Appendix A

A.0 Proposed NEMO Desert Tortoise Conservation Strategy

The following Desert Tortoise Conservation Strategy is based on recommendations of a NEMO Desert Tortoise Biological Team.[1] The recommendations were submitted in October 1998. The Team adopted the following goal and objectives as set forth in the recovery plan.

GOAL: To meet the recovery criteria for the Desert Tortoise as specified in the Desert Tortoise Recovery Plan (pp. 43-45). A population of Desert Tortoise within a recovery unit may be considered for delisting when all of the following criteria are met:

Upward or stationary trend in population for at least 25 years;

1. Sufficient habitat[2] must be managed intensely to ensure long-term tortoise-population viability {at least 1 area of 1000 square miles (640,000 acres) in the recovery unit};
2. Population lambda is at least 1.0[3];
3. Land management commitment sufficient to ensure long-term protection of tortoise populations and its habitat, and
4. Management is sufficient without the use of regulatory mechanisms (e.g., formal consultations with U.S. Fish and Wildlife Service) in the Endangered Species Act.

OBJECTIVES: The following objectives are based on the recovery actions specified in the Desert Tortoise Recovery Plan (pp. 45-54):

1. Establish areas where viable Desert Tortoise populations are maintained;
2. Develop and implement management prescriptions for these areas to address threats sufficient to accomplish the goal;
3. Acquire sufficient habitat in these areas to ensure that management strategies are effective;
4. Monitor tortoise populations to assess effectiveness of management prescriptions in meeting recovery goals in these areas;
5. Establish an environmental education program to facilitate understanding of desert tortoise threats and recovery needs, and affect compliance with management strategies in these areas; and
6. Continue research necessary to assess relative importance of threats to the desert tortoise in these areas and to evaluate and improve mechanisms to address these threats.

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[1]NEMO DT biological team: BLM (team lead) – Larry Foreman; FWS – Ray Bransfield, George Walker, Carol Crosby; BLM-BFO – Mark Depoy, Edy Seehafer, Tom Egan; CDFG – Frank Hoover, Becky Jones; BLM-NFO – Mike McGill, Willow Yumiko; BLM-RFO – Joyce Schlachter.

[2]Habitat must also be of sufficient quality (Desert Tortoise Recovery Plan, USFWS, June 1994, pp. 48-49).

[3]Minimum population density potential for adults is believed to be10/square mile to assure reproductive success (Ibid, in App. C, Section 5, and summarized on p. C53).

A.1 Objective 1 – Establish Areas Where Viable Desert Tortoise Populations are Maintained

An area must meet certain requirements to be considered for management of a viable desert tortoise population. There are basic vegetation, topographical, elevation, climatic, and other habitat requirements that make an area capable of supporting desert tortoises. In addition to these limitations, existing and future habitat fragmentation and sources of mortality must be manageable. An area should meet design requirements for good reserves. A long, linear area, for instance, would be unlikely to maintain a population of desert tortoise due to ease of migration into and out of the area.

In the NEMO Planning Area, four areas generally meet the requirements for viable desert tortoise populations based on the considerations in the previous paragraph. Adjacent areas outside of NEMO that provide viable desert tortoise habitat were also taken into consideration in the analysis of potential tortoise management areas. More specifically, identification of the management areas also considered similar areas in the East Mojave being developed on the Mojave National Preserve and already developed areas in southern Nevada. The management areas under consideration also abut the Northern Colorado Recovery Unit to the south.

A.1.1 Boundaries of Proposed Tortoise Management Units

The U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG) and BLM identified four areas for potential consideration by the BLM for desert tortoise conservation in the NEMO Planning Area. These four areas have had various names, as noted in parentheses, and include the following:

1. **Piute Valley Unit** (a.k.a. Piute-Eldorado Critical Habitat Unit):

   This area is bounded on the west and north by the Mojave National Preserve, on the south by I-40, on the east by the Dead Mountains and on the northeast by the Nevada State line. It consists of approximately 173,850 acres, 85 percent[4] of which (about 148,000 acres) is BLM-managed public lands. This unit together with the tortoise habitat in Fenner and Piute Valleys in the Mojave National Preserve and southern Nevada constitute the Piute-Fenner Desert Wildlife Management Area (DWMA).

2. **Ivanpah Valley Unit** (a.k.a. the northeastern portion of the Ivanpah Critical Habitat Unit):

   This area is bounded on the north by a powerline south of I-15, on the west and south by the Mojave National Preserve (and Nipton Road), and on the east by the Nevada State line. It consists of approximately 37,280 acres, of which about 35,200 acres is BLM-managed public lands.

3. **Shadow Valley Unit** (a.k.a. the northwestern portion of the Ivanpah Critical Habitat Unit):

   This area is bounded on the north by the Kingston Range, on the west by the Shadow Mountains, on the south by I-15, and on the east by the Clark Mountains. It consists of approximately 114,060 acres, of which approximately 101,355 acres is located east of Turquoise Mountain Road. Of these 101,355 acres, about 95,280 acres are BLM-managed public lands.

[4] Includes Phase I and II Wildlands/Caltellus acquisitions and exchanges completed in the last two years.

4. **Northern Ivanpah Valley Unit**:

   This area is bounded on the west by the eastern extent of the Clark Mountains, on the north by the Nevada State line and on the south and east by I-15. It consists of approximately 29,110 acres, of which about 27,300 acres are BLM-managed public lands.

A.1.2 Evaluation of Proposed Tortoise Management Units

Piute Valley Unit

This area includes examples of the best desert tortoise habitat remaining in the southern portion of the Eastern Mojave Desert. Tortoise densities vary widely, based on local conditions, ranging from about 10 to more than 350 per square mile, with good age-class distribution. There has been some decline over time and recent tortoise die-off from disease in this area. Existing development is patchy and generally low due to the lack of population centers near public lands. Much of the current use is focused further west (within the Mojave National Preserve), north (Lanfair Valley), or south and east of the area along the State line (Needles-Bullhead area). The Piute Valley ACEC is contiguous with lands managed for viable Desert Tortoise populations to the west in Mojave National Preserve and to the east on public lands managed by Las Vegas Field Office of BLM (Las Vegas Resource Management Plan, 1999) and provides critical linkage between these areas. Lands for the adjacent Northern Colorado Recovery Unit are also contiguous on the south of Route 66 and I-40. If the barriers of Route 66 and I-40 can be minimized, the Piute Valley ACEC will also provide an excellent linkage to this desert tortoise habitat to the south. This recommendation is consistent with current and proposed strategies for protection of adjacent National Park Service and BLM habitat of the Eastern Mojave population of the desert tortoise and for adjacent BLM habitat of the Northern Colorado Recovery Unit of the desert tortoise.

Ivanpah Valley Unit

This area provides high-density desert tortoise habitat in the southwestern most portion of the Northern and Eastern Mojave Recovery Unit, proposed for inclusion in the East Mojave Recovery Unit. This boundary would exclude approximately 3,280 acres originally included in BLM Category I habitat; however, this 3,280 acres is adjacent to I-15 and is largely an unoccupied dry lakebed that is not suitable habitat. This area includes all critical habitats in upper Ivanpah Valley. The valley has good quality desert tortoise habitat, but there has been one incidence of tortoise die-off from unknown causes and some signs of shell disease have been observed in the population in recent years.

Development is generally low due to the lack of population centers near public lands, but development pressures are increasing to the north and east from Stateline and to the west from Molycorp activities. The area is contiguous with lands managed for viable desert tortoise populations to the south and west in Mojave National Preserve and by a corridor to public lands managed by BLM's Las Vegas District and provides critical linkage between these latter areas. This recommendation is therefore consistent with the strategy for protection of adjacent National Park Service and BLM habitat of the Eastern Mojave Recovery Unit of the desert tortoise.

Shadow Valley Unit

The area includes all critical habitat from Bull Springs Wash eastward (Bull Springs Wash is adjacent to Turquoise Mountain Road), until it meets with Turquoise Mountain Road, then follow the Road as boundary. This boundary corresponds closely to the boundaries of BLM Category I tortoise habitat, but excludes critical habitat and Category I habitat west of Bull Springs Wash near Turquoise Mountain Road (approximately 12,705 acres) because tortoise populations are lower and the area has habitat fragmentation from roads and small inactive mines. The wash itself is included because it provides one of the few migration connectors for desert tortoises to habitat south of I-15 through the wash underpass. The Shadow Valley area is contiguous with lands managed for viable desert tortoise populations to the south across I-15 in Mojave National Preserve. This area, in conjunction with areas of the Preserve to the south on the other side of I-15, includes a unique genetic unit within California. However, it would be isolated from other DWMAs by non-habitat features to the west (towards Baker). There is low desert tortoise travel through this topographical area. It is further fragmented by I-15 to the south and by higher elevations further to the south.

The area is not yet undergoing substantial development pressures, consists of an almost continuous block of public lands, includes areas of wilderness in the northern one-quarter of Shadow Valley, and would incorporate the northernmost extent of suitable habitat for the Eastern Mojave population of desert tortoise. Desert tortoise densities in this area currently range from 5 to 50 per square mile; potential densities are not known. There has been moderate and increasing tortoise die-off from disease in this area in recent years. This area is also attractive because of its diverse vegetation types and topography that allow tortoises to respond to climatic variation. This recommendation is consistent with the strategy for protection of desert tortoise in the adjacent Mojave National Preserve.

Northern Ivanpah Valley Unit

The area located immediately north and west of Stateline (or Primm) is designated BLM Category I desert tortoise habitat but was not designated as critical habitat by USFWS. The area would not be included in a DWMA because it is relatively small (29,110 acres), is separated from other desert tortoise populations in the NEMO Planning Area by I-15 and Ivanpah Dry Lake, and is undergoing substantial development pressures particularly adjacent to I-15. This recommendation is also consistent with the strategy for desert tortoise adopted by Federal agencies in Nevada. The Nevada strategy did not identify the northern Ivanpah Valley, as an area to be managed for desert tortoise recovery.

A.1.3 Regional Overview of Proposed Approach

With the above proposed ACECS, overall design of tortoise management areas for the Eastern Recovery Unit would include two DWMAs - the Ivanpah-Shadow DWMA and the Piute Eldorado DWMA.

The Ivanpah-Shadow DWMA would include lands within the Mojave National Preserve and two BLM ACECs. Although virtually all tortoise habitat within the Preserve receives a high degree of protection, desert tortoise critical habitat within the Preserve is about 481,290 acres. Contiguous with the Preserve to the northeast, but separated by Nipton Road, is the proposed Ivanpah Valley ACEC; it is 37,280 acres. Contiguous with the Preserve to the northwest, but separated by I-15, is the proposed Shadow Valley ACEC. It is 101,355 acres. Together these three areas (Ivanpah Critical Habitat Unit on the Preserve and proposed Ivanpah Valley and Shadow Valley ACECS) total 619,925 acres. This is about the minimum size set forth in the Recovery plan.

The Piute-Eldorado DWMA would include lands within the Mojave National Preserve and two BLM ACECs. Desert tortoise critical habitat within the Preserve is about 279,460 acres. Contiguous with the Preserve to the southeast is the proposed Piute Valley ACEC; it is 173,850 acres. The Piute-Eldorado ACEC in Nevada in the Eastern Mojave Recovery Unit is 277,000 acres. Together these three areas (Piute-Eldorado Critical Habitat Unit on the Preserve and proposed Piute Valley ACEC and designated Piute-Eldorado ACEC in Nevada) total 730,310 acres. This is above the minimum size set forth in the Recovery plan.

The Ivanpah-Shadow DWMA has two connecting corridors with the Piute-Eldorado DWMA between Ivanpah Valley and Piute and one south of Kelso Valley on the Preserve. The two DWMAs in the Eastern Mojave Recovery Unit (Ivanpah-Shadow DWMA and Piute-Eldorado DWMA) total 1,350,235 acres.

A.2 Objective 2 – Develop And Implement Management Prescriptions For The ACECs To Address Threats Sufficient To Accomplish The Goal

The following proposed prescriptions were developed for desert tortoise and its habitat by the issues as described in Appendix D (Description and Strategy for Addressing Major Desert Tortoise Issues) and the Desert Tortoise Current Management Situation for the NEMO Planing Area (Foreman 1998). The Biological Team based on the BLM Statewide Desert Tortoise Policy and recommendations in the Recovery plan developed the prescriptions.

A.2.1 General Prescriptions for Activities Within Tortoise ACECs

Authorized ground-disturbing activities shall normally be authorized only between November 1 and March 1. If ground-disturbing activities must be authorized outside this window, an on-site biological monitoring shall be required throughout activities, as well as other stipulations to prevent take.

New surface disturbing projects shall include specific design features (see mitigation measures in Attachment 1) to minimize potential impacts to desert tortoise and desert tortoise habitat. Using the formal consultation procedures of the Endangered Species Act, the BLM shall seek to obtain from USFWS a programmatic biological opinion covering all projects less than 100 acres in size (any size for utilities in utility corridors) that do not require an EIS or do not require amendment of the CDCA Plan. The mitigation measures set forth in Attachment 1 below are proposed by BLM as terms and conditions for the biological opinion.

Reclamation would be required for activities that result in loss or degradation of desert tortoise habitat within the desert tortoise wildlife management area, to as close to pre-disturbance condition as practicable. Reclamation may include salvage and transplant of cacti or yucca, re-contouring, scarification of soil, soil amendments, seeding, and transplant of shrubs. Seedings will be of native species, from seed collected in the area of the project when feasible. See Appendix G for additional discussion.

Cumulative new surface disturbance on public lands administered by the BLM within any desert tortoise wildlife management area shall be no more than one percent of BLM lands. For the recommended Shadow Valley ACEC, this currently would be approximately 950 acres, for Ivanpah Valley ACEC approximately 350 acres, and for Piute Valley ACEC approximately 1,300[5] acres. This one percent limitation would not include needed acreage for expansion of freeways and major highways. The only project identified by CalTrans, in the reasonably foreseeable future, is the widening of Interstate –15 from Victorville, California to Las Vegas, Nevada. See Appendix G for a detailed discussion.

[5] This number does not yet reflect recent Wildlands/Catellus/BLM exchange lands.

Compensation for disturbances of public lands within the desert tortoise ACECs shall be required at the rate of five acres for each acre disturbed.(Refer to Appendix G for additional Information). Compensation may be in the form of habitat acquisition or off-site habitat improvement or protection projects, at the discretion of the BLM. As ACECs have fewer parcels available for acquisition from willing sellers and/or as the benefit/cost analysis favors habitat enhancement, it will be pursued in connection with or in lieu of acquisition.

A.2.2 Mineral Resources

All Mining Including Locatables

The desert tortoise ACECs shall remain open to mineral entry under the mining laws, subject to cumulative surface disturbance limitations and compensation for new disturbances, as outlined above. Unnecessary and undue degradation will be avoided.

BLM shall require a plan of operation and appropriate bonding for any activities involving disturbance of perennial vegetation, vehicle use off of designated open roads and trails, or use of mechanized earthmoving equipment or explosives.

BLM shall require the operator to reclaim any site upon completion of mining activity, according to a SMARA and BLM-approved reclamation plan and consistent with adopted BLM Standards.

Leasables

Additionally for oil and gas and geothermal activities, drill pads shall be located on disturbed areas or areas adjacent to designated open or limited routes, if technically feasible (e.g. slant drilling).

Saleables

Development and production, including expansion of existing and new pits may be permitted. Wherever feasible, existing pits shall be utilized to minimize new surface disturbance.

Non-commercial hand-collection of rock may occur anywhere, subject to motorized access limitations: (43CFR 8365.1-5)

A.2.3 Grazing Management

Utilize Regional Standards and Guidelines for Grazing Management, CDCA Plan, allotment management plans, and terms and conditions from the existing FWS biological opinions. For allotments within the DWMAs:

- Allow voluntary relinquishment of grazing lease and related authorizations.
- Temporary nonrenewable grazing use (perennial) shall not be authorized.
- Cattle shall be substantially removed from the ACEC from 3/15 to 6/15 according to an allotment program during years when ephemeral forage production is less than 230 pounds per acre. The allotment program shall be developed within a year and implemented within two years after that. The allotment program shall be a written plan detailing the area of removal, natural cattle movements, existing and potential improvements, and other constraints of cattle management.
- Ephemeral grazing use on ephemeral allotment would be unavailable and ephemeral grazing use would no longer be available for ephemeral/perennial allotments.
- Continue to apply stipulations in the existing USFWS biological opinions for cattle grazing. (See Appendix E)
- Include additional parameters as needed to discourage the use of range improvements by ravens.

A.2.4 Fire Management

Fires occurring in ACECs shall be managed in accordance with non-impairment criteria, as identified below with minimal disturbance to resource values within the ACEC.

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

Wildfires within the tortoise ACECs will be suppressed using a mix of the following methods to avoid impairment, including:

- Aerial attack
- Crews using hand tools to create fire breaks
- Mobile attack engines limited to public roads, designated open routes, and routes authorized for limited-use
- Use of foam and/or fire retardant
- Earth-moving equipment and other tracked vehicles (such as bulldozers) will not be used except in critical situations to protect life, property, or resources

BLM will assign a Resource Advisor on all wildfires exceeding initial attack.

Use of surface disturbing equipment, such as bulldozers, is restricted due to the sensitive desert environment. Such equipment can be utilized with field manager approval or at the discretion of the Incident Commander, when life and property are threatened. An on-site Resource Advisor, may authorize the limited use of such equipment if, in his or her estimation, the fire is serious enough that direct mortality and loss of habitat to the desert tortoise that would result from the fire is significant and other control means will not effectively prevent spread.

Backfires and burning of unburned fingers and islands would be discouraged and alternatives considered in tortoise ACECs.

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

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

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

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

Post-suppression mitigation shall include rehabilitation of firebreaks and other ground disturbances and obliteration of vehicle tracks sufficient to discourage future casual use. Hand tools will be used for rehabilitation activities whenever feasible.

A.2.5 Vegetation Resources

BLM shall not issue permits for live vegetation harvest, except in salvage areas where surface disturbance has been authorized**.**

No mechanical treatment or type conversion shall be allowed unless it benefits or improves tortoise habitat.

Collection of dead and down wood, with the exception of Joshua trees or yucca species, is allowed for personal camp use.

BLM will reduce the frequency and extent of surface disturbing activities to minimize invasion of weedy plants, whenever possible.

A.2.6 Lands and Realty

Lands shall not be available and shall not be classified or otherwise determined suitable for authorization or entry, under the following authorities:

- Agricultural Land Laws (e.g., Desert Land Entry, Carey Act, Indian Allotment)
- Recreation and Public Purposes Act
- FLPMA Lease/Sale; Exceptions may be considered for sales of hazardous material sites to Potentially Responsible Parties
- Airport Lease/Grant
- Non-protective withdrawals

Discussion: Certain types of discretionary land authorizations and entries constitute long-term disturbance and/or loss of habitat, which is inconsistent with tortoise conservation and recovery in ACECs.

All new major linear utilities shall be placed in existing, designated utility corridors consistent with the existing CDCA Plan Energy Production and Utility Element. To the extent feasible, existing routes would be utilized to provide access for maintenance of rights-of-way.

The poles and towers of electrical distribution lines shall be designed to discourage raven nesting**.**

A.2.7 Habitat Enhancement

In authorizations for projects that will disturb habitat, the BLM shall apply stipulations requiring rehabilitation of the disturbance. The rehabilitation shall be at least to the point where the topography, soils and vegetation conditions have been established for return to pre-disturbance conditions. This includes such actions as closing access to non-designated roads and restoring non-designated roadbeds to a condition suitable for their natural return to a pre-disturbance state. With regard to tortoise needs, the purpose is to return the habitat to meet the following needs:

- Lands are suitable for burrowing, if they would have been suitable prior to disturbance. This is characterized by stabilized, non-compacted soils
- Lands are adequate for foraging as indicated by sustainable replenishment of annual vegetation utilized by the desert tortoise in the area
- Lands provide adequate thermal cover through perennial shrubbery and other natural features utilized by the desert tortoise in the area

More specific criteria are now under development by the Desert Wide Restoration Taskforce. Site-specific rehabilitation standards will be developed for each site, to be supplemented with guidance provided by that Taskforce. (See Appendix G for additional information on this effort).

BLM may use compensation funds for enhancement of tortoise habitat after coordination with CDFG and USFWS. (See A.2.1 Item 5)

A.2.8 Transportation/Access

BLM shall designate roads and trails within the DWMAs as "open", "limited use" or "closed". The BLM shall prohibit motorized vehicle activity off of designated open roads and trails, except for official fire suppression, search and rescue, law enforcement, or other similar administrative need (including access to projects such as fences, waters, utilities) or for vehicle-based camping adjacent to open routes. "Limited use" routes are designated for special use (e.g., seasonal closure) or permitted access (e.g., a landowner to private lands). See Chapter 7, Figures 4a, b and c. Biological Parameters to minimize harassment of wildlife or significant disruption of wildlife habitat will be followed during the route designation process, including:

- Washes will be closed unless they provide the major through access in an area and no reasonable alternative exists, or they provide access to a major recreational site and do not result in substantive degradation of habitat
- The route designation process shall consider fragment size
- Closure of routes within ¼ mile of any significant bat roost shall be strongly considered
- Closure of routes within ¼ mile of known prairie falcon or golden eagle eyries (cliff nests) shall be strongly considered
- Closure of routes within ¼ mile of natural or artificial water sources (e.g. springs, seeps, streams, guzzlers) shall be strongly considered
- Closure of "redundant" routes shall be strongly considered

All DWMA lands bordering Interstate freeways and major highways shall be fenced. Priorities for fencing are the following:

- Interstate highways abutting or passing through a desert tortoise DWMA ACEC, including:
  - 34 miles of Interstate 40 in Piute-Fenner Valley (North side includes approximately 19 miles within the Mojave National Preserve that would be coordinated through the National Park Service)[6]
  - 20 miles of Interstate 15 through Shadow Valley (North side includes about 2.75 miles of private lands that would require easement or in Caltrans ROW; south side includes about 2 miles that would be coordinated through the National Park Service, across NPS-managed land), and 1.5 miles of Interstate 15 through Ivanpah Valley.
- Based upon average daily travel exceeding 1,000 vehicles and tortoise density exceeding 50 per square mile, the following highways:
  - 23.9 miles along U.S. 95 through Piute Valley from the California border to the intersection with Burlington Northern/Santa Fe Railroad at Arrowhead Junction (On both north and south side includes about 6 miles private and 1 mile State-managed lands). This highway would be fenced upon widening to 4 lanes and include a couple of wash undercrossings for desert tortoise

[6] The south side of this fence is covered in the Northern and Eastern Colorado Planning effort and the entire fence would be coordinated between the two planning efforts, along a common proposed DWMA boundary.

- 12 miles along Nipton Road between the California border near Nipton to Interstate 15 in Ivanpah Valley (South side 12 miles would be coordinated through the National Park Service, across NPS-managed and private lands; both sides includes about 3.5 miles of private lands that would require easement or in Caltrans ROW).

Fencing shall meet current specifications concerning mesh size, burial and design standards and shall be placed on both sides of the road. These standards will consider prevention of road kills to discourage ravens and coyotes.

Closed roads/routes shall be rehabilitated whenever necessary to prevent their continued use and to speed restoration.

Physical maintenance and grading shall be the minimum necessary to maintain the use of the road for its prescribed purposes. Grading shall be conducted with specified standards to prevent trapping desert tortoises within the roadbed, including appropriate standards for road berms.

A.2.9 Recreation Resources

Restrict vehicle camping to within 100 feet of centerline of designated open roads in previously disturbed areas. This is consistent with existing CDCA Plan guidance for sensitive areas. BLM shall provide visitor information to encourage visitors to camp in areas that have already been disturbed.

Allow dispersed non-motorized recreational activities in desert tortoise ACECs. Development of new recreational facilities, such as visitor centers, developed campgrounds, new designated non-motorized trails, shall not be allowed in the ACECs if these would create new permanent surface disturbance. Marking of existing non-motorized trails to known visitation sites to encourage use of one identified path is appropriate, if existing use has created an area of disturbance. Installation of interpretive signing and informational kiosks shall be encouraged.

Prohibit competitive speed events in the desert tortoise ACECs. Land sailing permits may be authorized for the Ivanpah lakebed outside of the ACEC, subject to appropriate terms and conditions. Secondary impacts from such events, such as group campsites, shall also be sited outside of the ACEC.

Restrict dual sport events to designated open routes between November 1 and March 1, continuing the existing ceiling on the number of riders per event (i.e., 500 riders) and any route-specific resource limitations.

Allow hunting according to current State legislation and regulations. Motorized access for hunting shall be limited to designated open or seasonally limited routes.

A.2.10 Wild Horse and Burro

Eliminate the Clark Mountain Herd Management Area from the DWMA and continue to reduce herds in associated Clark Mountain herd concentration areas (HCAs) as directed in the CDCA Plan until burros are substantially removed from the three HCAs. (HMA "F" Map 8 of the CDCA Plan)

Discussion: The appropriate management level (AML) for the Clark Mountain HMA would change from 44 burros in the current HMA (all within the Shadow Valley Concentration Area) to 0 burros (See Chapter 8, Figure 8c).

Burros located in the Clark Mountain Herd Management Area and its associated three concentration areas would be removed and any potential drift managed through relocation by direct or indirect means to other Herd Management Areas or rounded up for adoption. Shadow Valley would be the first priority round-up area, followed by the other two concentration areas.

The cumulative effect would be the substantial elimination of burros from the Clark Mountain Herd Area, freeing the forage the burros are consuming for potential use of desert tortoise or other foragers.

A.2.11 Wildlife

Existing wildlife guzzlers shall be modified to minimize mortality to desert tortoises, and new guzzlers shall incorporate appropriate design features to do the same.

The BLM shall identify lands for potential relocation, on a case-by-case basis, in coordination with USFWS, CDFG and private landowners who may wish to relocate desert tortoises from private lands slated for development onto nearby public lands within the tortoise ACECs.

A.2.12 Ravens

Within DWMAs, the BLM shall work with other agencies to implement a raven management strategy to reduce raven predation on tortoises. This raven management plan is based on the work of biologist Bill Boarman, who has identified the key elements of a successful raven management program. Early priorities for implementation of this phased approach in the NEMO planning area includes the following items:

- The BLM will work with other agencies to achieve fencing of major highways to minimize road kills as a food source for raven populations
- The BLM will remove ravens that are known to prey on tortoises through selective shooting or trapping and euthanasia where there is evidence of raven predation in or within one mile of DWMAs
- To the extent possible, the BLM shall eliminate human-caused sources of raven food as identified (e.g., illegal dumps, uncovered trashcans) at specified sources within DWMAs
- BLM will work with other agencies to reduce the availability of solid wastes at operating sanitary landfills outside of DWMAs and on overall programs to reduce the availability of organic wastes (related to facilities and methods for trash service, dump stations, and composting practices) unrelated to sanitary landfills
- BLM will work with other agencies and local jurisdictions to reduce the availability of unnecessary waters (related to facilities and methods for sewage treatment, pool/pond design, and irrigation)
- BLM will pursue raven management research as identified by the Desert Tortoise Management Oversight Group, to identify habitat requirements and control methodologies in the settings that the NEMO DWMAs provide, where populations appear to range over larger, less densely inhabited areas with longer commuter distances between major feeding locations. An unknown factor is the amount of habitat being provided by agricultural lands within the DWMAs.
- Proposed projects on public lands in the planning area which have the potential for increasing raven populations will be reviewed for design and operation features to reduce or eliminate the opportunity for proliferation of ravens.
- This program will be modified as needed to address the changing threat that ravens may pose in the planning area.

A.2.13 Law Enforcement

The law enforcement effort shall be aimed at enforcing wildlife regulations and reducing illegal dumping, littering, arson, cross-country vehicle travel, and vandalism.

A.2.14 Other Issues

The BLM shall participate with other groups and agencies to identify areas where uncontrolled dogs are causing desert tortoise mortality. In the event such a situation is discovered, BLM will encourage San Bernardino County to adopt or enforce ordinances prohibiting uncontrolled dogs in those areas.

The BLM shall participate with CDFG, USFWS, and other groups and agencies to identify areas where vandalism (e.g. shooting, collecting) of desert tortoises is occurring and take measures to prevent future occurrences.

A.3 Objective 3 – Acquire Sufficient Habitat in ACECs to Ensure that Management Strategies Are Effective

Habitat fragmentation is a major contributor to population declines (Berry 1984b, Berry & Burge 1984, Berry & Nicholson 1984b and Berry 1984c). Desert tortoises require a great deal of space to survive. Over its lifetime, each desert tortoise may require more that 1.5 square miles of habitat and may make forays of more than 7 miles at a time. In drought years, desert tortoises forage over larger areas and thus have a greater probability of encountering potential sources of mortality. Roads and urban areas form barriers to movement with higher raven densities, and tend to create small, local desert tortoise populations, which are much more susceptible to extinction than large, connected ones (Wilcox & Murphy 1985). Actions to ensure adequate desert tortoise habitat include:

- The BLM shall seek to acquire State Lands Commission lands and private lands within ACEC's. Exchange for lands of equal value shall be the preferred acquisition tool, when feasible. Acquisitions shall include surface and subsurface mineral rights wherever possible. Any lands acquired within tortoise ACECs will be managed in accordance with recovery area prescriptions.
- The highest priority parcels for acquisition are all lands in Piute Valley ACEC and three sections near Nipton Road in Ivanpah Valley.
- Compensation funds may be utilized for acquisition or enhancement of tortoise habitat.
- BLM shall not dispose of public lands within any tortoise DWMA, unless in the overall interest of desert tortoise conservation and recovery.

A.4 Objective 4 – Monitor Tortoise Populations to Assess Effectiveness of Management Prescriptions in Meeting Recovery Goal in These Areas

A monitoring program is essential to determine whether actions taken in the ACECs are effective and whether desert tortoise recovery goals are being achieved. To accomplish this the following monitoring program is proposed:

- The BLM shall participate with other agencies in a regionwide desert tortoise population trend-monitoring program using the distance sampling procedures approved by the Desert Tortoise Management Oversight Group. The Desert Tortoise Program Coordinator will oversee monitoring surveys, data storage, and data analysis.
- In addition to the rangewide desert tortoise monitoring effort, the BLM shall continue to monitor Shadow Valley desert tortoise permanent study plot on a four-year cycle to collect data on population size and demographics, direct mortality, vegetative trend, and uses for the area.
- The BLM in coordination with CDFG and USFWS shall establish an implementation monitoring strategy. This strategy would include monitoring of burro use and population distribution consistent with public lands health standards, monitoring of guzzlers to assure proper functioning, compliance monitoring for permitted activities and uses, and tracking of cumulative new surface disturbance.
- If population declines become evident in any tortoise ACEC, efforts to determine causes of population emigration and/or mortality should be pursued immediately in order to prevent extirpation. Efforts to recolonize the ACEC with wild desert tortoise from the same recovery unit should be undertaken if feasible. Long-term research and monitoring would be necessary to ensure the success of any such recolonization effort. In addition to these actions, emergency closures of cattle allotments or placements of allotments and licenses into non-use categories may be needed in affected areas to reduce stresses and provide additional forage. Land and mineral withdrawals may also be required to prevent impacts to desert tortoise and their habitat until adequate recovery occurs in the affected area.

A.5 Objective 5 – Establish An Environmental Education Program to Facilitate Understanding of Desert Tortoise Threats and Recovery Needs and Compliance with Management Strategies in These Areas

Visitor centers, interpretive sites, guided tours, and campgrounds are all appropriate in towns near desert tortoise wildlife management area units to educate the public about the status and needs of the desert tortoise and its habitat. In addition, desert tortoise programs should be developed for use in schools, museums, clubs, the media etc. Education efforts should be focused on groups using the desert on a regular basis. In addition, private landowners and other land managers can be encouraged to implement management actions that promote the conservation of other species and biotic communities.

These actions are recommended to increase manageability, establish an enforcement presence, effect an immediate reduction in the threats to desert tortoise populations in desert tortoise ACECs and build local support for the wildlife management area concept. Specific educational programs within the NEMO planning area, in addition to the above, include:

Install informational kiosks at major access points and informational signs at other access points to the desert tortoise wildlife management area units.

- Work with CalTrans to design and install separate, freestanding, interpretive kiosks with desert tortoise protection information at Halloran Springs and Fenner Valley rest areas.
- Update Desert Access Guides to include desert tortoise information.
- Update desert tortoise brochures and informational packets to reflect changes identified for the tortoise ACECs (e.g., camping distance change to 100 feet off routes).
- Develop an update to the existing BLM webpage for the desert tortoise recovery planning efforts.
- Implement other elements of the Statewide Tortoise Policy Public Outreach Program as funding becomes available.

A.6 Objective 6: Continue Research Necessary to Assess Relative Importance of Threats to the Desert Tortoise in These Areas and To Evaluate and Improve Mechanisms to Address These Threats.

Unlike the situation with many threatened or endangered species, considerable data exists on many aspects of the biology of the desert tortoise. Although there is also much information on the effects of human activities, much of the data has limited usefulness for site specific recovery planning. The magnitude and scope of new research data essential for recovery planning requires an unprecedented level of coordination and cooperation within and among agencies. Biologists and research scientists in the Department of Interior (BLM, NPS, Bureau of Reclamation, and USGS Biological Resources Division), Department of Defense, and other Federal and State agencies must work together to achieve this goal. No one agency can handle the entire essential research and monitoring. Employing the talents of academic researchers will be essential.

The Desert Tortoise Technical Advisory Group (TAC), which reports directly to the Management Oversight Group MOG), has prepared and periodically updated a list of research priorities. With the large number of researchers involved in desert tortoise issues, many topics on the list and their relative priority change rapidly. In 2000, the TAC prepared a list of research priorities for each Recovery Unit. Although it is expected that these priorities will change, following is the list generated for the MOG in 2000 for the Northern and Eastern Recovery Unit:

- Recommended high priority research topics
  - Epidemiology of upper respiratory tract disease in wild desert tortoise populations.
  - Epidemiology of shell diseases in wild desert tortoise populations.
  - Relationship between environmental toxicants and tortoise health.
  - Ecological relationship between fire and alien plant invasion and distribution.
  - The relationship between tortoise distribution and alien plant invasion and distribution.
  - Demography and mortality in desert tortoise populations.
- Recommended medium priority research topics
  - Validation and refinement of distance-sampling techniques for tortoise monitoring.
  - Long-distance movements in and fragmentation of desert tortoise populations.
  - Effectiveness of barrier fences and culverts in recovery of a local desert tortoise population.
  - Impacts of OHV use on approved routes of travel on tortoise populations and habitat.
  - Geographic variation and environmental determinants of reproductive output in the desert tortoise.

- Recommended low priority research topics
  - Ecology of raven predation on desert tortoises and raven behavior, particularly in more natural landscapes where tortoise predation is occurring.
  - Ecology of hatchling and juvenile desert tortoises in Mojave Desert habitats.
  - Effects of cattle grazing on desert tortoise populations.
  - Restoration and rehabilitation of desert tortoise habitat in the Mojave.

A.7 Management Actions in Desert Tortoise Habitat Outside ACECs

Authorized ground-disturbing activities may occur year-round.

Reclamation shall be required for activities that result in loss or degradation of desert tortoise habitat to as close to pre-disturbance condition as practicable. Reclamation may include, but are not limited to, salvage and transplant of cacti or yucca, re-contouring, scarification of soil, soil amendments, seeding, and transplant of shrubs. Seedings shall be of native species, from seed collected in the area of the project when feasible.

There are no cumulative acreage disturbance limitations to desert tortoise habitat outside of the ACECs.

Compensation shall be required by BLM for disturbances of desert tortoise habitat at the rate of 1 acre for each acre disturbed; this is the same as the current requirement in BLM's Desert Tortoise Statewide Management Policy. Funds collected from project proponents shall be directed to habitat enhancement, rehabilitation or acquisition in the Eastern Mojave Recovery Unit. Proponents may also implement enhancement or rehabilitation projects or donate lands directly, at BLM discretion.

New surface disturbing projects shall include specific design features (see mitigation measures section in Attachment 1) to minimize potential impacts to desert tortoise and desert tortoise habitat. Using the formal consultation procedures of the Endangered Species Act, the BLM shall seek to obtain from USFWS a programmatic biological opinion covering all projects less than 100 acres in size (any size for utilities in utility corridors) that do not require an EIS or do not require amendment of the CDCA Plan. The mitigation measures set forth in Attachment 1 below are proposed by BLM as terms and conditions for the biological opinion.

Attachment 1

Desert Tortoise Mitigation Measures

Introduction

These measures are intended to minimize impacts to the tortoise. In various wordings, they have been included in biological opinions issued by USFWS and in land-use decisions rendered BLM and others on Federal lands.

General Mitigation Measures

Designated Persons

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

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

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

Worker Training

All workers, including all participating agency employees, construction and maintenance personnel, and others who implement authorized actions shall be given special instruction. This instruction will include training on distribution, general behavior and ecology, protection afforded by State and Federal endangered species acts (including prohibitions and penalties), and procedures for reporting encounters, and the importance of following the protection measures. The education program may consist of a class or video presented by a qualified biologist. It is recommended that workers carry wallet cards with important information while in the field. (See Fig #A-1)

Compliance

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

The biological monitor shall document any incident occurring during project activities, which is considered by the biological monitor to be in non-compliance with the mitigation plan, immediately. The FCR shall ensure that appropriate corrective action is taken. The monitor shall document corrective actions. The following incidents shall require immediate cessation of the construction activities causing the incident, including:

- Imminent threat of injury or death to a desert tortoise
- Unauthorized handling of a desert tortoise, regardless of intent
- Operation of construction equipment or vehicles outside a project area cleared of desert tortoise, except on designated roads
- Conducting any construction activity without a biological monitor where one is required (see Term and Condition 2.1). If the monitor and FCR do not agree, the Federal agency's compliance officer shall be contacted for resolution. All parties may refer the resolution to the Federal agency's authorized officer.

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

Compensation

A mitigation fee based on the amount of acreage disturbed shall be required of proponents of new development. Compensation in Category I shall be required at the rate of five acres for each acre disturbed. Compensation in Category III shall be at the rate of one acre for each acre disturbed.

Compensation shall be in the form of habitat acquisition or enhancement or funds to accomplish these.

Tortoise Seasonal Restrictions

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

Pre-Construction Clearance Surveys

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

Site Fencing and Hazard Removal

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

Large or long-term project areas shall be enclosed with tortoise-proof fencing to keep desert tortoises out of the work area. The fencing shall be wire mesh with a maximum mesh size of 1-inch (horizontal) by 2-inch (vertical) fastened securely to posts. The wire mesh shall extend at least 18 inches above the ground and preferably about 12 inches underground. Where burial is not possible, the lower 12 inches shall be folded outward and fastened to the ground. Any gates or gaps in the fence shall be constructed to prevent entry of tortoises. The fencing shall be removed when restoration of the site is completed.

Temporary fencing shall be required around test sites where trenching or drill holes could trap animals or around other small, short-term projects where tortoises could move into the work area. Occasionally, seasonal restrictions and/or monitoring may be substituted to alleviate the need for fencing. Fenced areas are to be cleared of tortoises by an authorized biologist prior to project activities.

Surface Disturbance

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

Blading of work areas shall be minimized to the extent possible. Pre-construction activity, such as removal of vegetation, shall occur in the presence of a qualified biologist and if necessary, a qualified archaeologist or data archaeological technician (DAT). Disturbance of shrubs shall be avoided to the extent possible. Where shrubs must be disturbed, they shall be crushed rather than bladed or excavated, unless excavation of an area is specifically authorized. Topsoil shall be set aside and reapplied as part reclamation activities. Surface disturbance activities in areas that may affect properties on or eligible for the National Register of Historic Properties must have a site-specific evaluation prior to disturbance, and appropriate consultation with the CA-SHPO7 and/or affected tribes. All ground disturbing activities will comply with the Native American Graves Protection and Repatriation Act.

Project maintenance and construction, stockpiles of excavated materials, equipment storage, and vehicle parking shall be limited to existing disturbed areas wherever possible. Special habitat features, particularly tortoise burrows and archaeological sites (if present) shall be flagged by the qualified biologist so that they may be avoided by installation equipment and during placement of poles and anchors.

Cultural or tribal features uncovered during surface disturbance activities will result in cessation of activities in the affected area until the evaluation of the find by a qualified archaeologist can occur. In the case of in advertent finds of Native American human remains the most likely affected tribe or tribes will be notified in addition to the Native American Heritage Commission and the coroner as provided by law.

Biological Monitor

For activities conducted between March 1 and November 1 in desert tortoise habitat, a qualified biologist approved by BLM shall monitor construction and operation activities. The qualified biologist shall be present during all activities in which encounters with tortoises may occur. The qualified biologist shall watch for tortoises wandering into the construction areas, check under vehicles, examine excavations and other potential pitfalls for entrapped animals, examine exclusion fencing, and conduct other activities necessary to ensure that death or injuries of tortoises is minimized.

[7] California State Preservation Office

Refuse Disposal

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

Dogs

For a long-term occupancy, dogs shall be restrained either by enclosure in a kennel or by chaining to a point within the tortoise proof exclosure if one has been constructed for the activity. Dogs must always be under control. Control may be exercised by voice command or by leash.

Ravens

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

Motorized Access

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

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

> **Speed Limits:** Vehicle speed within a project area, along right-of-way maintenance roads and on routes designated for limited use shall not exceed 20 miles per hour. Speed limits shall be clearly marked by the proponent, and workers shall be made aware of these limits.
>
> **Tortoises Under Vehicles:** Vehicles parked in desert tortoise habitat shall be inspected immediately prior to being moved. If a tortoise is found beneath a vehicle, the authorized biologist shall be contacted to move the animal from harms-way, or the vehicle shall not be moved until the desert tortoise leaves of its own accord. The authorized biologist shall be responsible for taking appropriate measures to ensure that any desert tortoise moved in this manner is not exposed to temperature extremes, which could be harmful to the animal.

Route Maintenance and Surface Restoration

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

Heavy Equipment: Operators of heavy equipment such as road graders shall be accompanied by a biological monitor who is a qualified biologist when working in wildlife management area units during the desert tortoise's active period (March 1 to November 1). The biological monitor shall walk **in front** of the equipment during its operation and shall function as the FCR and have the responsibility and authority to halt all project activity should danger to a desert tortoise arise. Work shall proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or an authorized biologist has moved the desert tortoise from harms way. This measure does not currently apply to County or CalTrans roadwork on BLM land.

During the desert tortoise's inactive period (November 1 to March 1) an on-site monitor is not required, but the equipment operator shall be qualified as described under measure 16d. Otherwise a biological monitor shall accompany the operator. The operator shall watch for desert tortoises while using the equipment and shall have the responsibility for preventing harm to desert tortoises, as described under measure 16a.

Operators of light equipment used for trail maintenance and project leaders for surface reclamation actions shall watch for desert tortoises during all project activities. They shall have the responsibility for preventing harm to desert tortoises, as described under measure 16

Qualification: Operators shall be qualified as described in measure 16d.

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

Report: The equipment operator, or authorized biologist shall keep a tally of all desert tortoises seen, moved, injured or killed during the project. Other required elements are rating the effectiveness of required mitigation, a breakdown of actual habitat disturbance, and suggestions for improving mitigation

Water Ditches: The equipment operator or qualified biologist shall inspect water ditches for desert tortoise burrows before moving or shoveling any soil. If a desert tortoise burrow is present, the water ditch shall be left undisturbed if possible. If the equipment operator inspects water ditches for desert tortoise burrows, he or she shall be adequately trained as described in 16a.

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

Grading: To avoid building up tall berms that may inhibit desert tortoise movement, the operator shall minimize lowering of the roadbed while grading. Berms higher than 12 inches or a slope greater than 30 degrees shall be pulled back into the roadbed.

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

Special Mitigation for Specific Uses in Wildlife Management Area Units

Mineral Exploration and Development

In addition to mitigation measures described above for general mitigation, the following special mitigation measures shall apply to small mining operations and minor exploration and test drill holes in which the surface disturbance or area from which desert tortoises are to be removed is less than ten acres. Some of these measures may be applied in desert tortoise habitat outside of wildlife management area units as well.

Compliance: A qualified biologist shall be on-site during the initial construction activities or until the area is fenced and cleared of tortoise.

Explosives: If explosives are authorized in any desert tortoise habitat, the BLM's field office biologist shall verbally consult with the appropriate USFWS office to determine what measures shall be required to reduce the potential to take desert tortoises. These measures may include:

- Seasonal restrictions upon the use of explosives
- Temporary removals of desert tortoises from areas potentially at risk during detonation either directly from the explosion or by thrown materials. All handling and storage of desert tortoises for this purpose shall be conducted as described in measure 3 by an authorized biologist.
- Covering of desert tortoise burrows to reduce impacts of flying materials.

Non-Competitive Recreational Events

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

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

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

Maps: A map identifying the course shall be furnished to each entrant. The map shall clearly delineate maximum speed limits, authorized campsites, and desert wildlife management area, and shall include a statement cautioning that motorized travel beyond the edge of the roads into undisturbed habitat is strictly prohibited.

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

Camping: Overnight camping shall be limited to existing campgrounds or designated campsites capable of accommodating a group. A qualified biologist shall survey selected camping areas prior to the event to determine if desert tortoise burrows or other special status plant or animal species are present**.** Parking associated with vehicle-based camping must occur within 100' of centerline in wildlife management area units in previously disturbed areas, and within 300' of centerline in other tortoise habitat

Trash: Trash and food items shall be removed from and carried out of the area by the participants. The event proponent shall be responsible for assuring that trash and garbage are not left behind.

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

Clearance: An authorized biologist shall sweep the entire course within the wildlife management area within an hour before the event, and in other desert tortoise habitat within 3 hours before the event. In addition, an Authorized Biologist shall travel at the front of the event to ensure that the route is cleared of all desert tortoises. Desert tortoises found shall be moved approximately 100 feet off the course by authorized personnel.

Utility Pipelines and Underground Cables

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

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

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

Access: Vehicular travel shall be limited to the right-of-way. Access to the right-of-way shall be limited to public roads and designated routes. All temporary disturbances should be reclaimed immediately, as part of the project (see restoration below).

Trenches: Open trenches shall be regularly inspected by the authorized biologist at a minimum of three (3) times per day, and any desert tortoises that are encountered shall be safely removed. For small projects, escape ramps are sometimes required. The length of the trench left open at any given time shall not exceed that distance which will remain open for one week or less in duration. The authorized biologist immediately prior to backfilling shall make a final inspection of the open trench segment. Arrangements shall be made prior to the onset of maintenance or construction to ensure that desert tortoises can be removed from the trench without violating any requirement of the Occupational Safety and Health Administration.

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

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

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

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

Power Transmission

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

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

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

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

Restoration: Whenever possible, spur and access roads and other disturbed sites created during construction shall be re-contoured and restored.

Ravens: All transmission lines shall be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company shall remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from the USFWS's Division of Law Enforcement to take common ravens or their nests.

Project Reporting

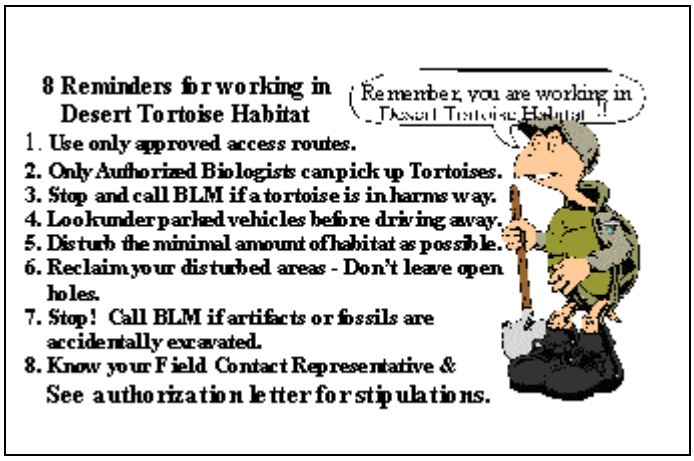
For each project on which the consultation is to be applied, the BLM will transmit a reporting form to the appropriate USFWS field office a minimum of 30 days prior to authorizing the activity. If there is no response after 30 days, the project may be approved.

All existing programmatic consultations for the CDCA are incorporated into this authorization (e.g., small mining, small disturbance, electrical utilities, pipeline maintenance, dualsport, waste site clean-up, etc.).

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

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

Figure A.1 – Wallet Card



Report on Proposed Action to be Covered by the Programmatic Consultation on Activities Resulting in Small Disturbances of Desert Tortoise Habitat in the California Desert

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

Name of Project: _____BLM Case File No.: _____

Type of Activity: _____

BLM Contact: _____

Date of Preparation: _____

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

General locality:

_____

BLM Field Office or Other Jurisdiction:

_____

Tortoise Critical Habitat Unit: _____

Tortoise Recovery Unit: _____

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

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

_____

_____

_____

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

_____

_____

_____

_____