Appendix L Special-Status Species Jurisdictional Determination, and Biological Opinion

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 PORTOLA ROAD, SUITE B
VENTURA, CA 93003
PHONE: (805)644-1766 FAX: (805)644-3958

Consultation Tracking Number: 08EVEN00-2014-SLI-0437 August 08, 2014
Project Name: HDC

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Official Species List

Provided by:

Ventura Fish and Wildlife Office
2493 PORTOLA ROAD, SUITE B
VENTURA, CA 93003
(805) 644-1766

Expect additional Species list documents from the following office(s):

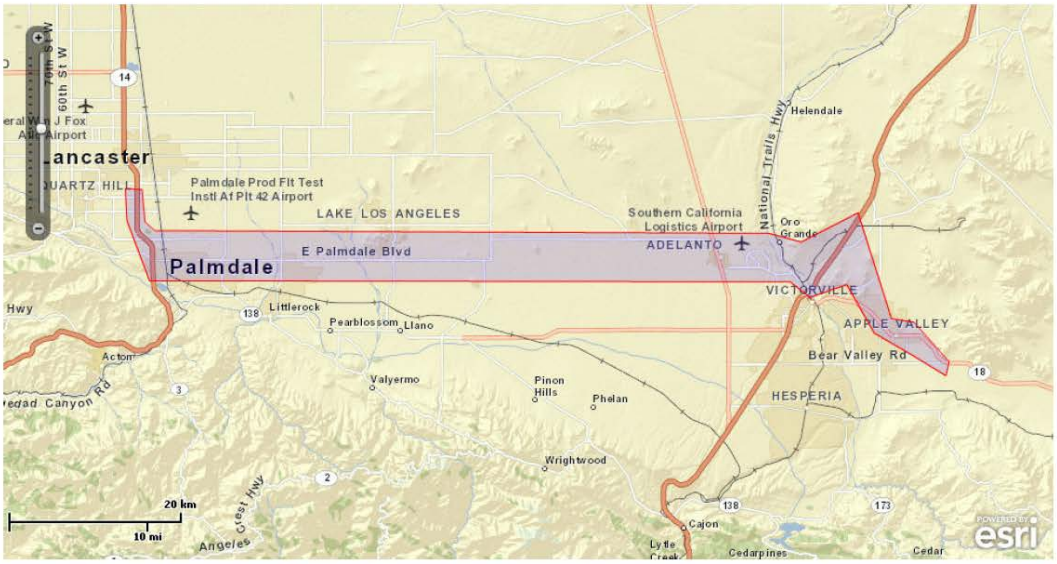
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Tracking Number: 08EVEN00-2014-SLI-0437
Project Type: Transportation
Project Description: New 63 Mile Freeway between Palmdale and Apple Valley

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-117.1178062 34.4732289, -117.1219943 34.4584202, -117.1659396 34.4804977, -117.2133181 34.5031353, -117.248337 34.5540472, -117.2953036 34.5406434, -117.3204658 34.556863, -118.1364952 34.5579581, -118.1653788 34.6209886, -118.1674387 34.6547723, -118.146187 34.6535014, -118.1423075 34.6198302, -118.1298792 34.6107886, -117.3479968 34.607712, -117.3063363 34.5988187, -117.2338836 34.6292315, -117.1912773 34.5185017, -117.1624381 34.5145414, -117.1178062 34.4732289)))

Project Counties: Los Angeles, CA | San Bernardino, CA

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Endangered Species Act Species List

There are a total of 15 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
California red-legged frog *(Rana draytonii)* Population: Entire	Threatened	Final designated	
Birds			
California condor *(Gymnogyps californianus)* Population: Entire, except where listed as an experimental population below	Endangered	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Endangered	Final designated	
Crustaceans			
Riverside fairy shrimp *(Streptocephalus woottoni)* Population: Entire	Endangered	Final designated	

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Vernal Pool fairy shrimp *(Branchinecta lynchi)* Population: Entire	Threatened	Final designated	
Fishes			
Mohave Tui chub *(Gila bicolor ssp. mohavensis)* Population: Entire	Endangered		
Flowering Plants			
California Orcutt grass *(Orcuttia californica)*	Endangered		
Cushenbury buckwheat *(Eriogonum ovalifolium var. vineum)*	Endangered	Final designated	
Cushenbury oxytheca *(Oxytheca parishii var. goodmaniana)*	Endangered	Final designated	
Parish's daisy *(Erigeron parishii)*	Threatened	Final designated	
San Fernando Valley Spineflower *(Chorizanthe parryi var. fernandina)*	Candidate		
Slender-Horned spineflower *(Dodecahema leptoceras)*	Endangered		
Spreading navarretia *(Navarretia fossalis)*	Threatened	Final designated	
Reptiles			
Desert tortoise *(Gopherus agassizii)* Population: U.S.A., except in Sonoran Desert	Threatened	Final designated	

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	Critical Habitat Type
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Final designated

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Tracking Number: 08ECAR00-2014-SLI-0500 August 08, 2014
Project Name: HDC

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Expect additional Species list documents from the following office(s):

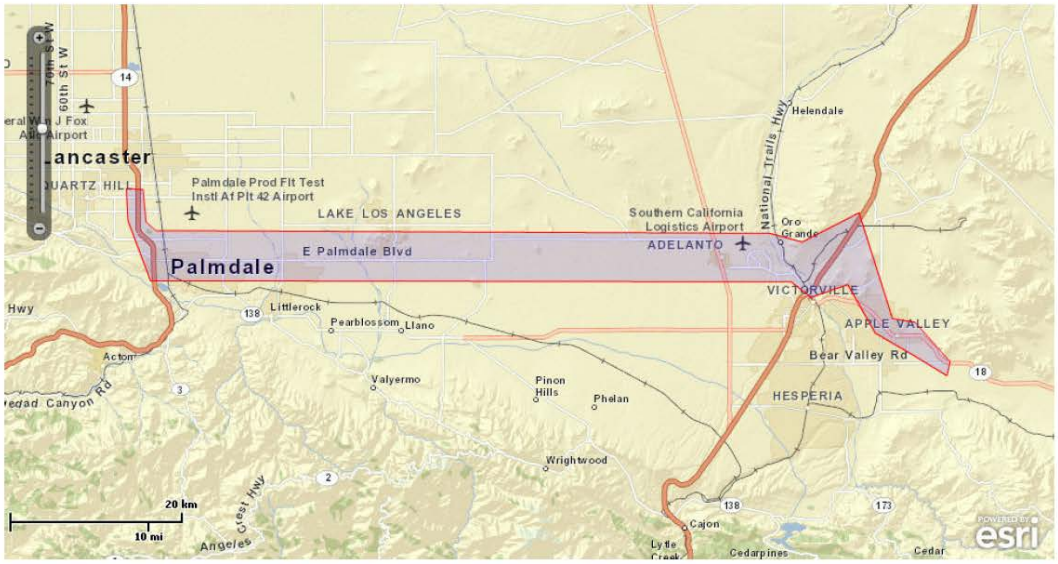
Ventura Fish and Wildlife Office
2493 PORTOLA ROAD, SUITE B
VENTURA, CA 93003
(805) 644-1766

Consultation Tracking Number: 08ECAR00-2014-SLI-0500
Project Type: Transportation
Project Description: New 63 Mile Freeway between Palmdale and Apple Valley

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-117.1178062 34.4732289, -117.1219943 34.4584202, -117.1659396 34.4804977, -117.2133181 34.5031353, -117.248337 34.5540472, -117.2953036 34.5406434, -117.3204658 34.556863, -118.1364952 34.5579581, -118.1653788 34.6209886, -118.1674387 34.6547723, -118.146187 34.6535014, -118.1423075 34.6198302, -118.1298792 34.6107886, -117.3479968 34.607712, -117.3063363 34.5988187, -117.2338836 34.6292315, -117.1912773 34.5185017, -117.1624381 34.5145414, -117.1178062 34.4732289)))

Project Counties: Los Angeles, CA | San Bernardino, CA

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Endangered	Final designated	
Flowering Plants			
Cushenbury oxytheca *(Oxytheca parishii var. goodmaniana)*	Endangered	Final designated	

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	Critical Habitat Type
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Final designated

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2016-SLI-0054 October 27, 2015
Event Code: 08ECAR00-2016-E-00113
Project Name: High Desert Corridor

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2016-SLI-0054
Event Code: 08ECAR00-2016-E-00113

Project Type: TRANSPORTATION

Project Name: High Desert Corridor
Project Description: This proposed project known as the HDC is to construct a new multimodal link between SR-14 in Los Angeles County and SR-18 in San Bernardino County. It would connect some of the fastest growing residential, commercial, and industrial areas in southern California, including the cities of Palmdale, Lancaster, Adelanto, Victorville, and the Town of Apple Valley.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-117.17519760131835 34.565665715695104, -117.11305618286133 34.47344852422265, -117.11408615112306 34.465806327688526, -117.14996337890625 34.4662309125205, -117.15854644775389 34.48547648989887, -117.16815948486328 34.50613224203845, -117.1782875061035 34.52423718437182, -117.22085952758789 34.54997337435046, -117.26686477661133 34.56255575713362, -117.3068618774414 34.551811369170494, -117.39835739135742 34.551811369170494, -117.4196434020996 34.55817334541288, -117.44384765625 34.56510027733401, -117.94647216796874 34.5752775795944, -117.95436859130858 34.584040369390316, -118.11607360839844 34.5851709846509, -118.13255310058594 34.57230932844958, -118.13392639160155 34.582627078683736, -118.13701629638672 34.596052369966294, -118.1634521484375 34.722426197808446, -118.12362670898439 34.727505358003015, -118.10234069824217 34.602410961291504, -117.44934082031249 34.58912801692681, -117.33810424804686 34.5851709846509, -117.30445861816406 34.584040369390316, -117.22686767578125 34.66258150231496, -117.21673965454102 34.65128519895413, -117.26480484008789 34.58799745550482, -117.17519760131835 34.565665715695104)))

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Project Counties: Los Angeles, CA | San Bernardino, CA

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Endangered Species Act Species List

There are a total of 7 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
arroyo toad *(Anaxyrus californicus)* Population: Entire	Endangered	Final designated	
Birds			
California condor *(Gymnogyps californianus)* Population: Entire, except where listed as an experimental population	Endangered	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Endangered	Final designated	
Fishes			
Mohave Tui chub *(Gila bicolor ssp. mohavensis)* Population: Entire	Endangered		
Flowering Plants			

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Cushenbury oxytheca *(Oxytheca parishii var. goodmaniana)*	Endangered	Final designated	
Reptiles			
Desert tortoise *(Gopherus agassizii)* Population: Entire, except in Sonoran Desert	Threatened	Final designated	

United States Department of Interior
Fish and Wildlife Service

Project name: High Desert Corridor

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	Critical Habitat Type
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Final designated

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: Los Angeles District | File/ORM #: SPL-2013-00847-CLH | PJD Date: Apr 5, 2016

State: CA | City/County: Los Angeles & San Bernardino Counties

Nearest Waterbody: See attached table

Location: TRS, LatLong or UTM: see attached table

Name/ Address of Person Requesting PJD: Paul Caron, Senior District Biologist, California Department of Transportation, Environmental Planning, District 7, 100 South Main Street, Los Angeles, California 90012

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: linear ft | width: see table | acres | Stream Flow: Ephemeral

Wetlands: 0 acre(s) | Cowardin Class: N/A

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: | Non-Tidal:

☑ Office (Desk) Determination
☑ Field Determination | Date of Field Trip: Feb 4, 2016

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below)

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: attached
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: see attached
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: see attached
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☑ FEMA/FIRM maps: see attached
- ☐ 100-year Floodplain Elevation is:
- ☐ Photographs: ☐ Aerial (Name & Date): ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

4/11/2016
Signature and Date of Regulatory Project Manager (REQUIRED)

Paul Caron 4/7/16
Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office: Los Angeles District | File/ORM #: SPL-2013-00847-CLH | PJD Date: Apr 5, 2016

State: CA | City/County: Los Angeles & San Bernardino Counties | Person Requesting PJD: Paul Caron

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
	see attached to				

Notes:

JD Report: High Desert Corridor Federal Jurisdictional Delineation, High Desert Corridor/Los Angeles and San Bernardino Counties, 63-mile (101-Kilometer) Connection Between SR-14 and SR-18, District 7 & LA & SB-New Highway, EA 2600U0/EFIS 0712000035 August 2015
Site Visit and Project Meeting on February 4, 2016

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2016-SLI-0667 May 26, 2016
Event Code: 08ECAR00-2016-E-00977
Project Name: HDC

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2016-SLI-0667
Event Code: 08ECAR00-2016-E-00977

Project Type: TRANSMISSION LINE

Project Name: HDC

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-117.30239868164062 34.58290973874778, -118.11744689941405 34.58686687870012, -118.14079284667969 34.60891035148567, -118.15727233886719 34.608345207315786, -118.14010620117188 34.58573628651288, -118.13941955566408 34.57273337081576, -117.30171203613281 34.57273337081576, -117.20695495605469 34.55011476000879, -117.18154907226562 34.49863451269174, -117.15065002441405 34.492975402501536, -117.15133666992186 34.504859090252026, -117.1746826171875 34.50938576380423, -117.19528198242188 34.56029389604531, -117.24884033203124 34.57216798051356, -117.30239868164062 34.58290973874778)))

Project Counties: Los Angeles, CA | San Bernardino, CA

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Endangered Species Act Species List

There are a total of 6 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
arroyo toad *(Anaxyrus californicus)* Population: Entire	Endangered	Final designated	
Birds			
California condor *(Gymnogyps californianus)* Population: Entire, except where listed as an experimental population	Endangered	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Endangered	Final designated	
Fishes			
Mohave Tui chub *(Gila bicolor ssp. mohavensis)* Population: Entire	Endangered		
Reptiles			

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Desert tortoise *(Gopherus agassizii)* Population: Entire, except in Sonoran Desert	Threatened	Final designated	

United States Department of Interior
Fish and Wildlife Service

Project name: HDC

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	Critical Habitat Type
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Final designated

From: Ray Bransfield [ray_bransfield@fws.gov]
Sent: Friday, May 27, 2016 12:00 PM
To: Johnson, Jeff W@DOT
Cc: Tara Callaway
Subject: FW: Official Species list delivered

Jeff,
This was forwarded to me. Our IPAC system has trouble getting things right. I don't know what you need to do with this list but it should not have had the California condor, arroyo toad, or Mohave tui chub on it. It should have contained the western yellow-billed cuckoo.

Please call me or Tara if you have any questions.
Ray

From: Garn, John [mailto:john_garn@fws.gov]
Sent: Friday, May 27, 2016 10:18 AM
To: Ray Bransfield
Subject: Fwd: Official Species list delivered

Good morning,

For your review and action.

Sincerely,
John

John Garn
Office Assistant
US Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008
760.431.9440 x360

---------- Forwarded message ----------
From: <fwhq_ecos_support@fws.gov>
Date: Thu, May 26, 2016 at 12:43 PM
Subject: Official Species list delivered
To: john_garn@fws.gov

To: IPaC point(s) of contact for Carlsbad Fish and Wildlife Office -- 81430

Project Location: Los Angeles, CA | San Bernardino, CA

IPaC has delivered an official Section 7 species list on behalf of your office to the person

indicated below.

Jeff Johnson
California Dept. of Transportation District 7
100 S Main Street
Los Angeles 90012
andrew_johnstone@dot.ca.gov
Phone: (213) 897-0840

For your convenience, IPaC has created a TAILS species list activity (08ECAR00-2016-SLI-0667) with a new event (08ECAR00-2016-E-00977) associated with it. A PDF of the species list document is attached to the event.

To open the TAILS activity, click here: https://ecos.fws.gov/tails/report/S7ByElementId.do?elementId=768913[ecos.fws.gov] (or copy the URL and paste it into your internet browser). If you are not already logged into ECOS, you will be required to do so before the TAILS record opens.

From the menu on the left side of the screen, click Event Report by Type. Here you will see all the events associated with this activity, including any requests for updated species lists. Simply click on the event (08ECAR00-2016-E-00977) to open it.

If you have any problems opening the TAILS record, please contact the ECOS help desk at https://ecos.fws.gov/ecosCommon/user/me/helpTickets/create[ecos.fws.gov].

The general location of the project can be viewed in google maps by clicking https://www.google.com/maps/place/34.573755922885574N117.66702645032524W[google.com].

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
VENTURA FIELD OFFICE
2151 ALESSANDRO DRIVE, SUITE 110
VENTURA, CALIFORNIA 93001

May 12, 2016

Paul Caron, Senior District Biologist
California Department of Transportation, District 7
Environmental Management Division
100 South Main Street
Los Angeles, California 90012

SUBJECT: Approved Jurisdictional Determination regarding geographic jurisdiction

Dear Mr. Caron:

I am responding to your request (File No. SPL-2013-00847-CLH) dated April 4, 2016, for an approved Department of the Army jurisdictional determination (JD) for the High Desert Corridor Project site located within various waters, indicated on the attached spreadsheet, in Los Angeles and San Bernardino Counties.

The Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. If both tests are met, a permit would likely be required. The first test determines whether or not the proposed project is located within the Corps' geographic jurisdiction (i.e., it is within a water of the United States). The second test determines whether or not the proposed project is a regulated activity under Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act. This evaluation pertains only to geographic jurisdiction.

Based on available information, I have determined waters of the United States do not occur on the project site. The basis for our determination can be found in the enclosed Approved Jurisdictional Determination (JD) forms.

The aquatic resources identified as isolated unnamed washes in project documentation you provided are each an intrastate isolated water with no apparent interstate or foreign commerce connection. As such, each of these aquatic resource site is not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Clean Water Act. Other federal, state, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service.

This letter includes an approved jurisdictional determination for the High Desert Corridor Project site. If you wish to submit new information regarding this jurisdictional determination, please do so within 60 days. We will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior

determination. If you object to this or any revised or reissued jurisdictional determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you wish to appeal this decision, you must submit a completed RFA form within 60 days of the date on the NAP to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division, CESPD-PDS-O, 2042B
1455 Market Street
San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Section 331.5 (see below), and that it has been received by the Division Office by **July 12, 2016.**

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request, and is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

Thank you for participating in the regulatory program. If you have any questions, please contact Crystal L.M. Huerta at 805-585-2143 or via e-mail at crystal.huerta@usace.army.mil. Please help me to evaluate and improve the regulatory experience for others by completing the customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,

Spencer D. MacNeil, D.Env.
Chief, Transportation & Special Projects Branch
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: Department of Transportation, District 7, Attn: Mr. Paul Caron	File No.: SPL-2013-00847-CLH	Date: May 12, 2016
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/cecw/pages/reg_materials.aspx* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

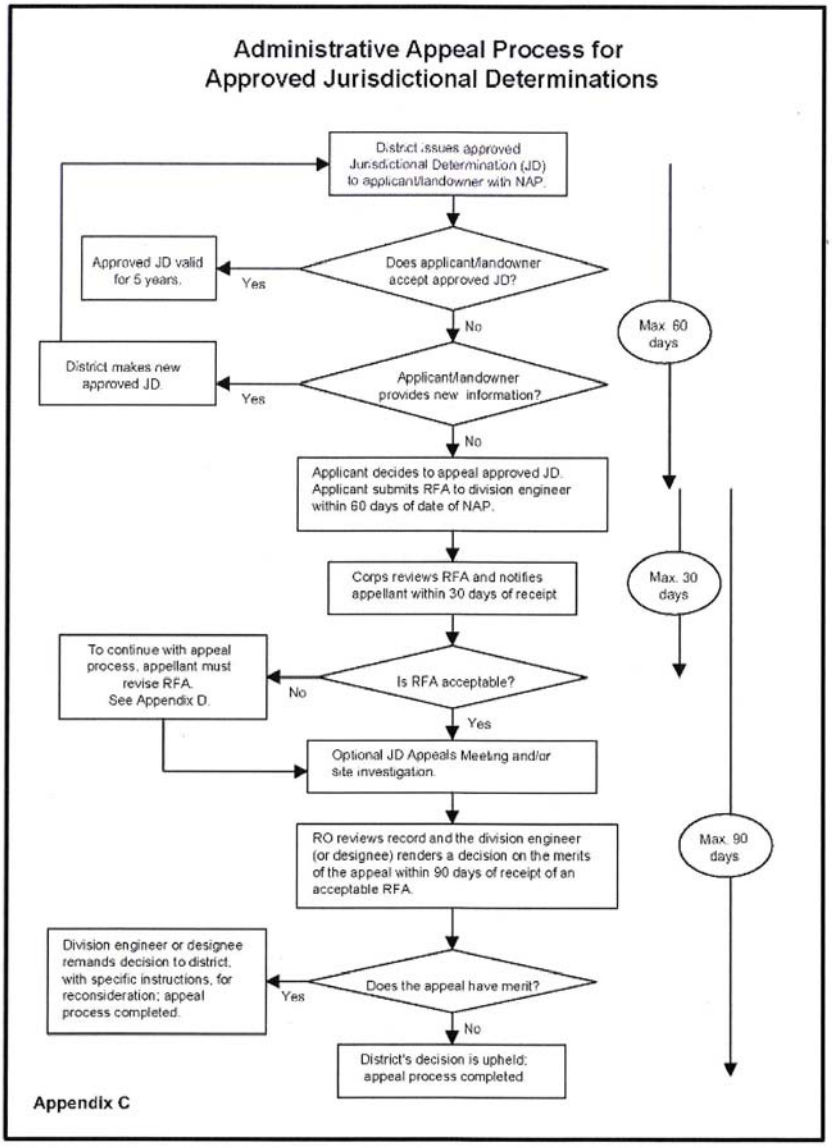
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
U.S. Army Corps of Engineers Los Angeles District, Ventura Field Office 2151 Alessandro Drive, Suite 110 Ventura, California 93001 **Crystal L.M. Huerta, Senior Project Manager** **Phone: 805-585-2143, FAX 916-557-7803** Email: crystal.huerta@usace.army.mil	Thomas J. Cavanaugh Administrative Appeal Review Officer U.S. Army Corps of Engineers South Pacific Division 1455 Market Street, 2052B San Francisco, California 94103-1399 Phone: 415-503-6574, FAX 415-503-6646) Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
Signature of appellant or agent.		

SPD version revised December 17, 2010


Administrative Appeal Process for
Approved Jurisdictional Determinations
District issues approved Jurisdictional Determination (JD) to applicant/landowner with NAP.
Does applicant/landowner accept approved JD?
Yes
Approved JD valid for 5 years.
No
Applicant/landowner provides new information?
Yes
District makes new approved JD.
No
Applicant decides to appeal approved JD. Applicant submits RFA to division engineer within 60 days of date of NAP.
Max. 60 days
Corps reviews RFA and notifies appellant within 30 days of receipt
Max. 30 days
Is RFA acceptable?
No
To continue with appeal process, appellant must revise RFA. See Appendix D.
Yes
Optional JD Appeals Meeting and/or site investigation.
RO reviews record and the division engineer (or designee) renders a decision on the merits of the appeal within 90 days of receipt of an acceptable RFA.
Max. 90 days
Does the appeal have merit?
Yes
Division engineer or designee remands decision to district, with specific instructions, for reconsideration; appeal process completed.
No
District's decision is upheld; appeal process completed
Appendix C

§ 331.5 Criteria.

(a) *Criteria for appeal* —(1) *Submission of RFA.* The appellant must submit a completed RFA (as defined at §331.2) to the appropriate division office in order to appeal an approved JD, a permit denial, or a declined permit. An individual permit that has been signed by the applicant, and subsequently unilaterally modified by the district engineer pursuant to 33 CFR 325.7, may be appealed under this process, provided that the applicant has not started work in waters of the United States authorized by the permit. The RFA must be received by the division engineer within 60 days of the date of the NAP.

(2) *Reasons for appeal.* The reason(s) for requesting an appeal of an approved JD, a permit denial, or a declined permit must be specifically stated in the RFA and must be more than a simple request for appeal because the affected party did not like the approved JD, permit decision, or the permit conditions. Examples of reasons for appeals include, but are not limited to, the following: A procedural error; an incorrect application of law, regulation or officially promulgated policy; omission of material fact; incorrect application of the current regulatory criteria and associated guidance for identifying and delineating wetlands; incorrect application of the Section 404(b)(1) Guidelines (see 40 CFR Part 230); or use of incorrect data. The reasons for appealing a permit denial or a declined permit may include jurisdiction issues, whether or not a previous approved JD was appealed.

(b) *Actions not appealable.* An action or decision is not subject to an administrative appeal under this part if it falls into one or more of the following categories:

(1) An individual permit decision (including a letter of permission or a standard permit with special conditions), where the permit has been accepted and signed by the permittee. By signing the permit, the applicant waives all rights to appeal the terms and conditions of the permit, unless the authorized work has not started in waters of the United States and that issued permit is subsequently modified by the district engineer pursuant to 33 CFR 325.7;

(2) Any site-specific matter that has been the subject of a final decision of the Federal courts;

(3) A final Corps decision that has resulted from additional analysis and evaluation, as directed by a final appeal decision;

(4) A permit denial without prejudice or a declined permit, where the controlling factor cannot be changed by the Corps decision maker (e.g., the requirements of a binding statute, regulation, state Section 401 water quality certification, state coastal zone management disapproval, etc. (See 33 CFR 320.4(j));

(5) A permit denial case where the applicant has subsequently modified the proposed project, because this would constitute an amended application that would require a new public interest review, rather than an appeal of the existing record and decision;

(6) Any request for the appeal of an approved JD, a denied permit, or a declined permit where the RFA has not been received by the division engineer within 60 days of the date of the NAP;

(7) A previously approved JD that has been superceded by another approved JD based on new information or data submitted by the applicant. The new approved JD is an appealable action;

(8) An approved JD associated with an individual permit where the permit has been accepted and signed by the permittee;

(9) A preliminary JD; or

(10) A JD associated with unauthorized activities except as provided in §331.11.

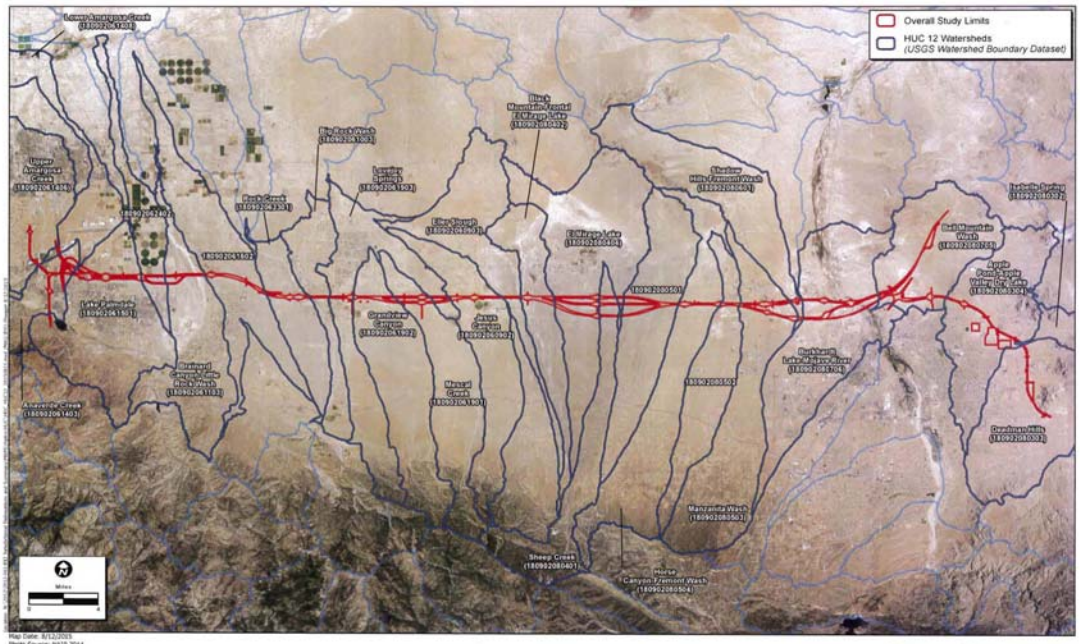


Figure 3. HUC 12 Watersheds

2012-061 High Desert Corridor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer To:
FWS-LA/SBD-15B0315-16F0216

April 06, 2016

Memorandum

To: District Biologist, California Department of Transportation, Los Angeles, California

From: for Field Supervisor, Carlsbad Fish and Wildlife Office, Carlsbad, California

SCOTT SOBIECH Digitally signed by SCOTT SOBIECH Date: 2016.04.06 14:14:55 -07'00'

Subject: Biological Opinion on High Desert Corridor, San Bernardino County, California

This document transmits the U.S. Fish and Wildlife Service's (USFWS) biological opinion based on our review of the California Department of Transportation's (Caltrans) proposed construction of the High Desert Corridor (HDC) in Los Angeles and San Bernardino Counties and its effects on the federally threatened desert tortoise (*Gopherus agassizii*). The proposed HDC involves construction of a 63-mile long highway and high-speed rail system to connect State Route 14 in Los Angeles County with State Route 18 and Interstate 15 in San Bernardino County. This document was prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). Your request for formal consultation dated August 14, 2015, received August 17, 2015, constitutes the date consultation was initiated.

We based this biological opinion on the biological assessment for the proposed action (Caltrans 2015a) that accompanied your request for consultation (Caltrans 2015b), additional information obtained from Caltrans staff, and information in our files. A record of this consultation will be made available at the Carlsbad Fish and Wildlife Office.

CONSULTATION HISTORY

In a memorandum dated August 14, 2015, and received August 17, 2015, Caltrans requested formal consultation regarding the HDC transportation facility (Caltrans 2015b). On September 15, 2015, Caltrans changed the determination of the desert tortoise in the Biological Assessment via electronic message to "May Affect, Likely to Adversely Affect" (Johnson pers. comm. 2015a). On October 1, 2015, Ray Bransfield (USFWS), Tara Callaway (USFWS), Jeff Johnson (Caltrans), and Brad Haley (Ecorps Consulting) decided after a site visit to use the density value from the lower confidence interval in the Fremont-Kramer Stratum to estimate desert tortoises in action area. On November 11, 2015, Rebecca Jones (California Department of Fish and Wildlife), Erinn Wilson (California Department of Fish and Wildlife), Tara Callaway, and Ray Bransfield discussed potential translocation measures for the HDC project and created a guidance outline. On December 10, 2015, Rebecca Jones, Jeff Johnson, Ray Bransfield, and Tara Callaway discussed the translocation guidelines for the HDC project and decided to move all desert tortoises from the action area to the

Monkeyflower Area of Critical Environmental Concern or the southern portion of the Fremont-Kramer Critical Habitat Unit. USFWS requested an extension and an extension was approved by Caltrans until January 15. On December 10, 2015, Caltrans was provided an informal draft of the HDC BO and approved the draft on February 27, 2016 (Johnson pers. comm. 2016a). On February 27, 2016, Caltrans approved the avoidance and minimization measures (Johnson pers. comm. 2016b).

CONCURRENCE SECTION FOR LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER AND ITS CRITICAL HABITAT

By memorandum dated August 14, 2015, received August 17, 2015, Caltrans requested USFWS concurrence with their determination that the HDC transportation facility is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*) and the federally endangered southwestern willow flycatcher (*Empidonax trailli extimus*) or its critical habitat. Caltrans' request and the USFWS response are made pursuant to section 7(a)(2) of the Act of 1973, as amended. The USFWS response is based on the information in Caltrans' request for concurrence and additional information provided by Jeff Johnson of your staff and Brad Haley.

The proposed HDC transportation facility is a cooperative effort between Caltrans and the Metro consisting of the construction of a 63-mile west-east transportation facility in the High Desert region of Los Angeles and San Bernardino Counties. The proposed HDC involves construction of a 63-mile long highway and high-speed rail system to connect State Route 14 in Los Angeles County with State Route 18 and Interstate 15 in San Bernardino County. For 4 years spanning 2012-2015, biologists conducted focused federally listed bird surveys for least Bell's vireo and southwestern willow flycatcher along the Mojave River and no listed species were detected in the proposed HDC transportation facility action area. Both species were observed nesting and documented in riparian habitat outside of the proposed action area.

Caltrans has proposed the following avoidance and minimization measures for the least Bell's vireo and southwestern willow flycatcher: not exceeding noise effects of 60 decibels at 1,000 feet averaged over one hour, installing directional lighting that focuses light on the bridge, and using approved avian biologists during bridge construction over the Mojave River and construction in suitable habitat. An avian biologist will be responsible for presenting a worker environmental awareness training to all workers involved with the exclusion fence installation and bridge construction, covering topics such as habitat requirements, activity patterns, and avoidance and minimization measures for the least Bell's vireo and southwestern willow flycatcher. Your request for concurrence provides additional information on the proposed action and the protective measures that would require the avian biologist(s) and construction crew to undertake to avoid adverse effects to the least Bell's vireo and southwestern willow flycatcher.

With the full implementation of the avoidance and minimization measures contained in your request, we concur with your determination that the proposed action is not likely to adversely affect the federally endangered least Bell's vireo or the southwestern willow flycatcher. We have reached this conclusion because of the avoidance and minimization measures proposed by Caltrans and the low-likelihood of encountering the listed bird species due to the construction distance from previous observation location and nesting sites.

The USFWS also concurs with your determination that the proposed action is not likely to adversely affect the designated critical habitat of the southwestern willow flycatcher for the following reasons. Construction crews will build three separate bridges over the Mojave River that will be about 80 feet above the river, and the bridges are not expected to affect the riparian vegetation within and adjacent to the river. Approximately 12.74 acres of southwestern willow flycatcher critical habitat occurs within the action area, and 8.55 of those 12.74 acres would be beyond the construction area and would not be affected. The remaining 4.19 of the 12.74 acres is low quality riparian habitat that does not contain the physical and biological features necessary to support this species. Of the 4.19 acres, 0.88 acres would not be affected; 3.24 acres would be permanently impacted; and 0.07 acres would be temporarily affected.

The proposed action would not significantly alter the physical and biological features of the designated critical habitat identified for this species. The amount of riparian habitat to support viable populations of the southwestern willow flycatcher or insect prey populations would not be reduced significantly in this area because the disturbance from the proposed project would occur within low quality riparian areas that are heavily disturbed. The road construction would reduce riparian trees in critical habitat; however, that particular riparian area in critical habitat is sparsely vegetated by unhealthy cottonwood trees and does not contain the physical and biological features necessary for this species. The protective measures proposed by Caltrans would likely minimize these effects through the installation of exclusion fencing to avoid impacts outside of the construction zone to critical habitat and using approved avian biologists during construction in suitable habitat.

Further consultation, pursuant to section 7(a)(2) of the Act of 1973, as amended, is not required. If the proposed action changes in any manner that may affect the least Bell's vireo and the southwestern willow flycatcher or its designated critical or if monitoring of any event reveals that the proposed protective measures are not functioning appropriately, please contact us immediately to determine whether additional consultation is required.

If you have any questions regarding this matter, please contact Tara Callaway of my staff at (760) 431-9440, extension 217.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

We summarized the following description of the proposed action from the biological assessment (Caltrans 2015a). The proposed 63-mile west-east facility would connect SR-14 in Los Angeles County and SR-18 and I-15 in San Bernardino County (Figure 1). Construction of the HDC may extend from 2016 to 2040 and would take approximately 36 to 48 months to complete the projected eight phases for all three segments. The HDC would include a 63-mile multi-lane freeway with a high-speed rail system along its center median and 39 miles of Class I and/or Class III bicycle paths.

Figure 1. Geographic location of the HDC.

The HDC footprint encompasses about 4,718.96 acres. Of that area, 1,993.95 acres are located between SR-14 and 240th Street East and 2,725.00 acres are located east of 240th Street East (Table 1). The HDC between 240th Street East and I-15 covers 1,977.16 acres and east of I-15 covers 747.85 acres.

Table 1. HDC permanent and temporary impacts in desert tortoise habitat

	Impact Area (acres)			
Location	**Permanent**	**Temporary**	**No Impacts**	**Total**
SR-14 to 240th Street East	1,732.31	261.64	0.00	1,993.95
East of 240th to I-15	1,569.66	406.35	1.15	1,977.16
East of I-15	558.26	189.59	0.00	747.85
Impact Totals	**3,860.23**	**857.58**	**1.15**	**4,718.96**

Construction

For each of the three segments, construction would include construction phases such as the mobilization and staging of the site for construction activities, site clearing and demolition, utility relocation, guideway and highway construction, tollway and railroad infrastructure installation, and landscaping.

Mobilization and Staging

This phase involves site preparation for construction activities by bringing materials and machinery to the site and storing in the staging area.

Site Clearing, Demolition, and Utility Relocation

This phase would clear the roadway and railway alignment of structures, vegetation, asphalt, and concrete. All materials cleared from alignment would be removed and disposed. Utilities that would interfere with construction would be removed and relocated or encased for continuing service.

Construction of Guideway, Highway, and Railroad

Construction crews would build the HDC roadways and high-speed rail system using site excavation, grading, filling, and pavement installation. Crews would contain approximately 150 people on site and consist of construction crewmembers, biologists, and engineers. Crews would use construction machinery such as scrapers (up to 10 at a time), large dozers (up to four), large loaders (four total), diesel transport trucks with tractor trailers (up to 20), excavators (up to four), pile drivers (up to four), backhoes (up to six), land planes (four total), vibratory rolling compactors (four total), skidsteers (six total), and water trucks (eight total). Bridges, overcrossings, undercrossings, soundwalls, and retaining walls would be built at the same time of the roadway and high-speed rail construction. The freeway and high-speed rail system components require approximately 9 feet and 15 feet of fill above grade upon which to build the highway, respectively. Caltrans would construct bridges spanning the Mojave River as three separate spans (eastbound traffic, high-speed rail tracks, and westbound traffic) each approximately 260 feet long and 80 feet above the river. Roadways and the high-speed rail would be approximately 56 and 49 feet wide, respectively; roadways would be spaced 34 feet from the middle of the high-speed rail or 9.5 feet from the edge of the high-speed rail.

Crews would construct seven bridges of varying lengths to cross washes throughout the transportation facility. Between the Mojave River and Victorville Landfill, 1.64 miles of highway

would be elevated; the high-speed rail would be approximately 30 feet below grade through this section. Overall, construction crews would install 174 culverts east of 240th Street East ranging in size from 7 feet by 3 feet to 12 feet by 8 feet; 65 soft bottom culverts would be included in desert tortoise habitat (Johnson pers. comm. 2016c). Construction crews would build a 90-foot-wide overpass designed for wildlife and vehicular crossings over the high-speed rail along Quarry Road.

Operations and Maintenance

Routine maintenance would occur as needed throughout the lifetime of the HDC transportation facility. Maintenance activities would include routine highway drainage and culvert cleaning to prevent flooding; landscape vegetation trimming; fence repairs; and trash, debris, and roadkill removal.

Avoidance and Minimization Measures

The proposed action includes the following measures that Caltrans will implement during survey, construction, and maintenance activities to minimize adverse effects to desert tortoises. We have changed the wording of some measures from that in the biological assessment to improve clarity, but we have not changed their substance. We have also updated some measures based on modifications agreed to by the USFWS and Caltrans (Johnson pers. comm. 2016b).

Authorized Biologists and Desert Tortoise Monitors

1. An authorized biologist is a person the USFWS has approved to conduct specific activities to protect desert tortoises during the implementation of a project (e.g. clearance surveys, handling of individuals, etc.). A desert tortoise monitor (monitor) is a person who assists the authorized biologists in protecting desert tortoises. The authorized biologist is responsible for supervising monitors and ensuring that monitors are sufficiently trained to perform assigned tasks, including the handling of desert tortoises. Authorized biologists and monitors are responsible for monitoring project activities within desert tortoise habitat, ensuring proper implementation of protective measures, and recording and reporting desert tortoise observations. Monitors report incidents of non-compliance to authorized biologists, and authorized biologists turn in reports of non-compliance to Caltrans and the USFWS immediately.

2. Caltrans will employ an appropriate number of authorized biologists and monitors during construction of the HDC transportation facility for the protection of the desert tortoise. Authorized biologists will monitor each activity where conditions exist that may result in injury or mortality of desert tortoise (e.g., clearing, grading, re-contouring, and restoration activities).

3. Caltrans will review and provide the credentials of all individuals seeking approval as authorized biologists to the USFWS at least 30 days prior to the time they are needed in the field.

4. Authorized biologists and monitors will have the authority to halt any activity immediately that does not comply with the protective measures described in the biological opinion and report non-compliance to Caltrans and then to the USFWS.

5. Individuals approved to capture and handle desert tortoises, perform pre-project clearance surveys, move desert tortoises out of harm's way, excavate burrows, handle nests and eggs, construct artificial burrows, and temporarily confine desert tortoises will do so in compliance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS guidance. The Desert Tortoise Field Manual can be found at http://www.fws.gov/carlsbad/PalmSprings/DesertTortoise.html. Individuals approved to perform these tasks include authorized biologists and monitors who are under the direct supervision of an authorized biologist.

6. An authorized biologist will be present during the removal of desert tortoise habitat east of 240th Street East; if an authorized biologist is within the immediate area and directly overseeing the habitat removal, a monitor can directly supervise vegetation removal.

Installation of Exclusionary Fencing around Construction Area

7. Prior to construction, Caltrans will install a temporary desert tortoise exclusion fence around all project areas in desert tortoise habitat, including staging and storage areas, as determined by an authorized biologist between 240th Street East and the eastern end of the project. Roads crossing the HDC will terminate at the exclusion fence and turnarounds will be developed. Caltrans will install the exclusion fences as specified in the USFWS's Desert Tortoise Field Manual (2009) or most up-to-date USFWS guidance. utilized

8. Authorized biologists and monitors will conduct daily clearance surveys of desert tortoise exclusion fence alignments during installation and monitor installation at all times. After exclusion fence construction is completed, authorized biologists and monitors will conduct 100 percent clearance surveys within the exclusion fence. Desert tortoises that are found inside the fence will be translocated[1], in accordance with the specifications established by the most up-to-date USFWS guidelines.

9. To the maximum extent practicable, Caltrans will place fence alignments and the features that they are enclosing (e.g. road alignment, etc.) in a manner that reduces the number of desert tortoises that must be moved off the project site.

10. The authorized biologist will use their best judgment regarding measures to use to ensure that desert tortoises do not immediately return to fenced areas or other areas they have been moved from to ensure their protection. The authorized biologist may use temporary penning,

[1] In the biological assessment (Caltrans 2015a), Caltrans refers to the act of moving desert tortoises from the project site to a recipient site as "relocation". Current terminology in the scientific literature refers to this practice as "translocation", and the USFWS has adopted this terminology in all recent biological opinions involving this practice for the desert tortoise. Therefore, we have substituted use of the term "relocation" with the term "translocation" in these measures to improve clarity.

in accordance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS guidance, to prevent desert tortoises from re-entering these areas during construction.

11. Caltrans will install shade structures, in accordance with the Desert Tortoise Field Manual (2009) or most up-to-date USFWS guidance, at regular intervals along exclusion fence to provide shade for desert tortoises that exhibit fence-pacing behavior.

12. Caltrans will inspect the temporary exclusion fence twice per week and repair, when necessary, during the construction of the HDC transportation facility to ensure that desert tortoises are excluded from the construction area.

13. Caltrans will confine all construction activities, project vehicles, and equipment to the area within the exclusion fence.

Translocation of Desert Tortoises

14. Authorized biologists will conduct health assessments, in accordance with the Health Assessment Handbook (USFWS 2013b) or most up-to-date USFWS guidelines, on all desert tortoises found during the clearance surveys for clinical signs of disease prior to translocation. If any desert tortoises are found with signs of disease, Caltrans will contact the USFWS to determine further actions. Any authorized biologist conducting health assessments must be approved by USFWS to perform these duties after attending and passing the USFWS health assessment course.

15. California Department of Fish and Wildlife (CDFW) and USFWS will approve Caltrans' translocation site(s) and translocation plan before construction commences. Caltrans will translocate desert tortoises to suitable habitat within the southern portion of the Fremont-Kramer Critical Habitat Unit or the Monkeyflower Area of Critical Environmental Concern as determined by USFWS and CDFW.

16. Desert tortoises will be translocated and released into suitable habitat and placed in the shade of a shrub. If an individual is found in a burrow, the desert tortoise will be excavated from the burrow and translocated to an unoccupied burrow similar to the hibernaculum in which it was found. Translocated desert tortoises will not be placed in existing occupied burrows. If an existing burrow that is similar in size, shape, and orientation to the original burrow is unavailable, the authorized biologist will construct one in accordance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS guidance.

17. Caltrans will monitor survivorship and movement activity for translocated desert tortoises for up to five years using radio telemetry in accordance with the Desert Tortoise Monitoring Handbook (USFWS 2015c) or most up-to-date USFWS guidance.

Worker Environmental Awareness Program

18. Caltrans will ensure that all workers associated with the transportation facility receive worker environmental awareness training to ensure the protection of the desert tortoise and its habitat. Caltrans will develop and implement the program and an authorized biologist or monitor will administer the training to all personnel. The worker environmental awareness training will:

    a. Be developed by or in consultation with an authorized biologist and consist of a presentation in which supporting written material and electronic media, including photographs of protected species, are made available to all participants;

    b. Discuss general conditions of the Act, necessity for adhering to the requirements of the Act, potential for civil and criminal penalties associated with violating the provisions of the Act, and specific requirements for complying with the provisions of the Act as they relate to the project;

    c. Place special emphasis on the natural history of the desert tortoise, including information on physical characteristics, photographs, distribution, behavior, ecology, and sensitivity to human activities;

    d. Describe construction activities that may affect the desert tortoise and its habitat, the purpose and function of the desert tortoise avoidance and minimization measures, legal protections and penalties, reporting requirements and procedures for personnel if non-compliance of environmental requirements occurs;

    e. Inform workers that the authorized biologists and monitors have the authority to halt work in any area where an unauthorized adverse impact to biological resources may occur if the activities continued;

    f. Discuss general safety protocols such as hazardous substance spill prevention and containment measures and fire prevention and protection measures;

    g. Describe project site boundaries within which project activities may be conducted;

    h. Provide contact information for the authorized biologists and monitors to handle late comments and questions about the material discussed in the program, as well as notification of any dead or injured wildlife species encountered during project-related activities;

    i. Direct all workers to report all observations of listed species and their sign to an authorized biologist for inclusion in the yearly compliance report;

    j. Include a training acknowledgment form to be signed by each worker indicating that they received training and will abide by the guidelines;

k. Provide information regarding the effects of predation on the desert tortoise by common ravens (*Corvus corax*) and other predators and describe preventative measures that reduce the likelihood that predators will be attracted to the project area;

l. Warn of the potential for desert tortoises to take refuge under vehicles and to notify an authorized biologist in that event;

m. Describe the specific procedures to be followed to move a desert tortoise that may be in imminent danger (i.e., on a heavily traveled road without an authorized biologist nearby).

Desert Tortoise Protective Measures

19. Caltrans will have an authorized biologist on-site during ground-disturbing activities to move any desert tortoises out of harm's way that may have been missed during clearance surveys. If a desert tortoise, whether dead, injured, or entrapped, is found in the project area after the 100 percent clearance survey is completed, all work within the area will halt.

20. All vehicles and equipment on project sites, including private automobiles parked outside of areas that have desert tortoise exclusion fencing, must be inspected by drivers prior to moving them to ensure that desert tortoises have not moved underneath the parked vehicle. If project personnel encounter a desert tortoise, they will contact an authorized biologist, and the desert tortoise will be allowed, under its own volition, to move a safe distance away prior to moving the vehicle. Inspection flags will be placed on heavy equipment at the end of the day to remind drivers to look under them prior to startup.

21. If a desert tortoise is found in a construction area where fencing was deemed unnecessary, work will cease until the individual leaves under its own volition to a safe distance out of harm's way. The authorized biologist will decide upon the extent of additional surveys and fencing needed.

22. No desert tortoise will be captured, moved, transported, released, or purposefully caused to leave its burrow for any reason when the ambient air temperature is above 95 degrees Fahrenheit (°F). No desert tortoise will be captured if the ambient air temperature is anticipated to exceed 95°F before handling or processing can be completed. If the ambient air temperature exceeds 95°F during handling or processing, desert tortoises will be kept shaded in an environment that does not exceed 95°F, and not released until ambient air temperature declines to below 95°F.

23. Caltrans will contain all trash associated with the project that could provide subsidies to predators in secure, self-closing receptacles. Caltrans will also remove and dispose of all road-killed animals on the project to prevent the introduction of subsidized food resources for common ravens and coyotes (*Canis latrans*).

24. Caltrans will ensure that workers do not bring firearms and pets into the project area. Firearms carried by authorized security and law enforcement personnel are exempt from this measure.

25. Caltrans and the contractor will follow the standard best management practice field manual (Caltrans 2003) with regard to dust, erosion, and sediment control.

26. Project personnel will ensure water used for construction does not create standing water that could attract desert tortoises or predators, such as common ravens and coyotes, to the site. When not in use, all water sources such as hydrants or open water trucks will be covered to prevent use by animals.

27. Culverts in desert tortoise habitat will have soft bottoms and will allow desert tortoises to enter and exit safely from each end.

28. Signs will be placed, as needed, to indicate the need to reduce speeds on roadways and strictly confine activities to the project area. All site personnel will adhere to a 35 miles per hour speed limit in unfenced areas (Caltrans 2016).

Prevention of Introducing Non-native and Invasive Plant Species

29. Caltrans will prevent the introduction or further spread of invasive and non-native species during and after construction to the work area by developing a weed abatement program.

Post-Construction

30. Permanent desert tortoise exclusion fencing, in accordance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS guidance will be installed parallel to the outside edge of the operational areas of the project, not necessarily the rights-of-way edge, in areas of suitable habitat where bridges are not located. This fencing will be a part of standard highway inspections and maintained in perpetuity. Roads that cross the HDC in desert tortoise habitat will be terminated and turnarounds will be used.

31. Wildlife-proof trash containers will be installed and regularly emptied at all rest stops or train stations associated with the HDC transportation facility.

32. Perching opportunities for common ravens and raptors near habitat supporting desert tortoise will be limited, structures incorporating a design to discourage raven and raptor perching should be selected including Avian Power Line Interaction Committee guidelines (APLIC 2006) for avoiding unintended injuries to birds.

Compensation

Caltrans has committed to offsetting the loss of desert tortoise habitat by paying compensation at a 1 to 1 ratio for permanent, adverse effects (1,554.83 acres). Compensation will include the acquisition of land within a Desert Wildlife Management Area and/or contribution of an equivalent monetary

value towards recovery actions in West Mojave. Recovery actions can include restoration, closing roads, fencing installation, repairs or purchase and discontinued use of Bureau of Land Management (BLM) grazing allotments. If the project design changes and increases or decreases the total amount of desert tortoise habitat that is adversely affected, Caltrans would pay compensation for the total amount of acres that are permanently lost.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATION

Jeopardy Determination

Section 7(a)(2) of the Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 Code of Federal Regulations 402.02).

The jeopardy analysis in this biological opinion relies on four components: 1) the status of the species, which describes the range-wide condition of the desert tortoise, the factors responsible for that condition, and its survival and recovery needs; 2) the environmental baseline, which analyzes the condition of the desert tortoise in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the desert tortoise; 3) the effects of the action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the desert tortoise; and 4) the cumulative effects, which evaluates the effects of future, non-Federal activities in the action area on the desert tortoise.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the current status of the desert tortoise, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the desert tortoise in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the desert tortoise and the role of the action area in the survival and recovery of the desert tortoise as the context for evaluation of the significance of the effects of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

STATUS OF THE DESERT TORTOISE

Status of the Desert Tortoise

Section 4(c)(2) of the Act requires the USFWS to conduct a status review of each listed species at least once every 5 years. The purpose of a 5-year review is to evaluate whether the species' status has changed since it was listed (or since the most recent 5-year review); these reviews, at the time of their completion, provide the most up-to-date information on the range-wide status of the species. We are

incorporating the 5-year review by reference to provide most of the information for this section of the biological opinion. The 5-year review is available at http://ecos.fws.gov/docs/five_year_review/doc3572.DT%205Year%20Review_FINAL.pdf The following paragraphs provide a summary of the relevant information in the 5-year review.

In the 5-year review, the USFWS discusses the status of the desert tortoise as a single distinct population segment and provides information on the Federal Register notices that resulted in its listing and the designation of critical habitat. The USFWS also describes the desert tortoise's ecology, life history, spatial distribution, abundance, habitats, and the threats that led to its listing (i.e., the five-factor analysis required by section 4(a)(1) of the Act). In the 5-year review, the USFWS concluded by recommending that the status of the desert tortoise as a threatened species be maintained.

With regard to the status of the desert tortoise as a distinct population segment, the USFWS concluded in the 5-year review that the recovery units recognized in the original and revised recovery plans (USFWS 1994a and 2011, respectively) do not qualify as distinct population segments under the USFWS's distinct population segment policy (61 Federal Register 4722; February 7, 1996). We reached this conclusion because individuals of the listed taxon occupy habitat that is relatively continuously distributed, exhibit genetic differentiation that is consistent with isolation-by-distance in a continuous-distribution model of gene flow, and likely vary in behavioral and physiological characteristics across the area they occupy as a result of the transitional nature of, or environmental gradations between, the described subdivisions of the Mojave and Colorado deserts.

In the 5-year review, the USFWS summarizes information with regard to the desert tortoise's ecology and life history. Of key importance to assessing threats to the species and to developing and implementing a strategy for recovery is that desert tortoises are long lived, require up to 20 years to reach sexual maturity, and have low reproductive rates during a long period of reproductive potential. The number of eggs that a female desert tortoise can produce in a season is dependent on a variety of factors including environment, habitat, availability of forage and drinking water, and physiological condition. Predation seems to play an important role in clutch failure. Predation and environmental factors also affect the survival of hatchlings.

In the 5-year review, the USFWS also discusses various means by which researchers have attempted to determine the abundance of desert tortoises and the strengths and weaknesses of those methods. Due to differences in area covered and especially to the non-representative nature of earlier sample sites, data gathered by the USFWS's current range-wide monitoring program cannot be reliably compared to information gathered through other means at this time.

The range-wide monitoring that the USFWS initiated in 2001 is the first comprehensive attempt to determine the densities of desert tortoises across their range. The Desert Tortoise Recovery Office (USFWS 2014) used annual density estimates obtained from this sampling effort to evaluate range-wide trends in the density of desert tortoises over time. This analysis indicates that densities in the Northeastern Mojave Recovery Unit have increased by approximately 13.6 percent per year since 2004, with the rate of increase apparently resulting from increased survival of adults and sub adults moving into the adult size class. The analysis also indicates that the populations in the other 4 recovery units are declining: Upper Virgin River (-5.1 percent), Eastern Mojave (-6.0 percent),

Western Mojave (-8.6 percent), and Colorado Desert (-3.4 percent; however, densities in the Joshua Tree and Piute Valley conservation areas within this unit seem to be increasing). The following figure shows linear trends in the log-transformed densities in each desert tortoise conservation area by recovery unit. Data for the Upper Virgin River Recovery Unit are from 1999 to the present; data for all other recovery units are from 2004 to the present.

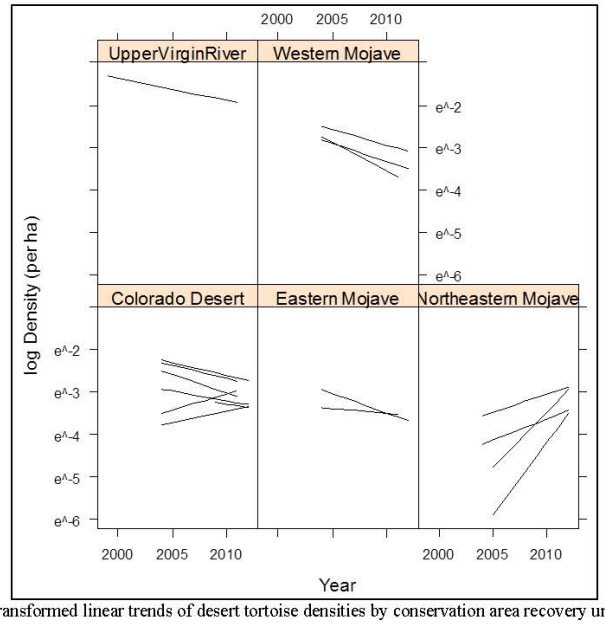


Figure 2. Log-transformed linear trends of desert tortoise densities by conservation area recovery units. Data for the Upper Virgin River Recovery Unit are from 1999 to the present; data for all other recovery units are from 2004 to the present.

Allison (pers. comm. 2014) also evaluated changes in size distribution of desert tortoises since 2001. In the Western Mojave and Colorado Desert recovery units, the relative number of juveniles to adults indicates that juvenile numbers are declining faster than adults. In the Eastern Mojave, the number of juvenile desert tortoises is also declining, but not as rapidly as the number of adults. In the Upper Virgin River Recovery Unit, trends in juvenile numbers are similar to those of adults; in the Northeastern Mojave Recovery Unit, the number of juveniles is increasing, but not as rapidly as are adult numbers in that recovery unit. Juvenile numbers, like adult densities, are responding in a directional way, with increasing, stable, or decreasing trends, depending on the recovery unit where they area found.

In this context, we consider "juvenile" desert tortoises to be animals smaller than 180 millimeters (mm) in length. The USFWS does not include juveniles detected during range-wide sampling in density estimations because they are more difficult to detect and surveyors frequently do not observe them during sampling. However, this systematic range-wide sampling provides us with an opportunity to compare the proportion of juveniles to adults observed between years.

In the 5-year review, the USFWS provides a brief summary of habitat use by desert tortoises; the revised recovery plan contains more detailed information (USFWS 2011). In the absence of specific and recent information on the location of habitable areas of the Mojave Desert, especially at the outer edges of this area, the 5-year review also describes and relies heavily on a quantitative, spatial habitat model for the desert tortoise north and west of the Colorado River that incorporates environmental variables such as precipitation, geology, vegetation, and slope and is based on occurrence data of desert tortoises from sources spanning more than 80 years, including data from the 2001 to 2005 range-wide monitoring surveys (Nussear *et al.* 2009). The model predicts the probability that desert tortoises will be present in any given location; calculations of the amount of desert tortoise habitat in the 5-year review and in this biological opinion use a threshold of 0.5 or greater predicted value for potential desert tortoise habitat. The model does not account for anthropogenic effects to habitat and represents the potential for occupancy by desert tortoises absent these effects.

To begin integrating anthropogenic activities and the variable risk levels they bring to different parts of the Mojave and Colorado deserts, the USFWS completed an extensive review of the threats known to affect desert tortoises at the time of their listing and updated that information with more current findings in the 5-year review. The review follows the format of the five-factor analysis required by section 4(a)(1) of the Act. The USFWS described these threats as part of the process of its listing (55 Federal Register 12178; April 2, 1990), further discussed them in the original recovery plan (USFWS 1994a), and reviewed them again in the revised recovery plan (USFWS 2011).

To understand better the relationship of threats to populations of desert tortoises and the most effective manner to implement recovery actions, the Desert Tortoise Recovery Office is developing a spatial decision support system that models the interrelationships of threats to desert tortoises and how those threats affect population change. The spatial decision support system describes the numerous threats that desert tortoises face, explains how these threats interact to affect individual animals and habitat, and how these effects in turn bring about changes in populations. For example, we have long known that the construction of a transmission line can result in the death of desert tortoises and loss of habitat. We have also known that common ravens, known predators of desert tortoises, use the transmission line's pylons for nesting, roosting, and perching and that the access routes associated with transmission lines provide a vector for the introduction and spread of invasive weeds and facilitate increased human access into an area. Increased human access can accelerate illegal collection and release of desert tortoises and their deliberate maiming and killing, as well as facilitate the spread of other threats associated with human presence, such as vehicle use, garbage and dumping, and invasive plants (USFWS 2011). Changes in the abundance of native plants because of invasive weeds can compromise the physiological health of desert tortoises, making them more vulnerable to drought, disease, and predation. The spatial decision support system allows us to map threats across the range of the desert tortoise and model the intensity of stresses that these multiple and combined threats place on desert tortoise populations.

The threats described in the listing rule and both recovery plans continue to affect the species. Indirect impacts to desert tortoise populations and habitat occur in accessible areas that interface with human activity. Most threats to the desert tortoise or its habitat are associated with human land uses; research since 1994 has clarified many mechanisms by which these threats act on desert tortoises. As stated earlier, increases in human access can accelerate illegal collection and release of desert tortoises and deliberate maiming and killing, as well as facilitate the spread of other threats associated with human presence, such as vehicle use, garbage and dumping, and invasive weeds.

Some of the most apparent threats to the desert tortoise are those that result in mortality and permanent habitat loss across large areas, such as urbanization and large-scale renewable energy projects, and those that fragment and degrade habitats, such as proliferation of roads and highways, off-highway vehicle activity, and habitat invasion by non-native invasive plant species. However, we remain unable to quantify how threats affect desert tortoise populations. The assessment of the original recovery plan emphasized the need for a better understanding of the implications of multiple, simultaneous threats facing desert tortoise populations and of the relative contribution of multiple threats on demographic factors (i.e., birth rate, survivorship, fecundity, and death rate; Tracy *et al.* 2004).

The following map depicts the 12 critical habitat units of the desert tortoise, linkages between conservation areas for the desert tortoise, and the aggregate stress that multiple, synergistic threats place on desert tortoise populations (Figure 3). Conservation areas include designated critical habitat and other lands managed for the long-term conservation of the desert tortoise (e.g., the Desert Tortoise Natural Area, Joshua Tree National Park, and the Desert National Wildlife Refuge). The revised recovery plan (USFWS 2011) recommends connecting blocks of desert tortoise habitat, such critical habitat units and other important areas to maintain gene flow between populations. Linkages defined using least-cost path analysis (Averill-Murray *et al.* 2013) illustrate a minimum connection of habitat for desert tortoises between blocks of habitat and represent priority areas for conservation of population connectivity. This map illustrates that, across the range, desert tortoises in areas under the highest level of conservation management remain subject to numerous threats, stresses, and mortality sources.

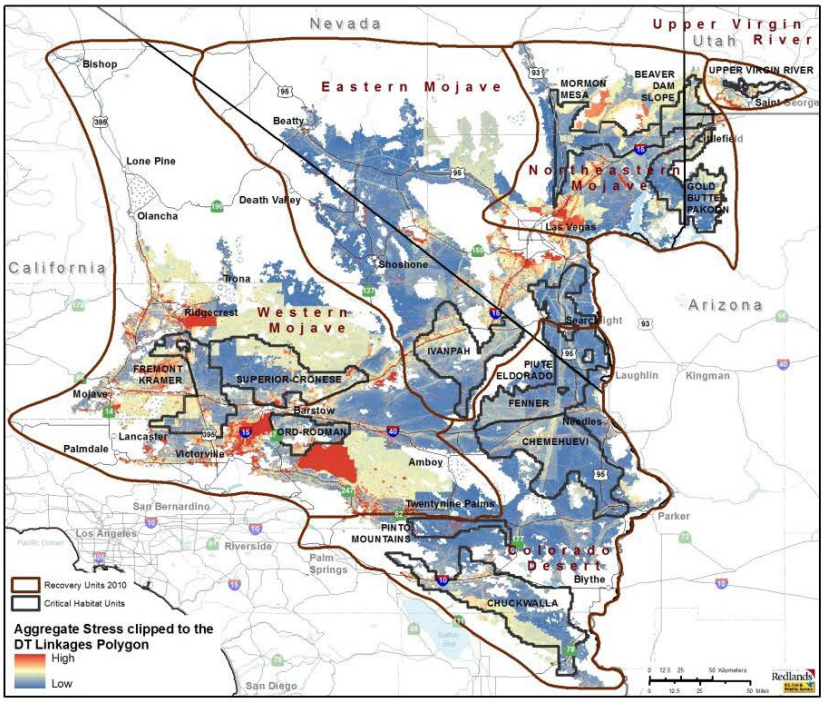


Figure 3. Critical habitat units of the desert tortoise, linkages between conservation areas for the desert tortoise, and the aggregate stress that multiple, synergistic threats place on desert tortoise populations.

Since the completion of the 5-year review, the USFWS has issued several biological opinions that effect large areas of desert tortoise habitat because of numerous proposals to develop renewable energy within its range. These biological opinions concluded that proposed solar plants were not likely to jeopardize the continued existence of the desert tortoise primarily because they were located outside of critical habitat and desert wildlife management areas that contain most of the land base required for the recovery of the species. The proposed actions also included numerous measures intended to protect desert tortoise during the construction of the projects, such as translocation of affected individuals. In aggregate, these projects would result in an overall loss of approximately 37,503 acres of habitat of the desert tortoise. We also predicted that the project areas supported up to 3,483 desert tortoises; we concluded that most of these individuals were small desert tortoises, that most large individuals would likely be translocated from project sites, and that most mortalities would be small desert tortoises that were not detected during clearance surveys. To date, 560 desert tortoises have been observed during construction of projects; most of these individuals were

translocated from work areas, although some desert tortoises have been killed (Appendix 2). The mitigation required by the BLM and California Energy Commission, the agencies permitting these facilities, will result in the acquisition of private land and funding for the implementation of various actions that are intended to promote the recovery of the desert tortoise. Although most of these mitigation measures are consistent with recommendations in the recovery plans for the desert tortoise and the USFWS continues to support their implementation, we cannot assess how desert tortoise populations will respond because of the long generation time of the species.

In addition to the biological opinions issued for solar development within the range of the desert tortoise, the USFWS (2012a) also issued a biological opinion to the Department of the Army (Army) for the use of additional training lands at Fort Irwin. As part of this proposed action, the Army removed approximately 650 desert tortoises from 18,197 acres of the southern area of Fort Irwin, which had been off-limits to training. The Army would also use an additional 48,629 acres that lie east of the former boundaries of Fort Irwin; much of this parcel is either too mountainous or too rocky and low in elevation to support numerous desert tortoises.

The USFWS also issued a biological opinion to the U.S. Marine Corps (Marine Corp) that considered the effects of the expansion of the Marine Corps Air Ground Combat Center at Twentynine Palms (USFWS 2012b). We concluded that the Marine Corps' proposed action, the use of approximately 167,971 acres for training, was not likely to jeopardize the continued existence of the desert tortoise. Most of the expansion area lies within the Johnson Valley Off-highway Vehicle Management Area.

The incremental effect of the larger actions (i.e., solar development, the expansions of Fort Irwin, and the Marine Corps Air Ground Combat Center) on the desert tortoise is unlikely to be positive, despite the numerous conservation measures that have been (or will be) implemented as part of the actions. The acquisition of private lands as mitigation for most of these actions increases the level of protection afforded these lands; however, these acquisitions do not create new habitat and Federal, State, and privately managed lands remain subject to most of the threats and stresses we discussed previously in this section. Although land managers have been implementing measures to manage these threats, we have been unable, to date, to determine whether the measures have been successful, at least in part because of the low reproductive capacity of the desert tortoise. Therefore, the conversion of habitat into areas that are unsuitable for this species continues the trend of constricting the desert tortoise into a smaller portion of its range.

As the USFWS notes in the 5-year review (USFWS 2010), "(t)he threats identified in the original listing rule continue to affect the (desert tortoise) today, with invasive species, wildfire, and renewable energy development coming to the forefront as important factors in habitat loss and conversion. The vast majority of threats to the desert tortoise or its habitat are associated with human land uses." Oftedal's work (*et al.* 2002 in USFWS 2010) suggests that invasive weeds may adversely affect the physiological health of desert tortoises. Current information indicates that invasive species likely affect a large portion of the desert tortoise's range (Figure 4). Furthermore, high densities of weedy species increase the likelihood of wildfires; wildfires, in turn, destroy native species and further the spread of invasive weeds.

19

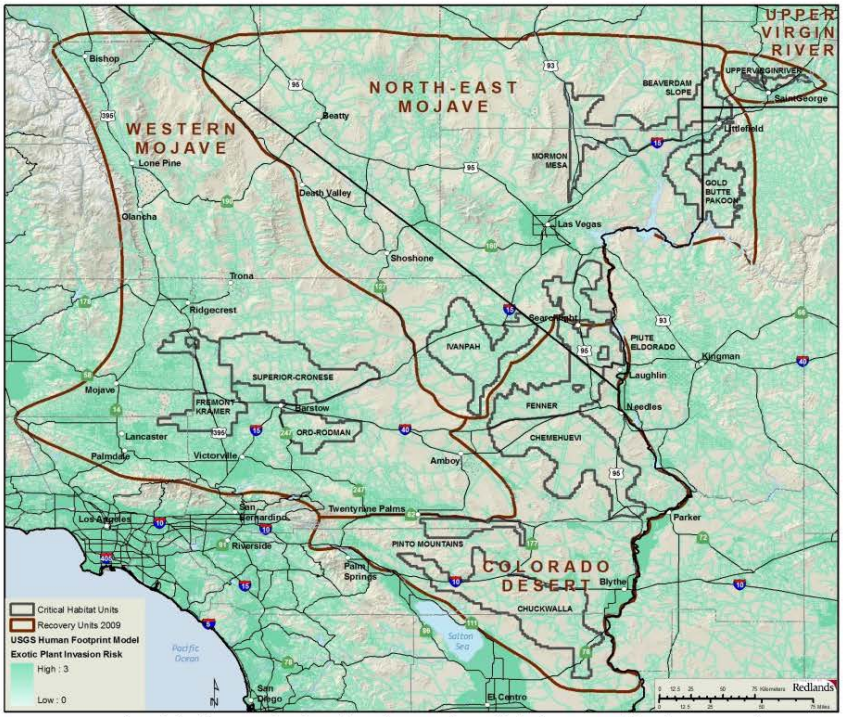


Figure 4. Invasion risk of non-native invasive plant species within the range of the desert tortoise.

Global climate change is likely to affect the prospects for the long-term conservation of the desert tortoise. For example, predictions for climate change within the range of the desert tortoise suggest more frequent and/or prolonged droughts with an increase of the annual mean temperature by 3.5 to 4.0 degrees Celsius. The greatest increases will likely occur in summer (June-July-August mean increase of as much as 5 degrees Celsius [Christensen *et al.* 2007 in USFWS 2010]). Precipitation will likely decrease by 5 to 15 percent annually in the region with winter precipitation decreasing by up to 20 percent and summer precipitation increasing by up to 5 percent. Because germination of the desert tortoise's food plants is highly dependent on cool- season rains, the forage base could be reduced due to increasing temperatures and decreasing precipitation in winter. Although drought occurs routinely in the Mojave Desert, extended periods of drought have the potential to affect desert tortoises and their habitats through physiological effects to individuals (i.e., stress) and limited forage availability. To place the consequences of long-term drought in perspective, Longshore *et al.* (2003) demonstrated that even short-term drought could result in elevated levels of mortality of desert tortoises. Therefore, long-term drought is likely to have even greater effects, particularly given that

the current fragmented nature of desert tortoise habitat (e.g., urban and agricultural development, highways, freeways, military training areas, etc.) will make recolonization of extirpated areas difficult, if not impossible.

The USFWS notes in the 5-year review that the combination of the desert tortoise's late breeding age and a low reproductive rate challenges our ability to achieve recovery. When determining whether a proposed action is likely to jeopardize the continued existence of a species, we are required to consider whether the action would "reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 Code of Federal Regulations 402.02). Although the USFWS does not explicitly address these metrics in the 5-year review, we have used the information in that document to summarize the status of the desert tortoise with respect to its reproduction, numbers, and distribution.

In the 5-year review, the USFWS notes that desert tortoises increase their reproduction in high rainfall years; more rain provides desert tortoises with more high quality food (i.e., plants that are higher in water and protein), which, in turn, allows them to lay more eggs. Conversely, the physiological stress associated with foraging on food plants with insufficient water and nitrogen may leave desert tortoises vulnerable to disease (Oftedal *et al.* 2002 in USFWS 2010), and the reproductive rate of diseased desert tortoises is likely lower than that of healthy animals. Young desert tortoises also rely upon high-quality, low-fiber plants (e.g., native annual plants) with nutrient levels not found in the invasive weeds that have increased in abundance across its range (Oftedal *et al.* 2002; Tracy *et al.* 2004). Compromised nutrition of young desert tortoises likely represents an effective reduction in reproduction by reducing the number of animals that reaches adulthood. Consequently, although we do not have quantitative data that show a direct relationship, the abundance of weedy species within the range of the desert tortoise has the potential to affect the reproduction of desert tortoises and recruitment into the adult population in a negative manner.

Data from small-scale study plots (e.g., 1 square mile) established as early as 1976 and surveyed primarily through the mid-1990s indicate that localized population declines occurred at many sites across the desert tortoise's range, especially in the western Mojave Desert; spatial analyses of more widespread surveys also found evidence of relatively high mortality in some parts of the range (Tracy *et al.* 2004). Although population densities from the local study plots cannot be extrapolated to provide an estimate of the number of desert tortoises on a range-wide basis, historical densities in some parts of the desert exceeded 100 adults in a square mile (Tracy *et al.* 2004). The USFWS (2010) concluded that "appreciable declines at the local level in many areas, which coupled with other survey results, suggest that declines may have occurred more broadly."

The Desert Tortoise Recovery Office (USFWS 2014) applied estimated densities within desert tortoise conservation areas surveyed during range-wide monitoring since 2004 to the estimated acreages of remaining habitat within each recovery unit to estimate the change in numbers of individuals greater than 180 mm in carapace length (Table 2). This calculation assumes that densities inside the surveyed conservation areas are similar to densities in habitat outside these areas, but any bias will be less than would have resulted from applying densities from much smaller study plots to the entire range. Although we presume densities are generally higher within conservation areas, we

consider this a reasonable way to describe overall changes in the population given the lack of broad-scale data outside the conservation areas.

Table 2. Percent change of desert tortoise numbers within conservation area recovery units between 2004 and 2012.

Recovery Units	2004	2012	Change	Percentage of Change
Western Mojave	152,967	76,644	-76,323	-50
Colorado Desert	111,749	85,306	-26,443	-24
Northeastern Mojave	13,709	40,838	27,129	198
Eastern Mojave	68,138	42,055	-26,083	-38
Upper Virgin River	12,678	8,399	-4,280	-34
Total	359,242	253,242	-106,000	-30

The following table (Table 3) depicts acreages of habitat (as modeled by Nussear *et al.* 2009, using only areas with a probability of occupancy by desert tortoises greater than 0.5 as potential habitat) within various regions of the desert tortoise's range and of impervious surfaces as of 2006 (Fry *et al.* 2011); calculations are by Darst (pers. comm. 2014). All units are in acres.

Table 3. Remaining modeled desert tortoise habitat within each conservation area recovery unit after impervious surface acreage is subtracted from modeled acreage of desert tortoise potential habitat.

Recovery Units	Modeled Habitat	Impervious Surfaces* (percentage in parentheses)	Remaining Modeled Habitat
Western Mojave	7,585,312	1,989,843 (26)	5,595,469
Colorado Desert	4,950,225	510,862 (10)	4,439,363
Northeastern Mojave	3,012,293	386,182 (13)	2,626,111
Eastern Mojave	4,763,123	825,274 (17)	3,937,849
Upper Virgin River	231,460	84,404 (36)	147,056
Total	20,542,413	3,796,565 (18)	16,745,848

* Impervious surfaces include paved and developed areas and other disturbed areas that have zero probability of supporting desert tortoises.

The distribution of the desert tortoise has not changed substantially since the publication of the original recovery plan in 1994 (USFWS 2010) in terms of the overall extent of its range. Prior to 1994, desert tortoises were extirpated from large areas within their distributional limits by urban and agricultural development (e.g., the cities of Barstow and Lancaster, California; Las Vegas, Nevada; and St. George, Utah; etc.; agricultural areas south of Edwards Air Force Base and east of Barstow), military training (e.g., Fort Irwin, Leach Lake Gunnery Range), and off-road vehicle use (e.g., portions of off-road management areas managed by the BLM and unauthorized use in areas such as east of California City, California). Since 1994, urban development around Las Vegas has likely been the largest contributor to habitat loss throughout the range. Desert tortoises have been essentially removed from the 18,197-acre southern expansion area at Fort Irwin (USFWS 2012a).

In conclusion, we have used the 5-year review (USFWS 2010), revised recovery plan (USFWS 2011), and additional information that has become available since these publications to

review the reproduction, numbers, and distribution of the desert tortoise. The reproductive capacity of the desert tortoise may be compromised to some degree by the abundance and distribution of invasive weeds across its range; the continued increase in human access across the desert likely continues to facilitate the spread of weeds and further affect the reproductive capacity of the species. Prior to its listing, the number of desert tortoises likely declined range wide, although we cannot quantify the extent of the decline; since the time of listing, data suggest that declines continue to occur throughout most of the range, although recent information suggests that densities may have increased in the Northeastern Mojave Recovery Unit. The continued increase in human access across the desert continues to expose more desert tortoises to the potential of being killed by human activities. The distributional limits of the desert tortoise's range have not changed substantially since the issuance of the original recovery plan in 1994; however, desert tortoises have been extirpated from large areas within their range (e.g., Las Vegas, other desert cities). The species' low reproductive rate, the extended time required for young animals to reach breeding age, and the multitude of threats that continue to confront desert tortoises combine to render its recovery a substantial challenge.

ENVIRONMENTAL BASELINE

Action Area

The implementing regulations for section 7(a)(2) of the Act define the "environmental baseline" as the past and present impacts of all Federal, State, or private actions and other human activities in an action area, the anticipated impacts of all proposed Federal projects in an action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions that are contemporaneous with the consultation in process (50 CFR 402.02). The action area is the basis of subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take.

The action area for the proposed project includes the areas that would be affected by construction of the 63-mile transportation facility including a multi-lane freeway, high speed rail system, and Class I bicycle paths and/or Class IIII bicycle routes. The action area also includes a 1,000-foot radius extending from both sides of the HDC transportation facility to incorporate the facility's rights-of-way. We estimated that the HDC action area encompasses 4,718.96 acres with a total of 2,061.93 acres containing suitable tortoise habitat; the action area is split up by I-15 and contains 1,470.28 acres west of I-15 and 591.65 acres east of I-15. The proposed transportation facility is located between SR-14 in Los Angeles County and SR-18 and I-15 in San Bernardino County. The information in the Environmental Baseline section is from the biological assessment for the proposed action (Caltrans 2015a), unless otherwise noted.

Habitat Characteristics of the Action Area

The action area contains 29 vegetation communities and six land cover types consisting of paved areas associated with existing freeways (SR-14, U.S. Highway 395 [US 395], SR-18, and I-15), disturbed and developed areas (residential, commercial, and industrial structures), agricultural, rock outcroppings, and unvegetated washes. The principal plant communities observed were creosote-bush scrub, allscale scrub, Joshua tree woodland, and rubber rabbitbrush scrub. Riparian scrub and

riparian woodland occur primarily in the Mojave River area. Elevation within the action area ranges from 2,740 to 3,050 feet above mean sea level.

The 10-mile Antelope Valley segment of the action area lies between the Tehachapi Mountain range to the north, San Gabriel Mountains to the south and Victor Valley to the east. The 26-mile High Desert segment of the action area is located between 100th Street East to US 395 and Adelanto. The 27-mile Victor Valley segment of the action area follows the alignment of Air Expressway Boulevard between Caughlin Road in Adelanto and Dale Evans Parkway east of I-15 in Apple Valley and continues southeast to SR-18.

The Antelope Valley segment contains commercial and residential developments, agricultural fields, and utility structures in the western portion and relatively undisturbed desert habitat in the eastern portion. Several drainages and washes are present in the action area, including Little Rock, Big Rock, and Mescal Creeks, located on the eastern portion of the Antelope Valley segment. The High Desert segment action area contains El Mirage Dry Lake; water flows from the north to El Mirage Dry Lake from Sheep Creek within the San Bernardino Mountains. Hydrology indicators show flows average less than six inches in depth. The Victor Valley segment action area contains the Mojave River crossing at a vertical gorge; east of the river, the action area climbs a boulder slope through Bell Mountain Pass onto an alluvial fan. Numerous north-south washes cross the area, and east of I-15, the action area continues over a series of hills modified by an active mining area and on into the rocky foothills of the Granite Mountains.

Existing Conditions in the Action Area

The land in the action area is predominantly privately owned but also contains federal land managed by the BLM. Within the action area, major developments include paved and unpaved roads and utilities. Habitat degradation throughout the action area is mostly due to human disturbances such as off-road vehicle use, human habitation, and illegal trash dumping.

Paved and Unpaved Roads

I-15, US 395, and SR-18 are major travel routes within the action area and serve as substantial barriers to the movement of desert tortoises. Numerous secondary roads and unpaved roads also fall within the action area (e.g. Air Expressway and Quarry Roads) but are less travelled. Whether desert tortoises pass under these roadways in culverts is unknown, but desert tortoises have been reported to use culverts along Highway 58 (Boarman 1993).

All roads in the action area are unfenced and do not preclude entry by desert tortoises. We expect traffic along these roads likely results in the death or injury of desert tortoises. In addition to the paved and unpaved roads, there are a myriad of additional off-highway vehicle routes traversing the action area. These unpaved roads are not a barrier to movement, but we anticipate that their use results in injury and mortality of desert tortoises based on observations of similar routes in other portions of the Mojave Desert (Hughson and Darby 2011).

Caltrans implements numerous activities within its rights-of-way for I-15 that affect the action area. These activities include bridge replacements, the widening of median shoulders, and road

resurfacing. In some cases, the USFWS concurred with the determinations made by Caltrans (or, previously, by the Federal Highway Administration) that the proposed projects were not likely to adversely affect the desert tortoise or its critical habitat. In other cases, Caltrans and the Federal Highway Administration implemented actions with minor effects on desert tortoises and their critical habitat under the auspices of programmatic biological opinions issued by the USFWS (1994b, 2006, and 2013c). We are unaware of any desert tortoises being killed as a result of these activities within the action area.

Utilities

The disturbance caused by electrical transmission lines may remain evident for many years after construction and, on occasion, repair and inspection work results in new disturbances in the rights-of-way. The initial construction and ongoing maintenance result in the loss of habitat and can serve as a mechanism to introduce and spread non-native and invasive plant species.

The most substantial ongoing effect of electrical transmission lines is their ongoing use by common ravens for perching and nesting. The presence of this additional nesting substrate has likely contributed to the increase in their numbers in the desert. As previously discussed, common ravens prey on desert tortoises and are likely detrimental to the recovery of the species.

A large electrical transmission line crosses the action area in Victorville near the Mojave River in the eastern portion of the proposed HDC transportation facility. This line and an associated switching station affect a small portion of the action area. The presence of utility corridors and maintenance roads associated with utility rights-of-way within the action area has caused the loss of a relatively minor amount of desert tortoise habitat. The construction of the tower sites for the transmission lines disturbed or destroyed habitat. Unpaved roads generally run parallel to the power lines and provide access to utility company workers and the public; spur roads extend from these roads to each tower. The main and spur roads have resulted in the greatest habitat loss in association, but we do not have any quantitative information on the amount of habitat loss that these roads have caused. The use of these access roads by workers and the public results in the ongoing injury and death of desert tortoises due to vehicle strikes.

Status of the Desert Tortoise in the Action Area

We summarized the following information about desert tortoises within the action area from the biological assessment (Caltrans 2015a). Biologists conducted desert tortoise presence-absence surveys in 2008, 2011, and 2013, in accordance with the USFWS survey protocol (1992). In addition, five concentric transects were conducted around the project footprint alignment at 100, 300, 600, 1200, and 2400 feet. Focused desert tortoise presence-absence surveys were conducted in 2008, 2011 and 2012 in the Los Angeles County portion and 2011 and 2012 in the San Bernardino County portion of the action area, in accordance with the USFWS survey protocol (2010). Additionally, three concentric transects were conducted around the edge of the 100 percent coverage area at 656; 1,312; and 1,969 feet.

Between SR-14 and 240th Street East, surveyors did not observe any live desert tortoises or desert tortoise sign in 2008 and 2011. East of 240th Street East, surveyors recorded 14 burrows, four

carcasses, and eight pieces of scat in the action area. Outside of the action area, surveyors observed two live tortoises, 27 burrows, 12 carcasses, and 64 pieces of scat. In 2011, surveyors recorded an adult male about 3,000 feet east of the SR-18 bridge over the Mojave River and 1,500 feet north of the action area. In 2013, the surveyors observed another live desert tortoise approximately 1,000 feet north of the action area, around 3 miles east of Sheep Creek Road near El Mirage. The majority of desert tortoise sign and activity occurred in close proximity to the live individuals.

Desert tortoise density estimates in the HDC action area were estimated based on the Desert Tortoise Recovery Office's annual range-wide line distance monitoring surveys (Allison pers. comm. 2014 and Appendix 1). The nearest study stratum containing comparable habitat is the Fremont-Kramer Stratum. Desert tortoise densities were estimated using the most recent survey years (2011, 2012, and 2014) recorded for Fremont-Kramer and the results were averaged (USFWS 2013a, 2014, 2015a). For the area of suitable habitat between 240th Street East and I-15 and the area east of I-15, the lower confidence interval estimate was used because the habitat is of lower quality and is much more fragmented by development and disturbance than the Fremont-Kramer Stratum.

We estimated that the 2,061.93 acres of suitable tortoise habitat in the action area would likely support a total of 123 desert tortoises with 16 desert tortoises larger than 180 mm (11 west of I-15 and 5 east of I-15) and 107 desert tortoises smaller than 180 mm (74 west of I-15 and 33 east of I-15) at this time (Appendix 1). To provide an estimate of desert tortoises smaller than 180 mm in length, we used an indirect method for deriving a population estimate based on the adult population size and a life table produced for the desert tortoise on a study plot near Goffs, California (Turner *et al*. 1987).

As stated in Turner *et al*. (1987), the life table has limited predictive ability because it assumes invariant schedules of reproduction and death and constant annual rates of increase or decrease in size (Appendix 1). In addition, our use of the life table for estimating population size for individuals smaller than 180 millimeters assumes that current egg production and survival rates in the action area are similar to that on the Turner et al. (1987) study site in the early 1980s. However, differences in resource availability, threats, and a variety of other variables can result in differences in the overall mortality rate of individuals at different sites and times and thereby create differences in the proportion of the population composed of individuals in these smaller classes. When we consider this estimate in combination with the other information discussed in this section on threats and the existing condition of the action area, it is likely that the actual size of the population for these smaller size classes is much lower than that reflected in the calculation in Appendix 1.

The estimate provided above is based on the best available survey information for this area. However, given the results of the project site surveys, the published literature regarding desert tortoise densities adjacent to heavily used roads, and the degraded habitat in the action area, we expect the desert tortoise density and overall population size to be low.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that would be added to the environmental baseline. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur. In the following

analysis, we considered the general manner in which the proposed action may affect desert tortoises and then evaluated the specific components of the proposed action. In the Conclusion section of the biological opinion, we considered the overall effects of the proposed action on the reproduction, numbers, and distribution of the desert tortoise.

Capture and Translocation of Desert Tortoises

An authorized biologist will perform clearance surveys immediately prior to and after fence installation and will temporarily pen all desert tortoises and their burrows in the project area, in accordance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS guidance. An authorized biologist will pen desert tortoises and conduct health assessments. Once a desert tortoise passes a health assessment, it will be translocated to the Mojave Monkeyflower Area of Critical Environmental Concern or the southern portion of the Fremont-Kramer Critical Habitat Unit. Caltrans will monitor survivorship and movement activity for translocated desert tortoises for up to 5 years using radio telemetry.

We estimated that the 2,061.93 acres of suitable tortoise habitat would likely support a total of 123 desert tortoises (Appendix 1). We estimated that there would be 16 desert tortoises larger than 180 mm (11 west of I-15 and 5 east of I-15) and 107 desert tortoises smaller than 180 mm (74 west of I-15 and 33 east of I-15) at this time. Of these, we cannot predict the exact number that Caltrans would translocate from the action area at the time of HDC development; however, we are using these estimates as a means to perform a reasonable analysis of the greatest potential magnitude of effects. In general, we expect that Caltrans will find most, if not all, larger desert tortoises and some portion of the smaller desert tortoises that are present on the project site.

Capturing desert tortoises may cause elevated levels of stress that may render these animals more susceptible to disease or directly result in injury or mortality. Handling desert tortoises sometimes causes them to void the contents of their bladder, which may be a loss of important fluids that could be fatal (Averill-Murray 1999a in Boarman 2002). Averill-Murray (1999a in Boarman 2002) provided evidence that handling-induced voiding may adversely affect survivability even though the amount of fluid discharged is usually small. Because Caltrans will use only experienced biologists (i.e., authorized biologists) approved by the USFWS and approved handling techniques, captured desert tortoises are unlikely to suffer substantially elevated stress levels or be killed or injured.

Biologists previously considered translocation to be an ineffective tool in reducing the impacts of projects on desert tortoises and raised concerns regarding its numerous potential adverse effects (e.g., overcrowding, increased disease transmission, increased mortality, elevation of stress hormones, vulnerability to drought, etc.). Over the last 10 years, several researchers have undertaken studies to more carefully evaluate the effects of translocation on desert tortoises; some of these studies have included the monitoring of control and resident animals. Desert tortoises used as a control inhabit areas that are isolated from those occupied by translocated animals, and desert tortoises used as residents inhabit areas that contain translocated animals. These studies have indicated that translocated, resident, and control animals do not have significant differences in mortality rates or in levels of stress hormones. Additionally, the action area for the project under consideration in this biological opinion likely supports a very small number of desert tortoises, so we anticipate that any effects of translocation on either resident or translocated animals are likely to be

negligible. The potential exists that a small number of translocated or resident desert tortoises may die or be injured due to translocation and specific circumstances; however, we consider this likelihood to be extremely low.

The reproductive output of translocated desert tortoises is slightly lower than that of residents or controls for the first year after translocation. The specific situation of the proposed action mitigates these potential risks to a degree because biologists will translocate animals from severely degraded habitat to higher quality habitat for foraging and burrowing. By moving desert tortoises to an area containing higher quality habitat, we anticipate that the reproductive potential and thus, the reproductive output of the translocated desert tortoises may be higher at the recipient site a year after release.

Despite the overall success of well-planned efforts to translocate desert tortoises, moving desert tortoises is not without risk. The successful translocation of desert tortoises depends greatly on the techniques used. Research on translocated desert tortoises indicates that they tend to spend more time above ground and travel more than resident or control individuals. The extended time above ground can increase the exposure of desert tortoises to predators and weather extremes; we are aware that desert tortoises will sometimes walk along newly installed fences within their territories until they become overheated and die. For these reasons, the USFWS's (2009) guidance recommends that workers translocate desert tortoises when weather conditions are the most conducive to the desert tortoise's activity patterns (April and May and September and October, although the appropriate translocation may vary slightly before or after these months depending on the weather in any given year).

Translocation during the summer likely places desert tortoises at a greater degree of risk than during the winter because animals are more likely to become active during the cooler portions of summer days and then become overheated if they cannot find shelter as the temperature increases. Desert tortoises translocated during the winter may emerge from the burrows into which they are placed on a warm day and then be unable to find suitable shelter when the temperature drops again; these individuals are likely more vulnerable to predators and exposure to lower temperatures. Caltrans has not proposed to translocate desert tortoises only during times of the year when individuals are more active, but they have proposed to not capture, move, transport, release, or purposefully force to leave a burrow when the ambient air temperature is above 95°F. Caltrans will not capture a desert tortoise if the ambient air temperature will exceed 95°F before handling or processing is completed. If the ambient air temperature does exceed 95°F during handling or processing, Caltrans will pen the desert tortoises in a shaded environment that does not exceed 95°F and will not release until ambient air temperature declines to below 95°F.

Construction

If surveyors do not detect and translocate desert tortoises and eggs prior to the onset of ground-disturbing activities, they are likely to be injured or killed by heavy equipment. Desert tortoises smaller than 180 mm and buried eggs are very difficult to detect, and biologists are more likely to overlook these small tortoises and eggs during surveys than large desert tortoises.

The proposed action is likely to result in the injury or mortality of few, if any, desert tortoises because Caltrans will survey the project area to remove desert tortoises prior to and after completion of the exclusion fence. Biologists are more likely to miss small desert tortoises and eggs during surveys due to their small size and cryptic nature. However, the proposed action is unlikely to result in the injury or mortality of small desert tortoises and eggs because the action area likely supports a very low density of desert tortoises. Reproductive output, such as hatchlings and eggs, may be limited by density-dependent effects; for instance, desert tortoise densities below a certain threshold may cause a significant reduction in the reproductive output and similarly for a high tortoise density (USFWS 1994).

The Desert Tortoise Recovery Plan (USFWS 1994) describes a minimum viable population density of 10 adults per square mile to ensure that females are mated every year to provide for stable or increasing populations. Below that level, reproductive potential and output could be reduced by fewer mating opportunities and greater reproductive effort due to a greater distance and space between mating individuals. Our conclusion of a low tortoise density in the action area is based upon several years of declining population trends in the Western Mojave Recovery Unit, 4 years of presence/absence surveys with only two live tortoises observed in the study area, and a severely degraded habitat from illegal trash dumping and off-highway vehicle use. Due to the aforementioned factors, we expect there to be very few, if any, small desert tortoises and eggs.

Temporary exclusion fences can degrade over time or flooding and wind can damage their integrity; desert tortoises may be able to move through subsequent breaks in the fence and then travel into the construction area. Desert tortoises that move into the construction area would be unsuspected by the construction crew and may be injured or killed by heavy equipment. Caltrans has proposed to inspect the temporary exclusion fence twice per week to ensure its integrity, but they did not propose checking the fence immediately after rain events or storms to fix any damage. Consequently, the exclusion fence would have multiple chances to fail and some potential exists for desert tortoises to enter work areas through breaches in the exclusion fencing and be killed or injured. Given the frequency that Caltrans will inspect fences, the worker education program, and other avoidance and minimization measures that workers will implement, we anticipate that the level of injury and mortality would be low.

Operation and Maintenance

Caltrans proposes to implement numerous operations and maintenance activities on the HDC. Once construction is finished, a permanent desert tortoise-proof exclusion fence along the HDC transportation facility would replace the temporary exclusion fence. Fences can malfunction over time due to natural forces like flooding and erosion; a fence malfunction may allow desert tortoises to move through breaks in the fence and then travel into traffic. Any desert tortoise that travels onto the HDC roadway would most certainly be killed or injured. Caltrans has proposed maintaining the permanent fence as part of standard highway inspections, in perpetuity. It did not specifically propose checking the fence after large rain events or extreme storms to check for any breaks in the fence and fix the damage; the HDC will be a permanent transportation facility, so there would be multiple opportunities for fence malfunctions. Because of the low density of desert tortoises in the area and the fact that fence malfunctions would be localized, temporary, and infrequent over the life

of the project, we anticipate that few desert tortoises would be killed on the HDC during operations and maintenance.

Introduction of Invasive and Non-native Plant Species

Invasive and non-native plant species have evolved outside of the area into which they are introduced, so native herbivores do not recognize these species. Therefore, herbivory does not control these species and introduced species proliferate in the novel area. In addition, invasive and non-native plant species may outcompete native plant species for nutrients, water, and space. Some invasive and non-native plant species can cover the ground with dense vegetation growth and persist in a dried condition for months after the growing season. These conditions increase the risk that a wildfire caused by a lightning strike or human activity would spread farther and burn hotter than under natural conditions. Fires have killed desert tortoises that were outside of their burrows.

We cannot predict the degree to which invasive and non-native species would proliferate within or spread beyond the boundaries of the action area for several reasons. For example, above-average rainfall immediately after construction may encourage the spread of invasive and non-native species whereas drought may have the opposite effect. We cannot predict whether project equipment would introduce new species or whether such new species would be able to germinate, grow, and reproduce onsite.

The biological assessment (Caltrans 2015a) notes that 21 invasive and non-native plants species occur within the study area, and given the proximity of an interstate and multiple highways and state routes to this project, vehicles traveling along these routes would likely be a constant source of introductions of invasive and non-native plant species within the action area. Currently, there are no known management plans covering the project area for invasive and non-native plant species management. However, Caltrans has committed to complying with a weed abatement program that will minimize the potential for non-native introductions. The objective of the weed management program is to ensure that the presence of weed populations on and adjacent to the project site do not increase due to the project. Because of available technology, consistently and persistently applied, we predict that the proposed project would not lead to an increase in the number or amount of invasive and non-native species in the action area.

Increased Subsidies for Predators

Human activity in the desert often attracts common ravens and coyotes. Consequently, the proposed action has the potential to attract common ravens and coyotes; additional food sources for predators from roadkill or improperly secured trash may lead to an increase in their reproductive rates. Increased numbers of predators would likely lead to further predation on desert tortoises near the project. Caltrans proposes to secure trash and remove roadkill promptly to eliminate it as a source of food and ensure that water used for construction does not create standing water, thereby reducing the attractiveness of the area to predators, such as common ravens and coyotes. Implementation of these proposed measures should reduce the attraction of common ravens and coyotes to the work area.

Habitat Loss and Fragmentation

We estimated that a total of 1,554.83 acres of suitable desert tortoise habitat would be permanently lost due to this project. Desert tortoise home ranges may cross the action area, so the construction of the HDC transportation facility might separate individuals north and south of the facility into different populations by not allowing interbreeding and genetic mixing. Desert tortoises in this area are already limited in their ability to interbreed east-west due to numerous major roadways such as I-15 and US 395. Because desert tortoises have a continuous-distribution model of gene flow, separating individuals into isolated populations may have a deleterious effect on their genetic fitness. Over time, an isolated population with few individuals might have a reduced genetic diversity or reach a genetic bottleneck selecting certain alleles until they become fixed, thus reducing the genetic fitness of that population. A reduced genetic fitness can lead to decreased resistance to diseases and lower adaptability to environmental stochasticity and stressors. However, Caltrans has proposed the construction of 65 bottom sand-filled culverts along the transportation facility in tortoise habitat and permanent fencing that will lead desert tortoises toward culvert undercrossings. These culverts will decrease the probability of separate populations of northern and southern individuals and will allow interbreeding and genetic mixing of individuals on both sides of the transportation facility.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action 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.

Most of the land in the action area is non-federally owned and held privately, while small portions are owned by the Federal government and managed by the BLM. We are unaware of any non-federal actions that are reasonably certain to occur in the action area (Johnson pers. comm. 2015b). Caltrans holds an easement for the operation and maintenance of the interstates.

Any future actions on Federal lands managed by the BLM would be subject to the consultation requirements of section 7(a)(2) of the Act and are therefore not considered cumulative effects. The BLM would be required to consult with the USFWS on any activity that it authorizes, funds, or implements on its lands under section 7(a)(2) of the Act. Therefore, we do not anticipate any cumulative effects associated with the proposed action.

CONCLUSIONS

Desert Tortoise

As we stated previously in the biological opinion, "jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 Code of Federal Regulations 402.02). This regulatory definition focuses on how the proposed action would affect the reproduction, numbers, or distribution of the species under consideration in the biological opinion. For that reason, we have

used those aspects of the desert tortoise's status as the basis to assess the overall effect of the proposed actions on the species.

Additionally, we determine whether a proposed action is likely "to jeopardize the continued existence of the species" through an analysis of how a proposed action affects the listed taxon within the action area in relation to the range of the entire listed taxon. For the desert tortoise, this process involves considering the effects at the level of the action area, then at the level of the recovery unit, and then finally for the range of the listed taxon. Logically, if a proposed action is unlikely to cause a measurable effect on the listed taxon within the action area, it is unlikely to affect the species throughout the recovery unit or the remainder of its range. Conversely, an action with measurable effects on the listed entity in the action area may degrade the status of the species to the extent that it is affected at the level of the recovery unit or range-wide.

In the following sections, we will synthesize the analyses contained in the Effects of the Action section of this biological opinion to determine how it affects the reproduction, number, and distribution of the desert tortoise. We will then assess the effects of the proposed action on the recovery of the species and whether it is likely to appreciably reduce the likelihood of both the survival and recovery of the desert tortoise.

Reproduction

Caltrans will move all reproductive desert tortoises from the project area to translocation recipient sites approved by the USFWS. Translocated desert tortoises may exhibit decreased reproduction in the first year following translocation, but based on research conducted by Nussear *et al.* (2012), the reproductive rates of translocated desert tortoises are likely to be the same as those of resident animals in subsequent years. In addition, the action area's low density is likely hampering reproduction due to decreased frequency of mating contacts, and because translocated animals will be moved from a severely degraded habitat to higher quality habitat, the reproductive potential will likely increase for all translocated desert tortoises. Thus, the reproductive output of the translocated desert tortoises may be higher at the recipient site due to increased mating opportunities and higher quality habitat for forage and burrowing.

Desert tortoises are well adapted to highly variable and harsh environments and their longevity helps compensate for their fluctuating annual reproductive success (USFWS 1994a). Due to the adaptability and longevity of fertility in female desert tortoises, reproduction in the local area should not be impeded over time. Construction would occur over a brief period in each segment relative to the reproductive time span of female desert tortoises.

Because the HDC transportation facility would span 63 miles, it has the potential to separate populations and individuals north and south of the project. Over time, isolated populations with few individuals might have decreased genetic diversity or may reach a genetic bottleneck (Wilcox and Murphy 1985; USFWS 2011). Alleles may become fixed from the genetic bottleneck, thus reducing the genetic diversity and fitness of the population. A reduction in genetic diversity and fitness can lead to a decreased ability to resist diseases and lower adaptability to environmental stochastic factors and stresses. Because Caltrans will install culverts that will allow desert tortoises to freely move between both sides of the project, we expect that genetic differences would not accumulate

between populations north and south of the project. Consequently, the proposed action is not likely to have a measurable effect on reproduction of desert tortoises that live near the action area.

Numbers

The surveys numbers from the biological assessment allowed us to make an estimate that 16 large (i.e., desert tortoises larger than 180 mm) and 107 small (i.e., smaller than 180 mm) desert tortoises are currently present within the action area. We recognize that the information used for these estimates represents a single point in time and the number of individuals in these areas may change by the onset of construction due to fluctuations in environmental factors such as annual rainfall. Consequently, these numbers represent only an estimate meant to reasonably characterize and analyze the magnitude of effects; the overall number of animals on site may be different.

The proposed action is likely to result in the injury or mortality of few, if any, desert tortoises because Caltrans will survey the project area to remove desert tortoises prior to construction and after completion of the exclusion fence. Even though biologists are more likely to miss small desert tortoises and eggs during surveys due to their small size and cryptic nature, the proposed action is unlikely to result in injury or mortality of many small desert tortoises and eggs. Few, if any, large reproductive desert tortoises occur in the action area, so we expect that small desert tortoises and eggs would be uncommon.

Maintenance and operation activities have a low potential to kill desert tortoises given that few desert tortoises reside in the area, and because desert tortoise mortalities and injuries would only occur if a fence malfunctioned, such as during extreme weather conditions. Caltrans will inspect and fix, as needed, the temporary and permanent exclusion fence, so we anticipate desert tortoise mortalities and injuries would occur infrequently, if ever, due to maintenance and operation activities.

Although the proposed action is unlikely to result in the mortality of desert tortoises, we used a conservative approach to demonstrate the effect of the proposed action on desert tortoises in the Western Mojave Recovery Unit by assuming that HDC transportation facility construction would result in the mortality of all large desert tortoises residing in the action area. In this scenario, the loss of 16 larger desert tortoises from the estimated 76,644 present in the recovery unit (see USFWS 2014) would comprise 0.02 percent of the population (i.e., 16/76,644 x 100 = 0.02). This quantification would present a worst-case scenario because we expect that far fewer than 16 large desert tortoises are likely to be killed or injured as a result of the proposed action. Because we anticipate that implementation of the proposed action would injure or kill far less than 0.02 percent of the number of desert tortoises in the Western Mojave Recovery Unit, we conclude that it would have a negligible effect on the number of desert tortoises in the recovery unit. Subsequently, we also anticipate a negligible effect on the range-wide abundance and recovery of the species.

Distribution

The proposed action would prevent desert tortoises from using 1,554.83 acres of degraded habitat between SR-14, SR-18, and I-15 in the Western Mojave Recovery Unit. As we noted in the Status of the Desert Tortoise section of this biological opinion, the USFWS estimates that approximately 5,595,469 acres of modeled habitat remain in this recovery unit. Consequently, the proposed action

would result in the permanent loss of approximately 0.028 percent of the habitat in the Western Mojave Recovery Unit (1,554.83 acres/5,595,469 acres x 100) and the proposed action would have an even smaller effect on the amount of habitat available range-wide.

Effects on Recovery

The construction of the transportation corridor is affecting 2,061.93 acres of desert tortoise habitat in the Western Mojave Recovery Unit and 1,554.83 of those acres will be permanently disturbed. This loss of habitat will occur within an area that currently contains few desert tortoises and degraded habitat. Although the habitat in the Western Mojave Recovery Unit is important to the recovery strategy for the desert tortoise, the permanent effects associated with this project are exceedingly small when considered in the context of the recovery unit as a whole.

Caltrans has also committed to offsetting the loss of desert tortoise habitat by paying compensation at a 1 to 1 ratio for permanent, adverse effects (1,554.83 acres x 1 = 1,554.83 acres). Compensation will include one of the following measures or a combination of the following: 1) acquisition of land within a Desert Wildlife Management Area and/or 2) contribution of an equivalent monetary value towards recovery actions in Western Mojave Recovery Unit. Recovery actions can include restoration, closing roads, fencing installation or repairs, and purchase and discontinued use of BLM grazing allotments. All acquisitions or recovery actions associated with Caltrans' compensation requirements will be performed within the Western Mojave Recovery Unit. If acquiring lands or contributing monetarily to recovery actions, Caltrans will work closely with USFWS in selecting lands most beneficial to the conservation and recovery efforts. Caltrans will acquire compensation lands prior to initiation of field activities associated with construction of the HDC transportation facility, unless Caltrans can provide assurances in the form of a financial security. Caltrans will coordinate with the USFWS to determine the financial security needed to complete compensation obligations.

After reviewing the current status of the species, the environmental baseline for the action area, the effects of the proposed actions, and the cumulative effects, it is the biological opinion of the USFWS that the HDC transportation facility, as proposed, is not likely to jeopardize the continued existence of the desert tortoise. We reached this conclusion because:

1. The proposed action will not affect the reproductive capacity of desert tortoises in the action area, the Western Mojave Recovery Unit, or range-wide because Caltrans will move most large (reproductive) individuals to recipient sites containing better habitat. Research has demonstrated that such movements have only minor, short-term effects on reproductive capacity and the better quality of habitat in the recipient areas is likely to increase reproductive output overall.

2. The proposed action will have negligible adverse effect on the number of desert tortoises in the Western Mojave Recovery Unit and range-wide because the number of desert tortoises likely to reside in the action area is low, and Caltrans will implement numerous measures to minimize injury and mortality during the transportation facility construction and operation.

3. The proposed action will have negligible effects on the distribution of the desert tortoise because it would result in the habitat loss of approximately 0.028 percent in the Western Mojave Recovery Unit and even less range-wide. The loss of habitat would not affect desert tortoise movement or dispersal.

4. The effects of the proposed action will have minimal effects on the conservation function of the Western Mojave Recovery Unit; additionally, Caltrans will acquire desert tortoise habitat within a BLM Desert Wildlife Management Area at a 1 to 1 ratio or contribute monetarily to recovery actions within the recovery unit to offset these effects. This will have a beneficial effect on the recovery of the desert tortoise by consolidating and/or improving management of desert tortoises within areas identified as important to conservation of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the USFWS as an intentional or negligent act or omission that creates the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the protective measures proposed by Caltrans and the terms and conditions of this incidental take statement.

The measures described below are non-discretionary; Caltrans must make these terms and conditions a mandatory condition of its proposed project for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activities covered by this incidental take statement. If Caltrans fails to require adherence to the terms and conditions of the incidental take statement through enforceable terms that are added to the proposed project, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the USFWS as specified in the incidental take statement [50 Code of Federal Regulations 402.14(i)(3)]. We also note that, because the USFWS considered the effects of the protective measures proposed by Caltrans in its analysis of the proposed action, these measures are also non-discretionary.

Construction of the HDC transportation facility

We estimated that 16 large and 107 small desert tortoises are currently present within the action area. Determining the exact number present within the project area at this time is not possible because desert tortoises are cryptic (i.e., individuals spend much of their lives underground or concealed under shrubs); they are inactive in years of low rainfall; and their numbers and distribution within the

action area may have changed since the surveys were completed and are likely to change further over the course of project implementation because of hatchings, deaths, immigration, and emigration. The numbers of hatchlings and eggs are even more difficult to quantify because of their small size, the location of eggs underground, and the fact that their numbers vary depending on the season; that is, at one time of the year, eggs are present but they become hatchlings later in the year.
Determining the amount or extent of the forms in which the take is likely to occur (killed, injured, or captured) is also difficult. As we noted previously, Caltrans would likely capture and translocate most of the large individuals (i.e., individuals greater than 180 mm in length) within the project area from harm's way. Furthermore, Caltrans proposes to implement measures that will minimize the mortality or injury of desert tortoises. However, occasionally even large animals remain undetected during monitoring; any undetected animals are likely to be killed or injured during construction. Some potential also exists for individuals to re-enter work areas through damaged fences. Some carcasses may be inadvertently buried by heavy equipment and others may be scavenged; consequently, not all animals that are killed or injured during construction are likely to be detected.

Therefore, we anticipate that all desert tortoises within the project area (i.e., the proposed HDC transportation facility) are likely to be taken during construction. We anticipate that most desert tortoises within this area are likely to be captured and translocated to nearby suitable habitat; however, the potential exists that desert tortoises may be killed or injured during implementation of this portion of the proposed action. Because we cannot precisely quantify the number of individuals that are likely to be killed, injured, or captured during construction of the proposed project, we will consider the amount or extent of take to be exceeded if two desert tortoises are killed or injured within the project area. We are not establishing a re-initiation criterion for the number of large or small desert tortoises that would be moved out of harm's way during construction. Additionally, we are not establishing a re-initiation criterion for the loss of eggs.

Operations and Maintenance

We cannot accurately predict how many desert tortoise may attempt to enter the completed HDC facility through damaged fences during Operations and Maintenance, or whether animals that gain access to the transportation facility will be killed or moved from harm's way. We acknowledge that Caltrans will not find every animal killed or injured during project activities. For these reasons, we will consider the amount or extent of take to be exceeded if two desert tortoises are killed or injured within the transportation facility or along the temporary or permanent fence in a calendar year. We are not establishing a re-initiation criterion for the number of desert tortoises that would be moved out of harm's way during operations and maintenance.

The exemption provided by this incidental take statement to the prohibitions against take contained in section 9 of the Act extends only to the action area as described in the Environmental Baseline section of this biological opinion.

REASONABLE AND PRUDENT MEASURE

The USFWS believes the following reasonable and prudent measures are necessary and appropriate to minimize take of desert tortoises during the implementation (i.e., construction, maintenance, and operation) of the HDC project:

1. Caltrans must ensure that the level of incidental take anticipated in this biological opinion is commensurate with the analysis contained herein.

2. Caltrans must complete a disposition plan for each translocated desert tortoise and should follow USFWS's guidance with site-specific exceptions as described in disposition plan.

3. Caltrans must reduce the potential for desert tortoises to be injured or killed by: flagging burrows before exclusion fence installation, overheating or predation after translocation, entering the construction area if a storm damages the exclusion fence, by leaving a temporary pen during and after a storm event, by reducing the likelihood that common ravens would nest onsite, and by mechanical clearing of weeds.

Our evaluation of the proposed action includes consideration of the protective measures proposed by Caltrans in the biological assessment and re-iterated in the Description of the Proposed Action section of this biological opinion. Consequently, any changes in these protective measures may constitute a modification of the proposed action that causes an effect to the desert tortoise that was not considered in the biological opinion and require re-initiation of consultation, pursuant to the implementing regulations of the section 7(a)(2) of the Act (50 Code of Federal Regulations 402.16).

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Caltrans must comply with the following terms and conditions, which implement the reasonable and prudent measures described in the previous section, and the reporting and monitoring requirements. These conditions are non-discretionary.

1. The following term and condition implements reasonable and prudent measure 1:

   To ensure that the proposed protective measures are effective and are being properly implemented, Caltrans must contact the USFWS immediately if it becomes aware that a desert tortoise has been killed or injured by project activities. At that time, Caltrans must review the circumstances surrounding the incident with the USFWS to determine whether the proposed protective measures and terms and conditions are effective and properly implemented or whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that the proposed protective measures and any appropriate terms and conditions of this biological opinion have been and continue to be fully implemented.

2. The following term and condition implements reasonable and prudent measure 2:

   Caltrans must complete a disposition plan, in accordance with the Health Assessment Handbook (USFWS 2013b) or most up-to-date USFWS guidelines, for each translocated desert tortoise and should follow USFWS's guidance with site-specific exceptions as described in disposition plan.

3. The following term and condition implements reasonable and prudent measure 3:

a. Caltrans must flag burrows before exclusion fence installation to show construction crews areas that must be avoided or where there should be more caution.

b. If desert tortoises are translocated during the spring or fall active period, Caltrans must monitor individuals for at least 2 days to ensure their safety. If desert tortoises are translocated during the summer or winter inactive period, Caltrans must monitor these individuals for at least 7 days to ensure their safety. If a desert tortoise does not settle into a burrow within the respective time periods listed above, Caltrans must install shelters to provide shade as described in USFWS (2009) or most up-to-date USFWS guidance. The shelters must be a light color and larger than the cross-section of a large desert tortoise to allow for air flow; this design will reduce the likelihood that the shelter will concentrate additional heat. If a desert tortoises activity level seems to be causing it physiological stress (e.g., foaming from the mouth), the authorized biologist must immediately place the animal in the shade to reduce its body temperature. After temperature falls below 95°F (and is unlikely to rise again before dawn), the desert tortoise must again be placed in the shade of a shrub or burrow; monitoring must resume the following day before the desert tortoise becomes active. If the desert tortoise again begins to experience hyperthermia, the authorized biologist must place it in a clean holding container, bring it to a location with controlled temperature, and contact the USFWS for further guidance.

c. Caltrans must inspect the temporary and permanent desert tortoise-proof exclusion fences immediately after heavy rain events to ensure its integrity. If Caltrans cannot repair the fence immediately after a storm, Caltrans must inspect the area inside the fence to assess whether desert tortoises gained entry prior to repair. Caltrans must translocate any desert tortoises found inside the exclusion fence at this time as described in this biological opinion.

d. Caltrans must immediately create multiple openings in temporary pens to allow desert tortoise movement in the event of rain.

e. Caltrans must inspect any machinery that has been idle for more than a day during the nesting season (generally February through May) to ensure that common ravens have not begun to construct a nest. Caltrans must remove any common raven nest before they lay eggs. If the birds lay eggs before the nest is removed, Caltrans must examine the area under the nest on a daily basis for as long as it is active to determine if the occupants are eating desert tortoises; if desert tortoise carcasses are observed, Caltrans must contact the USFWS within 24 hours. Caltrans must remove the nest after the young have fledged.

f. Common raven inactive nests must be removed from any permanent structures along the HDC in a timely manner throughout the operations phase of this project.

g. If Caltrans determines that the mechanical removal of non-native and invasive plants is necessary and desert tortoises may be present, Caltrans must conduct this work with an authorized biologist present. The authorized biologist must inspect the work

area for desert tortoises and translocate them as described in this biological opinion prior to the onset of mechanical clearing.

REPORTING REQUIREMENTS

Within 60 days of the completion of the proposed action, Caltrans must provide a report to the USFWS that provides details on the effects of the action on the desert tortoise. Specifically, the report must include information on any instances when desert tortoises were killed, injured, or handled, the circumstances of such incidents, and any actions undertaken to prevent similar mortalities or injuries from re-occurring. In addition, Caltrans must provide an annual report by January 31 each year during the construction period with the above information; if animals are moved from harm's way during this period, Caltrans must include that information in these reports.

We also request that Caltrans provide us in the final and annual reports the names of any biological monitors who assisted the authorized biologists and an evaluation of the experience they gained on the project. This information would provide us with additional reference material in the event these individuals are submitted as potential authorized biologists for future projects.

DISPOSITION OF DEAD OR INJURED DESERT TORTOISES

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(l)(v), upon locating a dead or injured desert tortoise, initial notification within 3 working days of its finding must be made by telephone and in writing to the Palm Springs Fish and Wildlife Office (760-322-2070). The report must include the date, time, location of the carcass, a photograph, cause of death or injury, if known, and any other pertinent information.

Caltrans must take care in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. Caltrans must transport injured desert tortoises to a qualified veterinarian for treatment. Should any treated desert tortoise(s) survive, the Caltrans must contact the USFWS regarding the final disposition of the tortoise(s).

Caltrans must take care in handling dead specimens to preserve biological material in the best possible state for later analysis, if such analysis is needed. The USFWS will provide the appropriate guidance when Caltrans provides notice that a desert tortoise has been killed by project activities.

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.

We recommend that Caltrans refrain from translocating desert tortoises during their period of summer or winter inactivity by avoiding occupied burrows until desert tortoises become active again in the fall or spring.

RE-INITIATION NOTICE

This concludes formal consultation on the High Desert Corridor Transportation Facility construction in Los Angeles and San Bernardino Counties. As provided in 50 Code of Federal Regulations 402.16, re-initiation of formal consultation is required where discretionary Federal involvement or control over the 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 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, the exemption issued pursuant to section 7(o)(2) will have lapsed and any further take would be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending re-initiation.

If you have any questions regarding this biological opinion, please contact Tara Callaway of my staff at (760)322-2070, extension 217 or by e-mail at Tara_Callaway@fws.gov.

APPENDICES

1. Calculations used to estimate the number of desert tortoises in the project area.

2. Solar projects for which the U.S. Fish and Wildlife Service has issued biological opinions or incidental take permits.

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Johnson, J. 2016c. Personal communication via email from Jeff Johnson of California Department of Transportation. Dated March 11.

Appendix 1. Calculations

Estimation of the Number of Desert Tortoises in the Project Area.

The HDC transportation facility action area covers 4,718.96 acres with 1,993.95 acres occurring between SR-14 and 240th Street East, which is not considered occupied by desert tortoise. A total of 2,725.00 acres occurs east of 240th Street East, the western boundary of occupied tortoise habitat within the transportation facility. The HDC action area contains 1,977.15 acres between 240th Street East and I-15 and 747.85 acres east of I-15. Between 240th Street East and I-15 and then east of I-15, 505.73 acres and 156.20 acres, respectively, are highly disturbed, developed, or are habitat types not suitable for desert tortoise. A total of 2,061.93 acres within the HDC transportation facility action area contain suitable tortoise habitat with 1,470.28 acres west of I-15 and 591.65 acres east of I-15.

Our calculations include 2,061.93 acres of suitable tortoise habitat within the action area, and we used density estimates of desert tortoises larger than 180 mm per square kilometer from data collected in 2011, 2012, and 2014 in the Fremont-Kramer Stratum (USFWS 2013, 2014, and 2015). We concluded that the desert tortoise density in the action area was likely lower than that of the surrounding Fremont-Kramer Stratum due to the severe habitat degradation caused from illegal trash dumping and off-highway vehicle use. In our calculations, we used the lower 95 percent confidence interval of 1.9 desert tortoises per square kilometer to compute the number of desert tortoises in the action area.

1 square kilometer = ~247 acres

Desert tortoises west of I-15:

$$\frac{\text{X desert tortoises on site}}{\text{1.90 desert tortoises on 1 km}^2} = \frac{\text{1,470.28 acres on site}}{\text{247 acres in 1 km}^2} = 11.31 \text{ desert tortoises}$$

We rounded the 11.31 to 11 desert tortoises larger than 180 mm.

Turner *et al.* (1987) determined that desert tortoises smaller than 180 mm comprised approximately 87 percent of a population of desert tortoises at Goffs in eastern San Bernardino County. To account for desert tortoises smaller than 180 mm, which are generally not detected by surveyors, we applied the following equation:

$$\frac{\text{11 desert tortoise >180 mm on site}}{\text{X total desert tortoises on site}} = \frac{\text{13\% of total}}{\text{100\%}} = 84.62 \text{ desert tortoises}$$

We rounded 84.62 to 85 total desert tortoises west of I-15. Since we estimated that 11 animals are larger than 180 mm, we then estimated that 74 are smaller than 180 mm.

Desert tortoises east of I-15:

$$\frac{\text{X desert tortoises on site}}{\text{1.90 desert tortoises on 1 km}^2} = \frac{\text{591.65 acres on site}}{\text{247 acres in 1 km}^2} = 4.55 \text{ desert tortoises}$$

We rounded the 4.55 to 5 desert tortoises larger than 180 mm.

Turner *et al.* (1987) determined that desert tortoises smaller than 180 mm comprised approximately 87 percent of a population of desert tortoises at Goffs in eastern San Bernardino County. To account for desert tortoises smaller than 180 mm, which are generally not detected by surveyors, we applied the following equation:

$$\frac{\text{5 desert tortoise >180 mm on site}}{\text{X total desert tortoises on site}} = \frac{\text{13\% of total}}{\text{100\%}} = 38.46 \text{ desert tortoises}$$

We rounded 38.46 to 38 total desert tortoises east of I-15. Since we estimated that 5 animals are larger than 180 mm, we then estimated that 33 are smaller than 180 mm. A total of 123 tortoises are estimated to occur in the HDC action area with 16 desert tortoises larger than 180 mm and 107 desert tortoises smaller than 180 mm.

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Appendix 2. Solar projects for which the U.S. Fish and Wildlife Service has issued biological opinions or incidental take permits.

The following table summarizes information regarding the solar projects that have undergone formal consultation with regard to the desert tortoise. In the Citations column, a single reference indicates that the acres of desert tortoise habitat and number of desert tortoises are estimates from the biological opinion. When the column includes two citations, the first is for the acreage of habitat and the estimated number of desert tortoises from the biological opinion and the second is for number of desert tortoises that were found onsite prior to or during construction.

Table 4. Solar projects which have undergone formal consultation in desert tortoise recovery units.

Project and Recovery Unit	Acres of Desert Tortoise Habitat	**Desert Tortoises Estimated[1]**	**Desert Tortoises Observed[2]**	**Citations[3]**
Eastern Mojave				
Ivanpah Solar Electric Generating System	3,582	1,136	175[7]	USFWS 2011a, Davis 2014
Stateline Solar	1,685	947	34	USFWS 2013a, LaPre 2014
Silver State North – NV	685	14[6]	4	USFWS 2010a, Cota 2013
Silver State South – NV	2,427[4]	1,020[4]	152	USFWS 2013a, Cota 2014
Amargosa Farm Road – NV	4,350	4[6]	-	USFWS 2010e
Western Mojave				
Abengoa Harper Lake	Primarily in abandoned agricultural fields	4[6]	-	USFWS 2011b
Chevron Lucerne Valley	516	10	-	USFWS 2010b
Northeastern Mojave				
Nevada Solar One - NV	400	[5]	[5]	Burroughs 2012, 2014
Copper Mountain North - NV	1,400	30[5]	30[5]	Burroughs 2012, 2014
Copper Mountain - NV	380	[5]	[5]	Burroughs 2012, 2014
Moapa K Road Solar - NV	2,141	186	157	USFWS 2012, Burroughs 2013
Colorado				
Genesis	1,774	8	0	USFWS 2010c, Fraser 2014a
Blythe	6,958	30	0	USFWS 2010d, Fraser 2014b
Desert Sunlight	4,004	56	7	USFWS 2011c, Fraser 2014a

Project and Recovery Unit	Acres of Desert Tortoise Habitat	Desert Tortoises Estimated[1]	Desert Tortoises Observed[2]	Citations[3]
McCoy	4,533	15	0	USFWS 2013b, Fraser 2014b
Desert Harvest	1,300	5	-	USFWS 2013c
Rice	1,368	18	1	USFWS 2011d, Fraser 2014a
Total	37,503	**3,483**	**560**	

1. The numbers in this column are not necessarily comparable because the methodologies for estimating the numbers of desert tortoises occasionally vary between projects. When available, we included an estimate of the numbers of small desert tortoises.

2. This column reflects the numbers of desert tortoises observed within project areas. It includes translocated animals and those that were killed by project activities. Project activities may result in the deaths of more desert tortoises than are found.

3. The first citation in this column is for the biological opinion or incidental take permit and is the source of the information for both acreage and the estimate of the number of desert tortoises. The second is for the number of desert tortoises observed during construction of the project; where only one citation is present, construction has not begun or data is unavailable at this time.

4. These numbers include Southern California Edison's Primm Substation and its ancillary facilities.

5. These projects occurred under the Clark County Multi-species Habitat Conservation Plan; the provisions of the habitat conservation plan do not require the removal of desert tortoises. We estimate that all 3 projects combined will affect fewer than 30 desert tortoises.

6. These estimates do not include smaller desert tortoises.

7. In the table attached to the electronic mail, the number of desert tortoises translocated from the project site is represented by the total number of translocated animals minus the number of animals born in the holding pens.

The USFWS completed biological opinions for the Calico and Palen projects. Caltrans for the Calico project, which was located in the Western Mojave Recovery Unit, has abandoned the project and the BLM has withdrawn the request for consultation (BLM 2013). The Palen project, which is located in the Colorado Desert Recovery Unit, has had several owners; most recently, the project proponent (Palen Solar Holdings, LLC) submitted a letter to the California Energy Commission in which it withdrew its application (California Energy Commission 2014). Another company may pursue a solar project at this location, although it has not filed applications with the BLM and California Energy Commission to date (Fraser 2014c).

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List of Figures

Figure 1. Geographic location of the HDC. 4
Figure 2. Log-transformed linear trends of desert tortoise densities by conservation area recovery units. Data for the Upper Virgin River Recovery Unit are from 1999 to the present; data for all other recovery units are from 2004 to the present. 14
Figure 3. Critical habitat units of the desert tortoise, linkages between conservation areas for the desert tortoise, and the aggregate stress that multiple, synergistic threats place on desert tortoise populations. 17
Figure 4. Invasion risk of non-native invasive plant species within the range of the desert tortoise. . 19

List of Tables

Table 1. HDC permanent and temporary impacts in desert tortoise habitat 5
Table 2. Percent change of desert tortoise numbers within conservation area recovery units between 2004 and 2012. 21
Table 3. Remaining modeled desert tortoise habitat within each conservation area recovery unit after impervious surface acreage is subtracted from modeled acreage of desert tortoise potential habitat. 21
Table 4. Solar projects which have undergone formal consultation in desert tortoise recovery units. 47

Appendix M Project Level Conformity Determination Letter

U.S.Department of Transportation
Federal Highway Administration

Federal Highway Administration
California Division

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (fax)

January 04, 2016

In Reply Refer To:
HDA-CA

Ms. Carrie Bowen
District Director
California Department of Transportation
District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012-3606

Attention: Andrew Yoon

Dear Ms. Bowen:

SUBJECT: Project Level Conformity Determination for the High Desert Corridor (CTIPS ID # LA0G665 & LA0G1099) Project

On November 18, 2015, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a complete request for a project level conformity determination for the High Desert Corridor Project. The project is in an area that is designated Non-Attainment or Maintenance for CO, Ozone and Particulate Matter (PM_{10}, $PM_{2.5}$).

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the Southern California Association of Governments' (SCAG) current Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), as amended. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 CFR 93.116 and 93.123, the localized $PM_{2.5}$ and PM_{10} analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the High Desert Corridor Project conforms with the State Implementation Plan (SIP) in accordance with 40 CFR Part 93.

If you have any questions pertaining to this conformity finding, please contact Joseph Vaughn at (916) 498-5346 or by email at Joseph.Vaughn@dot.gov.

RECEIVED
JAN 11 2016

Sincerely,

For: Vincent P. Mammano
Division Administrator

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