APPENDIX C

U.S. FISH AND WILDLIFE SERVICE CONSULTATION

United States Department of the Interior

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TAKE PRIDE IN AMERICA

October 22, 2003
File No. 1-5-04-F-400

Mr. John R. Holt
Environmental Manager
U.S. Department of Energy
Western Area Power Administration
Post Office Box 6457
Phoenix, Arizona 85005-6457

Dear Mr. Holt:

Subject: Biological Opinion on Proposed Construction of Phase II of the Hoover Dam By-Pass Project, Clark County, Nevada

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the subject project and its effects on the federally listed as threatened Mojave desert tortoise (*Gopherus agassizii*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*). Your September 30, 2003, request was received on October 1, 2003, at which time the Service initiated formal consultation. The project requires Federal actions involving the Western Area Power Administration (Western) and Federal Highway Administration (FHWA). As stated in your request, it was mutually agreed between Western and FHWA that Western would be the lead Federal agency for the second phase of the project and consultation under section 7 of the Act.

Western's September 30, 2003, letter also requested concurrence that the proposed construction of Phase II of the Hover Dam by-pass project in Clark County, Nevada, is "not likely to adversely affect" the bald eagle (*Haliaeetus leucocephalus*), a species federally listed as threatened. The Service concurs with this determination based on the following:

1) the lack of bald eagle observations in the project area indicates a lack of use of the project area, and

2) the majority of the project area is located away from perennial water bodies and other areas of likely bald eagle use.

This biological opinion is based on information provided in your September 30 request; biological assessment dated August 27, 2003 (Transcon Environmental 2003a); biological report dated August 27, 2003 (Transcon Environmental 2003b); August 20, 2003, letter to the Service from FHWA requesting that Western be the lead Federal agency for the project; discussions among Western and FHWA staff and their environmental consultants, the Service, and our files. A complete administrative record of this consultation is on file in the Southern Nevada Field Office, Las Vegas, Nevada.

Consultation History

On June 3, 1999, the Service issued a non-jeopardy biological opinion (Service File No. 1-5-99-F-105) to the FHWA for construction of a bypass of the Hoover Dam in Nevada and Arizona. FHWA proposed to bypass Hoover Dam with a new bridge and approach roadway crossing the Colorado River. The 3.35-mile-long road construction right-of-way (ROW) would average 300 feet in width. The Service concluded that up to 5 desert tortoises may be incidentally injured or killed and 20 desert tortoises captured and moved out of harm's way during project activities. Further, FHWA determined that the proposed project was *not likely to adversely affect* the bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco peregrinus anatum*), razorback sucker (*Xyrauchen texanus*), or southwestern willow flycatcher (*Empidonax traillii extimus*), which are federally listed species; the Service concurred with this determination.

On October 31, 2002, the Service amended the 1999 biological opinion for the Hoover Dam bypass to include relocation and installation of power circuits and structures associated with the project, as requested by FHWA.

A. BIOLOGICAL OPINION

I. Description of the Proposed Action

a. Proposed Action and Action Area

Western proposes to reconfigure a segment of its existing electrical transmission system near Boulder City, Nevada and the Hoover Dam. The proposed project area is located entirely within Clark County, Nevada (USGS 7.5' quadrangle series includes Hoover Dam, Nev.-Ariz. 1983; Boulder Beach, Nev.-Ariz. 1970; and Boulder City, Nev. 1983). The project crosses land administered by the Bureau of Reclamation (BOR), National Park Service (NPS) Lake Mead National Recreation Area, Boulder City and Western. The project area begins about 2,000-feet west of the Hoover Dam, on the Nevada side of the Colorado River, and continues along an existing transmission line corridor for approximately 8 miles where it terminates at the Mead Substation (Figure 1).

The proposed action involves double-circuiting a portion of the existing Hoover-Mead Nos. 5 and 7, 230-kV transmission lines with the re-named Henderson-Mead No. 1 transmission line from a point near the Hoover Dam to the Mead Substation. Double-circuiting is the placement of two separate electrical circuits, typically in the form of three separate conductors or bundles of conductors, on the same set of transmission line structures. The majority of the proposed alignment is within existing Western ROW, except where the Henderson-Mead No. 1 transmission line transfers from the Hoover-Mead No. 7 to the Hoover-Mead No. 5 transmission lines, near the Boulder City Substation, and where the Henderson-Mead No. 1 deviates from the Hoover-Mead No. 5 near the Mead Substation. Another component of the proposed action is the addition of fiber-optic conduit and cable through existing tunnels (near Hoover Dam) and on overhead ground wires on the transmission line structures described above. Equipment and structures at the existing Arizona and Nevada (A&N) Switchyard will be removed.

Western's proposed action includes:

- Disassembly and Removal of Existing Structures

  Work crews would disassemble existing steel lattice structures at the site and either completely remove or leave the existing foundations in place at or below grade. The disassembled structures would be removed from the work sites. Most of the structure removal activities would occur within the existing 200-foot transmission line ROW and 50-foot access road ROW.

- Ground Clearing and Leveling

  Clearing vegetation from the ROW and work areas would be required for worker safety, construction purposes (access and structure sites), clearances for electrical safety, long term maintenance and transmission reliability. At each structure site, leveled areas, or pads (approximately 30 by 40 feet), would be needed to facilitate the safe operation of construction equipment; a work area, approximately 200-feet in diameter, would be required to assemble the structure, and for crane maneuvers. Most of the existing structure sites that would be reused for the new structures would require minimal clearing and leveling.

- Structure Assembly and Erection

  Structure replacement activities involve mobilizing construction vehicles, moving equipment and poles along existing access roads to each structure site, installing

foundations and assembling and erecting the structures. Work crews would auger footings. Sections of the new structures and associated hardware would be delivered to each structure site by truck. Crews would mainly assemble new structures on the ground within the existing ROW and, using a crane, position them in the previously augured foundation holes. Most structure replacement activities would occur within the existing 200-foot transmission line ROW except in areas near the Mead Substation and Boulder City Tap. Western proposes to erect about 47 new monopole structures, 14 of which would be located in nearly the same location as the previous structures and 33 of which would be constructed in new areas along the project alignment.

- Conductor Placement

Conductor stringing would begin by installing insulators and sheaves on the conductor arms. The sheaves are rollers attached to the lower end of the insulators that are attached to the ends of each supporting structure cross arm. The sheaves allow crews to pull individual cables through each structure until the cables are ready to be pulled up to the final tension position. Workers would install temporary clearance structures at road crossings and crossings of energized electric lines. These would consist of vertical wood poles with overhead netting at the pole top to prevent the sock line (manila rope or wire used to pull the conductors into place) or conductors from sagging onto the roadway or energized lines during the stringing operation.

Western would establish conductor pulling and tension sites along the proposed alignment. These sites are required to set-up tractors and trailers with the spooled cables that hold the conductors and tension the lines to the proper height above the ground. All pulling and tensioning sites would be within the existing ROW.

Once the equipment is set-up, a light vehicle would pull the sock line between each supporting structure where access along the line is available. At each structure, the sock line would be hoisted to the cross arm and passed through the sheaves on the ends of the insulators. The sock line would be used to pull the conductor through the sheaves. The conductors would then be attached to the sock line and pulled through each supporting structure under tension. After the conductors are pulled into place, they are pulled to a pre-calculated sag and then tension-clamped to the end of each insulator. The final step of the conductor installation process is to remove the sheaves and install vibration dampers and other accessories.

- Fiber-Optic Cable Installation

Western proposes to install the fiber-optic cable in the Hoover Dam Control Tunnel and connect it to the Hoover-Mead No. 7 transmission line originating in the Los Angeles Switchyard. The fiber-optic cable installation on the reconfigured Hoover-Mead Nos. 5 and 7 transmission lines would require Western to replace one of the overhead ground wires. The fiber-optic cable would also be carried on segments of the new Henderson-Mead No. 1, 230-kV transmission line in place of the overhead ground wire. The fiber-optic cable would extend from Hoover Dam to the Mead Substation. The fiber-optic cable would be installed in construction spreads consisting of equipment and crews managing various phases of construction for a given line segment. Crews would store all materials and equipment associated with the project at a set-up location on a previously disturbed site. The process of installing the fiber-optic cable would require the same or similar action as conductor installation.

- Right-of-Way Cleanup and Restoration

  Western would ensure that construction sites, material storage yards and access roads are kept in an orderly condition during the construction period. Crews would collect waste construction materials and rubbish from all construction areas daily, haul them away and dispose of them at approved sites. All structure assembly and erection pads not needed for normal maintenance would be returned to their original contour and natural drainage patterns would be restored. The intent would be to restore all construction areas to their original condition, where feasible.

- Operation and Maintenance

  Western would use routine visual inspection to ensure proper transmission line operation and maintenance. Western anticipates the need to occasionally tighten hardware and replace damaged materials.

b. Proposed Minimization Measures

Western and FHWA propose the following measures to minimize potential effects to the desert tortoise as a result of project construction and maintenance.

1. A tortoise-education program shall be presented to all personnel working on the project or activities associated with the project or visiting the project site. This program shall be presented by a qualified tortoise biologist. The program shall include information on the legal protection for desert tortoises, penalties for violations of Federal and State laws, the

life history of the desert tortoise, general tortoise-activity patterns, reporting requirements, measures to protect tortoises and personal measures that employees can employ to promote the conservation of desert tortoises. The definition of "take" will also be explained. Specific and detailed instructions will be provided on the proper techniques to move tortoises that appear onsite, in accordance with Service-approved protocol. Currently, the Service-approved protocol is that described by the Desert Tortoise Council (1994, revised 1999).

2. A qualified desert tortoise biologist shall possess, at a minimum, a bachelor's degree in biology, ecology, wildlife biology, herpetology, or closely related fields as determined by Western. The biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign, which would include a minimum of 60 days of field experience. All tortoise biologists shall comply with the Service-approved handling protocol prior to conducting tasks in association with the biological opinion. In addition, the biologist shall have the ability to recognize tortoise sign and accurately record survey results.

3. The qualified biologist will check construction areas immediately before construction activities begin anytime during the year.

4. The qualified biologist will acquire all appropriate Service and Nevada Department of Wildlife (NDOW) permits or letters of authorization prior to handling desert tortoises and their parts, and prior to initiation of any activity that may require handling tortoises.

5. The qualified desert tortoise biologist would be present from March 15 through October 15 (active season) during surface-disturbing activities to ensure that desert tortoises are not inadvertently harmed, in areas that Western and the Service determine that the presence of a biologist is necessary. The biologist shall be on-call from October 16 through March 14 (inactive season).

6. Measures that would be taken to minimize mortality or injury of desert tortoises due to construction activities and use of heavy equipment include: (a) all desert tortoises observed by project workers shall be reported immediately to Western's biologist; (b) if blasting is required in desert tortoise habitat, a desert tortoise biologist will be assigned to each blasting crew or to each area in which blasting will occur; and (c) any time a vehicle is parked in desert tortoise habitat, the ground around and underneath the vehicle will be inspected for desert tortoise prior to moving the vehicle. If a desert tortoise is observed, an authorized biologist will be contacted.

7. Herbicides shall not be used in the project area unless approved in writing by Western.

8. Construction sites, staging areas, and access routes shall be cleared by a qualified tortoise biologist before the start of construction. The project area shall be surveyed for desert tortoise using survey techniques that provide 100 percent coverage. From March 15 through October 15, the pre-construction clearance shall take place no more than 3 days prior to initiation of construction; from October 16 through March 14, the pre-construction clearance shall take place no more than 10 days prior to initiation of construction. All desert tortoise burrows, and other species' burrows that may be used by tortoises, will be examined to determine whether the burrow is occupied by desert tortoises. Tortoise burrows shall be cleared of tortoises and eggs, and collapsed under supervision of a qualified tortoise biologist in accordance with the Service protocol (Desert Tortoise Council 1994, revised 1999).

9. Tortoises and nests shall be handled and relocated by a qualified tortoise biologist in accordance with Service-approved protocol (Desert Tortoise Council 1994, revised 1999). Burrows containing tortoises or nests shall be excavated by hand, with hand tools, to allow removal of the tortoise or eggs. Desert tortoises moved during the tortoise inactive season or those in hibernation, regardless of date, must be placed into an adequate burrow; if one is not available, one shall be constructed in accordance with Desert Tortoise Council (1994, revised 1999) criteria. During mild temperature periods in the spring and early fall, tortoises removed from the site shall not necessarily be placed in a burrow. Tortoises and burrows shall be relocated only to Federally-managed lands.

10. Tortoises that are moved offsite and released into undisturbed habitat on public land must be placed in the shade of a shrub, in a natural unoccupied burrow similar to the hibernaculum in which it was found, or in an artificially constructed burrow in accordance with Desert Tortoise Council (1994, revised 1999) criteria.

11. Overnight parking and storage of equipment and materials shall be in previously disturbed areas or areas to be disturbed that have been cleared by a tortoise biologist. Other areas needed for overnight parking and storage of equipment shall be cleared by the tortoise biologist and approved by the Contracting Officer.

12. All vehicular traffic shall be restricted to existing access roads, new constructed access spur roads, or those roads approved by Western in consultation with the Service.

13. Vehicles shall not exceed the 15 miles per hour speed limit on non-public, access roads.

14. All activities shall be confined to designated areas. Blading of vegetation shall occur only to the extent necessary and shall be limited to areas designated for that purpose by the qualified tortoise biologist.

15. A litter-control program shall be implemented during construction to minimize predation on tortoises by ravens drawn to the project site. This program shall include the use of covered, raven-proof trash receptacles, removal of trash from project areas to the trash receptacles following the close of each work day, and proper disposal of trash in a designated solid waste disposal facility. Precautions will be taken to prevent litter from blowing out along the road when trash is removed from the site.

16. The Service's Southern Nevada Field Office (702 515-5230) must be notified of any desert tortoise death or injury resulting from project implementation by close of business on the following working day. In addition, the Service's Division of Law Enforcement shall be notified in accordance with reporting requirements.

17. A Western representative(s) shall be designated who will be responsible for overseeing compliance with the reasonable and prudent measures, terms and conditions, reporting requirements and re-initiation requirements contained in the biological opinion. The designated representative shall provide coordination with the Service, BOR and NPS.

18. FHWA will provide compensation to the Section 7 Fund for the disturbance of 32 acres of desert tortoise habitat.

II. Status of the Species Rangewide/Critical Habitat

The desert tortoise is a large, herbivorous reptile found in portions of California, Arizona, Nevada, and Utah. It also occurs in Sonora and Sinaloa, Mexico. The Mojave population of the desert tortoise includes those animals living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, southwestern Utah, and in the Colorado Desert in California. Desert tortoises reach 8 to 15 inches in carapace length. Adults have a domed carapace and relatively flat, unhinged plastron. Shell color is brownish, with yellow to tan scute centers. The forelimbs are flattened and adapted for digging and burrowing. Optimal habitat has been characterized as creosote bush scrub in which precipitation ranges from 2 to 8 inches, where a diversity of perennial plants is relatively high, and production of ephemerals is high (Luckenbach 1982; Turner 1982; Turner and Brown 1982). Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse. Desert tortoises occur from

below sea level to an elevation of 7,300 feet, but the most favorable habitat occurs at elevations of approximately 1,000 to 3,000 feet (Luckenbach 1982).

Desert tortoises are most active during the spring and early summer when annual plants are most common. Additional activity occurs during warmer fall months and occasionally after summer rain storms. Desert tortoises spend the remainder of the year in burrows, escaping the extreme conditions of the desert. The size of desert tortoise home ranges vary with respect to location and year. Females have long-term home ranges that are approximately half that of the average male, which range from 25 to 200 acres (Berry 1986). Over its lifetime, each desert tortoise may require more than 1.5 square miles of habitat and make forays of more than 7 miles at a time (Berry 1986). In drought years, the ability of tortoises to drink while surface water is available following rains may be crucial for tortoise survival. During droughts, tortoises forage over larger areas, increasing the likelihood of encounters with sources of injury or mortality including humans and other predators. Desert tortoises possess a combination of life history and reproductive characteristics which affect the ability of populations to survive external threats. Tortoises may require 20 years to reach sexual maturity (Turner, *et al.* 1984; Bury 1987).

The desert tortoise is most commonly found within the desert scrub vegetation type, primarily in creosote bush scrub. In addition, it is found in succulent scrub, cheesebush scrub, blackbrush scrub, hopsage scrub, shadscale scrub, microphyll woodland, Mojave saltbush-allscale scrub, and scrub-steppe vegetation types of the desert and semidesert grassland complex (Service 1994). Within these vegetation types, desert tortoises potentially can survive and reproduce where their basic habitat requirements are met. These requirements include a sufficient amount and quality of forage species; shelter sites for protection from predators and environmental extremes; suitable substrates for burrowing, nesting, and overwintering; various plants for shelter; and adequate area for movement, dispersal, and gene flow. Throughout most of the Mojave Region, tortoises occur most commonly on gently sloping terrain with soils ranging from sand to sandy-gravel and with scattered shrubs, and where there is abundant inter-shrub space for growth of herbaceous plants. Throughout their range, however, tortoises can be found in steeper, rockier areas. Further information on the range, biology, and ecology of the desert tortoise can be found in Berry and Burge (1984); Burge (1978); Burge and Bradley (1976); Bury, *et al.* (1994); Germano, *et al.* 1994; Hovik and Hardenbrook (1989); Karl (1981, 1983a, 1983b); Luckenbach (1982); Service (1994); Turner, *et al.* 1984; and Weinstein, *et al.* (1987).

On August 4, 1989, the Service published an emergency rule listing the Mojave population of the desert tortoise as endangered (54 FR 42270). On April 2, 1990, the Service determined the Mojave population of the desert tortoise to be threatened (55 FR 12178). Reasons for the determination included loss of habitat from construction projects such as roads, housing and

energy developments, and conversion of native habitat to agriculture. Grazing and off-highway vehicle (OHV) activity have degraded additional habitat. Also cited as threatening the desert tortoise's continuing existence were illegal collection by humans for pets or consumption, upper respiratory tract disease (URTD), predation on juvenile desert tortoises by common ravens (*Corvus corax*) and kit foxes (*Vulpes macrotis*), and collisions with vehicles on paved and unpaved roads. Fire is an increasingly important threat to desert tortoise habitat. Over 500,000 acres of desert lands burned in the Mojave Desert in the 1980s. Fires in Mojave desert scrub degrade or eliminate habitat for desert tortoises (Appendix D of Service 1994).

On February 8, 1994, the Service designated approximately 6.4 million acres of critical habitat for the Mojave population of the desert tortoise in portions of California, Nevada, Arizona, and Utah (59 FR 5820), which became effective on March 10, 1994. Critical habitat is designated by the Service to identify the key biological and physical needs of the species and key areas for recovery, and focuses conservation actions on those areas. Critical habitat is composed of specific geographic areas that contain the primary constituent elements of critical habitat, consisting of the biological and physical attributes essential to the species' conservation within those areas, such as space, food, water, nutrition, cover, shelter, reproductive sites, and special habitats. The specific primary constituent elements of desert tortoise critical habitat are: Sufficient space to support viable populations within each of the six recovery units, and to provide for movement, dispersal, and gene flow; sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species; suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter sites; sufficient vegetation for shelter from temperature extremes and predators; and habitat protected from disturbance and human-caused mortality.

Approximately 1.2 million acres were designated as critical habitat in Nevada. Critical habitat units (CHUs) were based on recommendations for Desert Wildlife Management Areas (DWMAs) outlined in the *Draft Recovery Plan for the Desert Tortoise (Mojave Population)* (Service 1993). These DWMAs are also identified as "desert tortoise areas of critical environmental concern (ACEC)" by BLM. Because CHU boundaries were drawn to optimize reserve design, the CHU may contain both "suitable" and "unsuitable" habitat. Suitable habitat can be generally defined as areas that provide the primary constituent elements. The proposed project area does not occur within critical habitat.

On June 28, 1994, the Service approved the final Desert Tortoise Recovery Plan (Service 1994). The Desert Tortoise Recovery Plan divides the range of the desert tortoise into 6 recovery units and recommends establishment of 14 DWMAs throughout the recovery units. Within each DWMA, the Desert Tortoise Recovery Plan recommends implementation of reserve-level

protection of desert tortoise populations and habitat, while maintaining and protecting other sensitive species and ecosystem functions. The design of DWMAs should follow accepted concepts of reserve design. As part of the actions needed to accomplish recovery, the Desert Tortoise Recovery Plan recommends that land management within all DWMAs should restrict human activities that negatively impact desert tortoises (Service 1994). DWMAs have been designated by BLM through development or modification of their land use plans in Nevada, Arizona, and Utah. Land-use planning activities are underway in California to designate DWMAs/ACECs. The regulation of activities within critical habitat through section 7 consultation is based on recommendations in the Desert Tortoise Recovery Plan. DWMAs/ACECs have been designated in Utah, Arizona, and Nevada. Similar designations are in progress in California for the Western Mojave Recovery Unit, and Northern and Eastern Colorado recovery units. The proposed project area occurs within the Northeastern Mojave Recovery Unit but not within a DWMA/ACEC.

The Northeastern Mojave Recovery Unit occurs primarily in Nevada, but it also extends into California along the Ivanpah Valley and into extreme southwestern Utah and northwestern Arizona (Figure 2). Vegetation within this unit is characterized by creosote bush scrub, big galleta-scrub steppe, desert needlegrass scrub-steppe, and blackbrush scrub (in higher elevations). Topography is varied, with flats, valleys, alluvial fans, washes, and rocky slopes. Much of the northern portion of the recovery unit is characterized as basin and range, with elevations from 2,500 to 12,000 feet. Desert tortoises typically eat summer and winter annuals, cacti, and perennial grasses. Desert tortoises in this recovery unit, the northern portion of which represents the northernmost distribution of the species, are typically found in low densities (approximately 10 to 20 adults per square mile).

Long-term monitoring of desert tortoise populations is a high priority recovery task as identified in the Desert Tortoise Recovery Plan. From 1995 to 1998, pilot field studies and workshops were conducted to develop a monitoring program for desert tortoise. In 1998, the Desert Tortoise Management Oversight Group chose line distance sampling as the appropriate method to determine rangewide desert tortoise population densities and trends. Monitoring of populations using this method is underway across the range of the desert tortoise. Successful rangewide monitoring will enable managers to evaluate the overall effectiveness of recovery actions and population responses to these actions, thus guiding recovery of the Mojave desert tortoise.

III. Environmental Baseline

a. Status of the Species in the Action Area

The project area is situated in the northeast corner of the Mojave Desert. The region is typified by broad alluvial basins located between relatively isolated mountain ranges and dissected uplands. The project area crosses the northern most extension of the Eldorado Valley and Eldorado Mountains.

The dominant vegetation in the project area is creosotebush (*Larrea tridentata*) – white bursage (*Ambrosia dumosa*) community. Other common species observed in the project area during pedestrian surveys include desert buckwheat (*Eriogonum fasciculatum*), range ratany (*Krameria parvifolia*), brittlebush (*Encelia farinosa*), joint-fir (*Ephedra nevadensis*), beavertail cactus (*Opuntia basilaris*), barrel cactus (*Ferocactus ancanthodes*), and cholla (*Opuntia* spp). Common herbs and forbs include desert mallow (*Sphaeralcea ambigua*), desert chicory (*Rafinesquia neomexicana*), little trumpet (*Eriogonum inflatum*), evening primrose (*Camissonia californica*), fiddleneck (*Amsinckia intermedia*) and spiny chorizanthe (*Chorizanthe rigida*). Common grasses include Arabian grass (*Schismus arabicus*), fluff grass (*Erioneuron pulchellum*) and red brome (*Bromus madritensis rubens*).

In April and May 2003, a biologist conducted pedestrian surveys of the project area to characterize vegetation communities, wildlife habitats, and desert tortoise habitat (Transcon 2003a). During the surveys, 431 acres of desert tortoise habitat was surveyed. The survey sampled 5.2 miles of the proposed alignment and included approximately six transect miles. Although no tortoise sign was observed during the surveys, the intent was not to determine presence/absence of desert tortoises but to characterize the habitat. The biologist concluded that the project area included desert tortoise habitat potentially occupied by desert tortoises. Surveys conducted in the area in 1990 concluded that 10 to 45 desert tortoises occurred in the area per square mile of habitat. This determination was based on the observation of 45 corrected sign located over 109 acres of habitat surveyed based on the regression equation developed by Berry and Nicholson (1984) as modified by BLM's Las Vegas District (Mark Cochran, pers. comm. 2003).

b. Factors Affecting the Species Environment in the Action Area

Along the southern-most section of the project, the proposed transmission line facilities would be located near the Boulder City Riffle Range. The 100-acre Boulder City Municipal Landfill is located west of the project area and serves Boulder City and Lake Mead National Recreation

Area. The Mead Substation and Bureau of Reclamation's Southwestern Complex occur at the southern end of the project area. Most traffic to and from these existing facilities would not extend into the project area. Recreationists use the existing transmission line maintenance roads with little evidence of off-road activity.

Programmatic Biological Opinions Issued for Desert Tortoise in the Action Area

File No. 1-5-97-F-251. On November 21, 1997, the Service issued a programmatic biological opinion to BLM for implementation of multiple-use actions within their Las Vegas District, excluding desert tortoise critical habitat, proposed desert tortoise ACECs, and the area covered by the Las Vegas Valley programmatic consultation. BLM proposes to authorize activities within the programmatic area that may result in loss of tortoises or their habitat through surface disturbance, land disposal, and fencing, for a period of five years. The total area covered by this programmatic biological opinion is approximately 2,636,600 acres, which includes approximately 263,900 acres of BLM-withdrawn lands in Clark County. This programmatic consultation is limited to activities which may affect up to 240 acres per project, and a cumulative total of 10,000 acres, of desert tortoise habitat excluding land exchanges and sales. Only land disposals by sale or exchange within Clark County may be covered under this consultation up to a cumulative total of 14,637 acres. Therefore, a maximum total of 24,637 acres of desert tortoise habitat may be affected by the proposed programmatic activities. BLM collects a remuneration fee of $648 per acre of disturbance of desert tortoise habitat, as indexed annually for inflation.

File No. 1-5-98-F-053. On June 18, 1998, the Service issued a programmatic biological opinion to BLM for implementation of the Las Vegas RMP. BLM collects a remuneration fee of $648 per acre of disturbance of desert tortoise habitat, as indexed for inflation. The project area for this consultation covers all lands managed by BLM's Las Vegas Field Office, including desert tortoise critical habitat, proposed desert tortoise ACECs, and BLM-withdrawn land. The Las Vegas Field Office designated approximately 648 square miles of tortoise habitat as desert tortoise ACEC in the Northeastern Mojave RU, and approximately 514 square miles of tortoise habitat as desert tortoise ACEC in the East Mojave RU, through the final RMP. As identified in the RMP, BLM manages 743,209 acres of desert tortoise habitat within four tortoise ACECs for desert tortoise recovery. To accomplish desert tortoise recovery in the Northeastern and Eastern Mojave RUs, the Las Vegas Field Office implements appropriate management actions in desert tortoise ACECs through the RMP including:

1. Manage for zero wild horses and burros within desert tortoise ACECs.
2. Limit utility corridors to 3,000 feet in width, or less.

3. Do not authorize new landfills or military maneuvers.
4. Require reclamation for activities which result in loss or degradation of tortoise habitat, with habitat to be reclaimed so that pre-disturbance condition can be reached within a reasonable time frame.
5. Limit all motorized and mechanized vehicles to designated roads and trails within ACECs and existing roads, trails, and defined dry washes outside ACECs.
6. Allow non-speed OHV events within ACECs, subject to restrictions and monitoring determinations.
7. Prohibit OHV speed events, mountain bike races, horse endurance rides, four-wheel hill climbs, mini-events, publicity rides, high-speed testing, and similar speed based events.
8. Within ACECs, do not allow commercial collection of flora. Only allow commercial collection of fauna within ACECs upon completion of a scientifically credible study that demonstrates commercial collection of fauna does not adversely impact affected species or their habitat. This action will not affect hunting or trapping, and casual collection as permitted by the State.

Habitat Conservation Plans Completed Involving the Action Area

On May 23, 1991, the Service issued a biological opinion on the issuance of incidental take permit PRT-756260 (File No. 1-5-91-FW-40) under section 10(a)(1)(B) of the Act. The Service concluded that incidental take of 3,710 desert tortoises on up to 22,352 acres of habitat within the Las Vegas Valley and Boulder City in Clark County, Nevada, was not likely to jeopardize the continued existence of the desert tortoise. The permit application was accompanied by the *Short-Term Habitat Conservation Plan for the Desert Tortoise in the Las Vegas Valley, Clark County, Nevada* (Regional Environmental Consultants 1991) (Short-term HCP) and an implementation agreement that identified specific measures to minimize and mitigate the effects of the action on desert tortoises.

On July 29, 1994, the Service issued a non-jeopardy biological opinion on the issuance of an amendment to incidental take permit PRT-756260 (File No. 1-5-94-FW-237) to extend the expiration date of the existing permit by one year (to July 31, 1995) and include an additional disturbance of 8,000 acres of desert tortoise habitat within the existing permit area. The amendment did not authorize an increase in the number of desert tortoises allowed to be taken under the existing permit. Additional measures to minimize and mitigate the effects of the amendment were also identified. Approximately 1,300 desert tortoises were taken under the authority of PRT-756260, as amended. In addition, during the Short-term HCP, as amended, approximately 541,000 acres of desert tortoise habitat have been conserved in Clark County on lands administered by BLM and NPS.

On July 11, 1995, the Service issued an incidental take permit (PRT-801045) to Clark County, Nevada, including cities within the county and the Nevada Department of Transportation (NDOT), under the authority of section 10(a)(1)(B) of the Act. The permit became effective August 1, 1995, and allowed the "incidental take" of desert tortoises for a period of 30 years on 111,000 acres of non-Federal land in Clark County, and approximately 2,900 acres associated with NDOT activities in Clark, Lincoln, Esmeralda, Mineral, and Nye Counties, Nevada. The Clark County Desert Conservation Plan (DCP) served as the permitees' habitat conservation plan and detailed their proposed measures to minimize, monitor, and mitigate the effects of the proposed take on the desert tortoise (Regional Environmental Consultants 1995). The permittees imposed, and NDOT paid, a fee of $550 per acre of habitat disturbance to fund these measures. The permittees expended approximately $1.65 million per year to minimize and mitigate the potential loss of desert tortoise habitat. The majority of these funds were used to implement minimization and mitigation measures, such as increased law enforcement; construction of highway barriers; road designation, signing, closure, and rehabilitation; and tortoise inventory and monitoring within the lands initially conserved during the short-term HCP and other areas being managed for tortoise recovery (*e.g.*, ACECs or DWMAs). The benefit to the species, as provided by the DCP, substantially minimized and mitigated those effects which occurred through development within the permit area and aided in recovery of the desert tortoise. The desert tortoise translocation site west of I-15 was established in 1997 under the DCP.

As partial mitigation under the Short-term HCP and DCP, a conservation easement was purchased from the City of Boulder City in 1994. The term of the Boulder City Conservation Easement (BCCE) is for a minimum of 50 years and will be retained in a natural condition with the purpose for recovery of the desert tortoise and conservation of other species in the area. Certain uses shall be prohibited within the BCCE including motor vehicle activity off designated roads, livestock grazing, and activity that is inconsistent with the purposes of the BCCE. Much of the BCCE is also designated desert tortoise critical habitat.

On November 22, 2000, the Service issued an incidental take permit (TE-034927-0) to Clark County, Nevada, including cities within the county and NDOT, under the authority of section 10(a)(1)(B) of the Act. The permit supercedes the incidental take permit for the DCP. In the biological/conference opinion (File No. 1-5-FW-575), the Service determined that issuance of the incidental take permit to Clark County would not jeopardize the listed desert tortoise or southwestern willow flycatcher, or any of the 76 unlisted, un-proposed species covered under the permit. Under the special permit terms and conditions of the permit, take of avian species, with the exception of American peregrine falcon (*Falco peregrinus anatum*) and phainopepla (*Phainopepla nitens*), would not be authorized until acquisition of private lands in desert riparian habitats in southern Nevada has occurred. The incidental take permit allows incidental take of

covered species for a period of 30 years on 145,000 acres of non-Federal land in Clark County, and within NDOT rights-of-way, south of the 38th parallel in Nevada. The Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement (MSHCP) (Regional Environmental Consultants 2000), serves as the permittees' habitat conservation plan and details their proposed measures to minimize, mitigate, and monitor the effects of covered activities on the 78 species. In addition to measures specified in the MSHCP and its implementing agreement, the permittee shall comply with the special terms and conditions of the permit and measures stated in Sections 3C and 3D of the DCP, which were incorporated by reference into the MSHCP and incidental take permit.

IV. Effects of the Proposed Action on the Listed Species

Direct effects encompass the immediate, often obvious effect of the proposed action on the tortoise or its habitat. Indirect effects are caused by, or result from the proposed action, are later in time, and are reasonably certain to occur. In contrast to direct effects, indirect effects are more subtle, and may affect tortoise populations and habitat quality over an extended period of time, long after construction activities have been completed. Indirect effects are of particular concern for long-lived species such as the tortoise because project-related effects may not become evident in individuals or populations until years later.

Desert tortoises may be adversely affected during project activities. Vehicle and equipment operation on the project poses the greatest threat to desert tortoises. Desert tortoises may be killed or injured by project vehicles, including those that travel on access roads or across undisturbed desert, or captured and displaced out of harm's way. Additional harassment may occur from increased levels of noise and ground vibrations produced by blasting, vehicles, and heavy equipment (Bondello 1976; Bondello, *et al.* 1979). Ground vibrations can cause desert tortoises to emerge from their burrows; slapping the ground several times within a few feet of a desert tortoise burrow entrance will often cause a desert tortoise to emerge (Medica, *et al.* 1986). Measures proposed by Western should minimize these effects, which include: (1) educate project personnel on desert tortoise biology and its protected status, (2) clear construction areas immediately before construction activities begin, (3) provide a biologist to oversee project activities and clear project areas, (4) restrict activities to designated areas including existing or newly constructed roads, (5) require workers to check for tortoises underneath project vehicles before moving them, (6) impose a 15 mile-per-hour speed limit, and (7) requiring a desert tortoise biologist be assigned to each blasting crew.

Trash accumulation at the proposed project sites may attract and concentrate predators such as ravens, coyotes (*Canis latrans*), and kit fox, which may result in increased predation of desert

tortoises. Natural predation in undisturbed, healthy ecosystems is generally not an issue of concern. However, predation rates may be altered when natural habitats are disturbed or modified. Common raven populations in the California deserts have increased tenfold from 1968 to 1992 in response to expanding human use of the desert (Boarman and Berry 1995). Because ravens make frequent use of food, water, and nest site subsidies provided by humans, their population increases can be tied to this increase in food and water sources, such as landfills and septic ponds (Service 1994; Boarman 2002). Ravens may be attracted to landfills or project sites if trash is accessible by scavengers (Boarman 2002). Considering that ravens were very scarce in this area prior to 1940, it is assumed that the current level of raven predation on juvenile desert tortoises is an unnatural occurrence (BLM 1990). The measure proposed by Western to implement a litter-control program will minimize predation on tortoises from subsidized predators.

A total of 32 acres of desert tortoise habitat would be disturbed as a result of the project. As part of the proposed action, Western proposes to restore all construction areas to their original condition which should minimize impacts to desert tortoise habitat. Because Western proposes not to use herbicides on the project area, no effects to desert tortoise are anticipates from herbicide application.

The Service has determined that the level of effect described herein will not reduce appreciably the likelihood of survival and recovery of the Mojave population of the desert tortoise in the wild or diminish the value of critical habitat both for survival and recovery of the desert tortoise because:

- Potential impacts to the desert tortoise would be minimized by measures proposed by Western.
- The proposed project would mostly occur within an existing utility corridor.
- No new public access is anticipated to be created as a result of the project.
- No designated critical desert tortoise habitat would be affected by the project.

V. Cumulative Effects

Cumulative effects are those effects of future non-Federal (State, local government, or private) activities that are reasonably certain to occur in the project area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. As the human population continues to grow in Las Vegas and surrounding areas, recreation and human use of the desert will continue to increase. The Service does not anticipate the Phase II of the

Hoover Dam bypass project would not result in additional cumulative effects beyond those described in the Biological Opinion for the first phase of the bypass project. The energy transmitted along the project infrastructure will continue to support development in southern California and Nevada including development in desert tortoise habitat. In Clark County, Nevada, habitat loss on non-Federal land and incidental take of desert tortoise occurs under the purview of the Clark County MSHCP. We anticipate that similar effects to desert tortoise on non-Federal land in southern California would be covered by HCPs.

VI. Conclusion

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, the effects of the proposed minerals project and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the desert tortoise. In the Northeastern Mojave Recovery Unit, critical habitat for the desert tortoise has been designated in portions of the Piute and Eldorado valleys, Mormon Mesa, Gold Butte, and Beaver Dam Slope areas, however, this action does not affect those areas and no destruction or adverse modification of that critical habitat is anticipated.

B. INCIDENTAL TAKE STATEMENT

Section 9 of the Act, as amended, prohibits take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR § 17.3). "Harass" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR § 17.3). Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The following terms and conditions: (1) restate measures proposed by Western, (2) modify the measures proposed by Western, or (3) specify additional measures considered necessary by the Service. Where these terms and conditions vary from or contradict the minimization measures proposed under the *Description of the Proposed Action*, specifications in these terms and

conditions shall apply. The measures described below are nondiscretionary and must be implemented by Western so that they become binding conditions of any project, contract, grant, or permit issued by Western as appropriate, in order for the exemption in section 7(o)(2) to apply. The Service's evaluation of the effects of the proposed actions includes consideration of the measures developed by Western, and repeated in the *Description of the Proposed Action* portion of this biological opinion, to minimize the adverse effects of the proposed action on the desert tortoise. Any subsequent changes in the minimization measures proposed by Western may constitute a modification of the proposed action and may warrant reinitiation of formal consultation, as specified at 50 CFR § 402.16. These reasonable and prudent measures are intended to clarify or supplement the protective measures that were proposed by Western as part of the proposed action.

Western has a continuing duty to regulate the activity that is covered by this incidental take statement. If Western fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

I. Amount of Take

Based on the analysis of impacts provided above, measures proposed by Western, and anticipated project duration, the Service anticipates that the following take could occur as a result of the proposed action:

1. No desert tortoises may be incidentally injured or killed by project activities.

2. All desert tortoises found in harm's way may be harassed by capture and removal from the proposed project areas. The Service estimates that no more than five desert tortoises may be affected by project activities.

3. No desert tortoise eggs are anticipated to be destroyed during construction activities.

4. No desert tortoises are anticipated to be taken in the form of indirect mortality through predation by ravens drawn to trash in the project area.

5. An unknown number of desert tortoises may be taken indirectly in the form of harm through increased noise and ground vibrations associated with construction, use of heavy equipment, and other project activities.

II. Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species, or destruction or modification of critical habitat.

III. Reasonable and Prudent Measures

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of desert tortoise:

1. Western shall implement measures to minimize injury or mortality of desert tortoises due to project-related activities.

2. Western shall implement measures to minimize predation on tortoises by predators drawn to project areas.

3. Western shall implement measures to minimize destruction of desert tortoise habitat, such as soil compaction, erosion, or crushed vegetation, due to construction activities.

4. Western shall implement measures to ensure compliance with the reasonable and prudent measures and terms and conditions in this biological opinion.

IV. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Western must fully comply with the following terms and conditions, which implement the reasonable and prudent measures described above.

1. To implement Reasonable and Prudent Measure Number 1, Western shall fully implement the following measures to minimize injury or mortality of desert tortoises due to project-related activities:

    a. A desert tortoise education program will be presented to all personnel onsite during construction activities. This program will contain information concerning the biology and distribution of the desert tortoise, its legal status and occurrence in the proposed project area, the definition of "take" and associated penalties, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be

implemented when tortoises are encountered. Personnel will be informed to limit their activities to designated areas and check under vehicles before moving them as tortoises often seek shelter under parked vehicles.

b. All activities shall be confined to designated areas. Blading of vegetation shall occur only to the extent necessary and shall be limited to areas designated for that purpose by the authorized tortoise biologist.

c. Overnight parking and storage of equipment and materials shall be in previously disturbed areas or areas to be disturbed that have been cleared by an authorized tortoise biologist. Other areas needed for overnight parking and storage of equipment shall be cleared by the tortoise biologist.

d. Any desert tortoise found in imminent danger shall be moved out of harm's way. Such tortoises will relocated 300 to 1,000 feet offsite into adjacent undisturbed habitat. A pair of new, disposable latex gloves will be used for each tortoise that must be handled. After use, the gloves will be properly disposed. Tortoises found above ground will be placed under a marked bush in the shade; in an unoccupied burrow of similar size/orientation; or a burrow constructed by the authorized biologist in accordance with Section B-5-f (Desert Tortoise Council 1994, revised 1999). Any tortoise found within one hour before nightfall will be placed individually in a clean cardboard box and kept overnight in a cool, predator-free location. To minimize stress to the tortoise, the box will be covered and kept upright. Each box will be used only once and will then be discarded. The tortoise will be released the next day in the same area from which it was collected and placed under a marked bush in the shade.

e. If the tortoise is found and an authorized biologist is not available, an employee that has completed desert tortoise training may move the tortoise. All tortoises that are handled must be reported to the Service in accordance with Term and Condition 4 below.

f. Construction sites, staging areas, and access routes shall be cleared by an authorized tortoise biologist immediately prior (within 24 hours) to the onset of construction in any given area. The project area shall be surveyed for desert tortoise using survey techniques that provide 100 percent coverage. All potential tortoise burrows shall be identified and flagged for avoidance or excavation. Tortoise burrows shall be cleared of tortoises and eggs, and collapsed under

supervision of an authorized tortoise biologist in accordance with the Service protocol (Desert Tortoise Council 1994, revised 1999). All desert tortoise surveys, handling of desert tortoises, and burrow excavation will be performed only by an authorized biologist except as specified Term and Condition 1.e. above.

g. Tortoises and nests shall be handled and relocated by a qualified tortoise biologist in accordance with Service-approved protocol (Desert Tortoise Council 1994, revised 1999). Burrows containing tortoises or nests shall be excavated by hand, with hand tools, to allow removal of the tortoise or eggs. Desert tortoises moved during the tortoise inactive season or those in hibernation, regardless of date, must be placed into an adequate burrow; if one is not available, one shall be constructed in accordance with Desert Tortoise Council (1994, revised 1999) criteria. During mild temperature periods in the spring and early fall, tortoises removed from the site shall not necessarily be placed in a burrow. Tortoises and burrows shall be relocated only to Federally-managed lands.

Special precautions will be taken to ensure that desert tortoises are not harmed as a result of their capture and movement during extreme temperatures (*i.e.,* air temperatures below 55° F or above 95° F). Under such adverse conditions, tortoises captured will be monitored continually by an authorized biologist until the tortoise exhibits normal behavior. If a desert tortoise shows signs of heat stress, procedures shall be implemented as identified in Service-approved protocols (Desert Tortoise Council 1994, revised 1999).

h. In accordance with *Procedures for Endangered Species Act Compliance for the Mojave Desert Tortoise* (Service 1992), an authorized desert tortoise biologist shall possess a bachelor's degree in biology, ecology, wildlife biology, herpetology, or closely related fields. The biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign. In addition, the biologist shall have the ability to recognize and accurately record survey results. The attached *Desert Tortoise Biologist Qualifications Statement* should be completed by potential biologists (Attachment A) and submitted to Western for review.

i. Project activities that may endanger a tortoise will cease if a tortoise is found on a project site. Project activities may resume after an authorized biologist removes the tortoise from danger or after the tortoise has moved to a safe area.

j. Herbicides shall not be used in the project area unless approved in writing by Western and the Service.

k. All desert tortoises observed by project workers shall be reported immediately to an authorized biologist.

l. If blasting is required in desert tortoise habitat, an authorized desert tortoise biologist will be assigned to each blasting crew or to each area in which blasting will occur.

m. Vehicles will not exceed 15 miles per hour on non-public access roads. Authorized biologists will monitor speed limit compliance during construction.

n. All fuel, transmission or brake fluid leaks, or other hazardous waste leaks, spills, or releases will be reported immediately to the designated environmental supervisor. The environmental supervisor shall be responsible for spill material removal and disposal to an approved offsite landfill, and if necessary, will notify the appropriate Federal agency.

2. To implement Reasonable and Prudent Measure Number 2, Western shall fully implement the following measure to minimize predation on tortoises by predators drawn to project areas:

a. A litter-control program shall be implemented during construction to minimize predation on tortoises by ravens drawn to the project site. This program shall include the use of covered, raven-proof trash receptacles, removal of trash from project areas to the trash receptacles following the close of each work day, and proper disposal of trash in a designated solid waste disposal facility. Precautions will be taken to prevent litter from blowing out along the road when trash is removed from the site.

b. Western shall report any observations of raven predation on desert tortoises in the project area.

3. To implement Reasonable and Prudent Measure Number 3, Western shall fully implement the following measures to minimize destruction of desert tortoise habitat, such as soil compaction, erosion, or crushed vegetation, due to construction activities:

a. All equipment, vehicles, and construction materials will remain within designated areas. Staging areas will be located in previously disturbed areas whenever possible.

b. Cross-country travel and travel outside construction zones and fenced areas will be prohibited.

c. Prior to surface disturbing activities associated with the proposed project, FHWA will pay remuneration fees to be deposited into the Desert Tortoise Public Lands Conservation Fund (account number 730-9999-2315) (section 7 account) for compensation of desert tortoise habitat loss on public lands. Additionally, payment shall also be made for disturbance of private land into the MSHCP, as appropriate.

The proposed project would disturb a maximum of 32 acres of non-critical tortoise habitat on public and private lands. The fee will be assessed at the rate of $648 per acre of disturbance on public lands. These fees will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U). Information on the CPI-U can be found on the internet at: *http://stats.bls.gov/news.release/cpi.nws.htm*. The next adjustment will occur on March 1, 2004.

Clark County serves as the administrator of the funds, but does not receive any benefit from administering these funds. These funds are independent of any other fees collected by Clark County under the MSHCP. None of these funds shall be used to develop a habitat conservation plan.

The payments shall be accompanied by the attached Section 7 Fee Payment Form (Attachment B), and completed by the payee. The project proponent or applicant may receive credit for payment of such fees and deduct such costs from desert tortoise impact fees charged by local government entities. Payment shall be by certified check or money order payable to Clark County and delivered to:

Clark County Habitat Conservation
Department of Comprehensive Planning
Clark County Government Center, Third Floor
500 South Grand Central Parkway
Las Vegas, Nevada 89155-1712
(Attn: Sandy Helvey)
(702) 455-4181

4. To implement Reasonable and Prudent Measure Number 4, Western shall fully implement the following measures to ensure compliance with the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements in this biological opinion:

   a. The authorized biologist will record each observation of all desert tortoises within the project area. Information will include the following: Location, date and time of observation, whether tortoise was handled, general health and whether it voided its bladder, location tortoise was moved from and location moved to, and unique physical characteristics of each tortoise. A final report will be submitted to the Service's Southern Nevada Field Office in Las Vegas, Nevada, within 90 days of completion of construction.

   b. The authorized biologist will acquire all appropriate NDOW permits or letters of authorization prior to handling desert tortoises and their parts and prior to initiation of any activity that may require handling tortoises.

   c. A Western representative(s) shall be designated who will be responsible for overseeing compliance with the reasonable and prudent measures, terms and conditions, reporting requirements and re-initiation requirements contained in the biological opinion. The designated representative shall provide coordination with the Service, BOR and NPS.

The Service believes that no desert tortoises will be accidentally injured or killed and five tortoises may be taken by harassment or capture and movement out of harm's way during the project; no desert tortoises may be taken in the form of indirect mortality through predation by ravens drawn to the project area; no desert tortoise eggs or nests are anticipated to occur in the project area; and an unknown number of desert tortoises may be taken indirectly in the form of harm or harassment through increased noise associated with operation of heavy equipment.

In addition, up to 32 acres of desert tortoise habitat may be disturbed as a result of project activities. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take or loss of habitat identified is exceeded, such incidental take and habitat loss represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. Western must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Reporting Requirements

Upon locating a dead or injured endangered or threatened species, initial notification must be made to the Service's Division of Law Enforcement in Las Vegas, Nevada, at (702) 388-6380. Care should be taken in handling sick or injured desert tortoises to ensure effective treatment and care for the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured desert tortoises or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by the Service's Division of Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed. All deaths, injuries, and illnesses of desert tortoises, whether associated with project activities or not, will be summarized in an annual report.

The biologist will record each observation of handled desert tortoises. Data will include the following: location, date, time of observation, whether the tortoise was handled, the general health of the tortoise, whether it voided its bladder, the location the tortoise moved from and the location it moved to, and any unique physical characteristics. Reports documenting the effectiveness and compliance with the tortoise protection measures will be prepared every six months. A final report will be reviewed and approved by Western and then submitted to the Service within 90 days of completion of construction.

The following actions should be taken for injured or dead tortoises if directed by the Service's Division of Law Enforcement:

> Injured desert tortoises shall be delivered to any qualified veterinarian for appropriate treatment or disposal. Dead desert tortoises suitable for preparation as museum specimens shall be frozen immediately and provided to an institution holding appropriate Federal and State permits per their instructions. Should no institutions want the desert tortoise specimens, or if it is determined that they are too damaged (crushed, spoiled, etc.) for preparation as a museum specimen, then they may be buried away from the project area or cremated, upon authorization by the Service's Division of Law Enforcement. Western or the project proponent shall bear the cost of any required treatment of injured desert tortoises, euthanasia of sick desert tortoises, or cremation of dead desert tortoises. Should sick or injured desert tortoises be treated by a veterinarian and survive, they may be transferred as directed by the Service.

C. CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The Service does not have any conservation recommendations at this time.

D. REINITIATION

This concludes formal consultation on the actions outlined in your September 30, 2003, request. As required by 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over an action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If we can be of any further assistance, please contact Michael Burroughs, in the Southern Nevada Field Office, at (702) 515-5230.

Sincerely,

Cynthia T. Martinez

for Robert D. Williams
Field Supervisor

cc:
Administrator, Desert Conservation Plan, Clark County Department of Comprehensive Planning, Las Vegas, Nevada
Supervisory Biologist - Habitat, Nevada Department of Wildlife, Las Vegas, Nevada
Deputy State Director, Resources, Land Use, and Planning, Bureau of Land Management, Reno, Nevada
Regional Director, Lower Colorado Regional Office, Bureau of Reclamation, Boulder City, Nevada
Hoover Dam Bypass Project Manager, Federal Highway Administration, Lakewood, Colorado
Superintendent, Lake Mead National Recreation Area, National Park Service, Boulder City, Nevada
Assistant Regional Director, Ecological Services, Fish and Wildlife Service, Portland, Oregon
Senior Resident Agent, Division of Law Enforcement, Fish and Wildlife Service, Boise, Idaho