal portion of the DWMA. The amount that may be disturbed is proportional to the holding of the administering agency. The habitat credit component of Alternative A would not apply; however, existing BLM restoration programs would continue, including tamarisk removal and habitat restoration at Afton Canyon and Harper Lake, and intensive rehabilitation in recently burned areas, as in the footprint of the Willow Fire.

2.3.4 Incidental Take Permits

No regional habitat conservation plan would be adopted and implemented. On private lands, compliance with both FESA and CESA would be determined on a case-by-case basis, as at present. Separate incidental take permits would need to be obtained for each project. Protection for non-listed species on private lands would be determined by the CEQA review conducted for each project. "No surprises" assurances would not be provided.

2.3.5 Species Conservation Measures

Desert Tortoise: Tortoise Survey and No Survey areas would not be established. Presence-absence surveys and clearance surveys would be required on all public lands. Standard handling and disposition guidelines would be established for BLM lands only. Elsewhere, such guidelines would be determined on a case-by-case basis. Installation of tortoise fencing along highways would be accomplished on a project by project basis.

Tortoise prescriptions different from those proposed by Alternative A would include:

- (AB-7) Highway maintenance seasonal restrictions, roadbed and berm requirements, and preclusion of the use of invasive weeks for landscaping would apply only to portions of roads on public lands.

- (AB-8) No feral dog management program would be undertaken.
- (AB-9) Increased law enforcement within DWMAs would be limited to public lands.
- (AB-10) Project proponents could utilize level 1 "Best Management Practices" on BLM lands within DWMAs, and level 2 BMPs elsewhere. Pre-approved and programmatic level 1 and level 2 BMPs would not be available to proponents of projects located on private lands.
- (AB-11) Raven predation management would focus on public lands. The program would not address the modification of landfill and transfer station operations to reduce availability of waste to ravens, nor would landfills be precluded from locating on private lands within five miles of DWMAs.

Mohave Ground Squirrel: Los Angeles County's significant ecological areas would not be a component of the MGS conservation strategy. CDFG would continue to require trapping. CDFG's existing fee program would continue.

Other Species: A burrowing owl education program would not be implemented. Raptor-safe power lines would be required for BLM-approved powerlines only. Long-eared owl and gray vireo habitat at Big Rock Creek would not be acquired. No program would be implemented to conserve alkali wetland plants. Conservation of desert cymopterus and triple-ribbed milkvetch would rely on an avoidance requirement rather than the protection of habitat within conservation areas.

The following species could not meet all goals and objectives set for the habitat conservation plan alternatives: alkali mariposa lily, Barstow woolly sunflower, brown-crested flycatcher, burrowing owl, desert cymopterus, gray vireo, least Bell's vireo, Little San Bernardino Mountains gilia, long-eared owl, Mojave fringe-toed lizard, Mojave River vole, Parish's alkali grass, Parish's popcorn flower, Salt Springs checkerbloom, San Diego horned lizard, short-joint beavertail cactus, southwestern willow flycatcher, summer tanager, vermilion flycatcher, Western yellow-billed cuckoo, yellow-breasted chat, and yellow warbler. In addition, the multi-agency conservation strategy incorporating protection on both public and private lands within reserves would be diminished for DWMAs and conservation areas with mixed land ownership. This would affect most species addressed by the plan.

2.3.6 Monitoring, Adaptive Management and Implementation

Implementation of this alternative would rely upon funds appropriated to BLM by Congress, and MOG mitigation fees. The implementing authority, citizens advisory group and scientific advisory board suggested for Alternative A would not be established. Future amendment of the conservation strategy would be available through amendment of the BLM's CDCA Plan only.

2.4 ALTERNATIVE C: TORTOISE RECOVERY PLAN

2.4.1 Overview

The Desert Tortoise (Mojave Population) Recovery Plan (Tortoise Recovery Plan) was adopted in 1994. Prepared for USFWS by a "Desert Tortoise Recovery Team," it presented a set of actions that the recovery team concluded were needed to recover tortoise populations. Although its recommendations are not binding on the agencies with jurisdictions over lands within desert tortoise habitat, the Recovery Plan's conservation strategy has served as a starting point in the process of developing conservation strategies for the West Mojave and other regional plans.

The USFWS is currently initiating a two-step review of the Recovery Plan. During 2003, a team assembled by USFWS will conduct an assessment of the plan in light of new information collected since 1994. If the assessment indicates that a revision of the Recovery Plan is warranted, that revision could occur during 2004.

The 1994 Tortoise Recovery Plan's strategy was relatively general (for example, the locations of recommended DWMAs were identified on regional maps but precise boundary identification was left to future planning). The interagency collaborative planning process that led to Alternative A used the Recovery Plan as a starting point, adding details and modifications based upon more recent data. Accordingly, Alternative C uses many of the more specific proposals of Alternative A to "flesh out" many of the relatively more general recommendations of the Tortoise Recovery Plan.

Alternative C combines the tortoise conservation strategy suggested by the Tortoise Recovery Plan with the conservation program developed by Alternative A for the Mohave ground squirrel and other sensitive plants and animals. All aspects of this alternative's conservation strategy would be as described for Alternative A, except as specifically described below. These include Alternative A's motorized vehicle access network and education outreach program. The West Mojave Plan would be a habitat conservation plan, and incidental take permits would be sought from CDFG and USFWS by local jurisdictions (see foldout Map 2-16).

2.4.2 Habitat Conservation Area

The HCA would consist of all lands proposed for HCA status by Alternative A, and include lands designated as tortoise critical habitat but excluded from Alternative A's DWMAs. Thus the HCA would include the four tortoise DWMAs, an MGS conservation area, and fourteen conservation areas established to conserve other sensitive plants, animals and their habitats. The Ord-Rodman DWMA would be designated as an ecological reserve and a Research Natural Area.

No tortoise Special Review Areas would be designated. Two Special Review Areas for the Little San Bernardino Mountains gilia would be designated, as in Alternative A.

BLM multiple use class changes would be as described for Alternative A (see Table 2-4), except changes from Unclassified, I and M to L would apply to the larger DWMA boundaries. There would be no additional class changes under this alternative.

2.4.3 Compensation Framework and Incidental Take Permits

The West Mojave Plan would serve as a habitat conservation plan, and incidental take permits would be sought from CDFG and USFWS by local jurisdictions. All compensation, fee and implementation structures proposed by Alternative A apply to this alternative, except as expressly noted in the discussion of species conservation measures (section 2.4.4, below).

2.4.4 Species Conservation Measures

Measures proposed for species other than the desert tortoise would be as described by Alternative A, including utility construction and maintenance measures for tortoises and the education program. Tortoise management actions under Alternative C follow.

2.4.4.1 Desert Tortoise Take-Avoidance Measures

The following desert tortoise take-avoidance measures would be adopted.

- (AC-1) Surface disturbance within DWMAs would be restored to pre-disturbance conditions (defined as the topography, soils, and native vegetation that exist in adjacent undisturbed or relatively undisturbed areas), closing access to non-designated vehicle routes and including restoring non-designated roadbeds to their pre-disturbance state.

- (AC-2) All competitive and organized events (including dual sport) would be prohibited within DWMAs.

- (AC-3) Parking and camping would be allowed within DWMAs in designated areas. Outside of DWMAs, parking and camping would be allowed within 300 feet from the centerline of motorized vehicle routes designated open.

- (AC-4) Tortoise DWMAs may provide forms of recreation compatible with tortoise recovery, including minimum impact recreation (e.g. hiking, equestrian uses, birdwatching, and photography).

- (AC-5) No discharge of firearms would be allowed within DWMAs, except for hunting of big game or upland game birds from September through February.

- (AC-6) Mining would be allowed on a case by case basis, provided cumulative impacts do not significantly impact tortoise habitats or populations, and effects would be mitigated during operation and land restored to pre-disturbance condition. Requirements that surface disturbance within DWMAs be restored to pre-disturbance conditions would apply to open pit mines and hard rock quarries. Mineral withdrawals identified by Alternative A (Afton

Canyon, acquired lands within the Carbonate Endemic Plants ACEC, Coolgardie Mesa and West Paradise Conservation Areas, and Rand Mountains) would be pursued.

- (AC-7) Vandalism should be halted, as should the collection and release of captive tortoises. Regular and frequent patrols by law enforcement personnel are essential

- (AC-8) Emergency measures would be developed to control unleashed dogs and dog packs.

- (AC-9) Initiate cleanup of surface toxic chemicals and unexploded ordinance. Identify and clean up unauthorized dumps in DWMAs. Reduce or eliminate use of authorized landfills and sewage ponds in and near DWMAs by predators of the desert tortoise (e.g., ravens and coyotes). Allow no new landfills or sewage ponds within DWMAs.

2.4.4.2 Desert Tortoise Survey and Disposition Protocols

The following management prescriptions would be adopted:

- (AC-10) Existing survey, handling and disposition requirements would continue. Presence-absence surveys and clearance surveys would be required in all areas prior to any new ground-disturbing activities.
- (AC-11) "No Survey" areas would not be delineated.
- (AC-12) A drop-off site would be established for unwanted captive tortoises at BLM's Barstow Way Station.
- (AC-13) Programs would be developed to promote use of unwanted desert tortoises for research and educational purposes.

2.4.4.3 Proactive Tortoise Management Programs

Desert Tortoise Fencing and Signing: (AC-14) Fence or otherwise establish effective barriers to tortoises along heavily traveled roads. Install culverts that allow underpass of tortoises to alleviate habitat fragmentation. Construct desert tortoise barrier fencing and underpasses along Highway 395, parts of Highway 58, the Randsburg-Mojave Road, the Red Rock - Randsburg Road, the Red Rock - Garlock Road, the railroad north and adjacent to Highway 58, Highway 247, Interstate 15, Fort Irwin Road, Manix Trail, Superior Lake [Copper City] Road, and the northern boundary of the Superior-Cronese DWMA. Construct highway underpases along Fort Irwin Road to allow desert tortoise movement and to facilitate genetic exchange.

(AC-15) Sign or fence DWMA boundaries adjacent to communities and settlements such as Barstow, the small settlements north of Barstow, Kramer Junction, California City, Cantil, Galileo Hill, Randsburg, Johannesburg, Atolia and Helendale, and other areas with conflicting uses.

(AC-16) Fence the periphery of the Superior-Cronese DWMA as needed to enforce regulations and protect desert tortoises from human impacts. Along the boundary with the Fremont-Kramer DWMA, a double row of desert tortoise barrier fencing may be necessary to prevent the spread of URTD into the Superior-Cronese DWMA.

(AC-17) Construct and maintain special fencing to protect desert tortoises from recreational vehicle use in the Johnson Valley Open Area and surrounding lands.

(AC-18) Sign boundaries of the Ord-Rodman DWMA in the vicinity of Barstow, Newberry Springs, Lucerne, Landers and Lucerne Valley.

Land Acquisition: (AC-19) The goal of the plan would be to acquire all private lands in DWMAs. Maintenance of the local tax base would not be a goal of the DWMA land acquisition program. Outside of DWMAs, acquisition priorities set by Alternative A would be followed; land acquisition would be from willing sellers only, and the acquisition program would seek to maintain the stability of the local tax base.

Raven Management: (AC-20) Reduce populations of the common raven to lessen predation on juvenile tortoises and ensure recruitment of juveniles into the subadult and adult populations.

Tortoise Translocation: (AC-21) Desert tortoises from adjacent lands should be experimentally translocated into DWMAs, such as from the El Mirage Open Area into the Fremont-Kramer DWMA and from the Johnson and Stoddard Valley Open Areas into the Ord-Rodman DWMA, to increase the density of desert tortoises and salvage breeding stock.

Headstarting: (AC-22) Initiate a semi-wild breeding program to rebuild and restore tortoise populations. The DTNA would be an ideal place to begin this program.

Administration: (AC-23) Each DWMA may require a reserve manager, additional staff, and law enforcement personnel; in some cases, the same staff may manage adjacent DWMAs. The formation of local advisory committees is encouraged. As funds become available, each DWMA or group of DWMAs should have an associated visitor center or set of interpretive sites and panels.

2.4.5 Public Land Livestock Grazing Program

(AC-24) The Ord-Rodman DWMA would be designated as a cattle grazing experimental management zone. Grazing management in this area would be as described for Alternative A. Elsewhere, livestock grazing would not be permitted within DWMAs.

2.4.6 Public Land Motorized Vehicle Access Network

This alternative is based on the assumption that tortoises thrive best where density of access routes is low, traffic is low and human access is limited. To achieve this:

- (AC-25) Alterative A's motorized vehicle access network would be adopted and implemented. Routes not designated open would be restored to their pre-disturbance condition. Limited speed travel would be allowed in tortoise DWMAs on designated signed roads. Implement closure of DWMAs to vehicular access with the exception of designated routes, including Federal, State and County maintained vehicle routes.

- (AC-26) Restrict the establishment of new roads in DWMAs.

- (AC-27) Implement emergency closures of dirt roads and routes as needed to reduce human access and disturbance in areas where human-caused mortality of tortoises is a problem.

2.4.7 Education Program

(AC-28) Construct a visitor education center at the DTNA that would include facilities for research as well as a drop-off site for unwanted captive desert tortoises. Develop programs to promote use of unwanted captives for research and educational purposes.

2.4.8 Monitoring, Adaptive Management and Implementation

Fund and implement monitoring studies identified for Alternative A, including those on BLM permanent study plots.

Establish a research program and focus research on the following topics:

- **Fremont-Kramer DWMA:** (AC-29) Desert tortoise diseases, including URTD; toxicosis; shell lesions; general health; nutritional status; food preferences and requirements; water balance and energy flow; predation by feral dogs and other mammalian predators; raven predation; habitat restoration; the effectiveness of desert tortoise-proof fencing and culverts in eliminating road kills; interactions of desert tortoises with urban barrier fencing; protective barriers between urban development and open desert; and effects of mining, domestic sheep and cattle grazing, noise/vibrations, and cumulative impacts on mortality and survivorship.

- **Superior-Cronese DWMA:** (AC-30) Epidemiology of URTD and other diseases; physiological, ecological, nutritional, and behavioral requirements of hatchling and juvenile desert tortoises; nutritional qualities of preferred food plants; habitat restoration; and characteristics of undisturbed desert tortoise habitat. Continue using the latest medical techniques to assess the health of desert tortoises. Conduct epidemiological surveys to determine the distribution and frequency of desert tortoises with URTD and other diseases. These surveys would be used to help determine if fencing is necessary within the DWMA or between the Fremont-Kramer DWMA and the Superior-Cronese DWMA.

- **Ord-Rodman DWMA:** (AC-31) Disease epidemiology; the effects of ravens and other predators on desert tortoise populations; and the effects of hunting of upland birds, big game, and furbearers on desert tortoises and their habitat.

2.5 ALTERNATIVE D: ENHANCED ECOSYSTEM PROTECTION

2.5.1 Overview

Alternative D's conservation strategy grew out of discussions among the participating agencies and members of the public during EIR/S scoping and the development of Alternative A. Many suggestions were offered that called for placing a very high priority on the conservation of natural communities and ecosystems, even if adoption of these recommendations would limit human access to and multiple use of the western Mojave Desert. Alternative D presents a conservation strategy that incorporates many of these suggestions (see foldout Map 2-17).

All aspects of this alternative's conservation strategy would be as described for Alternative A, except as specifically described below. These include Alternative A's motorized vehicle access network and education outreach.

2.5.2 Habitat Conservation Area

(AD-1) The Fremont – Kramer DWMA would be reconfigured to encompass existing critical habitat between Shadow Mountain Road and Edwards Air Force Base west of the El Mirage Open Area, as in the revised Alternative A. This DWMA would also be expanded northwest of Kramer Junction so that its boundary followed the boundary between Kern and San Bernardino Counties.

(AD-2) The Mohave ground squirrel conservation area would be the same as Alternative A. The MGS conservation area would be designated by the BLM as an ACEC.

(AD-3) All BLM multiple use class I, M and U lands within the HCA would be changed to class L. All lands removed from the LTA disposal zone within the HCA would be reclassified from U and M to L. This would apply to the DWMAs, all conservation areas and ACECs listed in Table 2-4, but would not apply to scattered BLM parcels in the San Gabriel Mountains foothills and within the Los Angeles County SEAs (Table 2-4). The lands adjoining Joshua Tree National Park containing Little San Bernardino Mountains gilia habitat would change from U to M, and the other MUC changes in Table 2-4 would remain as in Alternative A.

2.5.3 Compensation Framework

(AD-4) The mitigation fee would be based on a compensation ratio that would include a conservation bonus value for projects located in two or more overlapping conservation areas. In the event that a project was to be located on lands within two overlapping conservation areas (such as portion of the Fremont – Kramer DWMA and the MGS Conservation Area, or the Ord-Rodman DWMA and the Mojave Monkeyflower Conservation area), the compensation ratio, normally 5:1 in the HCA, would be raised to 6:1. In the event that a project was located on lands within three overlapping conservation areas (such as lands within the Barstow Woolly Sunflower Conservation Area, the MGS Conservation Area, and the Fremont-Kramer DWMA), the compensation ratio

would be raised to 7:1. These additive compensation ratio areas are depicted on foldout Map 2-17. There are no lands within more than three overlapping conservation areas; thus, the 7:1 ratio would be the planning area's highest.

(AD-5) The West Mojave Plan would not include a Habitat Credit Component. A program to restore habitats within the HCA would be developed by the Implementation Team.

2.5.4 Species Conservation Measures

Desert Tortoise Take-Avoidance Measures: (AD-6) Within DWMAs, motorized vehicle stopping and parking would be allowed within 15 feet of the centerline of the designated route. Camping would be allowed only in designated areas. Where numerous scattered campsites occur in a particular area, BLM would consolidate them into a designated BLM campground. Educational materials could be disseminated from these established BLM campgrounds.

(AD-7) On public lands within DWMAs, general shooting other than hunting would not be allowed. No target shooting would be permitted.

(AD-8) New ground disturbance caused by mining exploration activities would have to be restored (rather than reclaimed). New linear utility projects would be required to include erosion control protections and re-vegetation in all areas. Level 1 BMPs would be applied in both DWMAs and elsewhere within the tortoise survey area (rather than applying Level 2 BMPs outside of DWMAs).

(AD-9) On public lands within tortoise DWMAs, the following restrictions would apply:

- No new agriculture, particularly biosolids fields in DWMAs
- No new development of nuclear and fossil fuel power plants in DWMAs
- All new routes in DWMAs would be considered in the context of Class L guidelines
- All recreational events would be restricted to "approved" routes of travel (not "existing" routes, as given for Class M)
- No pit, start, finish, or spectator areas allowed in DWMAs
- No competitive events would be allowed in DWMAs
- No dual-sport events would be allowed in DWMAs

(AD-10) Outside of DWMAs, current fire management practices would continue. To the degree possible and only if consistent with ensuring public safety, the use of heavy equipment and excessive ground disturbance within the HCA would be avoided. The brochure developed for filming activities (or a similar one) would be circulated to fire fighting personnel to identify DWMAs and areas having higher than average tortoise densities. In addition, except where necessary to address threats to developed property or human safety, the following guidelines for fire management would apply within tortoise DWMAs:

- In identified higher density areas, all fire fighting activities would be restricted to approved routes of travel; use of "closed" routes that have not been rehabilitated would be allowed (use of rehabilitated routes would not be allowed)
- No new roads would be created in areas having higher than average tortoise densities; approved routes may be widened as needed to serve as fire-breaks
- In general, fires in higher density areas would be allowed to burn, contained within existing roads, and result in as little habitat disturbance as feasible
- All burn areas in DWMAs would be quarantined from future use until which time a reduced network is identified to allow for public access, which would curtail additional habitat degradation and promote natural rehabilitation; the BLM, working with the Implementation Team, would determine when approved routes of travel would again be available for full use

Desert Tortoise Proactive Management Programs: (AD-11) In addition to the fencing proposals suggested by Alternative A, the following additional measures would be taken.

- The Mojave-Randsburg Road should be fenced from Highway 395 to the western boundary of the Fremont-Kramer DWMA.
- If average daily traffic warrants in the future, the Shadow Mountain Road should be fenced.
- Underpasses beneath the Fort Irwin Road should be installed.
- Fencing should be installed along the north side of the Pinto DWMA, using chain link if needed to prevent urban encroachment.
- The periphery of the Superior-Cronese DWMA should be fenced, as needed.
- At the time it is paved, a tortoise barrier fence and appropriately spaced culverts would be installed along both sides of Helendale Road between Silver Lakes and Highway 58, to prevent road from fragmenting high density tortoise areas habitat.

(AD-12) In many instances, the location of major improvement projects for highways listed above may be known years in advance of construction. Highways may be fenced years in advance of construction, and treated as a banked mitigation measure, worth an amount of credit to be determined in consultation with the Implementation Team. The cost could be calculated and recorded, and that amount "banked" (deducted from) against the cost of future mitigation, such as cost of land acquisition.

(AD-13) The long-term land acquisition goal would be to acquire all private lands within the DWMA, from willing sellers.

(AD-14) The funding and implementation priority of the tortoise disease management program suggested by Alternative A would be raised from low to high.

(AD-15) Experimental management zones would be established in the Brisbane Valley and Copper Mountain Mesa to study the effects of sheep grazing, off highway vehicle use and urbanization on tortoises.

(AD-16) Tortoise headstarting should be pursued as discussed in Alternative A, except the effort should not begin with a pilot program. Rather, at least five sites should be established within three years of plan adoption.

Desert Tortoise Translocation: (AD-17) Except as described in the Tortoise Disposition Protocol, do not mass-translocate tortoises into DWMAs. Mass translocation may serve as an adaptive management tool if clear scientific-based protocols are developed and endorsed by appropriate entities (such as the MOG).

(AD-18) Brisbane Valley and public lands north of Joshua Tree National Park would serve as potential translocation sites for unexpectedly large numbers of wild tortoises that are removed from construction sites authorized by the West Mojave Plan.

(AD-19) Allow translocation or other rescue of tortoises from military maneuver areas. To this end, complete a pilot translocation study to determine the efficacy of relocating healthy desert tortoises. Use results of the pilot translocation study to determine the best placement and use of removed tortoises. Some goals of the pilot study include:

- Determine the efficacy of translocation;
- Assess translocation as a possible tool for tortoise recovery;
- Use any animals tested positive for upper respiratory tract disease to further our understanding of the disease; and
- Possibly use animals to study the efficacy of the head-starting program.

Translocation site(s) (i) should be fenced; (ii) have conflicting land uses eliminated; (iii) occur on public lands even if that means purchasing private lands; (iv) be isolated from and not contiguous to reserve areas; and (v) receive only healthy tortoises that test negative for upper respiratory tract disease.

Mohave Ground Squirrel: (AD-20) Programmatic surveys in potential habitat areas would be conducted to develop a better MGS range map. Areas to be surveyed would include Brisbane Valley and the Ord-Rodman DWMA (especially it's southern portion). If "source areas" for MGS were to be identified in the future, site-specific mineral withdrawals of these areas would be considered.

Other Species: (AD-21) Grazing exclosures would be established to monitor habitat of the yellow-eared pocket mouse, Ninemile Canyon phacelia and Charlotte's phacelia in the eastern Sierra canyons.

(AD-22) Burrowing owl surveys would be required of all project sites.

(AD-23) To protect the gray vireo, the San Diego horned lizard and the short-joint beavertail cactus, flood control improvements would be restricted in washes that drain the San Gabriel and San Bernardino Mountains. In Los Angeles County, these include Grandview Canyon, Boneyard Canyon, Banneret Canyon, La Montaine Creek, Puzzle Canyon, Jesus Canyon, and Mescal Creek. In San Bernardino County, they include Sheep Creek, one unnamed tributary west of

Sheep Creek, Horse Canyon, Manzanita Wash, Oro Grande Wash and twelve unnamed tributaries between the Los Angeles County line and Interstate 15, and Telephone Canyon and an additional eleven unnamed tributaries east of Interstate 15 to the Mojave River. A one hundred foot buffer would be established.

(AD-24) All lands within the Carbonate Endemic Plants ACEC would be withdrawn from mineral entry, including acquired lands. All public lands would be changed from multiple use class M to class L.

(AD-25) To protect Charlotte's phacelia and Ninemile Canyon phacelia,, cattle grazing on the slopes of the eastern Sierra Nevada Mountains would be restricted in known habitat to the July 1 to April 1 time periods.

(AD-26) The multiple use class of lands south of the Cady Mountains would be changed from class M to class L.

2.5.5 Public Land Livestock Grazing Program

The livestock grazing program proposed by Alternative A would be implemented, except as expressly modified below.

- (AD-27) Fund Avery-Ivanpah study in three DWMA allotments (Harper, Ord, and Cronese) to determine the appropriateness of the 230 lbs / acre threshold; until that determination is scientifically made, use a threshold of 350 lbs / acre.

- (AD-28) Rather than March 15, remove cattle by February 15 of each year (as per other prescriptions) to benefit neonatal foraging.

- (AD-29) Prevent any further damage to identified riparian areas on all cattle allotments managed by the BLM.

- (AD-30) Take an aggressive look at the best placements of waters to facilitate other measures (i.e., establishing the Exclusion Zones, etc.) and minimize impacts to all covered species.

- (AD-31) Minimize OHV impacts on cattle in the Ord Mountain Allotment.

- (AD-32) Throughout the MGS conservation area, maintain 350 lbs/acre for sheep grazing until scientific studies demonstrate a non-competitive threshold. No sheep grazing would be allowed in this area after May 15.

2.5.6 Public Land Motorized Vehicle Access Network

The motorized vehicle access network proposed for Alternative A would be implemented under Alternative D.

(AD-33) Additional motorized vehicle access restrictions would be imposed in several of the motorized access zones within the DWMAs. Within biologically sensitive MAZ's, only street-legal vehicles (i.e. licensed by the California Department of Motor Vehicles in accordance with the State Vehicular Code as legal for operation on California's public roads and highways) would be permitted. These include street-legal four-wheel drive vehicles and dual-sport motorcycles. Vehicles that are not street-legal but are only eligible for "green sticker" licensing (that is, approved for use off of highways) would be prohibited. These include many types of dune buggies, sand rails, all terrain vehicles, quads and dirt bikes. The restricted MAZ's would are listed in Table 2-29.

Table 2-29
Motorized Access ZonesLimited to Street-Legal Vehicles Only

SUBREGION OR SPECIAL MANAGEMENT AREA	MOTORIZED ACCESS ZONE	REASONS FOR VEHICLE RESTRICTIONS
El Mirage	1,2	Total Corrected Sign for desert tortoise significantly above average; would help to address long-standing private property conflict issues
Kramer	1	Total Corrected Sign for desert tortoise significantly above average; would assist in addressing urban interface issues (i.e. Silver Lakes)
Kramer	2,3,4	Total Corrected Sign for desert tortoise significantly above average
Fremont	1,2,5	Total Corrected Sign for desert tortoise significantly above average
Superior	1	Total Corrected Sign for desert tortoise significantly above average; closure would help address significant law enforcement issues
Superior	3	Total Corrected Sign for desert tortoise significantly above average
Superior	4	Total Corrected Sign for desert tortoise significantly above average; offers protection to Paradise Valley which was withdrawn from the military as a possible expansion area
Superior	5	Total Corrected Sign for desert tortoise significantly above average; offers further protection for the Lane Mountain milkvetch
Newberry Rodman	3	Total Corrected Sign for desert tortoise significantly above average; conflicts with permitted ranching operation
Coyote	1	Total Corrected Sign for desert tortoise significantly above average (Offers protection to Paradise Valley)
Western Rand ACEC	---	Important tortoise habitat, adjacent to Desert Tortoise Research Natural Area

(AD-34) The CDCA Plan access corridor connecting the Stoddard Valley Open Area and the Johnson Valley Open Area would be deleted.

(AD-35) During periods of prolonged drought (lasting three or more years), the BLM would consider emergency route closures (generally referred to as "quarantine areas") in higher density areas, or identified motorized access zones. Such quarantines would be lifted immediately following break of the drought, which would be identified by the Implementation Team in coordination with BLM, USFWS, and CDFG.

2.6 ALTERNATIVE E: ONE DWMA – ENHANCED RECREATION OPPORTUNITIES

2.6.1 Overview

Alternative E's conservation strategy, like Alternative D's, grew out of discussions among the participating agencies and members of the public during EIR/S scoping and the development of Alternative A. Many suggestions were offered that called for placing a very high priority on multiple use and motorized vehicle access to the desert, even if this might affect some of the programs that could be implemented to conserve of species and ecosystems. These included scoping meeting requests that the EIR/S explore whether a single DWMA, protecting only the remaining areas of relatively higher tortoise populations, might be effective in conserving the desert tortoise. Alternative E presents a conservation strategy that incorporates many of these suggestions (see foldout Map 2-19).

Alternative E is intended to implement a tortoise management strategy that emphasizes a very aggressive ecosystem conservation program within the single DWMA, comparable to that proposed by Alternative D. Outside of this area, a program would be implemented that emphasizes multiple use, with special emphasis given to enhancing recreation opportunities.

All aspects of this alternative's conservation strategy would be as described for Alternative A, except as specifically described below. These include Alternative A's motorized vehicle access network, education, feral dog management plan and disease management trust fund.

2.6.2 Habitat Conservation Area

(AE-1) A single DWMA would be established, encompassing approximately 1,118 square miles and including portions of Alternative A's Superior-Cronese and Fremont-Kramer DWMA. This DWMA would exclude the Pinto Mountains, the Ord and Rodman Mountains, lands north and west of Kramer Junction, and lands south of Shadow Mountain Road. Within this DWMA, the tortoise conservation measures proposed by Alternative D would apply, except where specifically noted below. No tortoise Special Review Areas would be designated but the gilia SRAs would remain.

(AE-2) All BLM multiple use class M and U lands within the DWMA would be changed to class L. Lands within the DWMA removed from the LTA disposal zone would be changed from multiple use class U to L. All other multiple use class changes for ACECs and conservation areas outside the DWMA would be as described in Alternative A and Table 2-4.

Boundaries of conservation areas for the Mohave ground squirrel and other species would be established as proposed for Alternative A, except for the removal of the Spangler Hills Open Area expansion from the MGS Conservation Area.

2.6.3 Compensation Framework

(AE-3) Single-family residential structures within the HCA but outside of the tortoise DWMA would be exempt from the mitigation fee. The fee would apply to single-family residential structures within the DWMA.

2.6.4 Recreation Program

Alternative E proposes a number of measures that would enhance recreation opportunities within the western Mojave Desert. These are described below:

- (AE-4) Expand the Spangler Hills Open Area to include lands to the southwest between Highway 395 and the Trona Road. Change the BLM multiple use class to Class I within this area. The competitive "C" routes would be reopened.

- (AE-5) Expand the Johnson Valley Open Area westward to include the Cinnamon Hills. Change the BLM multiple use class to Class I within this area.

- (AE-6) Establish a Fremont Recreation Area on lands north and west of Fremont Peak, surrounding Cuddeback Dry Lake. Change the BLM multiple use class to Class M within this area. Allow competitive off highway vehicle speed events within this area on designated motorized vehicle routes. Prepare a management plan for this area that emphasizes vehicle access, camping, and competitive event support. A denser network of off highway vehicle routes than that proposed by Alternative A could be established in this area close to Cuddeback Dry Lake.

- (AE-7) Establish a corridor specifically for enduro events that runs from the El Mirage Open Area, to and past the Fremont Recreation Area, and ends at the Spangler Hills Open Area.

- (AE-8) Competitive motorized recreation events would be allowed between Shadow Mountain Road and the El Mirage Open Area.

- (AE-9) "Yellow flag" restrictions for competitive events would apply only within the single DWMA.

2.6.5 Species Conservation Measures

Desert Tortoise: (AE-11) All public lands within the single tortoise DWMAs would be reclassified as Category I habitat. All public lands outside of the DWMA would be reclassified as Category III habitat.

(AE-12) Within the DWMA, the following activities would be prohibited:

- All competitive and organized off highway vehicle events (including dual sport) within the DWMA, except for enduros along the proposed enduro corridor.
- Commercial filming
- Shooting and hunting

(AE-13) Outside of the DWMA, the commercial filming program described by Alternative A would be implemented.

(AE-14) The stopping, parking and camping changes proposed by Alternative A would apply only within the single tortoise DWMA.

(AE-15) Acquisition priorities would be highest for lands within the DWMA. However, there would be no net loss of acreage of private lands within the planning area.

(AE-16) Fencing priorities would be the same as for Alternative A, except that special attention would be given to ensure that these fences do not restrict off highway vehicle recreation opportunities. Fence the periphery of the DWMA, as needed.

(AE-17) The fire management program described for Alternative D would be applied within the DWMA.

(AE-18) Implement the headstarting program described by Alternative A, subject to the following modifications. Locate all facilities within the DWMA in places where tortoises have apparently been extirpated. Collect gravid females from adjacent areas, not within the DWMA.

(AE-19) If authorized construction project displaces tortoises within two miles of the DWMA, consider translocating them into the nearest portion of the DWMA.

(AE-20) Except as described in the Tortoise Disposition Protocol, do not mass-translocate tortoises into the DWMA. Mass translocation may serve as an adaptive management tool if clear scientific-based protocols are developed and endorsed by appropriate entities (such as the MOG).

(AE-21) A minimum of 2 new law enforcement and 2 new maintenance workers would be assigned to the DWMA, dedicated full-time to natural resources enforcement and implementation work

2.6.6 Public Land Livestock Grazing Program

(AE-22) The program would be the same as proposed for Alternative A, except there would be no seasonal restriction (i.e., May 15) or utilization threshold (i.e., 230 lbs/acre) on cattle or sheep allotments. The Harper Lake Allotment and the Cronese Lakes Allotment coincide with the single DWMA. All portions of allotments within the DWMA would no longer be available for grazing.

(AE-23) Sheep grazing would not be eliminated from public lands between Shadow Mountain Road and the northern, fenced boundary of the El Mirage Open Area.

2.7 ALTERNATIVE F: NO DWMA – AGGRESSIVE DISEASE AND RAVEN MANAGEMENT

2.7.1 Overview

Alternative F's conservation strategy differs from that of the previously discussed alternatives, in that it proposes a tortoise conservation strategy that relies on an aggressive program of tortoise disease management and raven control, supported by limited fencing, rather than the establishment of DWMAs to protect tortoise habitat. Thus the highest funding priority would be given to controlling disease and ravens, and no DWMAs would be designated (see foldout Map 2-21).

All aspects of this alternative's conservation strategy would be as described for Alternative A, except as specifically described below. These include Alternative A's motorized vehicle access network, livestock grazing program and education outreach.

2.7.2 Habitat Conservation Area

(AF-1) A 1.3 million acre habitat conservation area would be established that would consist only of the MGS Conservation Area and the 14 conservation areas proposed for other species by Alternative A. No DWMAs would be established, nor would DWMA ACECs be designated. Although no DWMAs would be delineated, BLM's Category I, II and III tortoise habitat designations and USFWS critical habitat would remain in effect. Changes to the Category I habitat in the Rand Mountains ACEC would be implemented.

(AF-2) Tortoise Special Review Areas would not be designated; however, the two Little San Bernardino Mountains gilia SRAs would be designated.

(AF-3) BLM multiple use class M lands would change to class L in the northern portion of the MGS Conservation Area. All other MUC changes shown on Table 2-4, with the exception of MUC changes in DWMAs, would be as described for Alternative A.

2.7.3 Compensation Framework

(AF-4) The compensation framework would be as described for Alternative A, although the area within which the 5:1 compensation ratio would apply would change. Under this alternative, the 5:1 ratio would be in effect within the HCA, and on all desert tortoise critical habitat located outside the HCA.

(AF-5) The 1 percent allowable ground disturbance threshold would not apply, either within or outside the HCA. There would be no habitat credit component program.

2.7.4 Species Conservation Measures

Tortoise Take-Avoidance Measures: (AF-6) Restoration and reclamation programs could continue, although there would be no habitat credit program.

(AF-7) Motorized vehicle speed events would be allowed on a case-by-case basis. An environmental assessment would be prepared for each event. On BLM public lands designated as "limited areas", motorized vehicle camping, stopping and parking on public lands would be allowed within 100 feet of designated open routes on BLM multiple use class L lands, and within 300 feet elsewhere.

(AF-8) Land acquisition would be guided by current BLM and Department of Defense acquisition priorities set by the BLM – EAFB land tenure adjustment strategy. This "LTA" strategy identified lands for disposal (Disposal Zone) while maintaining other lands (Retention and Consolidation Zones), the latter being located primarily in an L-shaped pattern running from north of Adelanto, to the Fremont Peak region, and then east through Superior Valley.

(AF-9) Mineral extraction and material sales would be allowed in all areas. BLM Plans of Operation would be required on multiple use class L and existing ACEC lands. Reclamation would be required, although restoration would not. Mines less than ten acres located on BLM lands would continue to be covered by the existing small mining biological opinion. SMARA regulations would be implemented by local jurisdictions and the BLM.

(AF-10) In tortoise Category I and II habitat, dogs off leash under the control of their owners would be allowed except where prohibited.

(AF-11) Caltrans highway proposals would be considered on a case-by-case basis.

(AF-12) Law enforcement and BLM ranger patrols would continue at current levels. There would be no new law enforcement personnel.

(AF-13) New utility construction and maintenance measures for tortoises would be addressed on a case-by-case basis. Maintenance measures would continue to follow existing procedures.

(AF-14) Streamlined Level 1 BMPs would apply within Category I and Category II tortoise habitat. Level 2 BMPs would apply elsewhere.

Tortoise Fencing Program: (AF-15) Require immediate fencing along the following roads, in decreasing order of priority: all of Highway 395 between Adelanto and Red Mountain; all of Highway 58 between Highway 14 and Barstow; all of Highway 247 between Barstow and Lucerne Valley; all of Interstate 40 between Barstow and Ludlow; and all secondary roads adjacent to tortoise habitat: Shadow Mountain Road, Fort Irwin Road, Irwin Road, recently paved portions of Twenty Mule Team Road, and Garlock Road.

Tortoise Survey and Disposition Protocols: (AF-16) Presence-absence survey would be required in all areas, and clearance surveys would be required where tortoise sign is found. "No Survey" areas would not be designated.

Tortoise Headstarting and Translocation: (AF-17) There would be no headstarting program, nor would there be the establishment of formal translocation areas. The Implementation Team would assist project proponents, as needed, to rescue tortoises from harn's way on BLM-authorized projects.

Tortoise Disease Management and Raven Control: (AF-18) The disease and raven programs proposed by Alternative A would be implemented under this alternative. Funding these programs would receive the highest priority. All other tortoise management programs, including habitat enhancement, reclamation, land acquisition, headstarting, weed management and other actions, would be funded only to the degree that moneys were available after full funding of the disease and raven control programs. If necessary, institute emergency culvert closure.

Other Species: (AF-19) LeConte's thrasher conservation would rely on lands protected by the MGS and other species conservation areas. No compensation or avoidance requirements would be imposed for the take of burrowing owl (though mortality is prohibited by state law), alkali wetland plants, Little San Bernardino Mountains gilia and crucifixion thorn.

2.7.5 Public Land Livestock Grazing Program

(AF-20) Livestock grazing would be managed pursuant to the existing USFWS biological opinions and current BLM CDCA Plan management. Sheep would continue to be precluded from grazing in tortoise Category I and II habitat.

2.8 ALTERNATIVE G: NO ACTION

2.8.1 Overview

Alternative G assumes the continued implementation, over the next 30 years, of existing approaches to the conservation of sensitive plants and animals as expressed in current provisions of agency and jurisdiction land use plans, ordinances, statutes and policies. Current procedures for complying with the California and federal endangered species acts would remain in effect, including case-by-case permitting under FESA and CESA. These programs are discussed in detail in Chapter 3, Section 3.1 (Planning and Regulatory Framework), and in the *Current Management Situation of Special Status Species in the West Mojave Planning Area* (a copy of which is included on the attached CD-Rom).

2.8.2 Habitat Conservation Area

No new conservation areas would be designated for the tortoise, nor would new conservation areas be established for other sensitive species. The DTNA would remain as the only area exclusively designated for tortoise management in the West Mojave. BLM management on

public lands would be directed by management goals of Category I, II, and III, Multiple Use Guidelines given in the CDCA Plan, USFWS-designated critical habitat, and other applicable regulations (i.e., FLMPA, FESA, etc.). Many of these same regulations would also apply to management of private lands, and CESA would apply.

No changes would be made to the Land Tenure Adjustment program.

Species within cities and counties would continue to be managed under general plans and other applicable regulations (i.e., SMARA, Streambed Alteration Agreements, CEQA). There would be no Special Review Areas. The Mojave Basin Adjudication would remain in effect.

2.8.3 Compensation Framework

The tortoise compensation framework would still follow the MOG formula. Although this formula is ostensibly applicable to public lands only, it has been (and would continue to be) applied to private lands as well, and is driven by the proximity of private lands to Category I, II, and III. Therefore, compensation ratios would remain at between 1:1 (on and adjacent to Category III Habitat) and up to 6:1 (on Category I Habitat). CDFG would continue to require trapping for Mohave ground squirrel, and CDFG's existing fee program for MGS would continue. The compensation framework, new ground disturbance limits and habitat credit component proposed by Alternative A would not apply.

2.8.4 Incidental Take Permits

Incidental take authorization (federal Section 10(a) and State 2081 permits) would continue to be sought on private lands where tortoise sign is found during presence-absence surveys. Projects with a federal nexus would continue to be authorized under Section 7 of FESA, and result in formal (i.e., issuance of biological opinions) and informal consultations.

2.8.5 Species Conservation Measures

- **Desert Tortoise:** There would be no specific, new conservation measures or areas applied to tortoise protection. The DTNA would remain as the single place where management for tortoise conservation would be applied.

- **Mohave Ground Squirrel:** No new measures would be identified relative to MGS conservation. Management would continue to be applied on private lands, but would not significantly affect management on public lands, except as provided for under CDCA guidelines and an MOU established between the BLM and CDFG.

Other Species: Carbonate Habitat Management Strategy would apply after a separate biological opinion. Take of burrowing owls would be determined on a case-by-case basis. No killing of owls would be allowed, as at present. Species found primarily on private lands (alkali mariposa lily, gray vireo, Little San Bernardino Mountains gilia, Parish's alkali grass, Parish's popcorn flower, San Diego horned lizard, and short-joint beavertail cactus) would receive case-by-

case review under CEQA. Species dependent on groundwater levels in the Mojave River would continue to be governed by local ordinances, wetland laws and application of the Mojave Basin Adjudication.

2.8.6 Public Land Livestock Grazing Program

If Alternative G (No Action) is adopted, the National Fallback Standards and Guidelines will be adopted for the Western Mojave Desert portion of the BLM's California Desert District.

2.8.6.1 Objective A - Implement Standards

Manage grazing activities under the National Fallback Standards:

- *Soils*. Upland soils exhibit infiltration and permeability rates that are appropriate to the soil type, climate, and landform.

- *Riparian/Wetland.* Riparian-wetland areas are in properly functioning condition.

- *Stream Function.* Stream channel morphology (including but not limited to gradient, width/depth ratio, channel roughness and sinuosity) and functions are appropriate for the climate and landform.

- *Native Species.* Healthy, productive, and diverse populations of native species exist and are maintained.

2.8.6.2 Objective B – Conform Grazing Activities

Manage grazing activities under the following fallback guidelines:

- Management practices maintain or promote adequate amounts of ground cover to support infiltration, maintain soil moisture, and stabilize soils.

- Management practices maintain or promote soil conditions that support permeability rate that are appropriate to climate and soils.
- Management practices maintain or promote sufficient residual vegetation to maintain, improve, or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge and stream bank stability.

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

- Management practices maintain or promote the appropriate kinds and amounts of soil organisms, plants and animals to support the hydrologic cycle, nutrient cycle, and energy flow.

- Management practices maintain or promote the physical and biological conditions necessary to sustain native populations and communities.

- Desired species are being allowed to complete seed dissemination in one out of every three years (Management actions will promote the opportunity for seedling establishment when climatic conditions and space allow.)

- Conservation of Federal threatened or endangered, Proposed, Category 1 and 2 candidate, and other special status species is promoted by restoration and maintenance of their habitats.

- Native species are emphasized in the support of ecological function.

- Non-native plant species are used only in those situations in which native species are not readily available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health.

- Periods of rest from disturbance or livestock use during times of critical plant growth or regrowth are provided when needed to achieve healthy, properly functioning conditions (The timing and duration of use periods will be determined by the authorized officer).

- Continuous, season-long livestock use is allowed to occur only when it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems.

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

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

- 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.

2.8.7 Public Land Motorized Vehicle Access Network

Off road vehicle designations in the West Mojave planning area would remain unchanged from those adopted by the BLM on June 30, 2003. Motorized vehicle networks developed during the preparation of ACEC management plans since 1980 would provide the network that would apply within those ACECs, except as specifically modified by the June 30, 2003 Decision Record. These include the following ACECs: Afton Canyon, Barstow Woolly Sunflower, Bedrock Spring, Big Morongo Canyon, Black Mountain, Calico Mountain Early Man Site, Christmas Canyon, Cronese Basin, Desert Tortoise Research Natural Area, Fossil Falls, Great Falls Basin, Harper Dry Lake, Jawbone/ Butterbredt, Juniper Flats, Last Chance Canyon, Mojave Fishhook Cactus, Rainbow Basin Natural Area, Red Mountain Spring (formerly Squaw Spring), Rodman Mountains Cultural

Area, Rose Spring, Sand Canyon, Short Canyon, Soggy Dry Lake, Steam Well, Trona Pinnacles, Upper Johnson Valley, Western Rand Mountains, and Whitewater Canyon.

Within the redesign area, the network adopted on June 30, 2003 would be retained. This would include the Juniper subregion network that Alternative A proposes to replace. In all other areas, the 1985-87 off road vehicle designations (as modified by the June 30, 2003 decision) would remain in place.

2.8.8 Education Program

Current programs implemented by the BLM, cities and counties would continue, including public volunteer efforts, outreach programs, media contacts, visitor field contacts and patrols by law enforcement personnel.

2.9 ALTERNATIVES EVALUATED BUT ELIMINATED FROM DETAILED CONSIDERATION

An environmental impact statement is required to rigorously explore and objectively evaluate all reasonable alternatives. The range of reasonable alternatives is limited by legal requirements and the requirements to fulfill the purpose and need described in Chapter One. The following alternatives were evaluated and eliminated from detailed consideration. These alternatives were eliminated because they did not meet the purpose and need for the West Mojave Plan or the CDCA Plan, did not meet certain legal requirements of FLPMA, or were variations of alternatives already being studied in detail through this environmental impact statement process.

Route Designation Mileage Ceiling Alternative: During the task group process, it was suggested that the mileage of a final motorized vehicle access network be capped at 18 miles per township in desert tortoise Category I habitat, and 24 miles per township in desert tortoise Category II habitat. This alternative was not considered in detail due to the arbitrary nature of these figures, neither of which had any basis in either the Desert Tortoise Recovery Plan or the scientific literature. Instead, the route network design was grounded in factors having a demonstrated connection to habitat needs, such as avoiding washes and areas of relatively high tortoise density, elevation and slope considerations, sensitivity of other species, elimination of redundant routes and type of vehicle use, as well as recreational, commercial and landowner access needs.

Interim Management Alternative: As a result of a January 2001 consent decree commitment on a settlement agreement arising out of litigation between BLM and the Center for Biological Diversity and others, the BLM was required to “implement an emergency route closure” for the Red Mountain, Fremont, Kramer, Superior and Newberry-Rodman subregions This measure was to remain in effect until the issuance of the West Mojave Plan Record of Decision. BLM implemented this measure by adopting route closures, based upon the preliminary and relatively incomplete information available at that time.

The closures were identified before the field survey work described above was completed, at a time when the route designation planning process was still at a relatively early stage. Prior to

March 2002, the results of this field survey were not available to help identify the location of routes of travel on the ground, the nature of those routes (graded, 4WD, single track, level of use), and vehicle destination points (campgrounds, staging areas, popular recreation sites, and other features). The field survey revealed that nearly nine percent of the routes left open by the interim closures do not exist on the ground. The field survey also indicates that the design of the resulting access network did not provide for all motorized vehicle access needs, nor for the most effective protection for species of concern.

Core Area Alternative: An approach suggested for reserve design was to identify DWMA boundaries, and then designate the most biologically sensitive or important portions of those DWMAs as "core areas," which would receive relatively higher priority for funding and implementation. This alternative was eliminated because it was concluded that all portions of the DWMA are equally critical for tortoise recovery, and that identifying higher priority "core areas" necessarily demoted the remainder of the DWMA to a low priority zone that, given limited funding, might see little in the way of implementation in the future. This could heighten the risk that habitat between the "core areas" would degrade, thereby fragmenting the DWMAs.

Barstow to Vegas Race Course Alternative: A proposal was suggested to re-route the West Mojave segment of the Barstow to Vegas Race Course to avoid sensitive resources. The start cone was to be relocated from the Alvord Road area to the Johnson Valley Open area, and the re-routed race course was to proceed northwest to the Pisgah Crater area, cross I-40, wind through the Cady Mountains area, cross I-15, and join the existing Barstow to Vegas Race Course near the Soda Mountains. This alternative was eliminated because in December 2002, the BLM's Record of Decision for its Northern and Eastern Mojave Plan eliminated the eastern three-quarters of the Barstow to Vegas Race Course. Lacking a route to connect to east of the Soda Mountains, a re-routed, but stand-alone, western segment would be an abbreviated route that would end with its eastern terminus well short of its intended destination, the State of Nevada. Accordingly, it was eliminated from detailed consideration.

Listed Species Only Alternative: The CDFG suggested consideration of an alternative addressing only those species designated as rare, threatened or endangered under state and federal laws. This alternative would not meet BLM and local jurisdiction objectives to conserve species that may be listed in the future. Moreover, because the West Mojave Plan is a federal land use plan amendment, as well as a habitat conservation plan, a listed species only alternative would not meet federal policies requiring the conservation of non-listed but sensitive species on public lands.

Listed and Candidate Species Alternative: The CDFG suggested consideration of an alternative addressing only those species now designated as rare, threatened or endangered or as candidates for listing under state and federal laws. This alternative, like the listed species only alternative, would not meet BLM and local jurisdiction objectives and federal mandates to conserve species that may be listed in the future.

Existing Reserves Alternative: The CDFG suggested consideration of an alternative addressing only conservation within existing reserves. This alternative is similar to the No Action alternative, which is addressed in detail. It would not meet the objectives of providing an integrated conservation program for the desert tortoise or Mohave ground squirrel and for many other species.

2.10 ALTERNATIVE DROPPED FROM CONSIDERATION

1985-87/ACEC Route Network Alternative: Off road vehicle designations in the West Mojave planning area would remain as they existed prior to the BLM's June 30, 2003 Decision Record. This alternative constituted the route designation component of Draft West Mojave Plan EIR/S Alternative G, the No Action alternative, because at the time the Draft EIR/S was published (mid-June 2003) the June 30, 2003 decision had yet to be made. The 1985-87/ACEC Route Network Alternative no longer is the "No Action" component, as that status has passed to the network adopted by the BLM's June 30, 2003 Decision Record.

The 1985-87/ACEC Route Network Alternative consisted of the motorized vehicle access network designated by the BLM in 1985 and 1987 for the Ridgecrest and Barstow Field Offices, together with networks developed during the preparation of ACEC management plans since 1980 would provide the network that would apply within those ACECs. It is no longer being considered because it included a number of significant weaknesses, including the following:

- Field surveys conducted during 2001 and 2002 revealed that nearly 13 percent of all open routes within the redesign area do not exist on the ground.
- The ACEC networks and the 1985-87 networks were plagued by numerous "edge matching" issues: twenty-five locations were identified where one or more routes from an ACEC network did not connect to corresponding 1985-87 routes on adjacent lands. The network, therefore, was not seamless, and therefore did not constitute an effective and functioning network.
- The network included many design flaws, in that it did not provide for adequate recreational and commercial access and had not been modified to adapt to new circumstances, developments and projects that have occurred in the West Mojave since the middle 1980s. Nor could the designers of the 1985-87 have access to the significant amounts of new biological data that have been obtained since the middle 1980s.

- While the 1985-87 network met most access needs in more remote, less heavily used areas such as Inyo County and the Cady Mountains, the design of the network did not necessarily meet public needs in the more heavily used public in the southwestern portion of the western Mojave Desert[7].

7 Design weaknesses included the following concerns (by subregion):

- **Coyote:** This is a lightly used area, with little motorcycle use. Most routes designated by the current network serve mining and commercial needs and utility maintenance. The network was not designed to serve recreational demands, so it is not particularly effective in providing access to popular rock hounding sites in Alvord Mountains. Its many long, linear routes provide limited opportunity for general touring, and tend to be destination oriented or lead to dead ends.

- **El Mirage:** The existing network offers very little in way of web of routes, in an area where a lack of a defined network has encouraged trespass riding on private property. Little general touring or connectivity is designed into the existing system, particularly in the Shadow Mountains, where the network is utilitarian but does not encourage, for example, enjoyable jeep touring.

- **Fremont:** The current network is particularly flawed in that it ignores what is considered to be one of most popular off highway vehicle areas, the region just north of Fremont Peak and the Gravel Hills. A location known as Hamburger Mill, just north of Fremont Peak, has traditionally been a very popular area for motorcycle groups to camp and tour. It is very popular with families, for it offers a wide variety of topography and trails demanding a broad spectrum of skills, from novice to highly technical. Large groups tend to congregate here. The current network doesn't provide any access in this area other than broad, four-wheel drive

routes; few if any of the popular motorcycle touring routes in this area and through the Gravel Hills are open. Campsites northeast of Fremont Peak, long used by OHV groups, are particularly affected. Finally, the existing network provides poor access in the Black Mountain area.

- **Juniper:** The current network suffers from many redundant routes. While it addresses most recreation needs, it does not meet current demands for a seamless interface with United States Forest Service route networks.

- **Kramer:** This region has many old motorcycle trails dating from many decades ago. The failure to leave some of these open is particularly important in the Iron Mountains, where the current network provides utilitarian access to mines and other facilities via well-graded routes but does not provide opportunities for OHV touring. The Iron Mountains are a popular area for rockhounding, exploring historic mines, and camping, and a demand for recreation-focused routes exists and is not satisfied by the existing network. Similarly, the Kramer Hills are historically popular with rockhounders, target shooters and motorcylists. The current network provides many two-track routes but no single-track routes. Finally the region as a whole lacks long range touring routes and single-track connectivity.

- **Middle Knob:** Since the existing network was designated, considerable windfarm development has occurred in the surrounding area. The design of the network does not take these developments into account, insofar as providing a recreation experience in this environment is concerned. The current network was not designed with the needs of private property owners in mind (that is, ensuring a minimum of conflicts between recreationists and property owners).

- **Newberry-Rodman:** This area known for rockhounding. The existing network does not ensure nearly as much access to these popular rockhounding areas as the demand warrants; rather, the network tends to be utilitarian rather than recreational in focus. There is a lack of short loops, and no provision for motorcycles (although motorcycle use of this subregion is not nearly as common as elsewhere). The current network is not as effective as it could be in preventing conflicts between recreationists and livestock grazing.

- **Red Mountain:** This is a very important motorcycle recreation area. The current network is particularly lacking in providing for this, in part because the 1985-87 inventory did not address single-track routes. The 1985-87 network effectively curtails quality motorcycle recreation experience, since the network is composed primarily of two-track and graded routes. The network lacks routes in rougher terrain around Red Mountain itself, other than in the form of utilitarian access to commercial mines and facilities. The network tends to be valley and bajada – focused, and directs visitors towards areas they can't access, such as the Grass Valley wilderness.

- **Superior:** This is an important area for 2 track or 4 WD touring. The current network, which is based upon the 1987 inventory, is lacking in providing for this type of recreational opportunity, particularly in the northwest quadrant of this sub region. Unlike the Hamburger Mill area of the Fremont sub region, this sub region is characterized by much more dispersed recreation and camping. Some of the more well-know areas include Rainbow Basin and Opal Mountain. Unfortunately, the network as described by the 1985-1987 fails to not only to adequately meet those dispersed recreation and camping needs, but also includes routes that draw visitors into Fort Irwin expansion area and into the Superior and Water Valleys, (both of which are characterized as having much higher than average densities of tortoise sign), rather than sending them elsewhere.

2.11 COMPARSON OF ALTERNATIVES

As required by the Council on Environmental Quality's Regulations for implementing NEPA, at Section 1502.14, Tables 2-30 through 33 present in comparative form the key components and environmental impacts of the seven alternatives addressed by the EIR/S. BLM multiple use class acreages are presented in Table 2-30. The acres of conservation areas that would be established by each alternative are identified in Table 2-31. A summary of actions proposed for each of the seven alternatives can be found in Table 2-32. Finally, for each species addressed by the plan, Table 2-33 presents a comparison of the acreage of habitat set aside for conservation and the acreage available for incidental take.

Table 2-30
Table Showing Multiple Use Classes in Each Alternative
Acres of BLM land

Alternative	Class C	Class L	Class M	Class I
A Preferred	458,814	1,494,725	715,964	379,906
B BLM Only	458,814	1,494,725	712,190	379,906
C Recovery Plan	458,814	1,494,725	717,540	379,906
D Enhanced Ecosystem Protection	458,814	1,884,740	329,720	373,548
E Enhanced Recreation	458,814	1,598,150	583,803	407,905
F Disease and Predation	458,814	1,494,725	714,229	373,407
G No Action	457,721	1,501,224	877,042	378,467

Numbers are approximate

Table 2-31[1]
Acreage of New Conservation Areas in Each Alternative

	A PREFERRED	B BLM ONLY*	C RECOVERY PLAN	D ENHANCED ECOSYSTEM	E ENHANCED RECREATION	F DISEASE AND RAVEN	G NO ACTION
Tortoise DWMAs	1,523,936	1,038,711	1,551,810	1,539,632	724,133	0	0
MGS Conservation Area	1,726,712	1,308,877	1,726,712	1,726,712	1,711,391	1,726,712	0
Special Review Area	135,037	0	63,340	135,037	135,037	63,340	0
Alkali Mariposa Lily	7,243	0	7,243	7,243	7,243	7,243	0
Barstow Woolly Sunflower	36,211	17,682	36,211	36,211	36,211	36,211	314
Bendire's Thrasher*	28,046	28,046	28,046	28,046	28,046	28,046	0
Big Rock Creek	10,785	0	10,785	10,785	10,785	10,785	0
Carbonate Endemic Plants	5,169	4,393	5,169	5,169	5,169	5,169	0
Coolgardie Mesa	13,354	10,107	13,354	13,354	13,354	13,354	0
Kelso Creek Monkeyflower*	1,870	1,870	1,870	1,870	1,870	1,870	0
Middle Knob	20,495	17,671	20,495	20,495	20,495	20,495	0
Mojave Monkeyflower	57,087	36,630	57,087	57,087	57,087	57,087	0
Mojave Fringe-toed Lizard	42,865	8,485	42,865	42,865	42,865	42,865	0
North Edwards	12,702	0	12,702	12,702	12,702	12,702	0
Parish's Phacelia	898	512	898	898	898	898	0
Pisgah	19,828	17,785	19,828	19,828	19,828	19,828	± 18,000
West Paradise	1,243	257	1,243	1,243	1,243	1,243	0

Many conservation areas overlap; thus, acreages are not totaled. Includes existing ACEC's and Wilderness within the HCA.

* Acreages are for BLM managed lands only

[1]. The acreages in this table have changed from those in the draft EIR/EIS to reflect corrections and changes in the Conservation Area boundaries.

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Table 2-32
Summary of EIS Alternatives

	ALTERNATIVE A INTERAGENCY CONSERVATION PLAN	**ALTERNATIVE B** BLM ONLY	**ALTERNATIVE C** TORTOISE RECOVERY PLAN	**ALTERNATIVE D** ENHANCED ECOSYSTEM PROTECTION	**ALTERNATIVE E** ONE DWMA ENHANCED RECREATION OPPORTUNITIES	**ALTERNATIVE F** NO DWMA AGGRESSIVE DISEASE & RAVEN MANAGEMENT	**ALTERNATIVE G** NO ACTION
OVERVIEW							
Overview	Conservation strategy seeks to balance conservation of sensitive plants and animals, and multiple use of the western Mojave Desert, providing motorized vehicle access where appropriate, while meeting FESA and CESA permit issuance criteria.	Same as Alternative A, implemented on BLM lands only. Case by case CESA and ESA compliance on private lands, as at present.	Desert Tortoise Recovery Plan actions serve as conservation strategy for tortoise. Other Species: Alternative A conservation strategy.	High priority on conservation of sensitive plants and animals, even if this requires limits on motorized vehicle access to and multiple use of the western Mojave Desert.	Single 1,000 mi^2 DWMA, composed of high-density areas. Alternative D program within DWMA, except as noted below. Elsewhere, multiple use with special emphasis on enhancing recreation. Other Species: Alternative A conservation strategy.	Intensive raven and tortoise disease management program, supported by limited fencing, rather than habitat protection and acquisition. Other programs - low priority for funding or eliminated. Other Species: Alternative A conservation strategy.	Current management continues. The Wildlife Element of the CDCA Plan, as amended, lists applicable public laws, acts, and executive orders that provide direction to the BLM in managing wildlife resources.
HCP?	Yes	No	Yes				No
Biological Goal	The biological goals identified for Alternative A would apply to all alternatives.						
CONSERVATION AREAS							
BLM Multiple Use Class Changes	See Table 2-31.						
Conservation Areas	See Table 2-32						
Special Review Areas	3 SRAs - 2 tortoise, 1 Little San Bernardino Mountain gilia.	No SRAs		3 SRAs - 2 tortoise, 1 Little San Bernardino Mountain gilia.		1 SRA - Little San Bernardino Mountains gilia.	No SRA.
Tortoise DWMA Status	Area of Critical Environmental Concern					None	
MGS CA Status	Wildlife Habitat Management Area			ACEC	Wildlife Habitat Management Area		None
Other New Special Designations	Two new Key Raptor Areas (Middle Knob and Argus Mountains).	Two new Key Raptor Areas (Middle Knob and Argus Mountains).	Ord Rodman ecological reserve and research natural area. Cattle grazing experimental management zone in Ord-Rodman DWMA. Carbonate endemic	Emergency management zones in Brisbane Valley and Copper Mountain Mesa to study effects of sheep/OHV use and urbanization,	Fremont Recreation Area. Enduro Corridor from El Mirage Open Area to Spangler Hills Open Area	None	None.

	ALTERNATIVE A INTERAGENCY CONSERVATION PLAN	**ALTERNATIVE B** BLM ONLY	**ALTERNATIVE C** TORTOISE RECOVERY PLAN	**ALTERNATIVE D** ENHANCED ECOSYSTEM PROTECTION	**ALTERNATIVE E** ONE DWMA ENHANCED RECREATION OPPORTUNITIES	**ALTERNATIVE F** NO DWMA AGGRESSIVE DISEASE & RAVEN MANAGEMENT	**ALTERNATIVE G** NO ACTION
			plants RNA.	respectively, on tortoises.			
COMPENSATION AND ALLOWABLE GROUND DISTURBANCE							
Compensation Framework	Three-tiered mitigation fee areas, derived from multipliers of 5:1, 1:1 and 0.5:1 times average HCA land value. Replaces most current mitigation, enhancement and endowment fees, many survey costs, time delays.	5:1 compensation within tortoise DWMAs; elsewhere, existing enhancement and endowment fees, survey costs, time delays.	Same as Alternative A.	Same as Alternative A, except - additive fees for multiple species, not to exceed a specified ratio (e.g. 7:1). Directed mitigation for plants.	Same as Alternative A; smaller HCA.	Same as Alternative A; smaller HCA.	Current Management: Desert tortoise management oversight group's (MOG) existing tortoise formula; CDFG enhancement and endowment fees, survey costs, time delays.
Allowable Ground Disturbance	One percent threshold, applicable within HCA, tracked by jurisdiction.	One percent threshold for BLM lands within HCA.	Not Applicable	One percent, tracked by conservation area and by jurisdiction.	Same as Alternative A.	Not applicable.	No limits
Restoration of existing ground disturbance	Habitat credit component.	Same as Alternative A, except applicable to BLM lands only.	Restore surface disturbance within DWMAs to pre disturbance conditions	Program to reclaim habitats in HCA to be developed by Implementing Team.	Same as Alternative A, applied to smaller HCA.	Current Management. (Tamarisk removal and habitat restoration at Afton Canyon, Salt Creek, Harper Lake, intensive rehabilitation in recently burned areas.)	Tamarisk removal and habitat restoration at Afton Canyon, Salt Creek, Harper Lake, intensive rehabilitation in recently burned areas.
MOTORIZED VEHICLE ACCESS AND RECREATION							
Motorized Vehicle Access Network: Components	Maintain existing route network (adopted June 30, 2003), except for minor modifications including: redesign of Juniper subregion network; selected route closures in Lane Mountain Milk vetch, Mohave monkeyflower and Barstow woolly sunflower conservation areas and Red Mountain subregion; reestablish "C" routes northeast of Spangler Hills Open Area, and designate additional open routes in Summit Range and east of Haiwee Reservoir. El Paso Collaborative Access Planning Area -- adopt 1985-87 and initiate follow-on community-based off road vehicle designation program.			Same as Alternative A except: - Only "street legal" vehicles allowed in biologically sensitive DWMA areas,	Same as Alternative A, except more intensive recreational uses of network allowed.	Same as Alternative A.	Maintain existing motorized vehicle route networks (adopted June 30, 2003).
Motorized Vehicles: Competitive	No vehicle speed events allowed in DWMAs or		All competitive and	All competitive and	Outside DWMA,	Vehicle speed events	Vehicle speed

	ALTERNATIVE A INTERAGENCY CONSERVATION PLAN	**ALTERNATIVE B** BLM ONLY	**ALTERNATIVE C** TORTOISE RECOVERY PLAN	**ALTERNATIVE D** ENHANCED ECOSYSTEM PROTECTION	**ALTERNATIVE E** ONE DWMA ENHANCED RECREATION OPPORTUNITIES	**ALTERNATIVE F** NO DWMA AGGRESSIVE DISEASE & RAVEN MANAGEMENT	**ALTERNATIVE G** NO ACTION
Events	MGS Conservation Area. Dual sport allowed seasonally in DWMAs, subject to limitations; year round elsewhere. Johnson Valley to Parker Race allowed, Barstow to Vegas racecourse eliminated, Stoddard to Johnson Valley corridor replaced by connector route.		organized events (including dual sport) prohibited within DWMAs.	organized events (including dual sport) prohibited within DWMAs. Stoddard to Johnson, Barstow to Vegas eliminated.	same as Alt A, except: Reopen competitive C routes by Spangler Open Area, allow competitive events between Shadow Mtn Road and El Mirage open area. In small DWMA, competitive events prohibited.	allowed case by case; EA prepared for each event	events allowed case by case; EA prepared for each event
Motorized Vehicles: Public Land Stopping and Parking	DWMAs - allowed 50 feet from centerline of the designated route, 300 feet elsewhere.		Within DWMAs, allowed in designated areas, within 300 feet of centerline of elsewhere.	Within DWMAs, allowed 15 feet from center line of the designated route.	In small DWMA, allowed 50 feet from center line. Elsewhere, within 100 feet in MUC L, 300 feet elsewhere	Within 100 feet of open routes in BLM class L, 300 feet elsewhere.	
Public Land Motorized Vehicle Camping	Within DWMAs, allowed in previously existing disturbed camping areas adjacent to open routes, within 300 feet of centerline elsewhere.		Within DWMAs, allowed in designated areas, within 300 feet of centerline elsewhere.	Designated areas only. Consolidate multiple camping sites into one official BLM campground.	Within small DWMA, same as alternative A. Elsewhere, allowed except where prohibited.	Allowed within 100 feet of open routes in BLM class L, 300 feet elsewhere.	
Other Recreation Measures	None		DWMAs may provide forms of recreation compatible with tortoise recovery.	Establish EMZ in Brisbane Valley to study effects of OHV on tortoise	(1) Expand Spangler Hills, Johnson Valley open areas (2) Fremont Recreation Area	None	
	Minimum impact recreation (e.g., hiking, equestrian uses, bird watching, photography) allowed in all areas.						
SPECIES CONSERVATION MEASURES: GENERALLY APPLICABLE							
Fire	Current Management		Fire suppression that minimizes surface disturbance (reflects current management).	Current management except, avoid use of heavy equipment and excessive ground disturbance in HCA	Current Management		
Highways - Maintenance	In DWMAs, seasonal restrictions, roadbed and berm requirements, no use of invasive weeds for landscaping	Same as Alt A, but limited to BLM lands.	Same as Alt A. Monitors assigned to all maintenance crews.	Same as Alternative A.			Current Management

	ALTERNATIVE A INTERAGENCY CONSERVATION PLAN	**ALTERNATIVE B** BLM ONLY	**ALTERNATIVE C** TORTOISE RECOVERY PLAN	**ALTERNATIVE D** ENHANCED ECOSYSTEM PROTECTION	**ALTERNATIVE E** ONE DWMA ENHANCED RECREATION OPPORTUNITIES	**ALTERNATIVE F** NO DWMA AGGRESSIVE DISEASE & RAVEN MANAGEMENT	**ALTERNATIVE G** NO ACTION
	in DWMAs.						
Hunting and Shooting	As regulated by current legislation.		DWMAs - No Shooting except hunting Sept - Feb	DWMA public lands: shooting other than hunting not allowed.	Same as Alternative A.		As regulated by current legislation.
Land Acquisition: General	Acquire private lands in HCA and manage for species recovery; set acquisition priorities. BLM's land tenure adjustment (LTA) program continues, modified by retention and acquisition of lands within HCA.		Acquire private lands in HCA; set acquisition priorities. Acquire all private lands in DWMA	Acquire private lands in HCA; set acquisition priorities; intent is to acquire as much private land as practicable. LTA program continues.	Acquire private lands in HCA; set acquisition priorities. DWMA given high priority for acquisition. LTA program continues.	LTA land acquisition program. Acquire private lands in multi-species CA.	LTA land acquisition program. No other overarching acquisition goal.
Land Acquisition	Maintain stability of local tax base.		Tax base changes acceptable.		Maintain stability of local tax base.		Current Management: Tax base changes acceptable.
Mining	Allowed; BLM Plans of Operations as currently, and in expanded ACECs (including all DWMAs) and expanded Class L areas. Existing permitted mines continue according to Plans of Operation. Selected withdrawals from mineral entry.		Mining allowed case by case, provided not significantly impact tortoise habitat or populations; restoration.	See Alternative A. If source areas identified for MGS, consider mineral withdrawals. Restoration standard.	Same as Alt A, though DWMA ACEC is much smaller.	Allowed. BLM Plans of Operations on Class L and existing ACECs. Reclamation standard.	
Utility Corridor	Retain BLM's network of CDCA Plan utility corridors.						
CONSERVATION MEASURES SPECIFIC TO DESERT TORTOISE							
Tortoise Take-Avoidance Measures							
Commercial Activities	Current Management		Modify ongoing and planned activities.	Current management.			
Highways in DWMAs	No new paved roads within tortoise DWMAs other than Caltrans pre-approved projects (see above).		Restrict establishment of new roads in DWMAs.	No new paved roads within DWMAs other than Caltrans pre-approved projects.		Highway proposals considered case-by-case.	

	ALTERNATIVE A INTERAGENCY CONSERVATION PLAN	**ALTERNATIVE B** BLM ONLY	**ALTERNATIVE C** TORTOISE RECOVERY PLAN	**ALTERNATIVE D** ENHANCED ECOSYSTEM PROTECTION	**ALTERNATIVE E** ONE DWMA ENHANCED RECREATION OPPORTUNITIES	**ALTERNATIVE F** NO DWMA AGGRESSIVE DISEASE & RAVEN MANAGEMENT	**ALTERNATIVE G** NO ACTION
Tortoise Survey and Disposition Protocols							
Tortoise Pre-Construction Surveys	Within DWMAs, presence-absence and clearance surveys. - In survey areas, clearance surveys; no Presence-absence surveys. In No Survey areas, no surveys.	Presence-absence surveys required in all areas, clearance surveys where tortoise sign is found.		Same as Alternative A.	Same as Alternative A, except Survey Area includes all lands outside Non-Survey Area and the single DWMA.	Presence-absence surveys required in all areas, clearance surveys where tortoise sign is found.	
Best Management Practices for Tortoise Habitat	Level 1 BMPs in DWMAs. Level 2 outside of DWMAs, but within tortoise survey areas.	Level 1 BMPs in DWMAs, on BLM lands only.	No BMPs. Modify ongoing and planned activities.	Level 1 BMPs in DWMA and Survey Area. Mandatory monitoring or fencing.	Level 1 BMPs in DWMAs. Level 2 outside of DWMAs, but in survey areas.	Terms and Conditions in biological opinions. Stipulations specified in right-of-way grants, e.g., to minimize impacts. Case by Case for private projects.	
Tortoise Handling Guidelines	Standard handling and disposition guidelines for all lands.	Standard handling and disposition guidelines for BLM land only. Case-by-case mitigation elsewhere.	Drop-off site for captive tortoises. Use for research and education.	Same as Alternative A.			Existing guidelines.
Tortoise Proactive Management							
Disease Program	Disease research and strategies considered at level of the MOG. Disease management program suggested, but low priority.		Based upon research findings, if needed: fences between Superior Cronese and Fremont Kramer DWMA; Study epidemiology of URTD and other diseases	High priority disease management program; balance priority with habitat conservation.	Same as Alternative A, except special attention to ensure that fences do not restrict OHV opportunities	Same as Alternative D, except disease management program receives very highest priority; little habitat conservation.	Disease research and strategies considered at level of the MOG.
Fencing - Highways	Yes						
Fencing: Urban Interface	Yes				No	Yes	No
Headstarting	Pilot facility -- Fremont-Kramer DWMA.		No program.	Establish at least five sites within three years of plan adoption.	Pilot facility -- Superior Cronese DWMA.	No program.	
Law Enforcement	8 new law enforcement rangers and 8 new maintenance workers assigned to DWMAs, dedicated full-time to natural resources and		Patrols by law enforcement	Same as Alternative A.	Same as Alt A, except adjust numbers for	No adjustment in size of ranger force.	

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	implementation.				smaller DWMA.		
Ravens	Raven management program. Landfill limits.	Raven management program, public lands only.	Reduce Ravens. Land fill limits	Same as Alternative A.		Very high priority Raven management program; landfill limits	No program.

Table 2-33
Acreage of Conservation and Incidental Take of Covered Species in Each Alternative.

	A PREFERRED		B BLM ONLY*		C RECOVERY PLAN		D ENHANCED ECOSYSTEM		E ENHANCED RECREATION		F DISEASE AND RAVEN		G NO ACTION***	
	Conserved	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**
Desert tortoise	1,477,630	See text for ITA	1,023,329	454,301 in DWMA. See text for ITA	1,514,847	See text for ITA	1,505,494	4,393 See text for ITA	715,424	4,393 in DWMA. See text for ITA	See text – different approach		DTNA, Cat 1 habitat	Unk.
Mohave ground squirrel	1,701,947	See text for ITA	1,280,106	See text for ITA	1,701,947	See text for ITA	1,701,947	See text for ITA	1,701,947	See text for ITA	1,701,947	See text for ITA	0	Unk.
Alkali Mariposa Lily	Permanent = 3,500+ Isolated sites	40,861	0	40,861	Permanent = 3,500+ Isolated sites	40,861	Permanent = 3,500+ Isolated sites	40,861	Permanent = 3,500+ Isolated sites	40,861	Permanent = 3,500+ Isolated sites	40,861	0**	68,171
Barstow Woolly Sunflower	50,548+	50	17,682+	32,872	50,548+	50	50,548+	50	50,548+	50	50,548+	50	0	Unk., estimated at 32,872 +
Bats	All significant roosts	< 25 bats at any one site	All significant roosts	No t limited	All significant roosts	< 25 bats at any one site	All significant roosts	< 25 bats at any one site	All significant roosts	< 25 bats at any one site	All significant roosts	< 25 bats at any one site	Roosts gated on case-by-case basis	Unk.
Bendire's Thrasher*	132,497	3,973	132,497	3,973	132,497	3,973	132,497	3,973	132,497	3,973	132,497	3,973	106,710	29,760
Brown-crested flycatcher	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	Big Morongo ACEC	Unk.
Burrowing owl	Unk.	No mortality. Limited.	Occurrences on BLM lands	No mortality. Limited.	Unk.	No mortality. Limited.	Unk.	No mortality. Limited.	Unk.	No mortality. Limited.	Unk.	No mortality. Limited.	0**	Unlimited
Carbonate Endemic Plants	5,169	Minimal	4,393	776	5,169	Minimal	5,169	Minimal	5,169	Minimal	5,169	Minimal	0	Unk.
Charlotte's phacelia	All known sites	50	30 of 37 sites	7 sites	All known sites	50	All known sites	50	All known sites	50	All known sites	50	30 of 37 sites	7 sites
Crucifixion thorn	All known sites	50	All known sites	50	All known sites	50	All known sites	50	All known sites	50	All known sites	50	0	Unk.
Desert cymopterus	Most occupied habitat	50	Most occupied habitat	50	Most occupied habitat	50	Most occupied habitat	50	Most occupied habitat	50	Most occupied habitat	50	0	Unk. Estimated at 14,343

	A PREFERRED		B BLM ONLY*		C RECOVERY PLAN		D ENHANCED ECOSYSTEM		E ENHANCED RECREATION		F DISEASE AND RAVEN		G NO ACTION***	
	Conserved	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**
Ferruginous hawk	Prevents and remedies electrocution threat	Unknown but minimized	Prevents and remedies electrocution threat on BLM lands	Potential electrocutions on private lands	Prevents and remedies electrocution threat	Minimized	Prevents and remedies electrocution threat	Minimized	Prevents and remedies electrocution threat	Minimized	Prevents and remedies electrocution threat	Minimized	Electrocution threat minimized for new power lines on BLM lands	Unk.
Golden eagle	20,495 at Middle Knob. Prevents and remedies electrocution threat. Minimizes mining impacts.	0	17,671 at Middle Knob. Prevents and remedies electrocution threat on BLM lands	0	20,495 at Middle Knob. Prevents and remedies electrocution threat. Minimizes mining impacts.	0	20,495 at Middle Knob. Prevents and remedies electrocution threat. Minimizes mining impacts.	0	20,495 at Middle Knob. Prevents and remedies electrocution threat. Minimizes mining impacts.	0	20,495 at Middle Knob. Prevents and remedies electrocution threat. Minimizes mining impacts.	0	20,495 at Middle Knob. Electrocution threat minimized for new power lines on BLM lands	0
Gray vireo	15,954+	Unk.	4,393+	Unk.	15,954+	Unk.	15,954+	Unk.	15,954+	Unk.	15,954+	Unk.	0**	Unk.
Inyo California towhee	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)	98% of area (public lands)	2% of area (private lands)
Kelso Creek Monkeyflower*	1,870	50	1,870	Unk. Minimal	1,870	Unk. Minimal	1,870	Unk. Minimal	1,870	Unk. Minimal	1,870	Unk. Minimal	0**	Unk. Minimal
Kern buckwheat	All except <0.1	<0.1	Most occupied habitat	Estimated 5 acres	All except <0.1	<0.1	All except <0.1	<0.1	All except <0.1	<0.1	All except <0.1	<0.1	Unk.	Estimated 10 acres
Lane Mountain milkvetch	14,597	0	10,164	4,433	14,597	0	14,597	0	14,597	0	14,597	0	Unk.	4,433+
LeConte's thrasher	1,782,892	Unk.	1,392,984	Unk.	1,811,468	Unk.	1,782,892	Unk.	1,521,707	Unk.	48,804+	Unk.	48,804+	Unk.
Little San Bernardino Mountains gilia	All known drainages	50	Sites within JTNP	All other known drainages	All known drainages	50	All known drainages	50	All known drainages	50	All known drainages	50	Sites within JTNP	All other known drainages
Mojave fringe-toed lizard	42,865+	4 sites, see text	37,270	5,595+	42,865+	4 sites, see text	42,865+	4 sites, see text	42,865+	4 sites, see text	42,865+	4 sites, see text	0	Unk.
Mojave monkeyflower	57,087	Unk.	36,630	20,457	57,087	50	57,087	50	57,087	50	57,087	50	0	Unk.
Mojave River vole	All sites (conditional)	0	0	Unk	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	0**	Unk.

	A PREFERRED		B BLM ONLY*		C RECOVERY PLAN		D ENHANCED ECOSYSTEM		E ENHANCED RECREATION		F DISEASE AND RAVEN		G NO ACTION***	
	Conserved	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**
Mojave tarplant	All occupied habitat	50 (new locations)	All occupied habitat	Unk.	All occupied habitat	50 (new locations)	All occupied habitat	50 (new locations)	All occupied habitat	50 (new locations)	All occupied habitat	50 (new locations)	All occupied habitat	Unk.
Parish's alkali grass	All of single known site	0	0	Unk.	0	All of single known site	0	All of single known site	0	All of single known site	0	All of single known site	0	Unk.
Parish's phacelia	898	50	512	376	898	50	898	50	898	50	898	50	0	Unk.
Parish's popcorn flower	All of single known site	0	0	Unk.	All of single known site	0	All of single known site	0	All of single known site	0	All of single known site	0	Unk.	Unk.
Prairie falcon	20,495 at Middle Knob. Minimizes mining impacts.	0	17,671 at Middle Knob. Minimizes mining impacts.	0	20,495 at Middle Knob. Minimizes mining impacts.	0	20,495 at Middle Knob. Minimizes mining impacts.	0	20,495 at Middle Knob. Minimizes mining impacts.	0	20,495 at Middle Knob. Minimizes mining impacts.	0	20,495 at Middle Knob. Minimizes mining impacts.	Unk.
Red Rock poppy	All occupied habitat	50	All occupied habitat	Minimal	All occupied habitat	50	All occupied habitat	50	All occupied habitat	50	All occupied habitat	50	Most habitat	Unk.
Red Rock tarplant	All occupied habitat	50	All occupied habitat	Minimal	All occupied habitat	50	All occupied habitat	50	All occupied habitat	50	All occupied habitat	50	Most habitat	Unk.
Salt Springs checkerbloom	All of single known site	0	0	Unk.	All of single known site	0	All of single known site	0	All of single known site	0	All of single known site	0	0	Unk.
San Diego horned lizard	15,954+	Unk.	4,393+	Unk.	15,954+	Unk.	15,954+	Unk.	15,954+	Unk.	15,954+	Unk.	0**	Unk.
Shockley's rock-cress	5,169	0	4,393	776	5,169	0	5,169	0	5,169	0	5,169	0	4,393 but no added management	776
Short-joint beavertail cactus	10,785	50	0	All	10,785	50	10,785	50	10,785	50	10,785	50	Existing SEAs and 1,590 scattered BLM parcels	0**
Southwestern pond turtle	All known sites (conditional at some)	Unk.	Selected sites	Unk.	All known sites (conditional at some)	Unk.	All known sites (conditional at some)	Unk.	All known sites (conditional at some)	Unk.	All known sites (conditional at some)	Unk.	Selected sites	Unk.
Southwestern willow flycatcher	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	Big Morongo ACEC	Unk.
Summer tanager	Mojave River sites (conditional)	Unk.	Selected sites	Unk.	Mojave River sites (conditional	Unk.	Mojave River sites (conditional	Unk.	Mojave River sites (conditional	Unk.	Mojave River sites (conditional	Unk.	Selected sites – see text	Unk.
Triple-ribbed milkvetch	All known sites	0	Sites on public land	Unk.	All known sites	0	All known sites	0	All known sites	0	All known sites	0	Sites on public land	Unk.

	A PREFERRED		B BLM ONLY*		C RECOVERY PLAN		D ENHANCED ECOSYSTEM		E ENHANCED RECREATION		F DISEASE AND RAVEN		G NO ACTION***	
	Conserved	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**	**Conserved**	**Take**
Vermilion flycatcher	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	Selected sites – see text	Unk.
Western snowy plover	All known sites	0	All known sites	0	All known sites	0	All known sites	0	All known sites	0	All known sites	0	Most known sites	Unk.
White-margined beardtongue	All known sites	50	Most known sites	Unk.	All known sites	50	All known sites	50	All known sites	50	All known sites	50	0	Minimal
Yellow-eared pocket mouse	Unk	Unk	Selected ACECs	Unk	Unk	Unk	Unk	Unk	Unk	Unk	Unk	Unk	Selected ACECs	Unk
Yellow warbler	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	Selected sites – see text	Unk.
Western yellow-billed cuckoo	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	All sites (conditional)	0	Unk.	Unk.
Yellow-breasted chat	Mojave River sites (conditional) 10,785 (Big Rock Creek)	0	Mojave River sites (conditional)	0	Mojave River sites (conditional) 10,785 (Big Rock Creek))	0	Mojave River sites (conditional) 10,785 (Big Rock Creek)	0	Mojave River sites (conditional) 10,785 (Big Rock Creek)	0	Mojave River sites (conditional) 10,785 (Big Rock Creek)	0	Selected sites – see text	Unk.

See also Table 2-11. Unk. = Unknown. * Acreages are for BLM managed lands only

** Los Angeles County may expand its SEA boundaries, providing some conservation for this species.
*** See text for potential conservation of the No Action Alternative. Continued review of projects under CEQA, by BLM in Category 1 habitat, and by FWS in occupied and critical habitat will result in some conservation by provision of compensation lands or set-asides.