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**Appendix G**  
**Desert Tortoise Mitigation Measure**

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# **APPENDIX G – DESERT TORTOISE MITIGATION MEASURE**

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## **General Mitigation Measures**

These measures are intended to minimize the impacts of authorized actions or projects on desert tortoise and its habitat.

## **Designated Persons**

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

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

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.

## **Compliance**

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

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

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

### **Compensation**

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

### **Tortoise Seasonal Restrictions**

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

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

Large or long-term project areas shall be enclosed with tortoise-proof fencing to keep desert tortoises out of the work area. The fencing shall be wire mesh with a maximum mesh size of 1/2" square fastened securely to posts. The wire mesh shall extend at least 18 inches above the ground

and preferably about 12 inches underground. Where burial is not possible, the lower 12 inches shall be folded outward and fastened to the ground. Any gates or gaps in the fence shall be constructed to prevent entry of tortoises. The fencing shall be removed when restoration of the site is completed.

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

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

### **Surface Disturbance**

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

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

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

### **Biological Monitor**

For activities conducted between March 15 and November 1 in desert tortoise habitat, construction and operation activities shall be monitored by a Qualified Biologist approved by BLM. The Qualified Biologist shall be present during all activities in which encounters with tortoises may occur. The Qualified Biologist shall watch for tortoises wandering into the construction areas, check under vehicles, examine excavations and other potential pitfalls for entrapped animals, examine exclusion fencing, and conduct other activities necessary to ensure that death or injuries of tortoises is minimized.

### **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**

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

## **Ravens**

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

## **Motorized Access**

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

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

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

## **Route Maintenance and Surface Restoration**

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

- a. **Heavy Equipment.** Operators of heavy equipment (such as road graders) shall be accompanied by a biological monitor who is a Qualified Biologist when working in desert tortoise habitat during the desert tortoise's active period (March 15 to 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 the desert tortoise has been moved from harm's way by an Authorized Biologist. This measure does not currently apply to County or Caltrans road work on BLM land.

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

- b. Injury. Should any desert tortoise be injured or killed, all activities shall be halted, and the Authorized Biologist immediately contacted. The biologist shall have the responsibility for determining whether the animal should be transported to a veterinarian for care, which is paid for by the project proponent, if involved. If the animal recovers, USFWS is to be contacted to determine the final disposition of the animal; few injured desert tortoises are returned to the wild.
- c. Report. The equipment operator or Authorized Biologist shall keep a tally of all desert tortoises seen, moved, injured or killed during the project. Other required elements are (1) rating the effectiveness of required mitigation, (2) a breakdown of actual habitat disturbance, and (3) suggestions for improving mitigation.
- d. Water Ditches. The equipment operator or Qualified Biologist shall inspect water ditches for desert tortoise burrows before moving or shoveling any soil. If a desert tortoise burrow is present, the water ditch shall be left undisturbed, if possible. The equipment operator shall inspect water ditches for desert tortoise burrows.
- e. Burrows. If a burrow is occupied by a desert tortoise and avoidance of the burrow is not possible during road maintenance or reclamation activities, the Authorized Biologist shall make the final determination. Only an Authorized Biologist may excavate the desert tortoise, following established protocols.
- f. Grading. To avoid building up tall berms that may inhibit desert tortoise movement, the operator should minimize lowering of the road bed while grading. Berms higher than 12 inches or a slope greater than 30 degrees shall be pulled back into the road bed. Where it is not feasible to meet these requirements, berms will be mitigated through such means as artificial breaching at washes, intersections, or ditch-outs for drainage with adequate spacing.
- g. Speed Limits. The equipment operator shall watch for desert tortoises on the road whenever driving, transporting, or operating equipment. Driving speeds shall not exceed 20 miles per hour, and operating speeds should not exceed 5 miles per hour to allow for adequate visibility.

## **Power Transmission**

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

- a. **Surveys.** When access along the utility corridor already exists, pre-construction surveys for transmission lines shall provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines shall follow standard protocol for linear projects.
- b. **Access.** To the maximum extent possible, access for transmission line construction and maintenance shall occur from public roads and designated routes.
- c. **Disturbed Areas.** To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites shall be sited in a manner that avoids desert tortoise burrows.
- d. **Restoration.** Whenever possible, spur and access roads and other disturbed sites created during construction shall be recontoured and restored.
- e. **Ravens.** All transmission lines shall be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company shall remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from the USFWS's Division of Law Enforcement to take common ravens or their needs.