INFORMATION HANDOUT

For Contract No. 08-0R1204
At 08-SBd-40-0.0/R25.0

Identified by
Project ID 0812000026

PERMITS

California Department of Fish and Wildlife

U.S. Fish and Wildlife Service

United States Army Corps of Engineers

Non-Reporting Nationwide 404

WATER QUALITY

California Regional Water Quality Control Board

Lahontan RegionBoard Order No. R6V-2016-0039

MATERIALS INFORMATION

Materials Report

List of Existing Traffic Management System Elements

DESERT TORTOISE

Information Brochure for Protection of Desert Tortoise

ELECTRONIC FILES

0R120-SlopeStakes.pdf

080r120_design_hor_ver_alg01_xsec.xml

080r120_design_model01.xml

080r120_og01.xml

401-800X-section.pdf

801-1200X-section.pdf

1201-1456X-section.pdf

FINAL-X-SECTIONS.DGN

California Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd Suite C-220
Ontario, CA 91764www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

May 18, 2016

Mr. Craig Wentworth
California Department of Transportation
464 West 4th Street
San Bernardino, CA 92401

Subject: Final Lake or Streambed Alteration Agreement
Notification No. 1600-2015-0266-R6
I-40 MEDIAN POST MILE 0-25

Dear Mr. Wentworth:

Enclosed is the final Streambed Alteration Agreement (Agreement) for the I-40 Median Post Mile (Project). Before the California Department of Fish and Wildlife (Department) may issue an Agreement, it must comply with the California Environmental Quality Act (CEQA). In this case, the Department, acting as a responsible agency, filed a Notice of Determination (NOD) within five working days of signing the Agreement. The NOD was based on information contained in the Mitigated Negative Declaration for the Re-Grade Median Cross Slopes, I-40 East of Fort Cady Road Overcrossing (Post Mile 0.0/25.0) prepared by the lead agency.

Under CEQA, the filing of an NOD triggers a 30-day statute of limitations period during which an interested party may challenge the filing agency's approval of the Project. You may begin the Project before the statute of limitations expires if you have obtained all necessary local, state, and federal permits or other authorizations. However, if you elect to do so, it will be at your own risk.

If you have any questions regarding this matter, please contact Heather Weiche, Environmental Scientist at 909-980-8607 or **heather.weiche@wildlife.ca.gov**.

Sincerely,

for Bruce Kinney
Environmental Program Manager

cc: Heather Weiche

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
INLAND DESERTS REGION
3602 INLAND EMPIRE BOULEVARD, SUITE C-220
ONTARIO, CA 91764
(909) 484-0167

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2015-0266-R6

CALIFORNIA DEPARTMENT OF TRANSPORTATION
INTERSTATE 40 MEDIAN POST MILE 0-25

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and the California Department of Transportation (Caltrans), as represented by Scott Quinnell (Permittee).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified CDFW on December 28, 2015 that Permittee intends to complete the Project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the Project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the Project in accordance with the Agreement.

PROJECT LOCATION

The Project is located along Interstate 40 (I-40) from the city of Barstow to approximately 6 miles east of the community of Newberry Springs, San Bernardino County, California. The Project area extends from Post Mile (PM) 0.0 at the intersection of Interstate 15 and Interstate 40 to PM 25.0. The geographic coordinates near the west end of the study area are 34.88642° North latitude and -117.00787° West longitude; near the middle of the study area are 34.84056° North latitude and -116.79829° West longitude; and near the east end of the study area are 34.81121° North latitude and -116.58144° West longitude. The project impact footprint is on lands mapped on the following United States Geological Survey (USGS) 7.5 minute topographic quadrangles:

Barstow, Nebo, Daggett, Minneola, Newberry Springs, and Troy Lake. Specifically, the Township, Range, and Section numbers are as follows:

Table 1. Township, Range, and Section Data

USGS Quadrangle	Township	Range	Section
Barstow	9 North	1 West	8
Nebo	9 North	1 West	9, 10
Daggett	9 North	1 West	13, 14, 15
	9 North	1 East	19, 20, 21
Minneola	9 North	1 East	5, 22, 25, 26, 27
	9 North	2 East	28, 29, 30, 34
Newberry Springs	8 North	3 East	1, 2, 31, 32, 33, 34, 35
	9 North	2 East	35, 36
Troy Lake	8 North	4 East	1, 5, 6

PROJECT DESCRIPTION

The Project includes re-grading the median cross slopes of I-40 inside the clear recovery zone from existing 6:1 or steeper gradients in the direction of 10:1 gradients or flatter, including associated modifications to existing drainage improvements in the highway median (Project).The Project area contains 86 jurisdictional drainages as shown in Figure 1-Impact Table. The drainages on the western portion of the study area flow into the Mojave River and the drainages on the eastern portion flow into Troy Dry Lake. Other work activities will include:

- Work off the paved roadway – regrade median cross slopes, drainage modifications and improvements in the median, preserve and improve the existing California Highway Patrol Crossovers, remove and install metal beam guard rails.

- Trenching, grading, or other ground disturbance actions (includes: extend drainage systems, removal of trees and vegetation).

- Work will be performed using imported borrow and some roadway excavation to flatten slopes in the median areas.

Figure 1-Impact Table

	Activity	Resource_Typ	Permanent_Lc	Impact_Duration	Proposed_A	Type of Structure	Latitude	Longitude
4	Discharge of fill material	River/Stream	YES	Permanent	0.0009	Reinforced Concrete Pipe	34.865	-116.94
5	Discharge of fill material	River/Stream	YES	Permanent	0.0142	Reinforced Concrete Box	34.864	-116.94
6	Discharge of fill material	River/Stream	YES	Permanent	0.0067	Reinforced Concrete Pipe	34.863	-116.93
7	Discharge of fill material	River/Stream	YES	Permanent	0.0039	Reinforced Concrete Pipe	34.863	-116.93
8	Discharge of fill material	River/Stream	YES	Permanent	0.0041	Corrugated Steel Pipe	34.862	-116.93
9	Discharge of fill material	River/Stream	YES	Permanent	0.0052	Reinforced Concrete Pipe	34.862	-116.92
10	Discharge of fill material	River/Stream	YES	Permanent	0.0051	Reinforced Concrete Pipe	34.861	-116.92
11	Discharge of fill material	River/Stream	YES	Permanent	0.0142	Reinforced Concrete Box	34.861	-116.92
12	Discharge of fill material	River/Stream	YES	Permanent	0.0151	Reinforced Concrete Box	34.86	-116.92
13	Discharge of fill material	River/Stream	YES	Permanent	0.0081	Reinforced Concrete Pipe	34.86	-116.92
14	Discharge of fill material	River/Stream	YES	Permanent	0.0078	Reinforced Concrete Pipe	34.859	-116.91
15	Discharge of fill material	River/Stream	YES	Permanent	0.0062	Reinforced Concrete Pipe	34.859	-116.91
16	Discharge of fill material	River/Stream	YES	Permanent	0.0075	Reinforced Concrete Box	34.859	-116.91
17	Discharge of fill material	River/Stream	YES	Permanent	0.0103	Reinforced Concrete Pipe	34.859	-116.91
18	Discharge of fill material	River/Stream	YES	Permanent	0.0067	Reinforced Concrete Pipe	34.859	-116.91
19	Discharge of fill material	River/Stream	YES	Permanent	0.0078	Reinforced Concrete Box	34.859	-116.92
20A	Discharge of fill material	River/Stream	YES	Permanent	0.0083	Reinforced Concrete Box	34.858	-116.91
20B	Discharge of fill material	River/Stream	YES	Permanent	0.0109	Reinforced Concrete Box	34.858	-116.91
20C	Discharge of fill material	River/Stream	YES	Permanent	0.0136	Reinforced Concrete Box	34.858	-116.91
21	Discharge of fill material	River/Stream	YES	Permanent	0.0137	Reinforced Concrete Box	34.858	-116.91
22	Discharge of fill material	River/Stream	YES	Permanent	0.0135	Reinforced Concrete Pipe	34.858	-116.9
23	Discharge of fill material	River/Stream	YES	Permanent	0.0062	Reinforced Concrete Box	34.857	-116.9
24	Discharge of fill material	River/Stream	YES	Permanent	0.0088	Reinforced Concrete Box	34.857	-116.9
25	Discharge of fill material	River/Stream	YES	Permanent	0.0049	Reinforced Concrete Pipe	34.857	-116.9
26	Discharge of fill material	River/Stream	YES	Permanent	0.0036	Reinforced Concrete Pipe	34.857	-116.9
27	Discharge of fill material	River/Stream	YES	Permanent	0.0037	Reinforced Concrete Pipe	34.856	-116.9
28	Discharge of fill material	River/Stream	YES	Permanent	0.0077	Reinforced Concrete Box	34.856	-116.9
29	Discharge of fill material	River/Stream	YES	Permanent	0.0148	Reinforced Concrete Box	34.856	-116.89
30	Discharge of fill material	River/Stream	YES	Permanent	0.028	Reinforced Concrete Box	34.854	-116.89
31	Discharge of fill material	River/Stream	YES	Permanent	0.0077	Reinforced Concrete Pipe	34.854	-116.88
32	Discharge of fill material	River/Stream	YES	Permanent	0.0085	Reinforced Concrete Pipe	34.853	-116.88
33	Discharge of fill material	River/Stream	YES	Permanent	0.0084	Reinforced Concrete Box	34.852	-116.88
34	Discharge of fill material	River/Stream	YES	Permanent	0.0056	Reinforced Concrete Pipe	34.852	-116.87
35	Discharge of fill material	River/Stream	YES	Permanent	0.0053	Reinforced Concrete Pipe	34.852	-116.87
36	Discharge of fill material	River/Stream	YES	Permanent	0.0084	Reinforced Concrete Box	34.851	-116.87
37	Discharge of fill material	River/Stream	YES	Permanent	0.0068	Reinforced Concrete Box	34.851	-116.87
38	Discharge of fill material	River/Stream	YES	Permanent	0.0085	Reinforced Concrete Box	34.85	-116.87
39	Discharge of fill material	River/Stream	YES	Permanent	0.011	Reinforced Concrete Box	34.85	-116.87
40	Discharge of fill material	River/Stream	YES	Permanent	0.0093	Reinforced Concrete Pipe	34.849	-116.86
41	Discharge of fill material	River/Stream	YES	Permanent	0.009	Reinforced Concrete Pipe	34.848	-116.86
42	Discharge of fill material	River/Stream	YES	Permanent	0.0042	Reinforced Concrete Box	34.848	-116.86
43	Discharge of fill material	River/Stream	YES	Permanent	0.0037	Reinforced Concrete Pipe	34.847	-116.85
44	Discharge of fill material	River/Stream	YES	Permanent	0.0056	Reinforced Concrete Box	34.847	-116.85
45	Discharge of fill material	River/Stream	YES	Permanent	0.0047	Reinforced Concrete Box	34.847	-116.85
48	Discharge of fill material	River/Stream	YES	Permanent	0.0086	Corrugated Steel Pipe	34.847	-116.85
51	Discharge of fill material	River/Stream	YES	Permanent	0.0035	Corrugated Steel Pipe	34.844	-116.83
54	Discharge of fill material	River/Stream	YES	Permanent	0.00299	Corrugated Steel Pipe	34.842	-116.81
56	Discharge of fill material	River/Stream	YES	Permanent	0.0034	Corrugated Steel Pipe	34.84	-116.79
58	Discharge of fill material	River/Stream	YES	Permanent	0.0052	Corrugated Steel Pipe	34.837	-116.77
59	Discharge of fill material	River/Stream	YES	Permanent	0.0038	Corrugated Steel Pipe	34.835	-116.76
60	Discharge of fill material	River/Stream	YES	Permanent	0.0066	Corrugated Steel Pipe	34.825	-116.76
62	Discharge of fill material	River/Stream	YES	Permanent	0.0082	Corrugated Steel Pipe	34.835	-116.75
64	Discharge of fill material	River/Stream	YES	Permanent	0.0083	Corrugated Steel Pipe	34.834	-116.74
65	Discharge of fill material	River/Stream	YES	Permanent	0.005	Corrugated Steel Pipe	34.833	-116.74
66	Discharge of fill material	River/Stream	YES	Permanent	0.0095	Corrugated Steel Pipe	34.833	-116.73
68	Discharge of fill material	River/Stream	YES	Permanent	0.0099	Corrugated Steel Pipe	34.833	-116.73
69	Discharge of fill material	River/Stream	YES	Permanent	0.007	Corrugated Steel Pipe	34.832	-116.72
71	Discharge of fill material	River/Stream	YES	Permanent	0.0043	Corrugated Steel Pipe	34.832	-116.72
72	Discharge of fill material	River/Stream	YES	Permanent	0.0078	Corrugated Steel Pipe	34.832	-116.72
73	Discharge of fill material	River/Stream	YES	Permanent	0.0104	Corrugated Steel Pipe	34.831	-116.71
74	Discharge of fill material	River/Stream	YES	Permanent	0.0141	Corrugated Steel Pipe	34.831	-116.71
76	Discharge of fill material	River/Stream	YES	Permanent	0.0078	Corrugated Steel Pipe	34.831	-116.71
77	Discharge of fill material	River/Stream	YES	Permanent	0.0073	Corrugated Steel Pipe	34.83	-116.7
78	Discharge of fill material	River/Stream	YES	Permanent	0.007	Corrugated Steel Pipe	34.83	-116.7
79	Discharge of fill material	River/Stream	YES	Permanent	0.0031	Corrugated Steel Pipe	34.826	-116.67
80	Discharge of fill material	River/Stream	YES	Permanent	0.0028	Corrugated Steel Pipe	34.826	-116.66
81	Discharge of fill material	River/Stream	YES	Permanent	0.0184	Corrugated Steel Pipe	34.825	-116.66
82	Discharge of fill material	River/Stream	YES	Permanent	0.0082	Corrugated Steel Pipe	34.825	-116.66
83	Discharge of fill material	River/Stream	YES	Permanent	0.0084	Corrugated Steel Pipe	34.824	-116.65
84	Discharge of fill material	River/Stream	YES	Permanent	0.0049	Corrugated Steel Pipe	34.812	-116.58
85	Discharge of fill material	River/Stream	YES	Permanent	0.0054	Corrugated Steel Pipe	34.812	-116.58
86	Discharge of fill material	River/Stream	YES	Permanent	0.1	Corrugated Steel Pipe	34.812	-116.58

PROJECT IMPACTS

Native plant species: cheesebush (*Hymenoclea salsola*), shadscale (*Atriplex confertifolia*), and goldenbush (*Ericameria* species). Associated understory species included rice grass (*Achnatherum hymenoides*), Mediterranean grass (*Schismus* species), checker fiddleneck (*Amsinckia tessellata*), California dandelion (*Malacothrix californica*), small flowered blazing star (*Mentzelia albicaulis*), yellow pepper-weed (*Lepidium flavum* var. *flavum*), Fremont's pincushion (*Chaenactis fremontii*), tansy mustard (*Descurainia pinnata*), and California mustard (*Guillenia lasiophylla*).
Mammals: Merriam's kangaroo rat (*Dipodomys merriami*), white-tailed antelope ground squirrel (*Ammospermophilus leucurus),* desert wood rat (*Neotoma lepida*), and cactus mouse (*Peromyscus eremicus*), Desert cottontail (*Sylvilagus audubonii*) and black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), gray fox (*Urocyon cinerecargenteus*), desert kit fox (*Vulpes macrotis*), bobcat (*Felis rufus*), and mountain lion (*Felis concolor*) **Reptiles:** side-blotched lizard (*Uta stansburuana*), western whiptail (*Cnemidophorus tigris*), desert iguana (*Diposonsaurus dorsalis*), zebra-tailed lizard (*Urosaurus grasioisus*), and desert horned lizard (*Phrynosoma platyrhinos*), coachwhip (*Masticophis flagellum),* Mojave patchnose snake (*Salvadora hexalepis mojavensis*), Great Basin gopher snake (*Rhinoheilus lecontei lecontei*), Sonoran ground snake (*Sonora semiannnulata*), Mojave shovelnose snake (*Chionactis occipitalis occipitalis*), desert night snake (*Hypsiglena torquata deserticola*), Mojave Desert sidewinder (*Crotalus cerastes*), and speckled rattlesnake (*Crotalus mitchelli*). **Bird**: common raven (*Corvus corax*), house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), horned lark (*Eremophila alpestris*), rock wren (*Salpinctes obsoletes*), black-throated sparrow (*Amphispiza bilineata*), and greater roadrunner (*Geococcyx californianus*), brewer's sparrow (*Spizella brewerii*), sage sparrow (*Amphispiza bellii*), yellow-rumped (Audubon's) warbler (*Denroica coronata audoboni*), and American pipit (*Anthis rubescens*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), barn owl (*Tyto alba*), burrowing owl (*Athene cunicularia*). **Invasive Species** Seaside barley **(***Hordeum marinum),* Wild oat (*Avena fatu,)* Foxtail chess (*Bromus madritensis* ssp. *Rubens),* Cheat grass *(Bromus tectorum),* Seaside barley (*Hordeum marinum),* Tamarisk *(Tamarix parviflora),* Russian thistle (*Salsola tragus),* Black mustard *(Brassica nigra),* Sahara mustard (*Brassica tournefortii),* Oleander *(Nerium oleander).*

Special Status Species

Birds Western snowy plover **(***Charadrius alexandrines nivosus),* Western yellow-billed (cuckoo *Coccyzus americanus occidentalis),* Yuma clapper rail (*Rallus longirostris yumanensis),* **Reptiles** Desert tortoise (*Gopherus agassizi),* **Mammals** Mohave ground squirrel *(Spermophilus Mohavensis).* (*Vulpes macrotis arcipes*); grey fox (*Urocyon cineroargenteus*); California ground squirrel (*Spermophilus beecheyi*); White-tailed

antelope squirrel (*Ammospermophilus leucurus*); Botta pocket gopher (*Thomomys bottae*); and bobcat (*Lynx rufus*).

The construction of the Project will permanently impact 0.74 acres of CDFW jurisdiction, including permanent impacts to 0.37 acre of ephemeral washes and 0.37 acres Mojave River riparian habitat.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the Project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the Project at the Project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the Project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.

1.4 Compliance with other Agencies. This Agreement does not relieve the Permittee of responsibility for compliance with applicable federal, state, or local laws, ordinances or grant conditions.

1.5 Project Site Entry. Permittee agrees that CDFW personnel may enter the Project site at any time to verify compliance with the Agreement.

1.6 Nesting Birds. This Agreement does not authorize take of Nesting Birds. Sections 3503, 3503.5 and 3513 pursuant to FGC prohibits the take of all birds and their active nests, including raptors and other migratory non-game birds (as listed under the United States Migratory Bird Treaty Act).

1.7 Other Project Documents Submitted to CDFW. Any other required reports, survey results, and other project documentation shall be submitted by mail or via e-mail to the current CDFW staff associated with this project. When no immediate CDFW

staff is available to receive these documents, then they shall be submitted to the CDFW regional office, at 3602 Inland Empire Boulevard, Suite C-220, Ontario, CA 91764, Attn: Streambed Alteration Staff, or, may be sent electronically to the CDFW inbox via email at: AskRegion6@wildlife.ca.gov. For all documents, please reference, Agreement No. 1600-2015-0266-R6, in the subject line.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

2.1 Designated Biologist(s). Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biologist(s) (Designated Biologist(s)) before commencement of project activities (including construction and/or site preparation). Permittee shall ensure that the Designated Biologist(s) is knowledgeable and experienced in the biology, natural history, collecting, and handling of appropriate species. The Designated Biologist(s) shall be responsible for monitoring activities addressed by this Agreement, including, but not limited to all activities that result in the clearing or grading of sensitive habitat as well as grading, excavation, and/or other ground-disturbing activities in jurisdictional areas. The Designated Biologist(s) shall flag the limits of grading and the jurisdictional areas, perform necessary surveys, and take photographs during the construction process, as required by this Agreement. Permittee shall obtain CDFW approval of Designated Biologist(s) in writing before commencement of project activities (Including site preparation), and shall also obtain approval in advance in writing if a Designated Biologist must be changed.

2.2 On-site Designated Biologist(s) with Stop work Authorization. The Designated Biologist(s) shall have the authority to immediately stop any project activities; if a State listed Species of Special Concern, or threatened or endangered species are found within the Project work area. The Designated Biologist(s) shall immediately stop work within the Project work area and notify CDFW in writing, via email (heather.weiche@wildlife.ca.gov), and by calling Heather Weiche, Environmental Scientist at (909) 980-8607 and the Regional Office at (909) 484-0167. Consultation with CDFW is required prior to cancellation of a stop work order.

2.3 Worker Environmental Awareness Program. Prior to any construction activities on the project site, the Permittee will implement a Worker Environmental Awareness Program (WEAP) to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site personnel, including the Permittee's personnel, contractors, and all subcontractors, prior to the employee's commencing work on the site. The WEAP will include but not be limited to protected species that have potential to occur within the Project site, including the Mojave desert tortoise, burrowing owl, desert kit fox, as well as nesting birds, plants, and other wildlife species.

2.4 Best Management Practices. Permittee shall actively implement Best Management Practices (BMPs) to prevent erosion and discharge of sediment and pollutants into streams during Project activities. BMPs shall be monitored and repaired if necessary to ensure maximum control of erosion, sediment, and pollution. Permittee shall prohibit the use of erosion control materials potentially harmful to fish and wildlife species, such as welded-weave monofilament netting (erosion control matting) or similar material, within and adjacent to CDFW jurisdictional areas. All fiber rolls, straw wattles, and/or hay bales utilized within and adjacent to the Project site shall be certified free of nonnative plant materials. Fiber rolls or erosion control mesh shall be made of loose-weave mesh that is not fused at the intersections of the weave, such as jute, or coconut (coir) fiber, or other products without welded weaves. Non-welded weaves reduce entanglement risks to wildlife by allowing animals to push through the weave, which expands when spread.

2.5 Work Period in Dry Weather Only. Work within the desert dry washes shall be restricted to periods of no stream flow and dry weather. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease and all necessary erosion control measures shall be implemented prior to the onset of precipitation. Construction activities halted due to precipitation may resume when precipitation ceases and the National Weather Service 72 hour weather forecast indicates a 20% or less chance of precipitation, provided no work occurs in the stream bed if water is flowing. If a construction phase may cause the introduction of sediments into the stream: 1) no phase of the project shall be started in May or November of any year, unless all work for that phase and all associated erosion control measures are completed prior to the onset of precipitation; and 2) no phase of the project shall commence unless all equipment and materials are removed from the channel at least 12 hours prior to the onset of precipitation and all associated erosion control measures are in place prior to the onset of precipitation. No work shall occur during a dry-out period of 24 hours after the above referenced wet weather. Weather forecasts shall be documented upon request by CDFW.

2.6 Post Storm Event Inspection. After any storm event, Permittee shall inspect all sites scheduled to begin or continue construction within the next 72 hours. Corrective action for erosion and sedimentation shall be taken as needed. National Weather Service 72 hour weather forecasts shall be reviewed prior to the start of any phase of the project that may result in sediment runoff to the stream, and construction plans adjusted to meet this requirement. The National Weather Service forecast can be found at: http://www.nws.noaa.gov.

Desert Tortoise and Mohave Ground Squirrel

2.7 Pre-construction sweeps. The Permittee shall implement sweeps within the proposed project site, the sweeps shall be conducted before construction, to

ensure that desert tortoises are absent from the project area. An on-call authorized biologist shall be available should desert tortoise be encountered during construction activities.

2.8 Check for Wildlife in Pipes / Construction Materials. Permittee shall visually check all sections of pipe / construction materials for the presence of wildlife sheltering within them prior to the pipe sections being placed in the trench and attached together, or shall have the ends capped while stored on site so as to prevent wildlife from entering. After attachment of the pipe sections to one another, whether in the trench or not, the exposed end(s) of the pipeline shall be capped at the end of each day during construction to prevent wildlife from entering and being trapped within the pipeline.

2.9 Escape Ramp in Trench. At the end of each work day, Permittee shall place an escape ramp at each end of the open trench to allow any animals that may have become entrapped in the trench to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degree.

Bats

2.10 Habitat Assessment/Survey-Bats. Using an appropriate combination of structure inspection, sampling, exit counts, and acoustic surveys, the CDFW-approved Designated Biologist(s) shall survey each structure and the surrounding area that may be impacted by the Project for bats. If bats are found using any bridges or culverts within the Project area, the biologist shall identify the bats to the species level, and evaluate the colony to determine its size and significance. The bat survey shall include: 1) the exact location of all roosting sites (location shall be adequately described and drawn on a map), 2) the number of bats present at the time of visit (count or estimate), 3) each species of bat present shall be named (include how the species was identified), 4) the location, amount, distribution and age of all bat guano shall be described and pinpointed on a map, and 5) the type of roost: night roost (rest at night while out feeding) versus a day roost (resting during the day) must also be clearly stated. The results of the bat survey shall be submitted to CDFW for review and concurrence no later than 10 days prior to commencement of Project activities. Reports shall be submitted to CDFW via email to heather.weiche@wildlife.ca.gov .

2.11 Bridges and Culverts Exclusionary Devices. The Designated Biologist (s) shall design and direct implementation of exclusionary devices designed to prevent birds and bats from utilizing bridges/culverts before construction activities begin. Exclusionary devices shall be installed on all bridges prior to the initiation of nesting season (February 1). Exclusionary devices shall cover both the sides and bottom of each bridge. Passage underneath each bridge (through the channel) shall not be impeded. Exclusionary materials shall be installed within seven (7)

days of surveying the bridge for bridge-dwelling wildlife, shall not pose an entanglement risk to wildlife, and shall be regularly maintained. Exclusionary materials shall not be installed if nesting bird activity is detected. If bats are found using any bridge, roost entrances shall be fitted with one-way doors that allow bats to exit but prevent entrance for a period of several days to encourage bats to relocate.

2.12 Bridge Widening Designs. The bridge widening design shall contain and be constructed with similar structural features to encourage continued roosting by bats. Replacement roosts shall have comparable thermal stability and durability, the same or similar search image, and the same cryptic roosting conditions as the roosts they replace. Alternate bat roosting structures (*i.e.*, lightweight concrete panels) shall be installed within the vicinity of the Project area. Construction and installation of roosting structures shall be supervised by the CDFW-approved Designated Biologist(s). The total length of the roosting structures shall be no less than one-half the total length of the expansion joints, or other suitable roosting structures, that will impacted during construction. The alternate roosting structures shall remain in place following construction and shall not be removed. Alternate bat roosting structures shall be installed as soon as possible and no later than 3 months prior to starting construction. A plan on the construction, placement, and timing of installation of the alternative roosting structures shall be submitted to CDFW for review and concurrence no later than 90 days prior to the commencement of Project activities.

2.13 Gasoline or Diesel Engines. No gasoline or diesel engines shall be stored or operated under any bridge, unless the bridge has been cleared of all bats.

2.14 Scheduling Night Work. All night work (dusk until dawn) in the vicinity of the structure (*i.e.*, roadway widening, resurfacing, lighting, lane-closure setup, etc.) shall have concurrence from CDFW and the Designated Biologist(s) prior to any work or scheduling of any work between March 1 and October 1.

2.15 Work Period and Time Limits-Bats. Construction activities on, under, or around, or within close proximity to bridges/culverts will be limited to October 1 to March 1, unless all bats have been excluded from the structure and concurrence has been received from CDFW.

2.16 Lighting and infrastructure Design. Any lighting or fencing for infrastructure adjacent to jurisdictional areas shall be designed or reviewed by a qualified biologist to allow wildlife to move within the open space and conserved areas without hindrance. Fencing shall also be monitored to ensure wildlife is not trapped against the fence or otherwise impacted by the installation or presence of the fence.

Nesting Birds

2.17 Nesting Bird/Burrowing Owl Plan. **No later than September 1, 2016**, Permittee shall submit to CDFW for review and approval a Nesting Bird/Burrowing Owl Plan (NBP) that includes project specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur and that the project complies with all applicable laws related to nesting birds and birds of prey, including Burrowing Owl. The NBP shall include at a minimum: monitoring protocols; survey timing and duration; the creation, maintenance, and submittal to CDFW of a bird-nesting log; and Project-specific avoidance and minimization measures. Avoidance and minimization measures shall include, at a minimum: project phasing and timing, monitoring of project-related noise, sound walls, and buffers. The NBP shall be submitted to CDFW via email to: Heather Weiche.

2.18 Work Period and Time Limits - Bird Nesting Surveys. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). In addition, Sections 3503, 3503.5, and 3513 of the FGC prohibit the take of all birds and their nests. The Designated Biologist(s) shall survey the entirety of the project site, and within a recommended 500-foot buffer (with the exception of inaccessible private properties) surrounding the project site for both diurnal and nocturnal nesting birds, prior to commencing project activities (including construction and/or site preparation). Surveys shall be conducted by the Designated Biologist(s) at the appropriate time(s) of day, no more than three days prior to commencement of project activities. Documentation of surveys and findings shall be submitted to CDFW for review prior to conducting project activities. If no nesting activities were observed, project activities may begin. If an active bird nest is located, the Designated Biologist(s) shall implement and monitor specific avoidance and minimization measures as specified in the CDFW-approved NBP (refer to Measure

Burrowing Owls

Burrowing Owl Habitat Assessment. Habitat assessments, surveys, impact assessments, and all associated reports shall be completed following the recommendations and guidelines provided within the *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012). It is the responsibility of the Project proponent to ensure compliance with these laws for the entire Project site.

Prior to the initiation of any Project activities, Permittee shall conduct a burrowing owl habitat assessment. The assessment shall be conducted by a biologist knowledgeable of burrowing owl habitat, ecology, and field identification of the species and burrowing owl sign and in accordance with the attached *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012). The assessment shall consist of walking the entire Project site and adjoining areas

within 150 meters, including areas that may be indirectly impacted by the Project, to identify the presence of burrowing owl habitat. A report summarizing the results of the habitat assessment shall be submitted to CDFW in accordance with the Nesting Bird/Burrowing Owl plan, following the completion of the assessment and shall include all information as outlined in Appendix C of the *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012). Note that Burrowing Owl habitat assessments dated more than one year prior to the construction start date will not be accepted by CDFW. If no suitable habitat is found on-site, no additional surveys are necessary. If suitable habitat is found onsite, burrowing owl surveys shall be conducted by a qualified biologist during the breeding season of February 1 through September 30 in accordance with the attached *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012). Survey results shall be submitted to CDFW within 30 days of completion of surveys following the guidelines provided in Appendix D of the *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012). If surveys confirm occupied Burrowing Owl habitat in or adjoining the Project area, the Permittee shall contact CDFW and conduct an impact assessment, in accordance with *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012), to assist in the development of avoidance, minimization, and mitigation measures, prior to commencing Project activities. Reports shall be mailed to CDFW at Heather Weiche, Environmental Scientist, at 3602 Inland Empire Boulevard Suite C-220, Ontario, California, 91764. **Please reference 1600-2015-0266-R6.**

Vegetation removal and restoration

2.19 Invasive Species. Permittee shall conduct project activities in a manner that prevents the introduction, transfer, and spread of invasive species, including plants, animals, and microbes (e.g., algae, fungi, parasites, bacteria, etc.), from one project site and/or waterbody to another. Prevention BMPs and guidelines for invasive plants can be found on the California Invasive Plant Council's website at: http://www.cal-ipc.org/ip/prevention/index.php and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: http://www.protectyourwaters.net/.

2.20 Non-native plant removal: The Permittee shall remove any non-native vegetation from the work area and shall dispose of it in a manner and a location which prevents its reestablishment.

2.21 Protection of Native Plants. Permittee shall flag or otherwise mark native plant species within the vicinity of invasive plants scheduled for control or eradication.

2.22 Pre-project vegetation surveys. No more than 30 days prior to the initiation of any Project activities, the Permittee shall submit to CDFW a survey of the proposed Project areas and a 150-foot buffer zone. These surveys shall include the following

information: (A) a description of the proposed Project; (B) a summary of vegetation present, including species present and percent cover; and (C) any proposed avoidance/minimization measures that will be employed to protect native species. If the pre-project vegetation surveys identify any sensitive or rare plant species, the Permittee shall contact CDFW **via email at: Heather.Weiche@wildlife.ca.gov.**

2.23 Temporary Staging Areas. All temporary staging areas, storage areas, and access roads involved with this project will occur within the permanent impact area (future pavement, median, on- and off ramps, interchanges etc.).

2.24 Pollution and Litter. Permittee shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of Permittee to ensure compliance.

2.24.1 Spoil sites shall not be located within a lake, streambed, or flowing stream or locations that may be subjected to high storm flows, where spoil shall be washed back into a lake, streambed, or flowing stream where it will impact streambed habitat and aquatic or riparian vegetation.

2.24.2 Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from project related activities shall be prevented from contaminating the soil and/or entering the waters of the State. These materials, placed within or where they may enter a lake, streambed, or flowing stream by Permittee or any party working under contract or with the permission of Permittee, shall be removed immediately.

2.24.3 No broken concrete, cement, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or washings thereof, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into a streambed, wash, or wetland. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any streambed or wash.

2.24.4 All equipment or vehicles driven and/or operated within or adjacent to a streambed or channel shall be checked daily and maintained as need to prevent deleterious material leaks.

2.24.5 No equipment maintenance shall be done within or near any streambed, wash, or wetland where petroleum products or other pollutants from the equipment may enter these areas under any flow.

3. Compensatory Measures

Compensatory Measures are needed to compensate for adverse impacts to fish and wildlife resources identified above that cannot be avoided or minimized, including listed species and critical habitats. Permanent Project impacts include 0.74 acres. Caltrans shall mitigate the impacts at a ratio of 3:1. Caltrans is responsible for the total mitigation required for the Project which includes 1.11 acres of ephemeral washes located in the Troy Dry Lake watershed and 1.11 acres of ephemeral washes located in the Mojave River watershed for a total of 2.22 acres of mitigation.

4. Reporting Measures

4.1 Notification to CNDDB. If any sensitive species are observed on or in proximity to the project site, or during project surveys, Permittee shall submit California Natural Diversity Data Base (CNDDB) forms and maps to the CNDDB within five working days of the sightings, and provide the regional CDFW office with copies of the CNDDB forms and survey maps. The CNDDB form is available online at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. This information shall be mailed within five days to: Department of Fish and Wildlife, California Natural Diversity Data Base, 1807 13th Street, Suite 202, Sacramento, CA 95814, Phone (916) 324-3812. A copy of this information shall also be mailed within five days to Department of Fish and Wildlife, Inland Deserts Region at the address below under Contact Information. **Please reference SAA # 1600-2015-0266-R6.**

4.2 Notification of Start of Construction. Permittee shall notify CDFW, in writing, at least five (5) days prior to initiation of project activities in jurisdictional areas, and at least five (5) days prior to completion of project activities in jurisdictional areas. Notification shall be sent to CDFW at 3602 Inland Empire Blvd., Suite-C220, Ontario, CA 91764 Attn: Lake and Streambed Alteration Team. Please reference **SAA # 1600-2015-0266-R6**.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or CDFW specifies by written notice to the other.

To Permittee:

Craig Wentworth
California Department of Transportation
464 West 4th Street
San Bernardino, CA 92401
(909) 383-6936
Craig.wentworth@dot.ca.gov

To CDFW:

Department of Fish and Wildlife
Inland Deserts Region
3602 Inland Empire Boulevard Suite c 220
Ontario, CA 91764
Attn: Lake and Streambed Alteration Program – Heather Weiche
Notification #1600-2015-0266-R6
(909) 980-8607
Heather.weiche@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the Project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the Project. The decision to proceed with the Project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited

to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the Project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the Project the Agreement covers (FGC section 1605(f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire on **April 5, 2021**, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a) (2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the Project described herein. If Permittee begins or completes a Project different from the Project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR CALIFORNIA DEPARTMENT OF TRANSPORTATION

5/3/2016

Craig Wentworth
Senior Environmental Planner

Date

FOR DEPARTMENT OF FISH AND WILDLIFE

5, 18, 2016

Bruce Kinney
for Environmental Program Manager

Date

Prepared by: Heather Weiche
Environmental Scientist

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2007-F-0270

November 5, 2013

David Bricker, Deputy District Director
Attn: Mahmoud Sadeghi
Caltrans, District 8, Environmental Division
464 West 4th Street, 6th Floor
San Bernardino, California 92401-1400

Subject: Biological Opinion for Routine Highway Improvement, Maintenance Activities, and Safety Projects in Imperial, Inyo, Kern, Los Angeles, Riverside, and San Bernardino Counties, California (8-8-10-F-59)

Dear Mr. Bricker:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion regarding the effects of routine highway improvement, maintenance activities, and safety projects, funded under the Federal Highway Administration's (FHWA) Federal aid program, on the federally threatened desert tortoise (*Gopherus agassizii*) and its critical habitat, in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et seq.). This document also contains our programmatic concurrence regarding projects funded under the FHWA's Federal aid program that are not likely to adversely affect the desert tortoise or its critical habitat.

This biological opinion is based on information contained in a previous biological opinion for small projects and routine operational highway improvement activities (Service 2006), personal communications with staff from the California Department of Transportation (Caltrans), and information contained in our files. A complete record of this consultation can be made available at the Ventura Fish and Wildlife Office (VFWO).

CONSULTATION HISTORY

The FHWA previously consulted with the Service regarding routine highway maintenance activities and their effects on the desert tortoise and its critical habitat (Service 1994, 1995). On January 12, 2006, the Service replaced the previous two biological opinions with a new programmatic biological opinion (Service 2006) for maintenance activities, and other similar scale projects, in the transmontane portions of Imperial, Riverside, Los Angeles, San Bernardino, Inyo, and Kern counties. During 2006, Caltrans identified issues in the new biological opinion that required clarification from our office on several different occasions. As a result of these discussions, we met with representatives from the FHWA and Caltrans in December 2006 to

discuss the potential for further streamlining the consultation process. Following this meeting, Caltrans and the Service began to collaborate on the development of a revised consultation process that would replace the 2006 biological opinion.

Review of the Draft Biological Opinion

We provided a draft biological opinion for your review on July 29, 2013. We received your comments on the draft document by memorandum, dated August 29, 2013. We have incorporated your comments into this final biological opinion, as appropriate.

ADMINISTRATION OF THE CONSULTATION

Caltrans has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, as described in the National Environmental Policy Act assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012) and codified in 23 U.S.C. 327. As this programmatic biological opinion extends over the jurisdictions of the VFWO and Palm Springs Fish and Wildlife Office (PSFWO), which is under the Carlsbad Fish and Wildlife Office, any Caltrans activity in Imperial and Riverside counties will be coordinated with the PSFWO, and activities in Los Angeles, San Bernardino, Inyo, and Kern counties will be coordinated with the VFWO Desert Division.

Caltrans will prepare all required environmental documents for individual projects that may be conducted pursuant to this biological opinion, including those needed to satisfy its responsibilities under the Act and the National Environmental Policy Act. Based upon the appropriate documentation, the consultation process will proceed as follows:

1. A Caltrans biologist will make a determination of not likely to adversely affect or likely to adversely affect for a proposed action and then notify the senior biologist in the VFWO Desert Division or the PSFWO via electronic mail, using a standardized notification form (Appendix 1).

2. We will review the notification form and respond via electronic mail or other approved written format. In our response, we will concur or not concur with Caltrans' determination and proposed protective measures, as needed. If we determine that use of this consultation is appropriate for a proposed project, the provisions of this programmatic consultation will apply and no further communication would be needed (other than required reporting and notifications). We will attempt to respond within 30 days; however, if Caltrans does not receive a response from us within 30 days, it must not assume we concur.

3. In the event that Caltrans has not received a response from us within 30 days, Caltrans will contact, via telephone, the Desert Division senior biologist or Caltrans Liaison in the VFWO or the PSFWO, and ask us to clarify our position regarding its determination. (Note that our concurrence will cover all aspects of consultation; that is, our concurrence will be made with regard to the Caltrans proposal at hand according to the guidance contained in this document

and not merely with regard to 'not likely to adversely affect' situations, as would be expected in a standard consultation.)

4. If we believe protective measures, in addition to those proposed by Caltrans, are necessary, we will convey that information to Caltrans within 45 days of receipt of the notification form. We will insert any additional protective measures into our response with which Caltrans agrees. We will provide written documentation of any discussions or information regarding additional protective measures in the project file.

5. If we determine that use of this consultation is not appropriate for a proposed project, we will notify Caltrans, in writing within 45 days of receipt of the notification form, and the standard provisions for section 7 consultation will apply.

6. If the proposed project does not meet the criteria to be covered by the programmatic biological opinion, the regulations which implement section 7 allow the Service up to 90 days to conclude formal consultation and an additional 45 days to prepare our biological opinion. If we require additional information to complete our biological opinion, we will describe our needs in our letter; if additional information is not required, we will consider consultation to have been initiated on the date we received the original notification of Caltrans' intent to conduct its proposed project pursuant to this biological opinion.

7. Barring any unresolvable problems, and if stated thresholds for take and impacts to critical habitat are not reached, this biological opinion will be in effect for 5 years from the date it is issued. At the end of 5 years, if the programmatic biological opinion is working properly and impacts to the desert tortoise and its habitat are minor, as projected, the biological opinion may be renewed for 5 more years by mutual agreement between the Service and Caltrans. If reinitiation is required for whatever reason before the end of any 5-year period, the revised biological opinion would be in effect for 5 years starting on the date the new biological opinion is issued.

Failure to Adhere to the Terms of the Biological Opinion

In the event that a particular project being implemented under the auspices of this biological opinion fails to adhere to the protective measures and other conditions described below, that particular project must be suspended until the project is back in compliance with the biological opinion. If a project is suspended under this condition, any further action that would result in take of the desert tortoise would not be exempted from the prohibitions of section 9 (as described under Incidental Take Statement). Because several Caltrans Districts are covered within the scope of this biological opinion, other projects that are in compliance with this biological opinion may continue as long as none of the reinitiation criteria (defined later) are triggered (e.g., take limit exceeded). Those reinitiation criteria apply to the sum total of all actions undertaken pursuant to this biological opinion and are not parsed out by Caltrans District.

Issue Resolution

Issue resolution may be initiated by the FHWA, Caltrans, or the Service. Any issues that are not readily resolved at the staff or project manager level will promptly be referred to the supervisory level. The supervisory contact for the Service is the Assistant Field Supervisor of the Desert Division for the VFWO or Assistant Field Supervisor, PSFWO. The supervisory contact for Caltrans is the Deputy District Director for the Environmental Division in each District. The supervisory contact for the FHWA is the Division Administrator.

Any issues that cannot be resolved at the supervisory level will be referred to upper management. The Deputy Field Supervisor will be the upper management contact for the Service. Any issue that is not resolved with the Deputy Field Supervisor will be promptly referred to the Field Supervisor. Again, unresolved issues are directed to the Deputy District Director for the Environmental Division in each district. The FHWA, Caltrans, and the Service are responsible for ensuring timely elevation and resolution of issues.

Criteria for Use in Reaching Appropriate Determinations

Caltrans will use the following outline to determine the appropriate level of consultation required for each proposed action.

1) Projects that would occur outside of desert tortoise habitat or known range would have *no effect* on the species; Caltrans would not need to contact the Service. If Caltrans requires technical assistance from the Service to determine if suitable habitat for desert tortoises would be affected, it should contact us by electronic mail.

2) If all of the following criteria are met, a determination of *may affect, not likely to adversely affect* the desert tortoise would be appropriate:

    a) The project is within the range of the desert tortoise;

    b) Desert tortoise habitat is present, but degraded or disturbed, in the project area. For the purposes of this consultation, Caltrans and Service consider degraded habitat to be habitat that has been affected by previous highway maintenance activities or routine use of the area by the public. *Degraded habitat* will generally exhibit a lower diversity and density of native shrubs and disrupted substrates than undisturbed habitat. The presence of ongoing human activity, such as residences or businesses will also be considered to be evidence of degraded habitat. In some washes, evidence of activities would no longer be visible after an event where water flows in the wash. Such washes would also be considered disturbed. The loss or disturbance of a minor amount of undisturbed habitat may also be considered as being not likely to adversely affect the species, when considered with regard to its distribution in the action area; and

c) Suitable desert tortoise habitat is present, but neither desert tortoises nor their diagnostic sign are observed during protocol-level surveys (Service 2010) or more current agency approved protocol.

3) If any of the following criteria are met, a determination of *not likely to adversely affect critical habitat* for the desert tortoise would be appropriate:

a) The project is within designated critical habitat, but the primary constituent elements of desert tortoise critical habitat are not present;

b) The primary constituent elements would not be affected by the proposed project; or

c) Effects to the primary constituent elements would be so minor that they cannot be meaningfully measured, detected, or evaluated when considered within the context of the critical habitat unit. Such effects may occur, for example, when a narrow strip of land supporting the primary constituent elements of critical habitat at the edge of an existing road may be affected by an action.

4) If all of the following criteria are met, a determination of *may affect, likely to adversely affect* the desert tortoise would be appropriate:

a) The project is within the range of the desert tortoise;

b) Suitable desert tortoise habitat is present in the project area and is not disturbed or degraded (as described under 1(b) above), and

c) Desert tortoises or their diagnostic sign are observed during surveys or a habitat assessment.

5) If any of the following criteria are met, a determination that a project *may adversely affect critical habitat* would be appropriate:

a) The project is within designated critical habitat and the primary constituent elements of desert tortoise critical habitat are present;

b) The primary constituent elements would be affected by the proposed project; or

c) Effects to the primary constituent elements could be meaningfully measured, detected, or evaluated, when considered within the context of the critical habitat unit. Such effects may occur, for example, when an area supporting the primary constituent elements of critical habitat, and not otherwise subject to disturbance, would be altered and the primary constituent elements would no longer be present over a measurable portion of the critical habitat unit.

In cases where a determination is not entirely clear from a verbal description, Caltrans will provide the Service with a photograph (aerial or otherwise, as appropriate) of the project site to assist in its determination.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Actions that would be considered appropriate to conduct pursuant to this biological opinion are projects and operational improvements, such as road widening and lane additions associated with safety projects that would occur within the existing Caltrans rights-of-way (ROW), a limited amount of seismic work, and minor improvements to ports-of-entry that would be conducted outside the ROW (upon Service approval, pursuant to the administration of this consultation). All projects and activities associated with operational improvement, with the exception of the geotechnical studies proposed herein, would occur within the ROW fence or unmarked boundary. The projects considered in this biological opinion could occur anywhere within the Caltrans ROW; however, in any given year, most of the ROW included in the action area for this biological opinion is not likely to be disturbed. This biological opinion does not cover impacts associated with the realignment and widening of freeways outside the existing Caltrans ROW specifically intended to accommodate increased traffic.

Project Categories

Actions included in the following eight categories would be appropriate to conduct pursuant to this biological opinion:

TYPE 1: HIGHWAY REHABILITATION AND DRAINAGE AND SAFETY STANDARDIZATION

Highway rehabilitation consists of grinding existing road pavement, proper disposal of resulting waste, and overlaying the prepared surface with new asphaltic concrete. Actions include grading of shoulders and road embankments, placement of shoulder backing, striping or widening of existing shoulders, replacing or installing guardrails, trimming or removing vegetation, installing traffic signals or left/right turn lanes, re-striping, and instituting traffic control measures. Drainage standardization consists of grading existing roadside channels, installing new roadside channels or drainage devices, and extending culverts. Additionally, all activities related to the storage of equipment and materials, and to the disposal of spoils will be considered as Type 1 activities.

TYPE 2: CATCH DAM, CATCH BASIN, STILLING BASIN, OR DRAINAGE IMPROVEMENT

Type 2 projects consist of constructing new erosion control devices adjacent to existing culverts or bridges, or repairing existing facilities, and the installation or replacement of culverts and armoring including upgrading to larger sized culverts. Check dams and stilling basins require excavating soil within the wash or channel and its bank, and placing concrete or rock slope

protection. Sediment catch basins require excavating areas on the inlet side of culverts or ditches, and constructing dikes to direct the flow of water. This may include the replacement of in-kind culverts.

TYPE 3: WIDENING HIGHWAYS FOR TURN POCKETS, ACCELERATION/ DECELERATION LANES, PASSING LANES, TWO-WAY LEFT TURN LANES, INTERSECTION WIDENING, CURVE REALIGNMENTS, REPAVING, AND PAVEMENT REHABILITATION.

Turn pockets and acceleration/deceleration lanes require widening both sides of the existing roadway and shoulder for up to 0.25 mile from an intersection. Passing lanes may consist of widening one side of the roadway by one lane. Two-way left-turn lanes require widening both sides of the roadway by a half-lane width and re-striping for the length of the project area. Curve realignment requires moving the roadway or excavation of the roadway and adjacent shoulders. Intersection widening usually consists of widening both sides of the roadway, adding shoulders and/or sidewalks, curb ramps, and signals.

TYPE 4: BRIDGE REHABILITATION AND REPLACEMENT

Bridge rehabilitation consists of removing the asphaltic concrete deck or replacing decks, reconstructing approaches, applying a seal coat, replacing/repairing guardrails, and sand blasting the underside of the bridge to inspect for damage. Bridge replacement consists of removing and replacing the entire bridge structure and its pillars and guardrails with a new bridge; pillar removal requires excavation. Temporary access roads may be needed to access the area underneath the bridges. Some bridge rehabilitation work may require installing temporary traffic detour crossovers across the highway median; crossovers would include construction of drainage structures to channel run-off from the construction site.

TYPE 5: PRELIMINARY PROJECT STUDIES AND SURVEYS

Geotechnical studies are required to provide information regarding the feasibility and/or best construction design for future projects. These early studies can assist with long- range planning to determine viable alternatives. Geotechnical boring typically entails drilling a test hole to analyze the subsurface geology and temporarily placing fill material adjacent to the boring activity. Immediately following the geotechnical study at a test pit, the borehole is filled and covered with surrounding material or bentonite. Cross-country travel may be required for geotechnical studies. Cross-country travel can either use the same route to return from the boring activities or continue forward in a linear fashion. Areas affected by geotechnical borings will include the entire width and length of the access route and all areas affected by vehicles and boring activities.

Archaeological studies are required to provide information and documentation of historical land use areas, archaeological sites (both prehistoric and historical), and areas of cultural concern (all of these are considered "historic resources"). Initial archaeological surveys are intended to inventory proposed project areas for historic resources, are non-intrusive (no surface collection or excavation), and include mapping and photographing of archaeological sites and resources.

Archaeological evaluations are intended to evaluate the previously inventoried historic resources; these evaluations generally require both mechanical (trenching) and hand-excavation to determine depth of archaeological sites and to find buried resources. These evaluations generally provide stratigraphic information based on depth of resource, and generally are conducted using 1-meter x 1-meter (1 meter^2) hand-excavated control units (may be multiple units depending on size and area of site). If mechanical trenching is used, the depth is generally 1 meter; any excavation deeper than 5 feet (1.524-m) requires shoring and exit ramps (also dependent upon site size). Archaeological data recovery uses the same methods as the above-mentioned evaluation efforts.

TYPE 6: RECONSTRUCTION OF EXISTING MAINTENANCE YARDS, PORTS OF ENTRY, REST AREAS, AND WEIGH STATIONS

Type 6 projects consist mainly of reconstructing or repairing existing maintenance yards, ports of entry, rest areas, and weigh stations to respond to legislative mandates or increased demands in geographical areas. As part of the process, Type 6 projects will require some limited road work.

TYPE 7: PERMANENT FENCE INSTALLATION, INSPECTION, AND MAINTENANCE

Type 7 projects consist of installing permanent fencing, cattle guards, and other features necessary to keep desert tortoises from entering the rights-of-way. Fence installation will follow the 2005 Recommended Design for Desert Tortoise Exclusion Fence, which is available through the VFWO website (http://www.fws.gov/ventura). Fence maintenance will occur when necessary to ensure that desert tortoises do not enter the ROW.

TYPE 8: SAFETY PROJECTS

Examples of safety projects include minor road realignments within the ROW, guard rail installation, California Highway Patrol enforcement areas/emergency passageways, glare screen, median barrier and cross slopes, remove/relocate or shield fixed objects, and traffic signs installation.

Protective Measures

Caltrans proposes to implement the following protective measures to avoid and minimize impacts to the desert tortoise and its critical habitat:

1. Caltrans will submit the names and qualifications of biologists that they believe meet the minimum requirements to serve as Authorized Biologists to the Service for review and authorization under this biological opinion prior to beginning on-site activities (forms at http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/). Once a biologist has been authorized by the Service, that individual may work on subsequent projects pursuant to this biological opinion without additional approval, provided that his or her performance remains satisfactory. Caltrans will maintain a record of all authorized biologists who work on its projects.

2. Caltrans will designate, on a project-by-project basis, an authorized biologist to be responsible for overseeing compliance with all protective measures and for coordination with the Service. The authorized biologist will immediately notify the resident engineer of project activities that may be in violation of this biological opinion. In such an event, the resident engineer can halt all construction activities until all protective measures are being fully implemented, as determined by the authorized biologist.

3. A resident engineer is, according to Caltrans' May 2006 Standard Specifications, "the Chief Engineer, Department of Transportation, acting either directly or through properly authorized agents, the agents acting within the scope of the particular duties delegated to them." The resident engineer has authority over the contract and is responsible for all aspects of the specific projects to which he or she is assigned. The resident engineer has the authority to stop work on a project. The authorized biologist will have the authority to halt any activity, through the Resident Engineer or other identified authority in charge of implementation that may pose a threat to desert tortoises and to direct movements of equipment and personnel to avoid injury or mortality to desert tortoise.

4. When handling desert tortoises, authorized biologists (and trained individuals) must follow the guidelines outlined in the Desert Tortoise Field Manual (Service 2010), chapters 6 and 7. The manual is available on the web through the VFWO website (www.fws.gov/ventura).

5. Immediately prior to the start of any ground-disturbing activities and prior to the installation of any desert tortoise exclusion fencing, clearance surveys for the desert tortoise will be conducted by the authorized biologist, as appropriate. The entire project area will be surveyed for desert tortoise and their burrows by an authorized biologist or approved desert tortoise monitor before the start of any ground-disturbing activities following the 2010 field survey protocol (Service 2010) or more current approved protocol. If burrows are found, they will be examined by an authorized biologist to determine if desert tortoises are present. If a tortoise is present and the burrow cannot be avoided, it will be relocated in accordance with Service protocol (Service 2010). If the authorized biologist determines clearance surveys are not needed, clearance surveys would not be required. If desert tortoises are found at a project site where Caltrans (or the authorized biologist) had previously concluded they were unlikely to occur, Caltrans will contact the Service to determine if the implementation of additional protective measures would be appropriate.

6. For construction projects determined likely to may affect desert tortoise, an education program will be developed and presented by the authorized biologist prior to the onset of ground-disturbing activities to be conducted under the auspices of this consultation. All onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel employed for a project will be required to participate in an education program regarding the desert tortoise before performing on-site work. The program will consist of a class presented by an authorized biologist or a video, provided the authorized biologist is present to answer questions. Wallet-sized cards or a one-page handout with important information for workers

to carry are recommended as a future reference and a reminder of the program's content. The program will cover the following topics at a minimum:

- the distribution, general behavior, and ecology of the desert tortoise;
- its sensitivity to human activities;
- the protection it is afforded by the Endangered Species Act;
- penalties for violations of State and Federal laws;
- notification procedures by workers or contractors if a tortoise is found in a construction area, and;
- protective measures specific to each project.

7. Whenever project vehicles are parked outside of a fence that is intended to preclude entry by desert tortoises, workers will check under the vehicle before moving it. If a desert tortoise is beneath the vehicle, the worker will notify the authorized biologist or an approved desert tortoise monitor to relocate the tortoise. If an authorized biologist is not present on-site, the Resident Engineer or supervisor must notify an authorized biologist. Workers will not be allowed to capture, handle, or relocate tortoises. Any such handling must be reported as described in the Reporting Requirements section of this biological opinion.

8. The area of disturbance will be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. This measure includes temporary haul roads, staging/storage areas, or access roads. Work area boundaries will be clearly and distinctly delineated with flagging or other marking to minimize surface disturbance associated with vehicle movement. Special habitat features, such as desert tortoise burrows, will be identified and marked as environmentally sensitive areas by the authorized biologist, if they are to be avoided and will be discussed and identified during the worker education program. To the extent possible, previously disturbed areas within the Caltrans ROW will be used for equipment storage, office trailer locations, and vehicle parking. The development of all temporary access and work roads associated with construction will be minimized and constructed without blading where feasible. Project-related vehicle traffic will be restricted to established roads, construction areas, staging/storage areas, and parking areas. The resident engineer, authorized biologist or approved desert tortoise monitor will ensure that blading is conducted only where necessary.

9. Caltrans will require all contractors to comply with the Act in the performance of work necessary for project completion. Evidence of compliance is required prior to Caltrans accepting or receiving materials or goods produced from outside of the right-of-way or through the use of facilities located outside of the right-of-way, including but not limited to, non-commercial batch plants, haul roads, quarries, and similar operations. Copies of the compliance documents will be maintained at the work-site by the resident engineer.

10. The resident engineer is responsible for ensuring that all protective measures are being fully implemented. If the resident engineer determines, or is notified by the authorized biologist, that one or more protective measures are not being fully implemented, he or she will halt all

activities that are out of compliance until all problems have been remedied. All workers, authorized biologists, and biological monitors will be required to notify the resident engineer of any such problem they notice. The resident engineer must always be able to contact an approved biological monitor or authorized biologist to resolve any unforeseen issues.

11. Caltrans will determine whether the presence of authorized biologists and approved desert tortoise monitors will be required during project activities as outline in the 'criteria for use in reaching appropriate determination' section of this programmatic biological opinion and the submitted Appendix I notification form to the Service. In general, where the risk to desert tortoises is low, the authorized biologist or an approved biological monitor will be present at the onset of the project to ensure protective measures are in place and will, if necessary (for example, for projects that will require a substantial length of time to complete), conduct periodic field checks to ensure compliance.

12. Permanent or temporary exclusion fencing may be used to prevent entry by desert tortoises into a work site, if Caltrans and the authorized biologist determine this measure is appropriate. Exclusion fencing will be installed following Service guidelines (2005) or more current protocol. The authorized biologist will ensure that desert tortoises cannot pass under, over, or around the fence. If such a fence is used, authorized biologists or desert tortoise monitors will not be required to be present at the site at all times. However, the authorized biologist must periodically check the fenced area to search for breaks in the fence and to ensure no desert tortoises have breached the fence. Preconstruction surveys for tortoise and tortoise sign will be performed within all proposed construction areas prior to the fence being installed. In addition, prior to ground disturbing activities beginning in a previously undisturbed or unfenced area, preconstruction surveys will be performed.

13. Upon locating a dead or injured tortoise within a project site, the resident engineer will immediately notify the authorized biologist whom then will notify the Service within 24 hours of the observation via telephone. Written notification must be made to the appropriate Fish and Wildlife field office within 5 days of the finding. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death or injury, if known, and other pertinent information (i.e., size, sex, recommendations to avoid future injury or mortality).

14. Injured desert tortoises will be transported to a veterinarian for treatment at the expense of the contractor or Caltrans. Only the authorized biologist or an approved desert tortoise biological monitor will be allowed to handle an injured tortoise. If an injured animal recovers, the appropriate Fish and Wildlife field office will be contacted for final disposition of the animal.

15. Caltrans will notify the authorized biologist or approved desert tortoise biological monitor to collect and place the remains of intact desert tortoise carcasses with educational or research institutions holding the appropriate State and Federal permits per their instructions. If such institutions are not available or the animal's remains are in poor condition, the information noted in this section will be obtained and the carcass left in place. If left in place and

sufficient pieces are available, the authorized biologist will attempt to mark the carcass to ensure that it is not reported again.

16. If working outside of a desert tortoise-proof fenced area, auger holes or other excavations will be covered following inspection at the end of each workday to prevent desert tortoises from becoming trapped.

17. When feasible or practicable, construction vehicles will be cleaned of all mud, dirt, and debris from other sites prior to entering the project area. The purpose of this measure is to minimize the spread of weedy plant species that may degrade desert tortoise habitat.

18. Except on maintained public roads designated for higher speeds or within a desert tortoise-proof fenced area, driving speed will not exceed 20 miles per hour through potential desert tortoise habitat on both paved and unpaved roads.

19. Any fuel or other hazardous materials spills will be promptly cleaned up; any leaks from equipment will be stopped and repaired immediately. Vehicle and equipment fluids that are no longer useful will be transported to an appropriate off-site disposal location. Fuel and lubricant storage and dispensing locations will be constructed to fully contain spilled materials until disposal can occur. Hazardous waste, including used motor oil waste and coolant, will be stored and transferred in a manner consistent with applicable regulations and guidelines.

20. Desert tortoise habitat, outside of the ROW, that is temporarily affected by grading during project construction (e.g., temporary access roads, detention basins) will be restored following construction, using salvaged topsoil. Habitat restoration will also incorporate desert bioregion revegetation/restoration guidance measures. These measures generally include alleviating soil compaction, returning the surface to its original contour, pitting or imprinting the surface to allow small areas where seeds and rain water can be captured, planting seedlings that have acquired the necessary root mass to survive without watering, planting seedlings in the spring with herbivory cages, broadcasting locally collected seed immediately prior to the rainy season, and covering the seeds with mulch. Temporary access roads and crossovers, outside of the ROW, will be re-graded, restored, and stabilized. Prior to the start of construction, potential temporary impact areas that have been identified by a botanist as having more than 75 percent cover of non-native grasses will not require restoration; areas that may be subject to temporary disturbance and would require revegetation following construction would be identified on Appendix I.

21. Plant species listed in Lists A and B of the California Exotic Pest Plant Council's list of exotic pest plants (latest edition) will not be used to restore or stabilize areas within or near desert tortoise habitat.

22. Upon completion of construction, all refuse, including, but not limited to equipment parts, wrapping material, cable, wire, strapping, twine, buckets, metal or plastic containers, and boxes will be removed from the site and disposed of properly.

23. If explosives need to be used, the authorized biologist will survey any area that may be affected by their use (via noise, vibration, or blown-up material) to determine if desert tortoises are present. If desert tortoises are present in this area, the resident engineer, with the cooperation of the authorized biologist or approved desert tortoise biological monitor, will implement necessary measures to protect these animals. Such measures may include, but are not limited to, installing temporary fencing and moving desert tortoises outside of it, holding desert tortoises in a secure location until after explosion, and other actions that protect the desert tortoises from injury or mortality during the blasting.

24. No firearms or pets, including dogs, will be allowed within the work area. Firearms carried by authorized security and law enforcement personnel and working dogs under the control of a handler will be exempt from this protective measure.

25. To preclude attracting predators, such as the common raven (*Corvus corax*) and coyotes (*Canis latrans*), food-related trash items will be removed daily from the work site and disposed of at an approved refuse disposal site. Workers are prohibited from feeding all wildlife.

26. Sandblasted material will either be vacuum-retrieved or contained by a tarp. All refuse material from sandblasting will be disposed of in compliance with Federal law.

27. During all off-road cross-country travel outside of any area surrounded by desert tortoise-proof fencing, the authorized biologist will select and flag the access route to avoid burrows, to minimize disturbance of vegetation, and to relocate any desert tortoises that are found in the access route, out of harm's way. The authorized biologist will walk in front of the lead vehicle to ensure that no desert tortoise or burrows are present. All vehicles will follow the lead vehicle's tracks and stay within the designated access route.

28. Boring locations will not be established within 35 feet of an active desert tortoise burrow. If an active burrow is found within 35 feet after the boring location is established, the boring location will be moved until it is at least 35 feet from the active burrow.

29. An authorized biologist will be onsite during all drilling or boring activities.

30. Desert tortoise exclusion fence construction will follow the guidelines in chapter 8 of the Desert Tortoise Field Manual (Service 2010) which is available at the VFWO website (www.fws.gov/ventura).

31. Cattle guards will be installed where appropriate, with technical assistance from the Service, if necessary. All cattle guards that serve as barriers to the movement of desert tortoises will be installed and maintained (e.g., removal of soil build-up) to ensure that any desert tortoise that falls underneath has a path of escape via a sloped escape ramp without crossing the intended barrier.

32. Desert tortoise-proof fencing will be tied to cattle guards in a manner that ensures juvenile desert tortoises cannot pass through (Service 2010)

33. When gates are installed within the fence line, desert tortoise-proof fencing will be installed along the gate bottom beginning at least 2 feet above the fence bottom and extending towards the ground leaving less than a 1-inch gap (Service 2010).

34. All desert tortoise fences, gates, and cattle guards will be regularly maintained at a frequency sufficient to ensure that they will continually provide an effective barrier to passage of desert tortoises.

35. Desert tortoise-proof fencing will not cross washes. When washes and culverts are encountered, the desert tortoise-proof fence will follow the wash to the roadway and either tie into the existing bridge or cross over the top of a culvert.

36. During fence inspections and repairs, if any desert tortoises are observed, workers are to notify the authorized biologist because only authorized biologists and approved biological monitors are permitted to handle tortoise. All desert tortoises encountered within the roadway side of the fence will be relocated across the fence to safety in accordance with Service protocol (Service 2010). Any such incident will be reported in the annual report.

37. On a case by case basis, individual active burrows may be fenced if the authorized biologist determines this protective measure is necessary to prohibit desert tortoises from repeatedly entering work areas. Fencing around individual burrows will be removed when adjacent construction is complete.

38. To further ensure that actions implemented under the auspices of this consultation do not substantially degrade the status of the desert tortoise or its critical habitat, Caltrans will reinitiate formal consultation in the event either of the following thresholds regarding injury or mortality to desert tortoises or loss or disturbance of their critical habitat is reached:

    a. two (2) desert tortoises injured or killed in any calendar year, within the action area, in each county considered in this biological opinion; or seven (7) desert tortoises injured or killed, within the action area (regardless of county) considered in this biological opinion, in any calendar year; and

    b. five (5) acres located outside of the ultimate rights-of-way containing the primary constituent elements of critical habitat of the desert tortoise are adversely affected on a long-term basis within each of the critical habitat units considered in this biological opinion, in any calendar year.

39. Each Caltrans district in the action area will record with a global positioning system (GPS) all new fence locations, culverts, and under crossings available to the desert tortoise within the range of roads covered by this programmatic biological opinion. All recorded data will be input into a geographical information system (GIS) database and submitted on an annual

basis to the Service to assist with future planning for fencing high priority roadways to reduce vehicle strikes to desert tortoises. The database will be updated as projects install new drainage structures, permanent desert tortoise proof fencing, and other structures such as cattle-guards and desert tortoise proof fencing.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

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 describes 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 are the effects of future, non-Federal activities in the action area on the desert tortoise. In accordance with regulation and policy, 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.

Adverse Modification Determination

This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied on the statutory provisions of the ESA to complete the following analysis with respect to critical habitat. In accordance with regulation and policy, the adverse modification analysis in this biological opinion relies on four components: (1) *Status of Species*, which includes a description of the range-wide condition of designated critical habitat for the desert tortoise in terms of primary constituent elements (PCEs), the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) *Environmental Baseline*, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the PCEs and how that will influence the recovery role of the affected critical habitat units; and (4) *Cumulative Effects*, which evaluates the effects of future non-Federal activities in the action area on the PCEs and how that will influence the recovery role of affected critical habitat units. The analysis in this biological opinion places an emphasis on using the intended range-wide recovery function of critical habitat for the desert tortoise and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

STATUS OF THE SPECIES

Section 4(c)(2) of the Act requires the Service 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 or not 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. For this reason, we are appending the 5-year review of the status of the desert tortoise (Appendix 1; Service 2010b) to this biological opinion and are incorporating it by reference to provide most of the information needed for this section of the biological opinion. The following paragraphs provide a summary of the relevant information in the 5-year review.

In the 5-year review, the Service 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 Service also describes the desert tortoise's ecology, life history, spatial distribution, abundance, habitats, and the threats that led to its listing (i.e., the 5-factor analysis required by section 4(a)(1) of the Act). In the 5-year review, the Service 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 Service concluded in the 5-year review that the recovery units recognized in the original and revised recovery plans (Service 1994 and 2011e, respectively) do not qualify as distinct population segments under the Service'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 Service 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 Service also discusses various means by which researchers have attempted to determine the abundance of desert tortoises and the strengths and weaknesses of those methods. The Service provides a summary table of the results of range-wide monitoring, initiated in 2001, in the 5-year review. This ongoing sampling effort is the first comprehensive attempt to determine the densities of desert tortoises across their range. Table 1 of the 5-year review provides a summary of data collected from 2001 through 2007; we summarize data from the 2008 through

2010 sampling efforts in subsequent reports (Service 2010b, 2010c, 2010d). As the Service notes in the 5-year review notes, much of the difference in densities between years is due to variability in sampling; determining actual changes in densities will require many years of monitoring. Additionally, due to differences in area covered and especially to the non-representative nature of earlier sample sites, data gathered by the range-wide monitoring program cannot be reliably compared to information gathered through other means at this time.

In the 5-year review, the Service provides a brief summary of habitat use by desert tortoises; more detailed information is available in the revised recovery plan (Service 2011a). 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 Service 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 Service described these threats as part of the process of its listing (55 Federal Register12178; April 2, 1990), further discussed them in the original recovery plan (Service 1994), and reviewed them again in the revised recovery plan (Service 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. In addition, common ravens, known predators of desert tortoises, use transmission line 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 (Service 2011a). 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 (OHV) 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).

We have enclosed a map that depicts the 12 critical habitat units of the desert tortoise and the aggregate stress that multiple, synergistic threats place on desert tortoise populations (Appendix 2). The map also depicts linkages between conservation areas for the desert tortoise (which include designated critical habitat) recommended in the revised recovery plan (Service 2011a) that are based on an analysis of least-cost pathways (i.e., areas with the highest potential to support desert tortoises) between conservation areas for the desert tortoise. This map illustrates that areas under the highest level of conservation management for desert tortoises remain subjected to numerous threats and stresses, which suggests that current conservation actions for the desert tortoise are not substantially reducing mortality sources for the desert tortoise across its range.

Since the completion of the 5-year review, the Service has issued several biological opinions that affect 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 (DWMAs) 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 tortoises during the construction of the projects, such as translocation of affected individuals. Additionally, the Bureau of Land Management (Bureau) and California Energy Commission, the agencies permitting these facilities, have required the project proponents to fund numerous measures, such as land acquisition and the implementation of recovery actions intended to offset the adverse effects of the proposed actions. In aggregate, these projects resulted in an overall loss of approximately 30,180 acres of desert

tortoise habitat; three of the projects (i.e., BrightSource Ivanpah, Stateline Nevada, and Desert Sunlight) constricted linkages between conservation areas that are important for the recovery of the desert tortoise. We also predicted that these projects would translocate, injure, or kill up to 1,621 desert tortoises (see table below); we concluded that most of the individuals in these totals would be juveniles. The mitigation required by the Bureau and California Energy Commission will result in the acquisition of private land within critical habitat and DWMAs and funding for the implementation of various actions that are intended to promote the recovery of the desert tortoise; at this time, we cannot assess how successful these measures will be.

The following table summarizes information regarding the proposed solar projects that have undergone formal consultation with regard to the desert tortoise. Data are from Service (2010d [Chevron Lucerne Valley], f [Calico], g [Genesis], h [Blythe]; 2011f [BrightSource Ivanpah], g [Desert Sunlight], h [Abengoa Harper Lake], i [Palen]; and Burroughs (2012; Nevada projects). Projects are in California, unless noted.

Project	Acres of Desert Tortoise Habitat	Estimated Number of Desert Tortoises Onsite	Recovery Unit
BrightSource Ivanpah	3,582	1,136	Eastern Mojave
Stateline Nevada - NV	2,966	123	Eastern Mojave
Amargosa Farm Road - NV	4,350	4	Eastern Mojave
Calico*			Western Mojave
Abengoa Harper Lake	Primarily in abandoned agricultural fields	4	Western Mojave
Chevron Lucerne Valley	516	10	Western Mojave
Nevada Solar One - NV	400	**	Northeastern Mojave
Copper Mountain North - NV	1,400	30 **	Northeastern Mojave
Copper Mountain - NV	380	**	Northeastern Mojave
Moapa K Road Solar - NV	2,152	202	Northeastern Mojave
Genesis	1,774	8	Colorado
Blythe	6,958	30	Colorado
Palen	1,698	18	Colorado
Desert Sunlight	4,004	56	Colorado
Total	30,180	1,621	

* The applicant has proposed changes to the proposed action; the Bureau has re-initiated formal consultation with the Service, pursuant to section 7(a)(2) of the Endangered Species Act, as part of its re-evaluation of the project (Service 2012a)

** These projects occurred under the Clark County Multi-species habitat conservation plan; we estimate that all three projects combined will affect fewer than 30 desert tortoises.

In addition to the biological opinions issued for solar development within the range of the desert tortoise, the Service (2012a) also issued a biological opinion to the Department of the 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.

As the Service notes in the 5-year review (Service 2010b), "(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 (2002 in Service 2010b) suggests that invasive weeds may adversely affect the physiological health of desert tortoises. Modeling with the spatial decision support system indicates that invasive species likely affect a large portion of the desert tortoise's range; see Appendix 3. Furthermore, high densities of weedy species increase the likelihood of wildfires; wildfires, in turn, destroy native species and further the spread of invasive weeds.

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 Service 2010b]). 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 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) will make recolonization of extirpated areas difficult, if not impossible.

The Service 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 CFR 402.02). Although the Service 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 Service 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 2002 in Service 2010b), 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 forbs) with nutrient levels

not found in the invasive weeds that have increased in abundance across its range (Tracy et al. 2004). Compromised nutrition of young desert tortoises likely represents an effective reduction in reproduction by reducing the number 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 negatively affect the reproduction of desert tortoises and recruitment into the adult population.

Data from long-term study plots, which were first established in 1976, cannot be extrapolated to provide an estimate of the number of desert tortoises on a range-wide basis; however, these data indicate, "appreciable declines at the local level in many areas, which coupled with other survey results, suggest that declines may have occurred more broadly" (Service 2010b). Other sources indicate that local declines are continuing to occur. For example, surveyors found "lots of dead [desert tortoises]" in the western expansion area of Fort Irwin (Western Mojave Recovery Unit) in 2008 (Fort Irwin Research Coordination Meeting 2008). After the onset of translocation, coyotes killed 105 desert tortoises in Fort Irwin's southern translocation area (Western Mojave Recovery Unit); other canids may have been responsible for some of these deaths. Other incidences of predation were recorded throughout the range of the desert tortoise during this time (Esque et al. 2010). Esque et al. (2010) hypothesized that this high rate of predation on desert tortoises was influenced by low population levels of typical prey for coyotes due to drought conditions in previous years. Recent surveys in the Ivanpah Valley (Northeastern Mojave Recovery Unit) for a proposed solar facility detected 31 live desert tortoises and the carcasses of 25 individuals that had been dead less than 4 years (Ironwood 2011); this ratio of carcasses to live individuals over such a short period of time may indicate an abnormally high rate of mortality for a long-lived animal. In summary, the number of desert tortoises range-wide likely decreased substantially from 1976 through 1990 (i.e., when long-term study plots were initiated through the time the desert tortoise was listed as threatened), although we cannot quantify the amount of this decrease. Additionally, more recent data collected from various sources throughout the range of the desert tortoise suggest that local declines continue to occur (e.g., Bureau et al. 2005, Esque et al. 2010).

The distribution of the desert tortoise has not changed substantially since the publication of the original recovery plan in 1994 (Service 2010b) 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., cities of Barstow, Lancaster, Las Vegas, St. George; 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 Bureau and unauthorized use in areas such as east of California City). 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 (Service 2012b).

The following table depicts acreages of habitat (as modeled by Nussear et al. 2009) within various regions of the desert tortoise's range and of impervious surfaces as of 2006 (Xian et al. 2009). Impervious surfaces include paved and developed areas and other disturbed areas that have zero probability of supporting desert tortoises.

Regions[1]	Modeled Habitat (acres)	Impervious Surfaces within Modeled Habitat	Percent of Modeled Habitat that is now Impervious
Western Mojave	7,582,092	1,864,214	25
Colorado Desert	4,948,900	494,981	10
Northeast Mojave	7,776,934	1,173,025	15
Upper Virgin River	232,320	80,853	35
Total	20,540,246	3,613,052	18

[1]The regions do not correspond to recovery unit boundaries; we used a more general separation of the range for this illustration.

On an annual basis, the Service produces a report that provides an up-to-date summary of the factors that were responsible for the listing of the species, describes other threats of which we are aware, describes the current population trend of the species, and includes comments of the year's findings. The Service's (2011d) recovery data call report describes the desert tortoise's status as 'declining,' and notes that "(a)nnual range-wide monitoring continues, but the life history of the desert tortoise makes it impossible to detect annual population increases (continued monitoring will provide estimates of moderate- to long-term population trends). Data from the monitoring program do not indicate that numbers of desert tortoises have increased since 2001. The fact that most threats appear to be continuing at generally the same levels suggests that populations are still in decline. Information remains unavailable on whether mitigation of particular threats has been successful."

In conclusion, we have used the 5-year review (Service 2010b), revised recovery plan (Service 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 have occurred in local areas throughout the range. 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.

Critical Habitat

The Service designated critical habitat for the desert tortoise in portions of California, Nevada, Arizona, and Utah in a final rule, published February 8, 1994 (59 Federal Register 5820). Critical habitat is designated by the Service to identify the key biological and physical needs of the species and key areas for recovery and to focus conservation actions on those areas. Critical habitat is

composed of specific geographic areas that contain the biological and physical features essential to the species' conservation and that may require special management considerations or protection. These features, which include space, food, water, nutrition, cover, shelter, reproductive sites, and special habitats, are called the primary constituent elements of critical habitat. The specific primary constituent elements of desert tortoise critical habitat are: 1) sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow; 2) sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species; 3) suitable substrates for burrowing, nesting, and overwintering; 4) burrows, caliche caves, and other shelter sites; 5) sufficient vegetation for shelter from temperature extremes and predators; and 6) habitat protected from disturbance and human-caused mortality.

Critical habitat of the desert tortoise would not be able to fulfill its conservation role without each of the primary constituent elements being functional. As examples, having a sufficient amount of forage species is not sufficient if human-caused mortality is excessive; an area with sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow would not support desert tortoises without adequate forage species.

The final rule for designation of critical habitat did not explicitly ascribe specific conservation roles or functions to the various critical habitat units. Rather, it refers to the strategy of establishing recovery units and desert wildlife management areas recommended by the recovery plan for the desert tortoise, which had been published as a draft at the time of the designation of critical habitat, to capture the "biotic and abiotic variability found in desert tortoise habitat" (59 Federal Register 5820, see page 5823). Specifically, we designated the critical habitat units to follow the direction provided by the draft recovery plan (Service 1994) for the establishment of desert wildlife management areas. The critical habitat units in aggregate are intended to protect the variability that occurs across the large range of the desert tortoise; the loss of any specific unit would compromise the ability of critical habitat as a whole to serve its intended function and conservation role.

Despite the fact that desert tortoises are not required to move between critical habitat units to complete their life histories, both the original and revised recovery plans highlight the importance of these critical habitat units and connectivity between them for the recovery of the species. Specifically, the revised recovery plan states that "aggressive management as generally recommended in the 1994 Recovery Plan needs to be applied within existing (desert) tortoise conservation areas (defined as critical habitat, among other areas being managed for the conservation of desert tortoises) or other important areas … to ensure that populations remain distributed throughout the species' range …. (Desert tortoise) conservation areas capture the diversity of the Mojave population of the desert tortoise within each recovery unit, conserving the genetic breadth of the species, providing a margin of safety for the species to withstand catastrophic events, and providing potential opportunities for continued evolution and adaptive change …. Especially given uncertainties related to the effects of climate change on desert tortoise populations and distribution, we consider (desert) tortoise conservation areas to be the minimum baseline within which to focus our recovery efforts (pages 34 and 35, Service 2011a)."

We did not designate the Desert Tortoise Natural Area and Joshua Tree National Park in California and the Desert National Wildlife Refuge in Nevada as critical habitat because they are "primarily managed as natural ecosystems" (59 Federal Register 5820, see page 5825) and provide adequate protection to desert tortoises. Since the designation of critical habitat, Congress increased the size of Joshua Tree National Park and created the Mojave National Preserve. A portion of the expanded boundary of Joshua Tree National Park lies within critical habitat of the desert tortoise; portions of other critical habitat units lie within the boundaries of the Mojave National Preserve.

Within each critical habitat unit, both natural and anthropogenic factors affect the function of the primary constituent elements of critical habitat. As an example of a natural factor, in some specific areas within the boundaries of critical habitat, such as within and adjacent to dry lakes, some of the primary constituent elements are naturally absent because the substrate is extremely silty; desert tortoises do not normally reside in such areas. Comparing the model of desert tortoise habitat developed by Nussear et al. (2009) to the gross acreages of the critical habitat units demonstrates quantitatively that the entire area within the boundaries of critical habitat likely does not support the primary constituent elements. As an example, the following table demonstrates this information; the acreage for modeled habitat is for the area in which the probability that desert tortoises are present is greater than 0.5. The acreages of modeled habitat are from Service (2010a); they do not include loss of habitat due to human-caused impacts.

Critical Habitat Unit	**Gross Acreage**	**Modeled Habitat**
Superior-Cronese	766,900	724,967
Fremont-Kramer	518,000	501,095
Ord-Rodman	253,200	184,155
Pinto Mountain	171,700	144,056
Piute-Eldorado	970,600	930,008
Ivanpah Valley	632,400	510,711
Chuckwalla	1,020,600	809,319
Chemehuevi	937,400	914,505
Gold Butte-Pakoon	488,300	418,189
Mormon Mesa	427,900	407,041
Beaver Dam Slope	204,600	202,499
Upper Virgin River	54,600	46,441
Totals	6,446,200	5,792,986

Condition of the Primary Constituent Elements of Critical Habitat

Human activities can have obvious or more subtle effects on the primary constituent elements. The grading of an area and subsequent construction of a building removes the primary constituent elements of critical habitat; this action has an obvious effect on critical habitat. The revised recovery plan identifies human activities such as urbanization and the proliferation of roads and highways as threats to the desert tortoise and its habitat; these threats are examples of activities that have a clear impact on the primary constituent elements of critical habitat.

We have included the following paragraphs from the revised recovery plan for the desert tortoise (Service 2011) to demonstrate that other anthropogenic factors affect the primary constituent

elements of critical habitat in more subtle ways. All references are in the revised recovery plan (i.e., in Service 2011); we have omitted some information from the revised recovery plan where the level of detail was unnecessary for the current discussion.

> Surface disturbance from OHV activity can cause erosion and large amounts of dust to be discharged into the air. Recent studies on surface dust impacts on gas exchanges in Mojave Desert shrubs showed that plants encrusted by dust have reduced photosynthesis and decreased water-use efficiency, which may decrease primary production during seasons when photosynthesis occurs (Sharifi et al. 1997). Sharifi et al. (1997) also showed reduction in maximum leaf conductance, transpiration, and water-use efficiency due to dust. Leaf and stem temperatures were also shown to be higher in plants with leaf-surface dust. These effects may also impact desert annuals, an important food source for [desert] tortoises.
>
> OHV activity can also disturb fragile cyanobacterial-lichen soil crusts, a dominant source of nitrogen in desert ecosystems (Belnap 1996). Belnap (1996) showed that anthropogenic surface disturbances may have serious implications for nitrogen budgets in cold desert ecosystems, and this may also hold true for the hot deserts that [desert] tortoises occupy. Soil crusts also appear to be an important source of water for plants, as crusts were shown to have 53 percent greater volumetric water content than bare soils during the late fall when winter annuals are becoming established (DeFalco et al. 2001). DeFalco et al. (2001) found that non-native plant species comprised greater shoot biomass on crusted soils than native species, which demonstrates their ability to exploit available nutrient and water resources. Once the soil crusts are disturbed, non-native plants may colonize, become established, and out-compete native perennial and annual plant species (DeFalco et al. 2001, D'Antonio and Vitousek 1992). Invasion of non-native plants can affect the quality and quantity of plant foods available to desert tortoises. Increased presence of invasive plants can also contribute to increased fire frequency.
>
> Proliferation of invasive plants is increasing in the Mojave and Sonoran deserts and is recognized as a significant threat to desert tortoise habitat. Many species of non-native plants from Europe and Asia have become common to abundant in some areas, particularly where disturbance has occurred and is ongoing. As non-native plant species become established, native perennial and annual plant species may decrease, diminish, or die out (D'Antonio and Vitousek 1992). Land managers and field scientists identified 116 species of non-native plants in the Mojave and Colorado deserts (Brooks and Esque 2002).
>
> Increased levels of atmospheric pollution and nitrogen deposition related to increased human presence and combustion of fossil fuels can cause increased levels of soil nitrogen, which in turn may result in significant changes in plant communities (Aber et al. 1989). Many of the non-native annual plant taxa in the Mojave region evolved in more fertile Mediterranean regions and benefit from increased levels of soil nitrogen, which gives them a competitive edge over native annuals. Studies at three sites within the central, southern, and western Mojave Desert indicated that increased levels of soil nitrogen can increase the dominance of non-native annual plants and promote the invasion of new species in desert regions. Furthermore, increased dominance by non-native annuals may decrease the diversity of native annual plants,

and increased biomass of non-native annual grasses may increase fire frequency (Brooks 2003).

This summary from the revised recovery plan (Service 2011) demonstrates how the effects of human activities on habitat of the desert tortoise are interconnected. In general, surface disturbance causes increased rates of erosion and generation of dust. Increased erosion alters additional habitat outside of the area directly affected by altering the nature of the substrate, removing shrubs, and possibly destroying burrows and other shelter sites. Increased dust affects photosynthesis in the plants that provide cover and forage to desert tortoises. Disturbed substrates and increased atmospheric nitrogen enhance the likelihood that invasive species will become established and outcompete native species; the proliferation of weedy species increases the risk of large-scale fires, which further move habitat conditions away from those that are favorable to desert tortoises. The following paragraphs generally describe how the primary constituent elements are affected by the threats described in the revised recovery plan.

Sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow. Urban and agricultural development, concentrated use by off-road vehicles, and other activities of this nature completely remove habitat. Although we are aware of local areas within the boundaries of critical habitat that have been heavily disturbed by the unauthorized use of such activities, we do not know of any areas that have been disturbed to the intensity and extent that this primary constituent element has been compromised. To date, the largest losses of critical habitat are likely the result of the widening of existing freeways. Despite these losses of critical habitat, which occur in a linear manner, the critical habitat units continue to support sufficient space to support viable populations within each of the six recovery units.

In some cases, major roads likely disrupt the movement, dispersal, and gene flow of desert tortoises. State Route (SR) 58 and SR 395 in the Fremont-Kramer Critical Habitat Unit and Fort Irwin Road in the Superior-Cronese Critical Habitat Unit are examples of large and heavily travelled roads that likely disrupt movement, dispersal, and gene flow. Roads that have been fenced and provided with underpasses may alleviate this fragmentation to some degree; however, such facilities have not been in place for sufficient time to determine whether they would eliminate this effect.

The threats of invasive plant species described in the revised recovery plan generally do not result in the removal of this primary constituent element because they do not convert habitat into impervious surfaces, such as urban development would.

Sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species. This primary constituent element addresses the ability of critical habitat to provide adequate nutrition to desert tortoises. As described in the revised recovery plan and 5-year review, grazing, historical fire, invasive plants, altered hydrology, drought, wildfire potential, fugitive dust, and climate change/temperature extremes contribute to the stress of "nutritional compromise." Paved and unpaved roads through critical habitat of the desert tortoise provide avenues by which invasive native species disperse; these legal routes also provide the means by which unauthorized use occurs over large areas of critical habitat. Nitrogen deposition

from atmospheric pollution likely occurs throughout all the critical habitat units and exacerbates the effects of the disturbance of substrates. Because paved and unpaved roads are so widespread through critical habitat, we expect that this threat has, to some degree, compromised the conservation value and function of critical habitat throughout the range of the desert tortoise. Appendix 2 depicts the routes by which invasive weeds have access to critical habitat; we expect that the routes shown on this map are a subset of the actual number of routes that actually cross critical habitat of the desert tortoise.

Suitable substrates for burrowing, nesting, and overwintering. Surface disturbance, motor vehicles traveling off route, use of OHV management areas, OHV events, unpaved roads, grazing, historical fire, wildfire potential, altered hydrology, and climate change leading to shifts in habitat composition and location, storms, and flooding can alter substrates to the extent that they are no longer suitable for burrowing, nesting, and overwintering; erosion caused by these activities can alter washes to the extent that desert tortoise burrows placed along the edge of a wash, which is a preferred location for burrows, could be destroyed. We expect that the area within critical habitat that is affected by off-road vehicle use to the extent that substrates are no longer suitable is relatively small in relation to the area that desert tortoises have available for burrowing, nesting, and overwintering; consequently, we expect that off-road vehicle use does not have a substantial effect on this primary constituent element.

Most livestock allotments have been eliminated from within the boundaries of critical habitat. Additionally, we expect that livestock would compact substrates to the extent that they would become unsuitable for burrowing, nesting, and overwintering only in areas of concentrated use, such as around watering areas and corrals. Because livestock grazing occurs over a relatively small portion of critical habitat and the substrates in most areas within livestock allotments would not be substantially affected, we expect that suitable substrates for burrowing, nesting, and overwintering remain throughout most of the critical habitat units.

Burrows, caliche caves, and other shelter sites. We expect that human-caused effects to burrows, caliche caves, and other shelter sites likely occur at a similar rate as effects to substrates for burrowing, nesting, and overwintering for the same general reasons. Consequently, we expect that sufficient burrows, caliche caves, and other shelter sites remain throughout most of the critical habitat units.

Sufficient vegetation for shelter from temperature extremes and predators. In general, sufficient vegetation for shelter from temperature extremes and predators remains throughout critical habitat. In areas where large fires have occurred in critical habitat, many of the shrubs that provide shelter from temperature extremes and predators have been destroyed; in such areas, cover sites may be a limiting factor. The proliferation of invasive plants poses a threat to shrub cover throughout critical habitat as the potential for larger wildfires increases.

In 2005, wildfires in Nevada, Utah, and Arizona burned extensive areas of critical habitat (Service 2010a). Although different agencies report slightly different acreages, the following table provides an indication of the scale of the fires.

Critical Habitat Unit	Total Area Burned (acres)	Percent of the Critical Habitat Unit Burned
Beaver Dam Slope	53,528	26
Gold-Butte Pakoon	65,339	13
Mormon Mesa	12,952	3
Upper Virgin River	10,557	19

The revised recovery plan notes that the fires caused statistically significant losses of perennial plant cover, although patches of unburned shrubs remained. Given the patchiness with which the primary constituent elements of critical habitat are distributed across the critical habitat units and the varying intensity of the wildfires, we cannot quantify precisely the extent to which these fires disrupted the function and value of the critical habitat.

Habitat protected from disturbance and human-caused mortality. In general, the Federal agencies that manage lands within the boundaries of critical habitat have adopted land management plans that include implementation of some or all of the recommendations contained in the original recovery plan for the desert tortoise. (See pages 70 to 72 of Service 2010a.) To at least some degree, the adoption of these plans has resulted in the implementation of management actions that are likely to reduce the disturbance and human-caused mortality of desert tortoises. For example, these plans resulted in the designation of open routes of travel and the legal closure (and, in some cases, physical closure) of unauthorized routes. Numerous livestock allotments have been relinquished by the permittees and retired by the Bureau and National Park Service. As a result of planning efforts, the Bureau's record of decision included direction to withdraw areas of critical habitat from mineral entry. As a result of actions on the part of various agencies, many miles of highways and other paved roads have been fenced to prevent desert tortoises from wandering into traffic and being killed. The Service and other agencies of the Desert Managers Group in California are implementing a plan to remove common ravens that prey on desert tortoises and to undertake other actions that would reduce subsidies (i.e., food, water, sites for nesting, roosting, and perching) that facilitate their abundance in the California desert (Service 2008).

Despite the implementation of these actions, disturbance and human-caused mortality continue to occur in many areas of critical habitat (which overlap the desert wildlife management areas to a large degree and are the management units for which most data are collected) to the extent that the conservation value and function of critical habitat is, to some degree, compromised. For example, many highways and other paved roads in California remain unfenced. Twelve desert tortoises have been reported to be killed on paved roads from within Mojave National Preserve in 2011; we fully expect that desert tortoises are being killed at similar rates on many other roads, although these occurrences are not discovered and reported as diligently as by the National Park Service. Employees of the Southern California Gas Company reported two desert tortoises in 2011 that were crushed by vehicles on unpaved roads.

Unauthorized off-road vehicle use continues to disturb habitat and result in cleared areas within the boundaries of critical habitat (e.g., Coolgardie Mesa in the Western Mojave Recovery Unit); although we have not documented the death of desert tortoises as a result of this activity, it likely occurs. Additionally, the habitat disturbance caused by this illegal activity exacerbates the spread

of invasive plants, which displace native plants that are important forage for the desert tortoise, thereby increasing the physiological stress faced by desert tortoises.

Although the Bureau has approved through its land use planning processes the withdrawal of areas of critical habitat from mineral entry, the Bureau has not undertaken the administrative procedures to complete withdrawals in all areas. Absent this withdrawal, new mining claims can be filed and further disturbance of critical habitat would likely occur.

Finally, the Bureau has not allowed the development of solar power plants within the boundaries of its desert wildlife management areas, which largely correspond to the boundaries of critical habitat. Conversely, the Bureau is considering the approval of at least one wind energy facility within critical habitat, while the County of San Bernardino is also circulating planning documents for the construction and operation of at least two such facilities within the boundaries of the Superior-Cronese Critical Habitat Unit.

Summary of the Status of Critical Habitat of the Desert Tortoise

As noted in the revised recovery plan for the desert tortoise and 5-year review (Service 2011a, 2010a), critical habitat of the desert tortoise is subject to landscape level impacts in addition to the site-specific effects of individual human activities. On the landscape level, atmospheric pollution is increasing the level of nitrogen in desert substrates; the increased nitrogen exacerbates the spread of invasive plants, which out compete the native plants necessary for desert tortoises to survive. As invasive plants increase in abundance, the threat of large wildfires increases; wildfires have the potential to convert the shrubland-native annual plant communities upon which desert tortoises depend to a community with fewer shrubs and more invasive plants. In such a community, shelter and forage would be more difficult for desert tortoises to find.

Invasive plants likely have already compromised the conservation value and function of critical habitat to some degree with regard to the second primary constituent element (i.e., sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species). These effects likely extend to the entirety of critical habitat, given the numerous routes by which invasive plants can access critical habitat and the large spatial extent that is subject to nitrogen from atmospheric pollution. Appendix 2 demonstrates the extent of the threat of invasive plants; Appendix 3 illustrates the 12 critical habitat units of the desert tortoise and the aggregate stress that multiple threats, including invasive plants, place on critical habitat.

We also expect that critical habitat has also been compromised to some degree with regard to the last primary constituent element (i.e., habitat protected from disturbance and human-caused mortality) as a result of the wide variety of human activities that continues to occur within its boundaries. These effects result from the implementation of discrete human activities and are thus more site-specific in nature.

Although the remaining primary constituent elements have been affected to some degree by human activities, we expect that these impacts have not, to date, substantially compromised the conservation value and function of the critical habitat units. We have reached this conclusion

primarily because we expect the impacts to be more localized and thus not affect the conservation value and function over large areas of critical habitat.

Land managers have undertaken actions to improve the status of critical habitat. For example, as part of its efforts to offset the effects of the use of additional training maneuver lands at Fort Irwin (Service 2004), the Army acquired the private interests in the Harper Lake and Cronese Lakes allotments, which are located within critical habitat in the Western Mojave Recovery Unit; as a result, cattle have been removed from these allotments. (On April 20, 1994, the Service issued a biological opinion that evaluated the effects of cattle grazing on critical habitat of the desert tortoise, which had recently been designated; the Service concluded that the Bureau's rangewide cattle grazing program was not likely to adversely modify critical habitat of the desert tortoise (Service 1994). Numerous other allotments have been retired through various means throughout the range of the desert tortoise. The retirement of allotments assisted in the recovery of the species by eliminating disturbance to the primary constituent elements of critical habitat by cattle and range improvements.

ENVIRONMENTAL BASELINE

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 C.F.R. 402.02). For the purposes of this biological opinion, we consider the action area to include the areas within Caltrans' ROW along the State highway system, within the range of the desert tortoise in California under the jurisdictions of the VFWO and PSFWO that are not included in approved habitat conservation plans. The action area also includes a minimal amount of desert tortoise habitat that would be disturbed during seismic testing conducted outside Caltrans ROW and during minor improvements (e.g., fence maintenance) to existing State points of entry.

The action area includes the acres in the counties indicated in Table 1 below, along with the specific acreage in each county in the action area. The acres that are included in Table 1 comprise the action area except for the small amount of habitat that would be disturbed by seismic testing.

The total acres in each county are divided between those acres that are within critical habitat for the desert tortoise, and those acres that are not within designated critical habitat, but are still within the range of the desert tortoise.

County	Acres in Critical Habitat	Acres outside Critical Habitat	Caltrans District
Kern	145	1,030	6
Los Angeles	0	242	7
San Bernardino	1,485	1,062	8
Riverside	242	150	8
Inyo	0	678	9
Imperial	747	96	11
Total acres	2,619	3,258	

Status of the Desert Tortoise in the Action Area

Caltrans did not conduct surveys for desert tortoises within the action area because the specific projects they may conduct under the auspices of this biological opinion have not been identified. However, research has shown that the density of desert tortoises is lower adjacent to existing roads than in more isolated areas (Nicholson 1978, Boarman and Sazakai 1996, von Seckendorff Hoff and Marlow 2002). Although we know that desert tortoises are frequently struck by vehicles and killed when they attempt to cross roads, we do not know if this mortality is solely responsible for the lowered density; poaching, habitat degradation, and noise from vehicle traffic may also be factors. Also, the quality of desert tortoise habitat adjacent to existing roads is often degraded as a result of non-native plant species and frequent disturbance of substrates resulting from the use of the roads. Therefore, because the action area includes previously disturbed areas near existing structures and the ROW along the State Highway system, we expect the action area to support lower densities of desert tortoises than adjacent areas outside of the ultimate ROW.

Status of Critical Habitat in the Action Area

Because of the nature of this consultation, Caltrans did not conduct surveys to assess the condition of the primary constituent elements of critical habitat within the action area. We assume that roadways (and the appurtenant ROW) that existed prior to the critical habitat designation have been degraded to some degree, and that existing ROW are not in pristine condition. Therefore, based upon our general knowledge of critical habitat in the vicinity of roads, we provide the following assessment of the likely condition of each primary constituent element adjacent to roadways within the action area:

Sufficient Space to Support Viable Populations Within Each of the Six Recovery Units and to Provide for Movement, Dispersal, and Gene Flow. All of the actions that would occur under the auspices of this consultation are likely to be located in the immediate vicinity of roadways; the vast majority would be within Caltrans' ROW. This area comprises a small portion of the critical habitat units in the action area. They are also linear segments of the critical habitat units, with a large edge-to-area ratio; such configuration is the least desirable from the perspective of establishing reserve areas. For these reasons, the areas where projects will occur currently do not support sufficient space to support viable populations; they are also not configured appropriately for the purposes of conservation.
Many of the roadways within the action area support volumes of traffic that likely prevent most desert tortoises from crossing them. In these cases, the existing road likely precludes movement, dispersal, and gene flow of desert tortoises. Portions of a few roads, such as SR 58 and Interstate 15, have been fenced to preclude entry by desert tortoises; desert tortoises can use culverts and undercrossings to move from one side of the road to the other.

Sufficient Quality and Quantity of Forage Species and the Proper Soil Conditions to Provide for the Growth of these Species. In the immediate vicinity of highly traveled roads, we expect that the quality and quantity of forage species have been substantially diminished due to routine use by vehicles and maintenance activities; we also expect that soil conditions have been highly altered by the frequent use. The condition of the habitat generally improves as distance from the road

increases; we expect this factor to hold for this and the remaining primary constituent elements of critical habitat.

Suitable Substrates for Burrowing, Nesting, and Overwintering. In general, roads will affect the ability of substrates to support burrowing, nesting, and overwintering in the same manner discussed in the previous paragraph. Shelter sites may be more abundant closer to roads in areas where rugged terrain precludes use and maintenance of roadside areas.

Burrows, Caliche Caves, and Other Shelter Sites. Again, roads will affect the ability of the area to support burrows, caliche caves, and other shelter sites; high levels of disturbance will generally eliminate these sites in most substrates. Burrows, caliche caves, and other shelter sites may be more abundant closer to roads in areas where rugged terrain precludes use and maintenance of roadside areas.

Sufficient Vegetation for Shelter from Temperature Extremes and Predators. The use and maintenance of roads generally results in the degradation of shrubs adjacent to heavily used roads. In some cases, such as where large scale road construction projects have occurred, shrubby vegetation has been completely removed and is highly unlikely to return.

Habitat Protected from Disturbance and Human-Caused Mortality. Roads can be a constant source of disturbance and human-caused mortality of desert tortoises in an area. Disturbance occurs as a result of general use, maintenance, and vehicle-related fires. Desert tortoises are crushed by vehicles that are using the roads; roads also serve as access to others who collect desert tortoises illegally. In general, habitat is not well protected from disturbance and human-caused mortality along roads. Fencing seems to reduce the incidence of mortality associated with road-killed desert tortoises.

In general, the condition of the primary constituent elements of critical habitat improves as the distance from a road increases because the amount of disturbance associated with the road decreases. Primary constituent elements adjacent to roads that do not receive heavy traffic and extensive maintenance generally are more capable of supporting the conservation functions because of the decreased amount of disturbance.

EFFECTS OF THE ACTION

Effects to the desert tortoise from the construction and maintenance activities being considered in this biological opinion include injury or mortality during construction, movement of desert tortoises out of harm's way, and predation by common ravens and other predators attracted to the construction sites. We did not analyze the effects of the existing roads themselves on the desert tortoise.

Injury or Mortality During Construction

Desert tortoises may be injured or killed by vehicles that strike individuals, bury occupied burrows, or trap desert tortoises in steep-sided excavations left as a result of work activities.

However, Caltrans will install desert tortoise exclusion fencing around each construction site and conduct a clearance survey to collect and move all desert tortoises found to suitable nearby habitat. Caltrans will employ only qualified biologists to conduct these surveys. For this reason, we anticipate that construction is unlikely to kill larger desert tortoises. Some potential always exists that surveyors may miss an individual during initial surveys or a desert tortoise may enter a work site through a temporary breach in the fence; in such instances, work activities could kill or injure it. Juvenile desert tortoises and eggs are difficult to detect during surveys; therefore, the potential exists that surveyors may miss them and they may remain in the work areas during construction. Because desert tortoise densities are generally lower adjacent to roads (Nicholson 1978, Boarman and Sazakai 1996, von Seckendorff Hoff and Marlow 2002), we assume few desert tortoises will occur in the action area (generally within ROW) and that even fewer are likely to avoid detection during surveys.

Construction noise has the potential to adversely affect the desert tortoise. The recovery plan notes that loud noises (and associated vibrations) may damage the hearing apparatus of desert tortoises (Service 1994). Such an injury could result in their being unable to communicate with other desert tortoises or unable to hear predators. The loss of the ability to communicate could affect reproductive efforts. The loss in the ability to hear predators could result in direct mortality. To avoid and minimize noise impacts, desert tortoises will be moved from project action areas, particularly areas where blasting will occur. In addition, desert tortoises within proximity of the blasting area will be relocated and burrows within the blast zone may be covered to reduce impacts from flying debris.

Capture and Removal of Desert Tortoises from the Project Sites

Caltrans will collect all desert tortoises observed within each project site during pre-project clearance surveys and move them into adjacent suitable habitat. We cannot predict how many desert tortoises would be removed during clearance surveys. However, as we discussed in the previous section, we anticipate few desert tortoises will occur in the action area due to its proximity to existing roadways, therefore, we expect that few would need to be captured and relocated.

Some potential exists that capturing desert tortoises may cause elevated levels of stress that may render these animals more susceptible to disease. Because Caltrans will use experienced biologists approved by the Service and approved handling techniques, collected desert tortoises are unlikely to suffer substantially elevated stress levels.

The translocation of any desert tortoises from the project area into surrounding habitat may disrupt the behavior and social structure of resident animals. However, because the action area considered in this biological opinion consists of the ROW along existing roadways and small isolated areas outside of the ROW where seismic testing or improvements to State Ports of Entry may be located, the action area will be linear and generally less than 100 feet wide at any given location. Those areas that may be affected by seismic work or improvements to State Points of Entry, outside the ROW, will be relatively small and inconsequential, and in close proximity to existing roadways, or other developed areas, where habitat is degraded. For this reason, projects are unlikely to affect

the entire home range of any desert tortoise. Therefore, desert tortoises are likely to be moved within their own home ranges where little threat exists that relocation will disrupt the behavior and social structure of other resident animals.

Relocated desert tortoises may attempt to travel back to the area from which they were collected. This effort could result in the desert tortoise moving into an active construction area where the likelihood of being injured or killed is greater. The relocated desert tortoise could also move around an exclusion fence and ultimately onto a roadway where it could be struck by motor vehicles or collected by passersby. Relocated adult desert tortoises may continue to disperse and never establish a territory resulting in no reproductive effort and the loss of offspring to maintain population viability. Because we anticipate most, if not all, desert tortoises would be moved a short distance within their home ranges, we do not expect them to try and return to the collection site or continue to disperse.

Predation

Human activities often attract predators of the desert tortoise such as the common raven and coyote. To avoid and minimize adverse effects from predators, employees at construction sites will remove all food related trash from the work site on a daily basis. This measure should greatly reduce the likelihood the predators will be attracted to work sites. Compliance with this measure will be monitored by the resident engineer and biologist(s) authorized to work on the project.

Effects on Critical Habitat

The roadways and State Ports of Entry that would be improved now exist. Improvements would occur within the ROW and in some other small areas outside of the ROW. Caltrans has proposed to reinitiate consultation if more than 5 acres located outside of the ultimate ROW containing the primary constituent elements of critical habitat of the desert tortoise are adversely affected on a long-term basis within each critical habitat unit considered in this biological opinion, in any calendar year. Five acres is an inconsequential amount of critical habitat that may be lost as a result of the proposed action in comparison with the amount of critical habitat that would still be available for desert tortoises within the affected critical habitat units. Additionally, because of the nature of the actions that would be implemented under the provisions of this consultation, the five acres will be scattered throughout the action area; under this scenario, the effects of the loss of these relatively small areas of critical habitat on any given critical habitat unit would be insignificant.

Furthermore, as we discussed in the Environmental Baseline - Status of Critical Habitat in the Action Area section of this biological opinion, the action area will generally occur in highly degraded areas of low habitat value to the desert tortoise because of disturbance associated with use and maintenance of the road. For example, with regard to "sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow" (the first primary constituent element), the areas adjacent to roads where work would occur would generally be linear in shape and small in size relative to the amount of habitat needed to conserve desert tortoises; additionally, the existing road may already prevent movement, dispersal,

and gene flow to a large degree. Thus, any effects to this primary constituent element would not be measurable when considered in light of the existing conditions and in comparison with the general sizes of the critical habitat units. (For example, the Pinto Mountain Critical Habitat Unit, at approximately 171,700 acres, is the smallest critical habitat unit in the action area. Even if the entire Caltrans right-of-way along SR 62 that intersected the Pinto Mountain Critical Habitat Unit was disturbed [i.e., approximately 200 feet wide by 50 miles], only approximately 0.7 percent of the critical habitat unit would be affected.)

The second through fifth primary constituent elements (sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species; suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter sites; sufficient vegetation for shelter from temperature extremes and predators) relate to very specific biological and physical attributes of critical habitat. Again, as we discussed in the Environmental Baseline - Status of Critical Habitat in the Action Area section of this biological opinion, routine use and maintenance of roads generally degrade the quality of these primary constituent elements in the area adjacent to the roadway. Generally, the amount of degradation decreases with distance from the road and is less intense along less heavily used roads. As we discussed in the previous paragraph, the amount of the primary constituent elements that may be disturbed in the action area would constitute, at most, a very small fraction of the critical habitat within the action area.

The final primary constituent element, habitat protected from disturbance and human-caused mortality, is generally absent from areas adjacent to roads. As in the other primary constituent elements, the quality of the critical habitat in this regard increases as the distance from the roadway increases.

In summary, the conservation function of the critical habitat units will not be impaired in any measurable manner by the proposed action, primarily because the amount of disturbance would be relatively minor, compared to the sizes of the critical habitat units in the action area. Furthermore, large, intact blocks of critical habitat would not be affected by the proposed highway improvements and small projects because the vast majority of this work will occur in areas that are already substantially degraded due to the presence of existing highways and roads.

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 programmatic 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. We are unaware of any non-federal actions that are reasonably certain to occur in the action area. The vast majority of activities that may occur in the ROW would likely be linked to work on the highways and roads, so we expect that most actions in these areas will have some Federal nexus. Outside of the Caltrans ROW but still in the action area, much of the desert tortoise habitat is under the control of the Bureau or other federal agency, so actions in those areas would be subject to section 7 consultation and not part of the cumulative effects.

CONCLUSION

Desert Tortoise

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, the effects of the proposed highway small projects and operational improvements, and the cumulative effects, it is the Service's biological opinion that the small projects and operational improvements, as proposed by Caltrans, are not likely to jeopardize the continued existence of the desert tortoise. We have reached this conclusion because:

1. Caltrans has proposed numerous measures to avoid or minimize mortality and injury of desert tortoises during construction;

2. The area to be directly affected constitutes a small portion of the range of the desert tortoise;

3. The habitat that would be adversely affected by the proposed action does not support high densities of desert tortoise due to the presence of existing roadways; and

4. We expect few desert tortoises to be injured or killed.

Critical Habitat

After reviewing the current status of the critical habitat of the desert tortoise, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the small projects and operational improvements, as proposed by Caltrans, are not likely to destroy or adversely modify critical habitat of the desert tortoise. We have reached this conclusion because:

1. The proposed actions would occur in areas where the primary constituent elements have been degraded, or are absent, due to the proximity of existing roadways;

2. The amount of critical habitat that would be affected within, and adjacent to the ROWs, is relatively small in comparison with the amount and quality of suitable habitat that would be available for desert tortoises within the remainder of the affected critical habitat units; and

3. Given the condition of the primary constituent elements in the ROW and the quantity of critical habitat that would be affected, the conservation functions of the critical habitat would not be impaired by the proposed actions.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation 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 Service as an act which actually kills or injures wildlife. Such acts may 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 Service as intentional or negligent actions that create 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 (50 CFR 17.3). 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 terms and conditions of this incidental take statement.

The protective measures described in this biological opinion are non-discretionary and must be undertaken by the FHWA and Caltrans or made binding conditions of any grant or permit issued to contractors, as appropriate, for the exemption in section 7(o)(2) to apply. The FHWA and Caltrans have a continuing duty to regulate the activity covered by this incidental take statement. If the FHWA or Caltrans fails to assume and implement the protective measures and terms and conditions or fails to require contractors to adhere to the protective measures and terms and conditions of the incidental take statement through enforceable terms that are added to construction contracts, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the FHWA and Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(I)(3)].

Because of the limited size of the operational improvements and small projects, the location of most projects in previously disturbed areas, and the measures proposed by the FHWA and Caltrans to avoid or minimize the amount of incidental take, the Service anticipates that the proposed actions are likely to result in few injuries to or mortalities of desert tortoises; however, desert tortoises are mobile, not entirely predictable in their activity patterns, can dig new burrows in previously inspected areas over time, and desert tortoise hatchlings and their burrows are particularly difficult to detect because of their small size. Therefore, we anticipate that some incidental take may occur. We are unable to anticipate precisely the number of desert tortoises that may be killed or injured during small projects and operation improvement activities. Caltrans has proposed to reinitiate consultation if two (2) desert tortoises are injured or killed in any county within the action area in any calendar year or if seven (7) desert tortoises are injured or killed in the action area (regardless of county) in any calendar year. Consequently, we anticipate that the amount of take, in the form of injury or mortality, will not exceed these numbers each year.

Caltrans has also proposed to capture and relocate any desert tortoises found in the action area and in harm's way. All desert tortoises found within the areas proposed for highway improvement or maintenance may be captured and relocated. Based on the disturbed nature of the habitat within the action area and the low density of desert tortoises likely to be found adjacent to roadways (Nicholson 1978, Boarman and Sazakai 1996, von Seckendorff Hoff and Marlow 2002), we assume that few desert tortoises will be relocated. We consider the relocation of desert tortoises

out of harm's way to be an effective way to minimize adverse effect to this species, and any desert tortoises that are relocated will be done so to reduce the potential for injury or mortality. Animals that are relocated will not be counted toward the re-initiation threshold proposed by the Federal Highway Administration and Caltrans.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

Because the protective measures included in the "Description of the Proposed Action" section of this biological opinion were developed in full cooperation by the Service and Caltrans, we have not included any additional reasonable and prudent measures and terms and conditions.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), Caltrans must report the progress of the action and its impact on the desert tortoise to the Service as specified in this incidental take statement.

By March 1 of every year this biological opinion is in effect, each Caltrans District must submit an annual report to the Fish and Wildlife Service describing the projects conducted under the auspices of this biological opinion during the previous year. The annual report must include information on: the number of desert tortoises injured or killed during work conducted under the auspices of this biological opinion, the location and date those injuries or mortalities occurred, the number of desert tortoise moved out of harm's way, the locations and dates of the relocations, the amount of critical habitat lost or disturbed, and any other relevant information regarding the desert tortoise or its critical habitat. We request that Caltrans provide any recommendations that may increase the level of protection of desert tortoises while not interfering with their ability to implement their proposed actions. Reports may be sent by e-mail to the appropriate contact at the VFWO.

DISPOSITION OF DEAD OR INJURED DESERT TORTOISES

Caltrans must report dead or injured desert tortoises as described in protective measures 13 through 15.

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.

1. We recommend Caltrans inspect the site of each activity performed pursuant to this biological opinion for any infestations of the Sahara mustard (*Brassica tournefortii*), and that you notify us if Sahara mustard is found and whether eradication efforts were implemented.

2. We recommend Caltrans continue to construct fences and install underpasses within desert wildlife management areas to keep desert tortoises off of roads while allowing dispersal across roads.

The Service requests notification of the implementation of any conservation recommendations, so we may be kept informed of actions that minimize or avoid adverse effects to or benefit the desert tortoise and its habitat.

REINITIATION NOTICE

This concludes formal consultation on Caltrans' highway maintenance activities and small projects in Imperial, Inyo, Kern, Los Angeles, Riverside, and San Bernardino counties. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency 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, any operations causing such take must cease pending re-initiation.

If you have any questions regarding this consultation, please contact Carl Benz of the VFWO at (805) 644-1766, ext. 311, or John Taylor of the PSFWO at (760) 322-2070, ext. 218.

Sincerely,

Stephen P. Henry
Acting Field Supervisor
Ventura Fish and Wildlife Office

Jim A. Bartel
Field Supervisor
Carlsbad Fish and Wildlife Office

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APPENDIX 1

Report on Proposed Action to be Covered by the
Programmatic Biological Opinion (8-8-13-F-0279) on
California Department of Transportation's Small Projects and
Operational Improvement Activities in Desert Tortoise Habitat in
Imperial, Riverside, Inyo, Eastern Kern, Los Angeles,
and San Bernardino Counties, California

Name of Project:

Type of Activity:

Location of Activity: Roadway: Begin Milepost: End Milepost:
General Locality:

Map Attached: Yes/No

Timing of project: Start Date: End Date:

Brief description of project:

Conservation measures to be implemented:

Determination (provide rationale for your determination):

No Effect:

May Affect, Not Likely to Adversely Affect:

May Affect, Likely to Adversely Affect

DEPARTMENT OF THE ARMY
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464 West 4th Street
San Bernardino, California 92401-1400

SUBJECT: Approved Jurisdictional Determination regarding geographic jurisdiction

Dear Mr. Wentworth:

I am responding to your request (File No. SPL-2016-00098-TWJ) dated May 5, 2016, for an approved Department of the Army jurisdictional determination (JD) associated with a segment of the proposed Interstate 40 (I-40) Median Re-grade Project located between post miles 12.45 and 25 near the City of Barstow, San Bernardino County, California (Lat/Long: 33.8405°N,-116.79896°W) (see attached approved JD maps).

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 in the project corridor, in the locations depicted on the enclosed drawing. The basis for our determination can be found in the enclosed approved JD form(s).

The aquatic resources identified as JD Features 54, 56, 58-60, 62, 64-66, 68-69, 71-74, and 76-86 in the "Project Waters and Biological Resources Maps" you provided are intrastate, isolated, non-navigable waters with no apparent interstate or foreign commerce connection. As such, these aquatic resource are 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/or the U.S. Fish and Wildlife Service.

This letter includes an approved JD for the proposed I-40 Median Re-grade Project sites located between post miles 12.45 and 25 within the Troy Dry Lake Watershed. 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 **August 20, 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 Tim Jackson at 213-452-3419 or via e-mail at Timothy.W.Jackson@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,

CASTANON.DAVID.J.1231966150

Digitally signed by CASTANON.DAVID.J.1231966150
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=CASTANON.DAVID.J.1231966150
Date: 2016.06.21 14:49:52 -07'00'

David J. Castanon
Chief, Regulatory Division

Enclosure(s)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: California Department of Transportation, D8, (POC: Craig Wentworth)	File Number: SPL-2016-00098-TWJ	Date: 6/21/2016
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. 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. 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. 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:

Tim Jackson
Regulatory Division
U.S. Army Corps of Engineers, Los Angeles District
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017
Phone: (213) 452-3419
Email: timothy.w.jackson@usace.army.mil

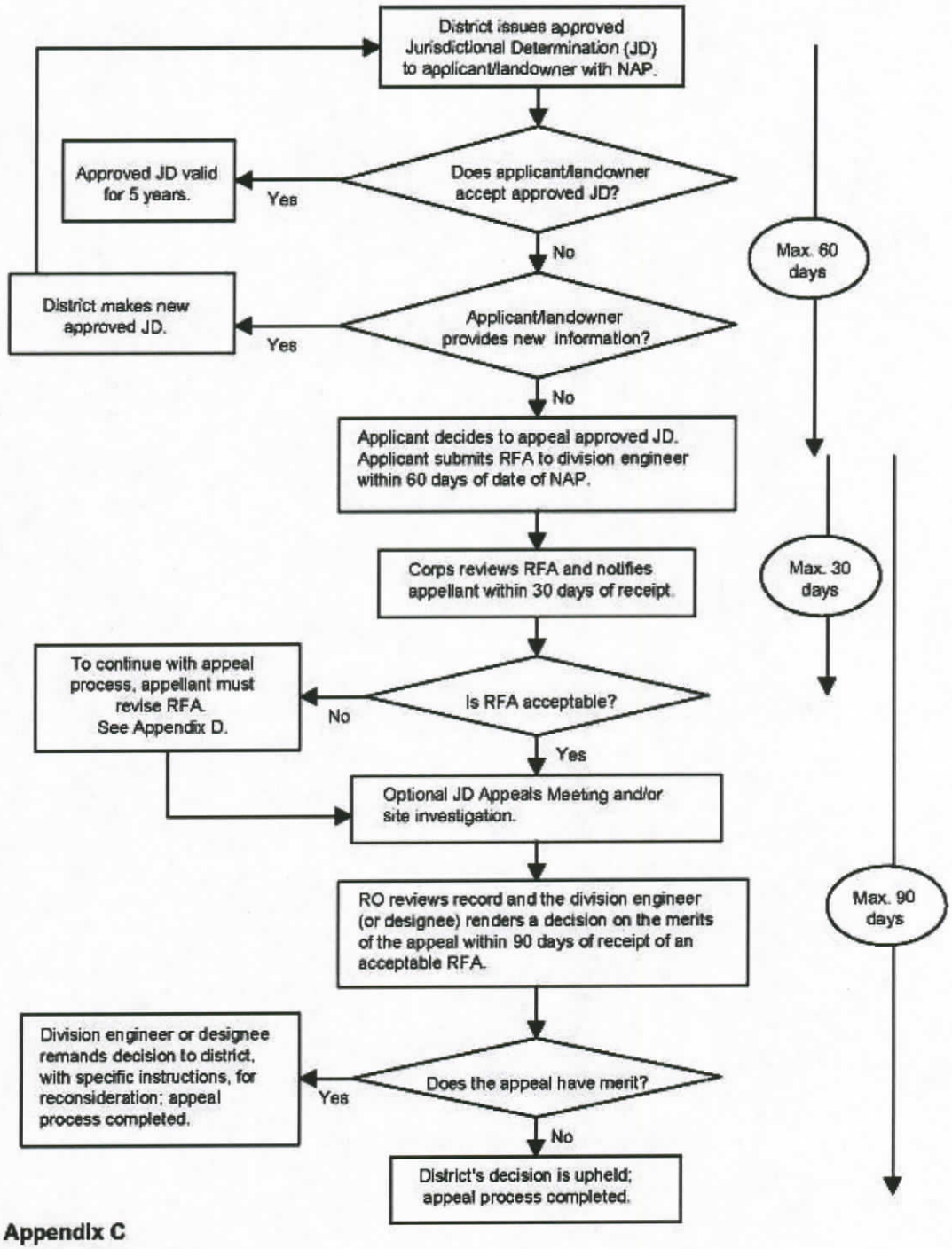
If you only have questions regarding the appeal process you may also contact:

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.		

Administrative Appeal Process for Approved Jurisdictional Determinations



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 superseded 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.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 2016-05-26

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SPL-2016-00098-TWJ

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: San Bernardino City: Barstow
Center coordinates of site (lat/long in degree decimal format): Lat. 34.8405° N, Long. 116.79896° W.
Universal Transverse Mercator:
Name of nearest waterbody: Troy Dry Lake
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: None
Name of watershed or Hydrologic Unit Code (HUC): HUC-10 Daggett Wash - Mojave River, HUC 10- Manix Wash - Mojave River, and HUC 10 - Troy Dry Lake
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: May 26, 2016
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 0 linear feet: 0 width (ft) and/or acres.
      Wetlands: 0 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not Applicable.**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **The project traverses three HUC 10 watersheds along Interstate 40 (I-40) post miles 0 - 25: Daggett Wash (post miles 0 - 6.82), Manix Wash (post miles 6.82 - 12.45), and Troy Dry Lake (post miles 12.45 - 25). The Daggett Wash and Manix Wash watersheds contain waters of the U.S. because their surface waters flow directly to the Mojave River. To address waters in these two watersheds, the project sponsor submitted a separate Preliminary Jurisdictional**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

Determination (PJD) request in association with a Nation Permit No. 14 application. The aquatic features identified within the Troy Dry Lake watershed along the project corridor (post miles 12.45 to 25) have mostly ephemeral flow regimes, are not navigable, and lack any substantial interstate commerce connection. Tributaries of the features within the Troy Dry Lake watershed (post miles 12.45 to 25) orginate from the Newberry Mountains and the Rodman Mountains. This is visable using National Geographic cartographic map with referrences and U.S. Geological Survey's National Hydrographic Database (NHD). The project area within the Troy Dry Lake watershed does not affect any wetlands as defined by 33 CFR §328.3(b).

According to the NHD, the aquatic features between post miles 12.45 and 25 flow northward from the project area and terminate in the desert floor of the Mojave valley within Troy Dry Lake. These features do not have the capacity to support interstate or foreign commerce and they do not have surface or shallow subsurface connectivity to, and neither are they adjacent to, any traditional navigable waters [33 CFR §328.3 (a) (1) & (2)]. Waters located between post miles 12.45 and 25 are not used by interstate or foreign travelers for recreational or other purposes requiring surface flow [33 CRF §328.3 (a) (3)(i)]. Also, they do not support fish or shellfish which could be taken or sold for recreational or other purposes in interstate or foreign commerce [33 CFR §328.2 (a)(3)(ii)].

The waters between post miles 12.45 and 25 flow north from the Newberry Mountains and Rodman Mountains towards I-40 and eventually drain into Troy Dry Lake. Due to natural increase in elevation, there is no surface or shallow subsurface connection between Troy Dry Lake and the Mojave River or any potential Traditional Navigable Water.

Considering the information above, the aquatic features located within the project corridor between post miles 12.45 and 25 are not waters of the United States according to 33 CFR §328.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: None.

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": None.

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **acres**
   Drainage area: **acres**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

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[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
- Average width: feet
- Average depth: feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- ☐ Silts
- ☐ Sands
- ☐ Concrete
- ☐ Cobbles
- ☐ Gravel
- ☐ Muck
- ☐ Bedrock
- ☐ Vegetation. Type/% cover:
- ☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):
  - ☐ clear, natural line impressed on the bank
  - ☐ changes in the character of soil
  - ☐ shelving
  - ☐ vegetation matted down, bent, or absent
  - ☐ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☐ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☐ abrupt change in plant community
- ☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☐ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

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[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

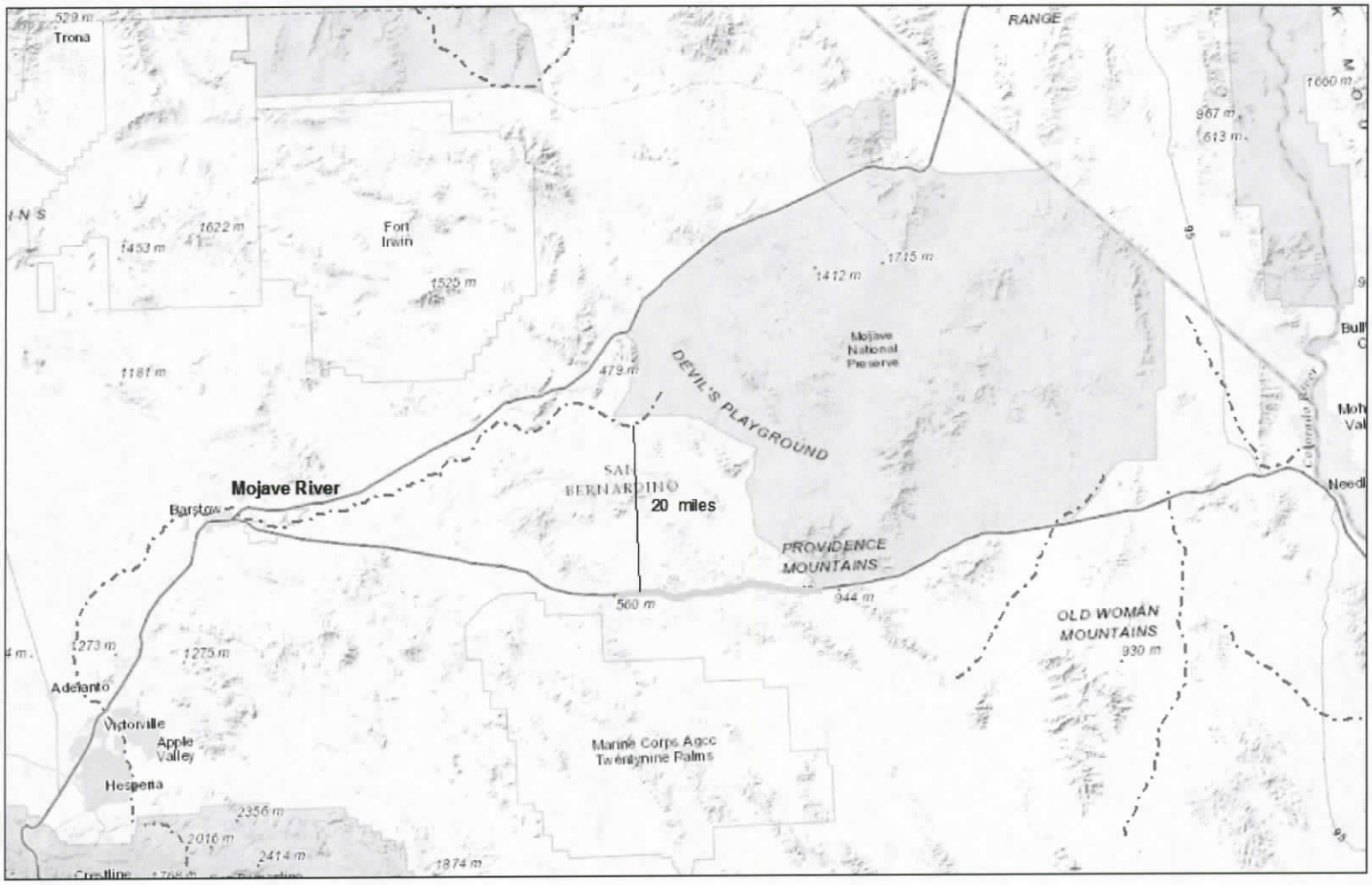
Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☒ Non-wetland waters (i.e., rivers, streams): **1,649** linear feet, **498** width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall 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: California Department of Transportation.
☐ 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 scale & quad name: 7.5 minute Barstow, Nebo, Daggett, Minneola, Newberry springs, and Troy Lake.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☐ Aerial (Name & Date): National geographic maps.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): USGS HUC 10.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

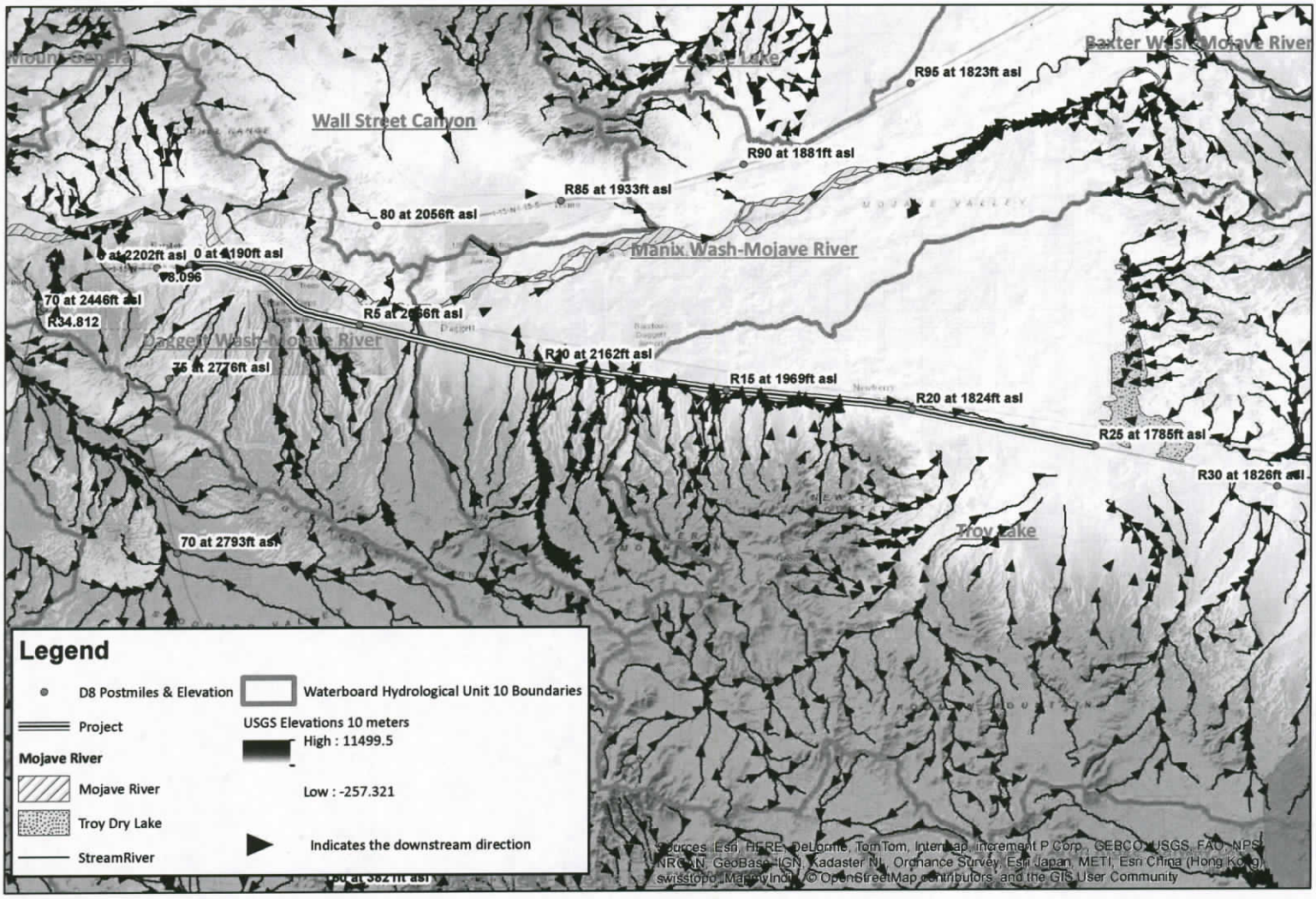
As explained above, the waters located within the project corridor between post miles 12.45 and 25 flow north from the Newberry Mountains and the Rodman Mountains and eventually drain into Troy Dry Lake. Due to the increase in elevation between Troy Dry Lake and the Mojave River there is no surface or shallow subsurface connection between Troy Dry Lake and the Mojave River or any potential Traditional Navigable Water. The distance between Troy Dry Lake and the Mojave River is approximately 24 miles. There are no flows conveyed either on the surface or shallow subsurface from the non-regulated waters to the Mojave River or any potential Traditional Navigable Water.



08-0R160
Median Regrade Project
I-40, PM 50-75

BSA
Stream; Braided Stream
Stream; Braided Stream
Stream Intermittent
Canal; Aqueduct; Intracoastal Waterway

0 20 40 80 Miles



California Department of Transportation
I-40 Regrade Median
SBD 40, PM 0-25

0 4 8 16 Miles

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DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
915 WILSHIRE BOULEVARD, SUITE 930
LOS ANGELES, CA 90017-3401

June 21, 2016

DEPARTMENT OF THE ARMY NATIONWIDE PERMIT VERIFICATION

ATTN: Craig Wentworth, Senior Environmental Planner
California Department of Transportation, District 8
464 West 4th Street
San Bernardino, California 92401

Dear Mr. Wentworth:

This correspondence is in reply to your application (File No. SPL-2016-00098-TWJ), dated April 11, 2016, for a Department of the Army Permit to discharge permanent fill into approximately 0.364 acre of waters of the U.S., in association with the Interstate 40 Median Re-grade Project. The proposed work would take place in unnamed tributaries of Daggett Wash and Manix Wash within and near the City of Barstow, San Bernardino County, California (Lat/Long: 34.8405°N, -116.7989°W) (see attached Vicinity & Location Map).

Based on the information you have provided, the Corps of Engineers has determined your proposed activity complies with the enclosed terms and conditions of Nationwide Permit (NWP) No. 14 Linear Transportation Projects, as described in enclosure 1.

Specifically, you are authorized to:

1. Discharge permanent fill material into approximately 0.384 acre (2,655 linear feet) of non-wetland waters of the U.S. at the following drainage features:

    - Unnamed Drainage 3: 0.0009 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 4: 0.0142 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 5: 0.0067 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 6: 0.0039 acre of non-wetland waters of the U.S.
    - Unnamed Drainage 7: 0.0041 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 8: 0.0052 acre of wetland waters of the U.S.;
    - Unnamed Drainage 9: 0.0051 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 10: 0.0142 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 11: 0.0151 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 12: 0.0081 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 13: 0.0078 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 14: 0.0062 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 15: 0.0075 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 16: 0.0103 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 17: 0.0067 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 18: 0.0078 acre of non-wetland waters of the U.S.;
    - Unnamed Drainage 19: 0.0083 acre of non-wetland waters of the U.S.;

- Unnamed Drainage 20A: 0.0109 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 20B: 0.0136 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 20C: 0.0137 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 21: 0.0135 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 22: 0.0062 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 23: 0.0088 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 24: 0.0049 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 25: 0.0036 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 26: 0.0037 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 27: 0.0077 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 28: 0.0148 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 29: 0.028 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 30: 0.0077 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 31: 0.0085 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 32: 0.0084 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 33: 0.0056 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 34: 0.0053 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 35: 0.0084 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 36: 0.0068 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 37: 0.0085 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 38: 0.011 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 39: 0.0093 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 40: 0.009 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 41: 0.0042 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 42: 0.0037 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 43: 0.0056 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 44: 0.0047 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 45: 0.0086 acre of non-wetland waters of the U.S.;
- Unnamed Drainage 48: 0.0035 acre of non-wetland waters of the U.S.; and
- Unnamed Drainage 51: 0.0029 acre of non-wetland waters of the U.S.

Furthermore, you must comply with the following non-discretionary Special Conditions:

1. This permit is contingent upon the issuance of a section 401 Water Quality Certification (WQC). The Permittee shall abide by the terms and conditions of the Clean Water Act section 401 WQC. The Permittee shall submit the section 401 WQC to Tim Jackson (Timothy.W.Jackson@usace.army.mail) of the Corps Regulatory Division within two weeks of receipt from the issuing state agency. The Permittee shall not proceed with construction until receiving an e-mail or other written notification from Corps Regulatory Division acknowledging the Clean Water Act 401 WQC has been received, reviewed, and determined to be acceptable. If the RWQCB fails to act on a valid request for certification within 60 days after receipt of a complete application, please notify the Corps so we may consider whether a waiver of water quality certification has been obtained.

2. Prior to initiating construction in waters of the U.S., the Permittee shall submit to the Corps Regulatory Division a complete set of final detailed grading/construction plans showing all work and structures in waters of the U.S. All plans shall be in compliance with the Final Map and Drawing Standards for the South Pacific Division dated February 10, 2016 (http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/MapStand020816.pdf). All plan sheets shall be signed, dated, and submitted electronically no larger than 8.5 x 11 inches. No work in waters of the U.S. is authorized until the Permittee receives, in writing (by letter or e-mail), Corps Regulatory Division approval of the final detailed grading/construction plans. The Permittee shall ensure that the project is built in accordance with the Corps-approved plans.

3. The Permittee shall clearly mark the limits of the workspace with flagging or similar means to ensure mechanized equipment does not enter avoided waters of the U.S. in the project corridor shown on Figure 1. Adverse impacts to waters of the U.S. beyond the Corps-approved construction footprint are not authorized. Such impacts could result in permit suspension and revocation, administrative, civil or criminal penalties, and/or substantial, additional, compensatory mitigation requirements.

4. Within 45 calendar days of completing authorized work in waters of the U.S., the Permittee shall submit to the Corps a memo including the following:
   a. Date(s) work within waters of the U.S. was initiated and completed;
   b. Summary of compliance status with each special condition of this permit (including any noncompliance that previously occurred or is currently occurring and corrective actions completed or being taken to achieve compliance);
   c. Color photographs taken at the project site before and after construction for those aspects directly associated with impacts to waters of the U.S.;
   d. Electronic as-built drawings for the entire project (all sheets must be signed, dated, to-scale, and no larger than 8.5 x 11 inches); and
   e. Signed Certification of Compliance.

Endangered Species Act:

5. This Corps permit does not authorize you to take any threatened or endangered species, in particular the desert tortoise (*Gopherus agassizii*) or adversely modify its designated critical habitat. In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g. ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). Pursuant to Caltrans' correspondence with the U.S. Fish and Wildlife Service (USFWS) dated April 1, 2015, the USFWS concurred that your activity "May Affect, Not Likely to Adversely Affect" the desert tortoise and the work is covered under the Programmatic BO (8-8-10-F-59) for small project and operational activities in desert tortoise habitat. Your authorization under this Corps permit verification is conditional upon your compliance with all of the required avoidance and minimization measures in the Programmatic BO, which are incorporated by reference in this permit verification. Failure to comply with the required avoidance and minimization measures would constitute non-compliance with your Corps permit verification. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO and with the ESA.

Cultural Resources:

6. Pursuant to 36 C.F.R. section 800.13, in the event of any discoveries during construction of either human remains, archeological deposits, or any other type of historic property, the Permittee shall notify the Corps' Regulatory Division (Tim Jackson at 213-452-3419 or Stephanie Hall at 213-452-3410) and

Archeology Staff (Danielle Storey at 213-452-3855 or Meg McDonald at 213-452-3849) within 24 hours. The Permittee shall immediately suspend all work within 100 feet of any area(s) where potential cultural resources are discovered. The Permittee shall not resume construction in the area surrounding the potential cultural resources until the Corps Regulatory Division re-authorizes project construction, per 36 C.F.R. section 800.13.

This verification is valid through March 18, 2017. If on March 18, 2017 you have commenced or are under contract to commence the permitted activity you will have an additional twelve (12) months to complete the activity under the present NWP terms and conditions. However, if I discover noncompliance or unauthorized activities associated with the permitted activity I may request the use of discretionary authority in accordance with procedures in 33 CFR § 330.4(e) and 33 CFR § 330.5(c) or (d) to modify, suspend, or revoke this specific verification at an earlier date. Additionally, at the national level the Chief of Engineers, any time prior to March 18, 2017, may choose to modify, suspend, or revoke the nationwide use of a NWP after following procedures set forth in 33 CFR § 330.5. It is incumbent upon you to comply with all of the terms and conditions of this NWP verification and to remain informed of any change to the NWPs.

A NWP does not grant any property rights or exclusive privileges. Additionally, it does not authorize any injury to the property, rights of others, nor does it authorize interference with any existing or proposed Federal project. Furthermore, it does not obviate the need to obtain other Federal, state, or local authorizations required by law.

Thank you for participating in the regulatory program. If you have any questions, please contact Timothy Jackson at 213-452-3419 or via e-mail at Timothy.W.Jackson@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,

CASTANON.DAVID.J.1231966150

Digitally signed by CASTANON.DAVID.J.1231966150
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=CASTANON.DAVID.J.1231966150
Date: 2016.06.21 12:53:56 -07'00'

David J. Castanon
Chief, Regulatory Division

LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS

CERTIFICATE OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY NATIONWIDE PERMIT

Permit Number: *SPL-2016-00098-TWJ*

Name of Permittee: *Caltrans District 8, Craig Wentworth – Senior Environmental Planner*

Date of Issuance: *June 21, 2016*

Upon completion of the activity authorized by this permit and the mitigation required by this permit, sign this certificate, and return it by **ONE** of the following methods;

1) Email a digital scan of the signed certificate to Timothy.W.Jackson@usace.army.mil

OR

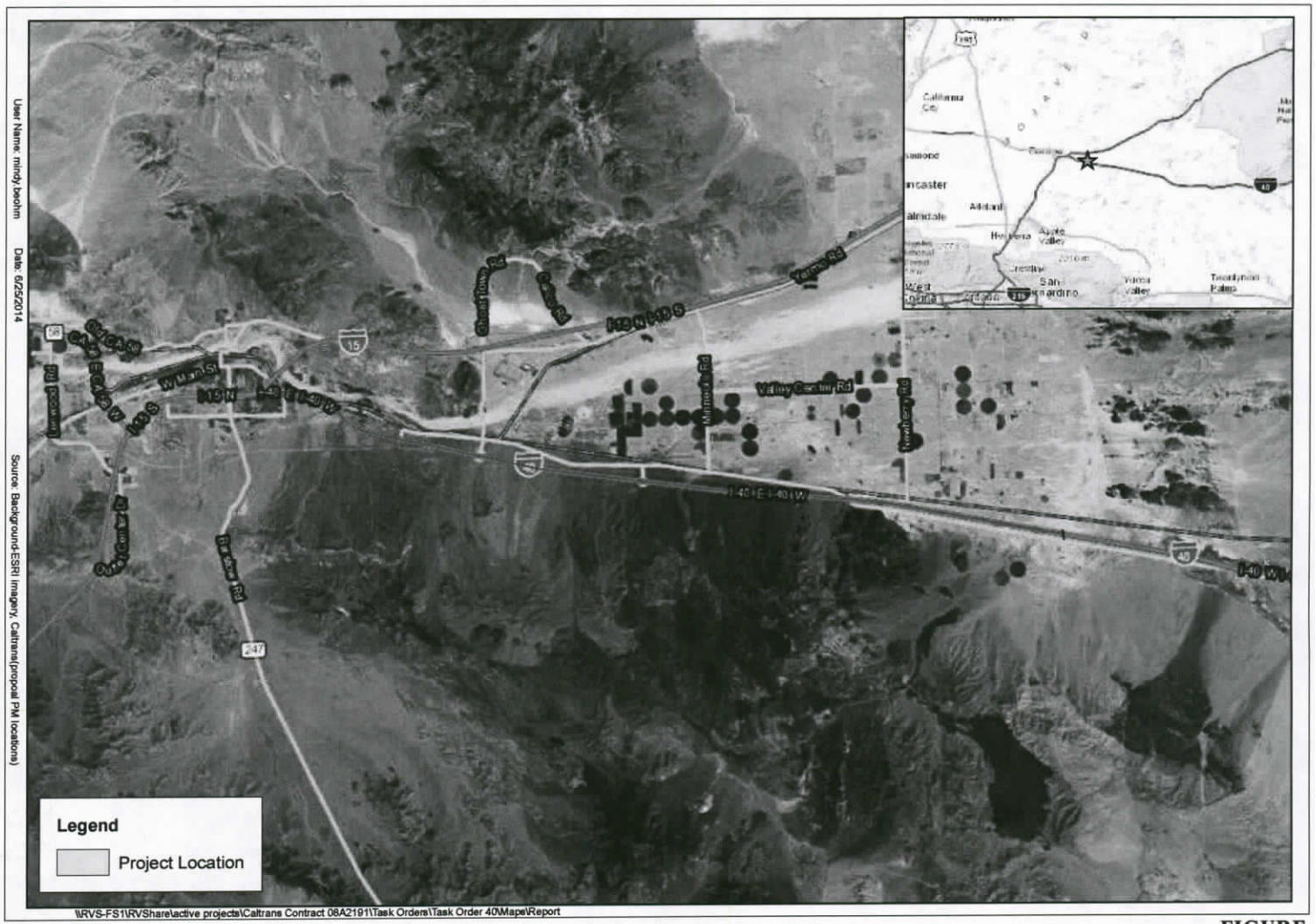
2) Mail the signed certificate to

U.S. Army Corps of Engineers
ATTN: Regulatory Division SPL-2016-00098-TWJ
915 Wilshire Boulevard, Suite 930
Los Angeles, CA 90017-3401

I hereby certify that the authorized work and any required compensatory mitigation has been completed in accordance with the NWP authorization, including all general, regional, or activity-specific conditions. Furthermore, if credits from a mitigation bank or in-lieu fee program were used to satisfy compensatory mitigation requirements I have attached the documentation required by 33 CFR 332.3(l)(3) to confirm that the appropriate number and resource type of credits have been secured.

_____ _____

Signature of Permittee Date



\\RVS-FS1\RVShare\active projects\Caltrans Contract 08A2191\Task Orders\Task Order 40\Maps\Report

0 6,500 13,000 26,000

Feet

1 in = 20,119 feet

Vicinity & Location
Interstate 40 Median Regrade Project
California Department of Transportation

FIGURE

1

TO: Craig Wentworth, Senior Environmental Planner
California Department of Transportation
464 West 4th Street
San Bernardino, CA 92401
craig.wentworth@dot.ca.gov

FROM: PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

DATE: June 27, 2016

SUBJECT: **Board Order No. R6V-2016-0039 For Clean Water Act Section 401 Water Quality Certification, Interstate 40 Median Regrading Postmile 0-25 Project, San Bernardino County, WDID 6B361512003**

The California Regional Water Quality Control Board, Lahontan Region (Water Board) has received project information from the California Department of Transportation (Applicant) and an application filing fee to complete an application for Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) for the Interstate 40 Median Regrading Postmile 0-25 Project (Project). This Order for WQC is based upon the information provided in the application and subsequent correspondence received in support of the application.

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with California Water Code (CWC), section 13320, and California Code of Regulations (CCR), title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality, or will be provided upon request.

PROJECT DESCRIPTION

This WQC is based upon the information provided by the Applicant. Project details are summarized in the following table.

Table of Project Information:

<table>
<tr><td>WDID Number</td><td>6B361512003</td></tr>
<tr><td>Applicant</td><td>California Department of Transportation</td></tr>
<tr><td>Project Name</td><td>Interstate 40 Median Regrading Postmile 0-25 Project</td></tr>
<tr><td>Project Purpose and Description</td><td>The Project is to improve safety along a 25-mile segment of Interstate 40 by regrading and flattening cross slopes and extending existing drainage facilities within the median between the east- and west-bound traffic lanes.

Portions of Interstate 40 cross between watersheds containing waters of the United States (WOUS) and watersheds containing waters of the State only. This 401 WQC Order applies only to those portions of the Project that occur within WOUS ("Federal Waters," Enclosure 1). Those portions of the Project that are not subject to CWA section 404 requirements (i.e. "State Waters" only, see Enclosure 1) will be regulated concurrently with this Order under General Waste Discharge Requirements for Small Construction, Including Utility, Public Works, and Minor Streambed/Lakebed Alteration Projects, Board Order No. R6T-2003-0004-288.</td></tr>
<tr><td>Project Type</td><td>Transportation, Roads and Highways</td></tr>
<tr><td>Project Address or other Locating Information</td><td>The Project begins in Barstow near the Interstate 15/Interstate 40 interchange and extends approximately 12 miles east along Interstate 40 (Enclosure 1).</td></tr>
<tr><td>Latitude/Longitude</td><td>Latitude: 34.8857 Longitude: -117.01214 (west endpoint)
Latitude: 34.8413 Longitude: -116.8043 (east endpoint)</td></tr>
<tr><td>Hydrologic Unit(s)</td><td>Mojave Hydrologic Unit 628.00, Middle Mojave Hydrologic Area 628.30, Lower Mojave Hydrologic Area 628.50</td></tr>
<tr><td>Project Area</td><td>129 acres in Middle/Lower Mojave watershed</td></tr>
<tr><td>Receiving Water(s) Name</td><td>Ephemeral streams tributary to the Mojave River</td></tr>
<tr><td>Water Body Type(s)</td><td>Minor surface waters</td></tr>
<tr><td>Designated Beneficial Uses</td><td>MUN, AGR, GWR, REC-1, REC-2, WARM, COLD, WILD</td></tr>
<tr><td>Potential Water Quality Impacts to WOUS</td><td>Hydrogeomorphic changes in the flow regime on the Project site may result in downstream erosion, sedimentation, and/or siltation.</td></tr>
<tr><td>Project Impacts (Fill) to WOUS</td><td>
<table>
<tr><th rowspan="2">Waterbody Type</th><th colspan="3">Permanent</th><th colspan="3">Temporary</th></tr>
<tr><th>Acres</th><th>Linear Feet</th><th>Cubic Yards</th><th>Acres</th><th>Linear Feet</th><th>Cubic Yards</th></tr>
<tr><td>Stream</td><td>0.384</td><td>2,655</td><td>-</td><td>0</td><td>0</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>Federal Permit(s)</td><td>The U.S. Army Corps of Engineers (USACE) will regulate the Project under Nationwide Permit 14, Linear Transportation Projects, pursuant to section 404 of the CWA.</td></tr>
<tr><td>Non-Compensatory Mitigation</td><td>During construction, the Applicant will follow Best Management Practices (BMPs) including construction storm water controls designed to minimize the short-term degradation of water quality. Following construction, the Applicant will implement an effective combination of permanent post-construction BMPs to stabilize all disturbed areas of the Project area.</td></tr>
</table>

Compensatory Mitigation	To compensate for permanent impacts to WOUS, the Applicant proposes in-kind preservation of waters at a 2 to 1 mitigation ratio. The mitigation lands will be located in the greater Mojave watershed (628.00) and contain sufficient acreage of WOUS to meet the 2 to 1 mitigation requirement. The Applicant will preserve the mitigation lands in perpetuity. The mitigation will be provided concurrently with construction, with a copy of the conservation easement or similar document provided to the Water Board by February 28, 2018.
Applicable Fees[1]	$35,843 (2,655 linear feet of discharge x $13.50 per linear foot)
Fees Received	$35,843
Estimated Annual Active Discharge Fee[2]	$600 (an annual active discharge fee will be assessed each fiscal year or portion of a fiscal year during which discharges occur until the Water Board issues a Notice of Completion of Discharges Letter to the Applicant)
Estimated Annual Post-Discharge Monitoring Fee[2]	$300 (an annual post-discharge monitoring fee will be assessed each fiscal year or portion of a fiscal year onsite mitigation monitoring is required until the Water Board notifies the Applicant that the mitigation requirement has been met)

[1] Dredge and fill application fees shall not exceed $90,000 for Fill and Excavation operations.
[2] The actual Annual Active Discharge Fee will be calculated using the fee schedule in effect at the time the annual fee is assessed per California Code of Regulations, Title 23, section 2200(a)(3). It is the Applicant's responsibility to inform Water Board staff when construction is complete and when onsite mitigation monitoring begins.

CEQA COMPLIANCE

The California Department of Transportation prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the Project. The IS/MND was prepared pursuant to the California Environmental Quality Act (CEQA Public Resources Code 21000, et seq.) and circulated under State Clearinghouse No. **2014121092**. The IS/MND was certified on April 16, 2015, following public review.

The Water Board, acting as a CEQA Responsible Agency in compliance with CCR, title 14, section 15096, has considered the IS/MND for the Project and the potential water quality impacts. As a result of the analysis, the Water Board finds potential water quality impacts are less than significant.

SECTION 401 WATER QUALITY CERTIFICATION

Authority

CWA, section 401 (33 United State Code [USC], paragraph 1341), requires that any applicant for a CWA, section 404 permit, who plans to conduct any activity that may result in discharge of dredged or fill materials to WOUS, shall provide to the permitting agency a certification that the discharge will be in compliance with applicable water quality standards of the state in which the discharge will originate. No section 404 permit may be granted (or valid) until such certification is obtained. The Applicant submitted a complete application and the fees required for WQC under section 401 of the CWA for the Project. The USACE will regulate the Project under Nationwide Permit 14, Linear Transportation

Projects, pursuant to section 404 of the CWA. CCR, title 23, section 3831(e) grants the Executive Officer the authority to grant or deny WQC for projects in accordance with CWA section 401. The proposed Project qualifies for such WQC.

Standard Conditions

Pursuant to CCR, title 23, section 3860, the following standard conditions are requirements of this certification:

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to CWC, section 13330 and CCR, title 23, section 3867.

2. This certification action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license unless the pertinent certification application was filed pursuant to CCR, title 23, section 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action must be conditioned upon total payment of the full fee required under CCR, title 23, section 3833, unless otherwise stated in writing by the certifying agency.

4. Neither Project construction activities nor operation of the Project may cause a violation of the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), may cause a condition or threatened condition of pollution or nuisance, or cause any other violation of the CWC.

5. The Project must be constructed and operated in accordance with the Project described in the application for WQC that was submitted to the Water Board. Deviation from the Project description constitutes a violation of the conditions upon which the certification was granted. Any significant changes to this Project that would have a significant or material effect on the findings, conclusions, or conditions of this certification, including Project operation, must be submitted to the Executive Officer for prior review and written approval.

6. This WQC is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this WQC and civil or criminal liability.

7. The Water Board may add to or modify the conditions of this certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the CWC or section 303

of the CWA, or as appropriate to coordinate the operations of this Project with other projects where coordination of operations is reasonably necessary to achieve water quality standards or to protect the beneficial uses of water. Notwithstanding any more specific conditions in this certification, the Project must be constructed and operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the CWC or section 303 of the CWA.

8. This certification does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under the California Endangered Species Act (Fish and Wildlife Code, section 2050 et seq.) or the federal Endangered Species Act (16 USC, section 1531 et seq.). If a "take" will result from any act authorized under this certification, the Applicant must obtain authorization for the take prior to construction or operation of the Project. The Applicant is responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.

Additional Conditions

Pursuant to CCR, title 23, section 3859, subdivision (a), the following additional conditions are required with this certification:

1. The Project is to improve safety along a 25-mile segment of Interstate 40 by regrading and flattening cross slopes and extending existing drainage facilities within the median between the east- and west-bound traffic lanes. Portions of Interstate 40 cross between watersheds containing WOUS and watersheds containing waters of the State only. This 401 WQC Order applies only to those portions of the Project that will occur within WOUS, as described in the Table of Project Information above and as located within the "Federal Waters" area of Enclosure 1. Separate Water Board authorization is being issued concurrently with this WQC Order for those portions of the Project that will occur within waters of the State only.

2. To compensate for permanent impacts to WOUS, the Applicant proposes in-kind preservation of waters at a 2 to 1 mitigation ratio. The mitigation lands will be located in the greater Mojave watershed (628.00) and contain sufficient acreage of WOUS to meet the 2 to 1 mitigation requirement. The Applicant will preserve the mitigation lands in perpetuity. The mitigation will be provided concurrently with construction, with a copy of the conservation easement or similar document provided to the Water Board no later than **February 28, 2018**.

3. Work within a stream channel is authorized only during dry weather conditions. Should inclement weather occur, all work within the channel must stop and all equipment and materials must be removed to upland areas.

4. In no instance will backfill or cover materials be placed above the natural grade of a channel so as to cause a condition of impoundment or change in the natural flow path of the waterway.

5. All excess sediment not used as backfill for the Project will be removed from the site and stockpiled or spread in an upland location. BMPs must be used, as needed, to temporarily stabilize stockpiled soils until such time that they are reused or permanently stabilized.

6. During construction, the Applicant will implement an effective combination of sediment and erosion control BMPs, as needed, to temporarily stabilize all disturbed soils until such time that they are permanently stabilized either with vegetation or by some alternative means.

7. Following construction, the Applicant will implement an effective combination of permanent post-construction BMPs to stabilize all disturbed areas of the Project area.

8. To document the completion of the Project, the Applicant must submit a **Construction Completion Report** to the Water Board within 60 days following completion of Project construction. The Construction Completion Report should include the following, at minimum: a summary of the Project activities, including the date(s) those activities were performed; identification of stream locations (tabulated with latitude/longitude and corresponding map with photo documentation), work activity (channel clearing, culvert extension, etc.), and volume of backfill/cover used (cubic yards); the area and length of channel of temporary and permanent disturbance to WOUS at each location and cumulatively for the entire Project; a summary of the activities related to construction storm water controls and the BMPs used; and a summary of any activities that deviated from those described in the original application and supporting documents.

9. An "Annual Active Discharge Fee" will be assessed each year this Order remains in "Active" construction status. The actual Annual Active Discharge Fee will be calculated using the fee schedule in effect at the time the annual fee is assessed per California Code of Regulations, title 23, section 2200(a)(3). The annual fee will apply each fiscal year or portion of fiscal year until the Applicant submits a Construction Completion Report (see Additional Condition No. 7 above) and the Water Board issues a Notice of Completion of Discharges Letter to the Applicant.

10. This Order does not authorize emergency repair activities. The Applicant is required to apply for separate authorization to perform emergency repairs should that be necessary.

11. No debris, cement, concrete (or wash water there from), oil, or petroleum products must be allowed to enter into or be placed where it may be washed from the Project site by rainfall or runoff into surface waters.

12. An emergency spill kit must be at the Project site at all times during Project construction.

13. Construction vehicles and equipment must be monitored for leaks and proper BMPs must be implemented should leaks be detected or the vehicles/equipment must be removed from service, if necessary, to protect water quality.

14. The Applicant must permit Water Board staff or their authorized representative(s) upon presentation of credentials:

    a. Entry onto Project premises, including all areas on which fill, excavation or mitigation is located or in which records are kept;

    b. Access to copy any record required to be kept under the terms and conditions of this WQC;

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this WQC; and

    d. Sampling of any discharge or surface water covered by this WQC.

15. The Applicant must maintain at the Project site a copy of this Order and a copy of the complete WQC application provided to the Water Board so as to be available at all times to site operating personnel and agencies.

16. The Applicant is responsible for informing any contractors of the specific conditions contained in this WQC Order.

Enforcement

1. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation will be subject to any remedies, penalties, processes or sanctions, as provided for under state law. For purposes of CWA, section 401(d), the applicability of any state law authorizing remedies, penalties, processes or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this WQC.

2. In response to a suspected violation of any condition of this certification, the State Water Board or the Water Board may require the holder of any permit or license subject to this WQC to furnish, under penalty of perjury, any technical or monitoring report that the State Water Board or Water Board deems appropriate, provided that the burden, including costs, of the reports must be in reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

3. In response to any violation of the conditions of this certification, the Water Board may add to or modify the conditions of this certification, as appropriate, to ensure compliance.

Section 401 Water Quality Certification Requirements Granted

I hereby issue this Order certifying that any discharge from the referenced Project will comply with the applicable provisions of CWA, sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards), and with other applicable requirements of state law. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this WQC. A copy of State Water Board Order No. 2003-0017-DWQ is enclosed for your reference (Enclosure).

Except insofar as may be modified by any preceding conditions, all WQC actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the Applicant's Project description and the terms specified in this WQC Order, and (b) compliance with all applicable requirements of the Basin Plan.

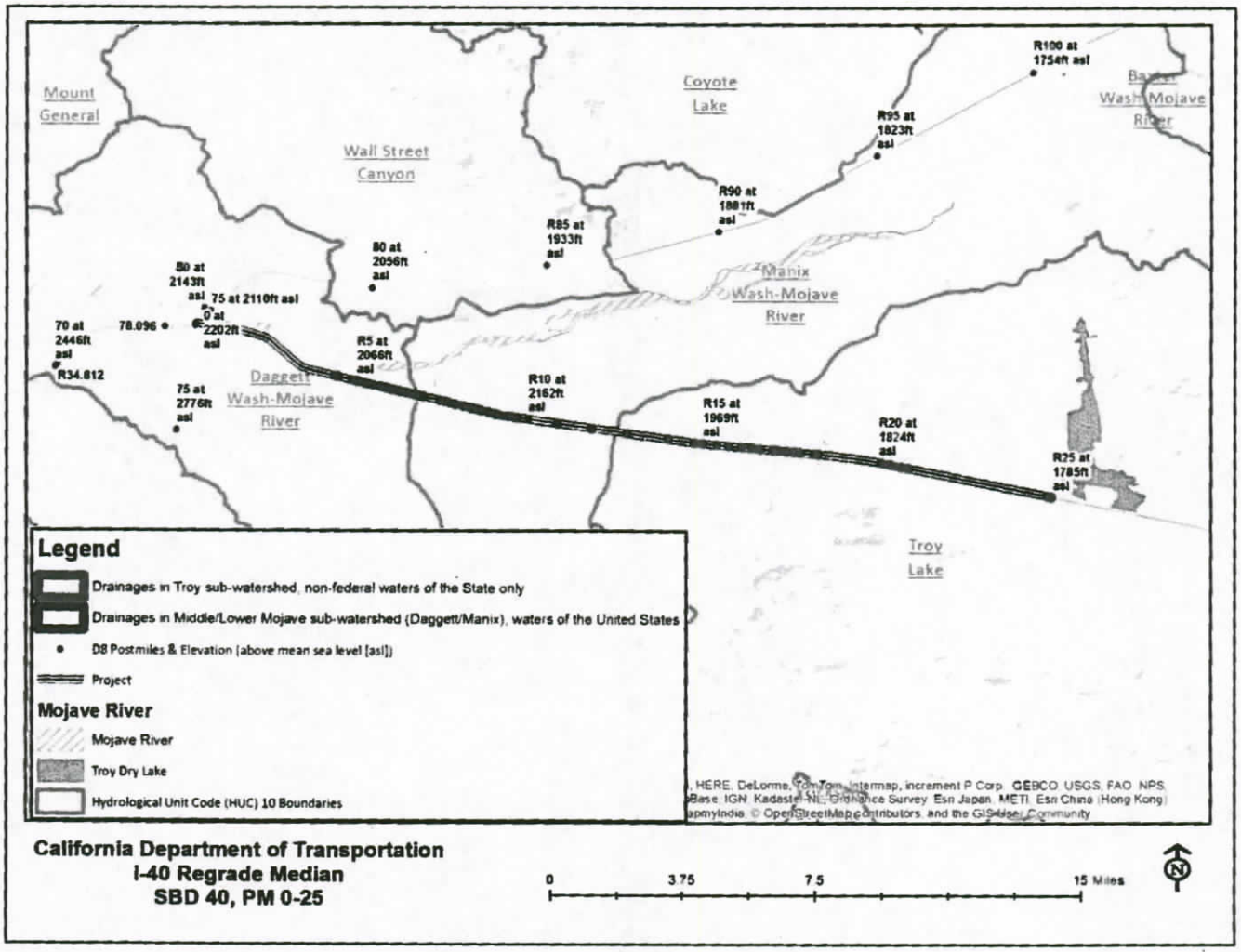
We look forward to working with you in your efforts to protect water quality. If you have any questions regarding this matter, please contact me at (530) 542-5412 (patty.kouyoumdjian@waterboards.ca.gov), Jan Zimmerman, Engineering Geologist, at (760) 241-7376 (jan.zimmerman@waterboards.ca.gov), or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (patrice.copeland@waterboards.ca.gov). Please send all future correspondence regarding this Project to the Water Board's email address at Lahontan@waterboards.ca.gov and be sure to include the WDID No. in the subject line.

Enclosures: (1) Project Overview and Watershed Map
(2) SWRCB Order No. 2003-0017-DWQ

cc: Josh Jaffery, Caltrans (josh.jaffery@dot.ca.gov)
Timothy Jackson, USACE (Timothy.W.Jackson@usace.army.mil)
Becky Jones, Dept. of Fish and Wildlife (rebecca.jones@wildlife.ca.gov)
SWRCB, Division of Water Quality (stateboard401@waterboards.ca.gov)
USEPA Wetlands Regulatory Office, Region 9 (R9-WTR8-Mailbox@epa.gov)
Melissa Scianni, USEPA, Region 9 (scianni.melissa@epa.gov)

ENCLOSURE 1

Project Overview and Watershed Map



California Department of Transportation
I-40 Regrade Median
SBD 40, PM 0-25

0 3.75 7.5 15 Miles

N

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2003 - 0017 - DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.

2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.

3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.

4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.

5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,[1] file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

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[1] "Waters of the State" as defined in CWC Section 13050(e)

6. These General WDRs require compliance with all conditions of Certification orders to ensure that water quality standards are met.

7. The U.S. Supreme Court decision of *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (the *SWANCC* decision) called into question the extent to which certain "isolated" waters are subject to federal jurisdiction. The SWRCB believes that a Certification is a valid and enforceable order of the SWRCB or RWQCBs irrespective of whether the water body in question is subsequently determined not to be federally jurisdictional. Nonetheless, it is the intent of the SWRCB that all Certification conditions be incorporated into these General WDRs and enforceable hereunder even if the federal permit is subsequently deemed invalid because the water is not deemed subject to federal jurisdiction.

8. The beneficial uses for the waters of the State include, but are not limited to, domestic and municipal supply, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources.

9. Projects covered by these General WDRs shall be assessed a fee pursuant to Title 23, CCR section 3833.

10. These General WDRs are exempt from the California Environmental Quality Act (CEQA) because (a) they are not a "project" within the meaning of CEQA, since a "project" results in a direct or indirect physical change in the environment (Title 14, CCR section 15378); and (b) the term "project" does not mean each separate governmental approval (Title 14, CCR section 15378(c)). These WDRs do not authorize any specific project. They recognize that dredge and fill discharges that need a federal license or permit must be regulated under CWA section 401 Certification, pursuant to CWA section 401 and Title 23, CCR section 3855, et seq. Certification and issuance of waste discharge requirements are overlapping regulatory processes, which are both administered by the SWRCB and RWQCBs. Each project subject to Certification requires independent compliance with CEQA and is regulated through the Certification process in the context of its specific characteristics. Any effects on the environment will therefore be as a result of the certification process, not from these General WDRs. (Title 14, CCR section 15061(b)(3)).

11. Potential dischargers and other known interested parties have been notified of the intent to adopt these General WDRs by public hearing notice.

12. All comments pertaining to the proposed discharges have been heard and considered at the November 4, 2003 SWRCB Workshop Session.

13. The RWQCBs retain discretion to impose individual or General WDRs or waivers of WDRs in lieu of these General WDRs whenever they deem it appropriate. Furthermore, these General WDRs are not intended to supersede any existing WDRs or waivers of WDRs issued by a RWQCB.

IT IS HEREBY ORDERED that WDRs are issued to all persons proposing to discharge dredged or fill material to waters of the United States where such discharge is also subject to the water quality certification requirements of CWA section 401 of the federal Clean Water Act (Title 33 United States Code section 1341), and such certification has been issued by the applicable RWQCB or the SWRCB, unless the applicable RWQCB notifies the applicant that its discharge will be regulated through WDRs or waivers of WDRs issued by the RWQCB. In order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, dischargers shall comply with the following:

1. Dischargers shall implement all the terms and conditions of the applicable CWA section 401 Certification issued for the discharge. This provision shall apply irrespective of whether the federal license or permit for which the Certification was obtained is subsequently deemed invalid because the water body subject to the discharge has been deemed outside of federal jurisdiction.

2. Dischargers are prohibited from discharging dredged of fill material to waters of the United States without first obtaining Certification from the applicable RWQCB or SWRCB.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 19, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton
Nancy H. Sutley

NO: None.

ABSENT: None.

ABSTAIN: None.

Debbie Irvin
Clerk to the Board

California Water Boards

Edmund G. Brown Jr., Governor

Matthew Rodriquez, Secretary for Environmental Protection

Lahontan Regional Water Quality Control Board

June 27, 2016

WDID No. 6B361512003

Craig Wentworth
Senior Environmental Planner
California Department of Transportation
464 West 4th Street
San Bernardino, CA 92401
craig.wentworth@dot.ca.gov

Notice of Applicability for General Waste Discharge Requirements for Small Construction, Including Utility, Public Works, and Minor Streambed/ Lakebed Alteration Projects, Board Order No. R6T-2003-0004, Interstate 40 Median Regrading Postmile 0-25 Project, San Bernardino County

This is a Notice of Applicability (NOA) in response to an application for Waste Discharge Requirements (WDRs) for dredge and fill in waters of the State (WOS) for the Interstate 40 Median Regrading Postmile 0-25 Project (Project) dated December 24, 2015. Subsequent information in support of the application was last received by Water Board staff on June 16, 2016. The U.S. Army Corps of Engineers has determined that portions of the Project are not subject to Clean Water Act (CWA) section 404 requirements (refer to Enclosure 1). Those portions of the proposed Project not subject to CWA section 401 water quality certification do require coverage under the General Waste Discharge Requirements for Small Construction, Including Utility, Public Works, and Minor Streambed/Lakebed Alteration Projects, Board Order (General Board Order) No. R6T-2003-0004.

The California Department of Transportation (Applicant) is hereby assigned General Board Order No. R6T-2003-0004-288 and Waste Discharge Identification (WDID) No. 6B361512003 for this Project. By this Notice of Applicability (NOA), the fill- and excavation-related discharges to WOS associated with the Project are authorized and subject to compliance with the General Board Order. A copy of the General Board Order is enclosed. Please use the above-referenced WDID number in future correspondence regarding this Project.

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations (CCR), title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

PROJECT DESCRIPTION

This NOA is based upon the information provided by the Applicant. Project details are summarized in the following table.

Table of Project Information:

WDID Number	6B361512003						
Applicant	California Department of Transportation						
Project Name	Interstate 40 Median Regrading Postmile 0-25 Project						
Project Purpose and Description	The Project is to improve safety along a 25-mile segment of Interstate 40 by regrading and flattening cross slopes and extending existing drainage facilities within the median between the east- and west-bound traffic lanes. Portions of Interstate 40 cross between watersheds containing waters of the United States (WOUS) and watersheds containing waters of the State only (WOS). This NOA applies only to those portions of the Project that occur within non-federal WOS only ("non-federal waters of the State," Enclosure 1). Those portions of the proposed Project that are subject to CWA section 404 requirements (i.e. "Federal Waters," see Enclosure 1) will be regulated concurrently with this NOA under Board Order No. R6V-2016-0039.						
Project Type	Transportation, Roads and Highways						
Project Address or other Locating Information	The Project begins on Interstate 40 near postmile 12 and extends approximately 13 miles east, ending near Newberry Springs (Enclosure 1).						
Latitude/Longitude	Latitude: 34.8413 Longitude: -116.8043 (west endpoint) Latitude: 34.8112 Longitude: -116.5814 (east endpoint)						
Hydrologic Unit(s)	Mojave Hydrologic Unit 628.00, Troy Valley Hydrologic Subarea 628.62						
Project Area	139 acres in Troy Valley watershed						
Receiving Water(s) Name	Ephemeral streams tributary to Troy Dry Lake						
Water Body Type(s)	Minor surface waters						
Designated Beneficial Uses	MUN, AGR, GWR, REC-1, REC-2, WARM, COLD, WILD						
Potential Water Quality Impacts to WOS	Hydrogeomorphic changes in the flow regime on the Project site may result in downstream erosion, sedimentation, and/or siltation.						
Project Impacts (Fill) to WOS	**Waterbody Type**	**Permanent**			**Temporary**		
		Acres	Linear Feet	Cubic Yards	Acres	Linear Feet	Cubic Yards
	Stream	0.356	1,649	-	0	0	0
Federal Permit(s)	None required. The USACE has determined that the Project site does not contain WOUS.						
Non-Compensatory Mitigation	During construction, the Applicant will follow Best Management Practices (BMPs) including construction storm water controls designed to minimize the short-term degradation of water quality.						

Table of Project Information:

	Following construction, the Applicant will implement an effective combination of permanent post-construction BMPs to stabilize all disturbed areas of the Project area.
Compensatory Mitigation	To compensate for permanent impacts to WOS, the Applicant proposes in-kind preservation of waters at a 2 to 1 mitigation ratio. The mitigation lands will be located in the greater Mojave watershed (628.00) and contain sufficient acreage of WOS to meet the 2 to 1 mitigation requirement. The Applicant will preserve the mitigation lands in perpetuity. The mitigation will be provided concurrently with construction, with a copy of the conservation easement or similar document provided to the Water Board no later than February 28, 2018.
Applicable Fees[1]	$22,262 (1,649 linear feet of discharge x $13.50 per linear foot)
Fees Received	$21,663 ($599 remaining fees to be paid before NOA is valid)
Estimated Annual Active Discharge Fee[2]	$600 (an annual active discharge fee will be assessed each fiscal year or portion of a fiscal year during which discharges occur until the Water Board issues a Notice of Completion of Discharges Letter to the Applicant)
Estimated Annual Post-Discharge Monitoring Fee[2]	$300 (an annual post-discharge monitoring fee will be assessed each fiscal year or portion of a fiscal year onsite mitigation monitoring is required until the Water Board notifies the Applicant that the mitigation requirement has been met)

[1] Dredge and fill application fees shall not exceed $90,000 for Fill and Excavation operations.
[2]The actual Annual Active Discharge Fee will be calculated using the fee schedule in effect at the time the annual fee is assessed per California Code of Regulations, Title 23, section 2200(a)(3). It is the Applicant's responsibility to inform Water Board staff when construction is complete and when onsite mitigation monitoring begins.

CEQA COMPLIANCE

The California Department of Transportation prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the Project. The IS/MND was prepared pursuant to the California Environmental Quality Act (CEQA Public Resources Code 21000, et seq.) and circulated under State Clearinghouse No. 2014121092. The IS/MND was certified on April 16, 2015, following public review.

The Water Board, acting as a CEQA Responsible Agency in compliance with CCR, title 14, section 15096, has considered the IS/MND for the Project and the potential water quality impacts. As a result of the analysis, the Water Board finds potential water quality impacts are less than significant.

GENERAL INFORMATION

1. The Project must be constructed and operated in accordance with the Project description in the information provided to the Water Board. Deviation from the Project's description constitutes a violation of the conditions upon which this NOA was granted.

2. Neither Project construction activities nor operation of the Project may cause a violation of the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), may cause a condition or threatened condition of pollution or nuisance, or cause any other violation of the Water Code.

3. Any discharge to surface waters within the Project area must be in accordance with the requirements contained in the General Board Order. Failure to abide by the conditions of the General Board Order and this NOA may result in enforcement action as authorized by the provisions of the Water Code.

4. An "Annual Active Discharge Fee" will be assessed each year this NOA remains in "Active" construction status. The actual Annual Active Discharge Fee will be calculated using the fee schedule in effect at the time the annual fee is assessed per California Code of Regulations, title 23, section 2200(a)(3). The annual fee will apply each fiscal year or portion of fiscal year until the Applicant submits a Construction Completion Report (see Additional Condition No. 7 above) and the Water Board issues a Notice of Completion of Discharges Letter to the Applicant.

AMENDMENT TO MONITORING AND REPORTING PROGRAM R6T-2003-0004

By this NOA, I am amending Monitoring and Reporting Program R6T-2003-0004 of the General Board Order to include additional monitoring and reporting requirements pursuant to California Water Code, section 13267. This revised order for technical report submittal is necessary to verify compliance with the requirements of the General Board Order. The additional requirements are as follows.

1. To document the completion of the Project, the Applicant must submit a **Construction Completion Report** to the Water Board within 60 days following completion of Project construction. The Construction Completion Report should include the following, at minimum: a summary of the Project activities, including the date(s) those activities were performed; identification of stream locations (tabulated with latitude/longitude and corresponding map with photo documentation), work activity (channel clearing, culvert extension, etc.), and volume of backfill/cover used (cubic yards); the area and length of channel of temporary and permanent disturbance to WOS at each location and cumulatively for the entire Project; a summary of the activities related to construction storm water controls and the BMPs used; and a summary of any activities that deviated from those described in the original application and supporting documents.

2. To compensate for permanent impacts to WOS, the Applicant proposes in-kind preservation of waters at a 2 to 1 mitigation ratio. The mitigation lands will be located in the greater Mojave watershed (628.00) and contain sufficient acreage of WOS to meet the 2 to 1 mitigation requirement. The Applicant will preserve the mitigation lands in perpetuity. The mitigation will be provided concurrently with construction, with a copy of the conservation easement or similar document provided to the Water Board no later than **February 28, 2018**.

REVOCATION PROCEDURES

As stated in the General Board Order, coverage shall continue until revoked in writing by the Water Board. The Applicant is responsible for notifying the Water Board in writing that the Project is complete, certifying that the required conditions are met, and requesting revocation of coverage. Coverage for the specific Project will be revoked provided the following conditions are met.

1. The Project is complete, soil stabilization measures and permanent BMPs are in place and functioning, and onsite mitigation and monitoring requirements are completed.

2. Information required in section B of the Monitoring and Reporting Program for the General Board Order has been submitted.

3. Water Board staff have verified that the conditions of the General Board Order have been met, which may also include a field inspection by Water Board staff.

We look forward to working with you in your efforts to protect water quality. If you have any questions regarding this matter, please contact me at (530) 542-5412 (patty.kouyoumdjian@waterboards.ca.gov), Jan Zimmerman, Engineering Geologist, at (760) 241-7376 (jan.zimmerman@waterboards.ca.gov), or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (patrice.copeland@waterboards.ca.gov). Please send all future correspondence regarding this Project to the Water Board's email address at Lahontan@waterboards.ca.gov and be sure to include the WDID No. in the subject line.

Patty Z. Kouyoumdjian

PATTY KOUYOUMDJIAN
EXECUTIVE OFFICER

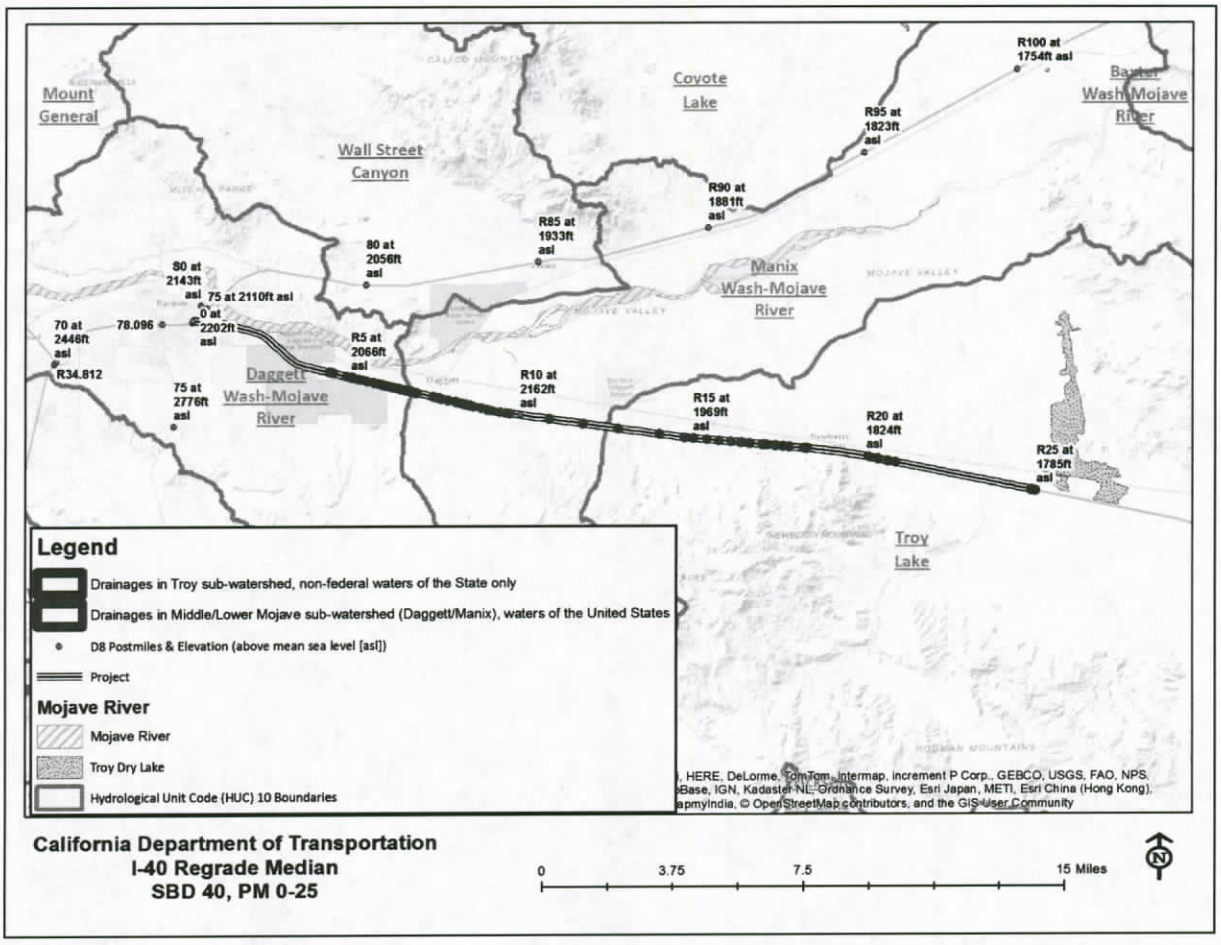
Enclosures: (1) Project Overview and Watershed Map
(2) General Board Order and Monitoring and Reporting Program No. R6T-2003-0004

cc: Josh Jaffery, Caltrans (josh.jaffery@dot.ca.gov)
Becky Jones, Dept. of Fish and Wildlife (rebecca.jones@wildlife.ca.gov)
SWRCB, Division of Water Quality (stateboard401@waterboards.ca.gov)
Jan Zimmerman, Lahontan Water Board
Patrice Copeland, Lahontan Water Board

R:\RB6Victorville\ R6T-2003-0004-288_NOA-I40 Median_401 Certs & WDRs 6B361512003.docx

ENCLOSURE 1

Project Overview and Watershed Map


Mount General
Wall Street Canyon
Coyote Lake
Barstow Wash-Mojave River
Manix Wash-Mojave River
Daggett Wash-Mojave River
Troy Lake
R100 at 1754ft asl
R95 at 1823ft asl
R90 at 1881ft asl
R85 at 1933ft asl
80 at 2056ft asl
80 at 2143ft asl
75 at 2110ft asl
0 at 2202ft asl
70 at 2446ft asl
78.096
R34.812
75 at 2776ft asl
R5 at 2066ft asl
R10 at 2162ft asl
R15 at 1969ft asl
R20 at 1824ft asl
R25 at 1785ft asl
Legend
Drainages in Troy sub-watershed, non-federal waters of the State only
Drainages in Middle/Lower Mojave sub-watershed (Daggett/Manix), waters of the United States
D8 Postmiles & Elevation (above mean sea level [asl])
Project
Mojave River
Mojave River
Troy Dry Lake
Hydrological Unit Code (HUC) 10 Boundaries
, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,
Base, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),
apmyIndia, © OpenStreetMap contributors, and the GIS User Community
California Department of Transportation
I-40 Regrade Median
SBD 40, PM 0-25
0
3.75
7.5
15 Miles
N

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6T-2003-0004

GENERAL WASTE DISCHARGE REQUIREMENTS
FOR

SMALL CONSTRUCTION PROJECTS, INCLUDING UTILITY, PUBLIC WORKS, AND MINOR STREAMBED/LAKEBED ALTERATION PROJECTS IN THE LAHONTAN REGION EXCLUDING THE LAKE TAHOE HYDROLOGIC UNIT

The California Regional Water Quality Control Board, Lahontan Region (Regional Board) finds:

1. In accordance with Section 13260 of the California Water Code, the discharge of storm water runoff and products of erosion from small construction projects, including utility, public works, within certain sensitive watersheds in the Lahontan Region, and discharges associated with minor streambed/lakebed alteration projects in the Lahontan Region is considered to be a discharge of waste that could affect the quality of waters of the State.

2. The Regional Board may prescribe requirements for any proposed discharge, in accordance with Section 13263 of the California Water Code.

3. Implementation of temporary best management practices (BMPs) is an effective and economical means of preventing or minimizing the discharge of the products of erosion, sediment-laden storm water, and minor waste material spills from small construction projects.

4. Implementation of permanent best management practices (BMPs) after construction is an effective means of treating storm water runoff from impervious surfaces and of preventing erosion following construction of small sites.

5. This General Permit regulates: 1) discharges associated with minor streambed/lakebed alteration projects in the Lahontan Region; and 2) storm water discharges from small construction activity that enter surface waters either directly or indirectly through drainage conveyances or municipal separate storm sewer facilities within the following Hydrologic Units/Areas in the Lahontan Region (see Attachments "A", "B", and "C"):

    a. Little Truckee River Hydrologic Unit (HU No. 636.00)
    b. Truckee River Hydrologic Area (HU No. 635.20)
    c. West Fork Carson River Hydrologic Unit (HU No. 633.00)
    d. East Fork Carson River Hydrologic Unit (HU No. 632.00)
    e. Mono Hydrologic Unit (HU No. 601.00)
    f. Long Hydrologic Area (HU No. 603.10)

6. Small construction projects located within the jurisdiction of local agencies that have entered into a Memorandum of Understanding (MOU) with the Regional Board to implement a storm water construction pollution control program in accordance with the *Water Quality Control Plan for the Lahontan Region* (Basin Plan) are not subject to this General Permit. The Town of Mammoth Lakes has entered into such an MOU with the Regional Board and upon adoption of this Permit the Regional Board waives requirements for submitting Reports of Waste Discharge for small construction activity, as defined in Finding 9, within the Mammoth Lakes jurisdiction. Subsequent to the adoption of this Order, other jurisdictions may enter into MOUs with the Regional Board and qualify for a similar waiver.

7. Discharges of storm water runoff and products of erosion from certain construction projects in the Lake Tahoe Hydrologic Unit are regulated under separate General Waste Discharge Requirements and are not covered under this permit.

8. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to separate storm sewer systems or other watercourses within their jurisdiction, as allowed by State and Federal law.

9. For purposes of this Order, a "small construction project" includes construction activity that results in land disturbance of 10,000 square feet or more and is not covered under the State Water Resources Control Board (SWRCB) Water Quality Order 99-08-DWQ (Statewide Construction General Permit). Land disturbance is clearing, grading, or disturbances to the ground, including excavation and stockpiling, within the footprint of the structure to be constructed, and any staging and access areas that disturb native soil conditions. Only the actual area of land disturbance is considered when determining whether a project must be covered under this Permit. For example, if a 1-acre parcel (43,560 square feet) is to be developed, but only 9,000 square feet of soil will be disturbed within the project site, coverage under this Permit is not required. Small construction projects also include utility projects proposed by a public or private utility and public works projects proposed by a public entity that involve 10,000 square feet or more of land disturbance.

   The Statewide Construction General Permit currently covers projects involving one acre or more of land disturbance. Small construction activity that results in land disturbances of less than 10,000 square feet is subject to this General Permit if the construction activity is part of a larger common plan of development that, as a whole, encompasses 10,000 square feet, but less than 1 acre of soil disturbance. For example, a single development that is completed in two separate phases, with each phase disturbing 8,000 square feet, would require coverage under this Permit because the total land disturbance associated with the project as a whole is 16,000 square feet. For purposes of this Order, Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility, nor does it include emergency construction activities required to protect public health and safety.

10. For purposes of this order, a "minor streambed/lakebed alteration project" is one that includes soil disturbing work, including maintenance dredging, within the high water mark of any water body in the Lahontan Region or the 100-year floodplain in the Truckee and Little Truckee River Hydrologic Units, and is not regulated by the Army Corps of Engineers under Clean Water Act (CWA) Section 404.

11. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA Section 404 and does not constitute a state water quality certification under CWA Section 401.

12. To obtain authorization for proposed storm water discharges associated with land disturbing activities to ground and/or surface waters pursuant to this General Permit, the Discharger must submit a Notice of Intent (NOI – Attachment "D") to comply with the General Permit and a filing fee to the Regional Board prior to commencement of construction activities. The NOI must include a description of specific temporary and permanent Best Management Practices (BMPs) to be implemented to prevent or minimize the discharge of waste from the project site during and after construction (see Attachment "E"). For proposed construction activity on easements or on nearby property by agreement or permission, the entity responsible for the construction activity must submit the NOI and filing fee and shall be responsible for development and implementation of the BMPs. Coverage under the General Permit shall begin upon written notification from the Regional Board or 30 days following Regional Board receipt of an NOI if the applicant receives no response from the Regional Board.

13. If an individual National Pollutant Discharge Elimination System (NPDES) Permit is issued to a discharger for activities otherwise subject to this General Permit, or if an alternative general or individual permit is subsequently adopted which covers storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the subsequent General Permit.

14. Potential pollutant discharges from projects covered under this General Permit consist of products of erosion, construction waste materials, dewatering waste, turbid water and waste earthen materials from work within surface waters, and small amounts of petroleum products from construction equipment.

15. The Regional Board adopted and the State Water Resources Control Board (SWRCB) approved the *Water Quality Control Plan for the Lahontan Region* (Basin Plan). This General Permit implements the Basin Plan. Dischargers regulated by this General Permit must comply with the water quality standards, guidelines, and prohibitions in the Basin Plan, and subsequent amendments thereto.

16. Runoff from the project sites will potentially enter either ground or surface waters of the Hydrologic Units/Areas listed in Finding 5.

17. The beneficial uses of ground and surface waters within the Hydrologic Units/Areas listed in Finding 5 are provided in Chapter 2 of the Basin Plan. There are a variety of designated beneficial uses for individual water bodies that are too numerous to list in this General Permit. The pertinent information is available from the Basin Plan at the Regional Board offices and may be found at the following website - http://www.swrcb.ca.gov/rwqcb6/files.htm

18. A Negative Declaration for the adoption of this General Permit was certified by the Regional Board on January 8, 2003 (Resolution No. R6T-2003-0004) in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.).

19. The projects regulated by this General Permit are typically nonrecurring and short-term construction projects that will normally be completed within two construction seasons. The applicability of these requirements to the specific project may be revoked pursuant to Administrative Provisions – Section IV.D.

20. The Regional Board has notified the interested agencies and persons of its intent to adopt general waste discharge requirements for small construction projects and has provided them with an opportunity to submit their written views and recommendations.

21. The Regional Board in a public meeting heard and considered all comments pertaining to the requirements.

IT IS HEREBY ORDERED that all dischargers submitting an NOI, applicable fee, and BMP plan in accordance with this permit shall comply with the following:

I. DISCHARGE PROHIBITIONS

A. The discharge of waste[1], including but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) that causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

B. The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.

C. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.

D. The discharge, attributable to human activities, of solid or liquid waste materials, including but not limited to soil, silt, clay, sand, or other organic or earthen material, to surface waters of the Truckee River and Little Truckee River Hydrologic Units, is prohibited.

E. The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials, including but not limited to soil, silt, clay, sand, or other organic or earthen material, to lands within the 100-year floodplain of the Little Truckee River and Truckee River, or any tributary to the Little Truckee and Truckee Rivers, is prohibited. A summary of the waste discharge prohibitions and exception criteria is presented in Attachment "F."

F. Unless specifically granted, authorization pursuant to this General Permit does not constitute an exemption to applicable discharge prohibitions prescribed in the Basin Plan.

G. Unless otherwise authorized by a separate waste discharge permit, discharges of material other than storm water, including dewatering waste, to a separate storm sewer system or waters of the state are prohibited. Discharge of dewatering waste to land is covered under this General Permit providing that there are no pollutants present that could degrade groundwater quality. If no land disposal alternatives exist for dewatering waste, the Discharger may seek coverage to discharge dewatering waste to surface waters under a separate NPDES permit by submitting a separate Report of Waste Discharge.

H. Discharges of non-storm water are allowed only when necessary for performance and completion of construction projects and where they do not cause or contribute to a violation of any water quality standard. Such discharges must be described in the BMP plan (see Provision III – Best Management Practices). Wherever feasible, alternatives that do not result in the discharge of non-storm water, or that discharge any non-storm water to land, shall be implemented.

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[1] CWC Section 13050(d): "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

I. Storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

J. Except under emergency conditions, land disturbance between October 15 of any year and May 1 of the following year is prohibited in the Little Truckee River and Truckee River Hydrologic Units. Where it can be shown that granting a variance would not cause or contribute to the degradation of water quality, an exception to the dates stated above may be granted in writing by the Executive Officer.

K. The discharge of fresh concrete or grout to surface waters is prohibited, unless the discharge is confined to the work area and isolated from flowing streams or water bodies.

L. The discharge of oil, gasoline, diesel fuel, any petroleum derivative, any toxic chemical, or hazardous waste is prohibited.

M. The discharge of waste, including wastes contained in storm water, shall not cause a pollution, threatened pollution, or nuisance as defined in Section 13050 of the California Water Code.

II. RECEIVING WATER LIMITATIONS

A. Storm water discharges and authorized nonstorm water discharges to any ground water or surface water shall not adversely impact human health or the environment.

B. The discharge of storm water from the project area to surface waters shall not cause or contribute to a violation of any narrative or numeric water quality objective contained in the Basin Plan. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited. A complete listing of water quality objectives is presented in the Basin Plan, Chapter 3 and can be found at the following website - http://www.swrcb.ca.gov/rwqcb6/files.htm

Water quality objectives that apply to all surface waters within the Lahontan Region include, but are not limited to, the following construction-related pollutants.

Oil and Grease
Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses.

For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.

pH
In fresh waters with designated beneficial uses of COLD or WARM, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters of the Region, the pH shall not be depressed below 6.5 nor raised above 8.5.

The Regional Board recognizes that some waters of the Region may have natural pH levels outside of the 6.5 to 8.5 range. Compliance with the pH objective for these waters will be determined on a case-by-case basis.

Sediment
The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

Settleable Materials
Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more that 0.1 milliliter per liter.

Turbidity
Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. For all waters, increases in turbidity shall not exceed natural levels by more than 10 percent. Additionally for the Little Truckee Hydrologic Unit and Truckee River Hydrologic Area, turbidity shall not be raised above 3 Nephelometric Turbidity Units (NTU) mean of monthly means. Additionally for the West Fork Carson River Hydrologic Unit, the turbidity shall not be raised above a mean of monthly means value of 2 NTU.

Toxicity
All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

C. Should it be determined by the Discharger or Regional Board staff that storm water discharges and/or authorized nonstorm water discharges are causing or contributing to a violation of an applicable water quality standard, the Discharger shall:

1. Implement corrective measures immediately following discovery that water quality standards were violated, followed by notification to the Regional Board by telephone as soon as possible but no later than 48 hours after the discharge has been discovered. This notification shall be followed by a report within 14 calendar days to the Regional Board, unless otherwise directed by the Regional Board, describing (1) the nature and cause of the water quality standard violation; (2) the BMPs currently being implemented; (3) any additional BMPs which will be implemented to prevent or reduce pollutants that are causing or contributing to the violation of water quality standards; and (4) any maintenance or repair of BMPs. This report shall include an implementation schedule for corrective actions and shall describe the actions taken to reduce the pollutants causing or contributing to the violation.

2. The Discharger shall revise storm water pollution control measures and monitoring procedures to incorporate: 1) the additional BMPs that have been, and will be implemented; 2) the implementation schedule; and 3) any additional monitoring needed.

3. Nothing in this section shall prevent the Regional Board from enforcing any provisions of this General Permit while the Discharger prepares and implements the above report.

III. BEST MANAGEMENT PRACTICES (BMPs)

A. Prior to the initiation of any construction related activities, the Discharger shall develop a BMP implementation plan and install temporary erosion control facilities to prevent transport of earthen materials and other wastes off the property. Guidance for developing the BMP plan is provided in Attachment "E."

B. All land disturbing activities shall be conducted in accordance with the Lahontan Region Project Guidelines for Erosion Control (Attachment "G").

C. If the Regional Board determines that the proposed BMPs will not achieve the applicable standards and receiving water objectives, the Discharger may be required to implement additional or alternative BMPs.

IV. ADMINISTRATIVE PROVISIONS

A. Applicability and Timing

1. Upon receipt of the applicable filing fee, an NOI to comply with the provisions of this General Permit, and an adequate BMP plan, the Discharger will be issued a written Notice of Applicability (NOA). The Regional Board reserves the right to request additional information if the NOI and/or BMP plan is deemed inadequate.

2. The Discharger shall submit a NOI, a BMP plan, and the appropriate fee at least 30 days prior to the proposed date of construction. Additional time (up to 120 days) will be required for projects that propose disturbance to flood plains or waters of the state. Construction may not begin until a written NOA is received from the Regional Board or 30 days have elapsed from the date the NOI was received by the Regional Board. If the Discharger is notified in writing that the NOI and/or BMP plan is incomplete, the Discharger must provide the additional information requested in the notice and the Regional Board may take up to 30 days to respond with an NOA or request for additional information.

3. All Dischargers must implement the BMP plan and the Monitoring and Reporting Program upon commencement of construction.

4. Projects may be brought to the Regional Board for consideration of adoption of an individual WDR when the Executive Officer deems it necessary to achieve water quality protection.

5. The conditions of this General Permit do not exempt the Discharger from compliance with any other laws, regulations, or ordinances which may be applicable, do not legalize land treatment and disposal facilities, and leave unaffected any further restraints on those facilities which may be contained in other statutes or required by other regulatory agencies.

B. Provisions

1. All Dischargers must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to drainage systems or other water courses under their jurisdiction.

2. The Discharger shall at all times fully comply with the engineering plans, specifications, and technical reports developed for the project and/or submitted with the NOI. The Discharger shall at all times fully comply with the BMP Plan.

3. The Discharger must comply with the Standard Provisions for Waste Discharge Requirements contained in Attachment "H", which is made part of this General Permit.

4. Pursuant to California Water Code Section 13267, the Discharger shall comply with Monitoring and Reporting Program No. **R6T-2003-0004** hereby made a part of this General Permit.

5. The owners of property subject to this General Permit shall have a continuing responsibility for ensuring compliance with the General Permit. The Discharger identified in the NOA shall remain liable for General Permit violations until an NOI is received from the new owner/operator. Notification of applicable General Permit requirements shall be furnished to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board. This General Permit is transferable to the new owner. Any change in the ownership and/or operation of property subject to this General Permit shall be reported to the Regional Board. The new owner must comply with the General Permit, including the Monitoring and Reporting Program.

C. Revocation Procedures

Coverage under the General Permit shall continue until revoked in writing by the Regional Board staff. The Discharger is responsible for notifying the Regional Board in writing that the project is complete, certifying that the required conditions are met, and requesting revocation of coverage under the General Permit. The General Permit for the specific project will be revoked provided the following conditions are met: 1) the construction project is complete and soil stabilization measures are in place and functioning; 2) permanent BMPs have been installed and are functional; 3) information required by the attached Monitoring and Reporting Program has been submitted; and 4) Regional Board staff have inspected the site, if deemed necessary.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on January 8, 2003.

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachment A: Map of Little Truckee River Hydrologic Unit and Truckee River Hydrologic Area

Attachment B: Map of West and East Forks Carson River Hydrologic Units

Attachment C: Map of Mono Hydrologic Unit and Long Hydrologic Area

Attachment D: Notice of Intent Form

Attachment E: Best Management Practices Plan

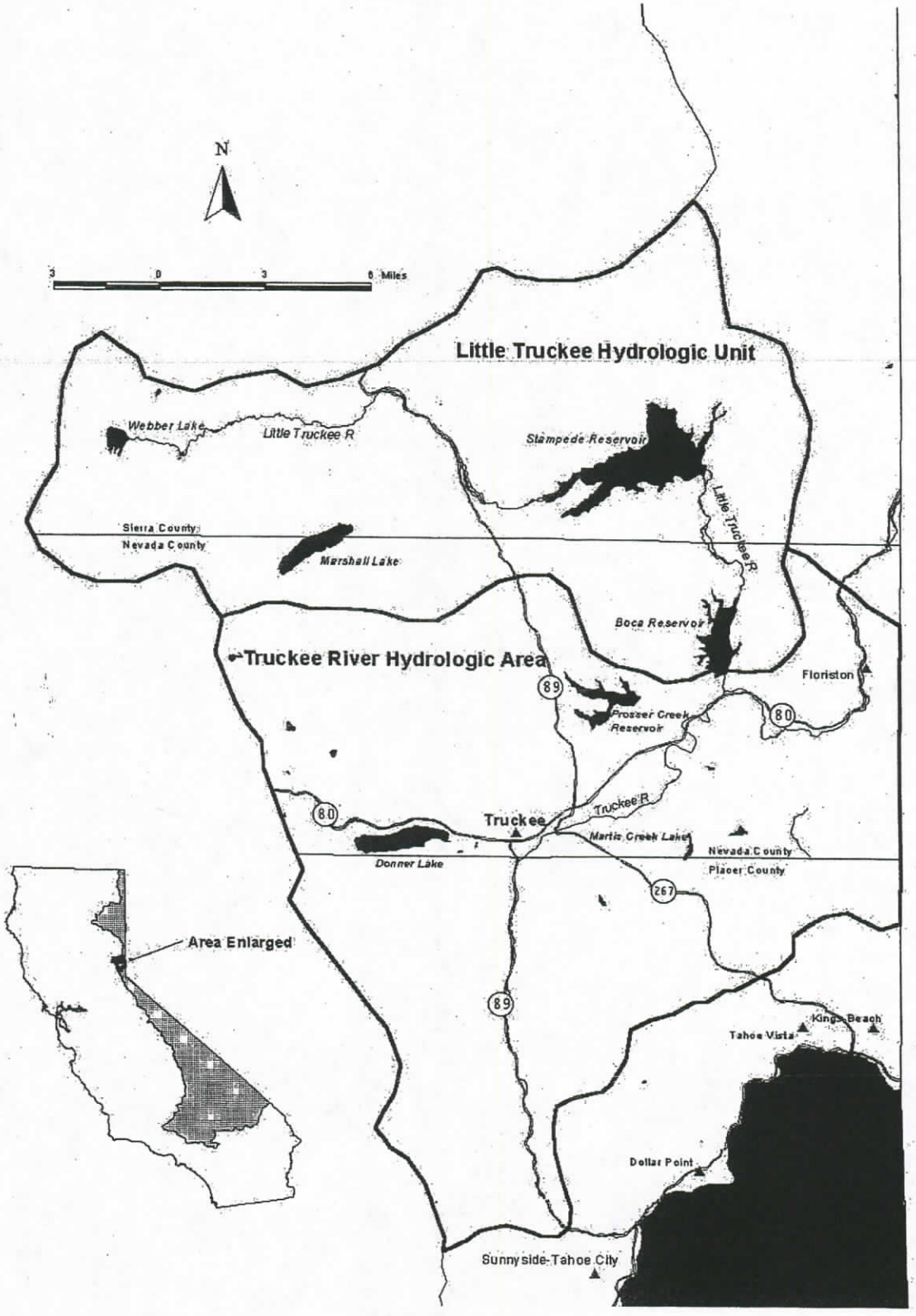
Attachment F: Waste Discharge Prohibitions and Exception Criteria for Projects within the Truckee River Hydrologic Unit

Attachment G: Lahontan Region Project Guidelines for Erosion Control

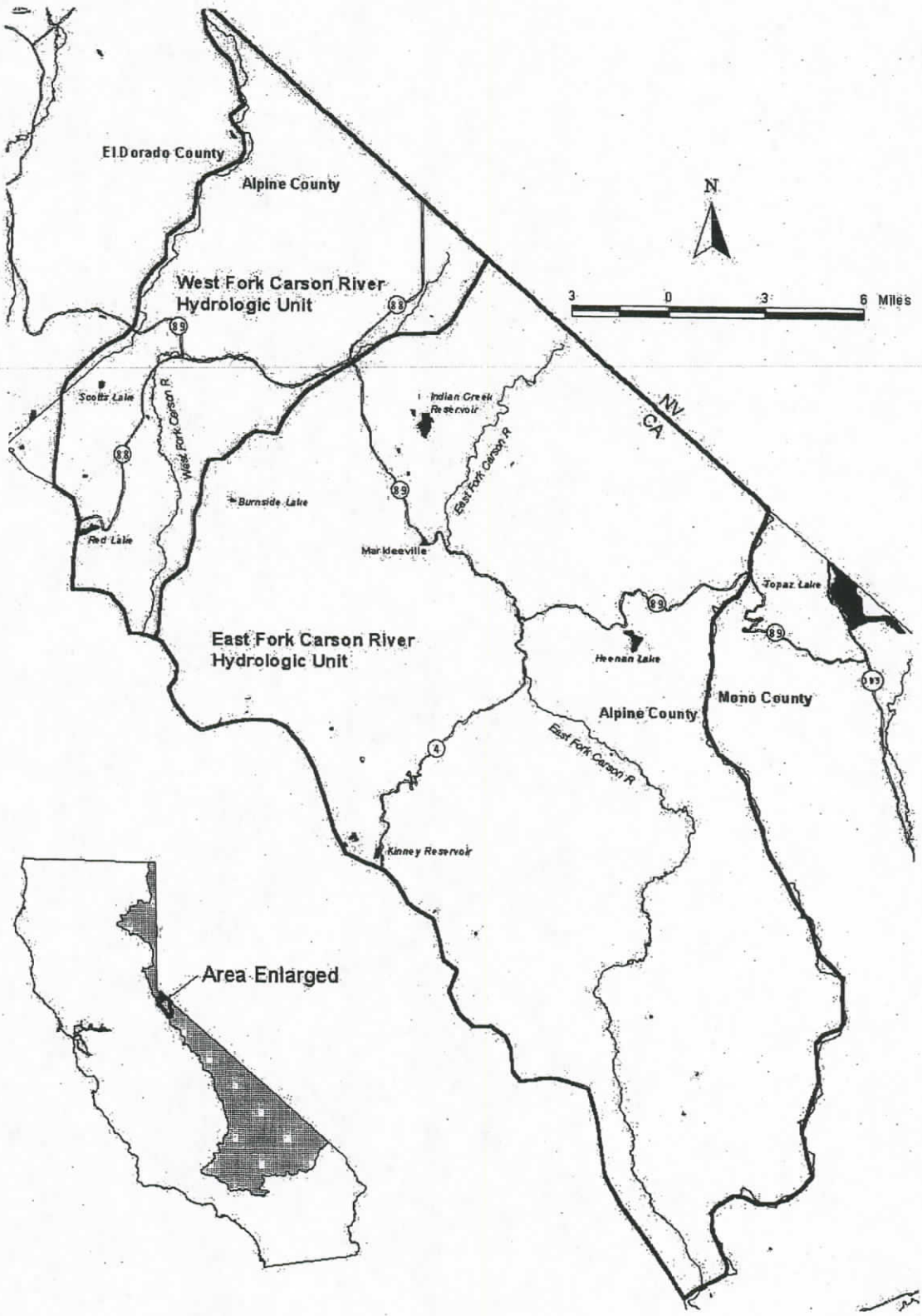
Attachment H: Standard Provision for Waste Discharge Requirements

BA/cgT: Small Construction General Permit WDR

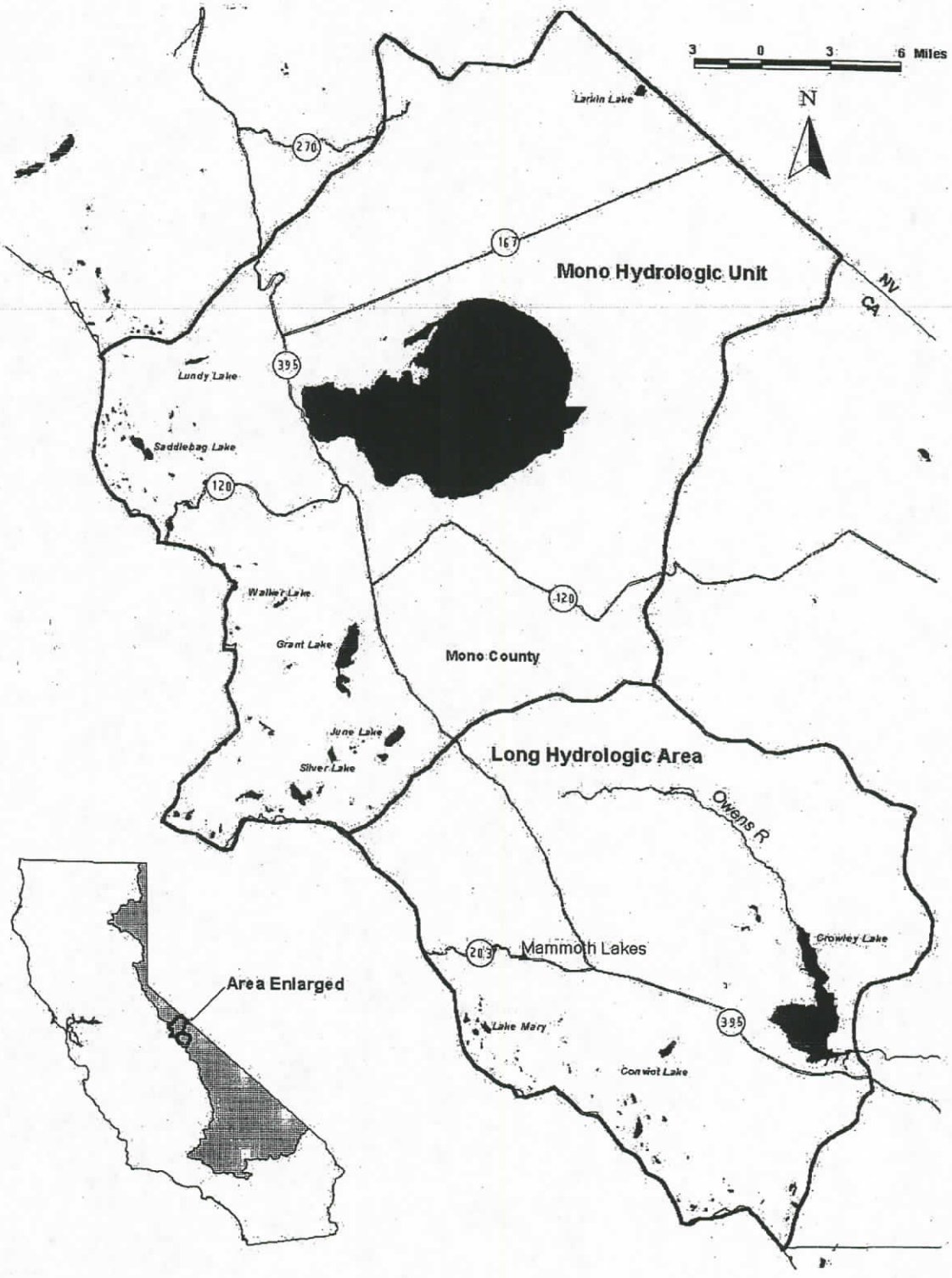
Attachment "A"
Little Truckee River Hydrologic Unit
And
Truckee River Hydrologic Area



Attachment "B"
West and East Fork Carson River
Hydrologic Units



Attachment "C"
Mono Hydrologic Unit
And
Long Hydrologic Area



ATTACHMENT "D"
California Regional Water Quality Control Board – Lahontan Region
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SMALL CONSTRUCTION PROJECTS, INCLUDING UTILITY, PUBLIC WORKS, AND MINOR STREAMBED/LAKEBED ALTERATION PROJECTS
IN THE LAHONTAN REGION
EXCLUDING THE LAKE TAHOE HYDROLOGIC UNIT
(WQ ORDER No. R6T-2003-0004)

I. NOI STATUS (SEE INSTRUCTIONS)

MARK ONLY ONE ITEM 1. ☐ New Construction 2. ☐ Change of Information for WDID#

II. PROPERTY OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) –

III. DEVELOPER/CONTRACTOR INFORMATION

Developer/Contractor	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) –

IV. CONSTRUCTION PROJECT INFORMATION

Site/Project Name	Site Contact Person		
Physical Address/Location	Latitude °	Longitude °	County
City (or nearest City)	Zip	Site Phone Number ( ) –	Emergency Phone Number ( ) –

A. Total size of construction site area: _____ Acres B. Total area to be disturbed: _____ Acres (% of total _____)	C. Percent of site imperviousness (including rooftops): Before Construction: _____% After Construction: _____%	D. Tract Number(s): _____, _____ E. Mile Post Marker: _____

F. Is the construction site part of a larger common plan of development or sale? ☐ YES ☐ NO	G. Name of plan or development:
H. Construction commencement date: ____/____/____ I. % of site to be mass graded: _____	J. Projected construction dates: Complete grading: ____/____/____ Complete project: ____/____/____

K. Type of Construction (Check all that apply):

1. ☐ Residential 2. ☐ Commercial 3. ☐ Industrial 4. ☐ Reconstruction 5. ☐ Transportation
6. ☐ Utility Description: _____ 7. ☐ Other (Please List): _____

V. BILLING INFORMATION

SEND BILL TO:	Name	Contact Person	
☐ OWNER (as in II. above)			
☐ DEVELOPER (as in III. above)	Mailing Address	Phone/Fax	
☐ OTHER (enter information at right)	City	State	Zip

VI. REGULATORY STATUS

A. Has a local agency approved a required erosion/sediment control plan? ☐ YES ☐ NO

Does the erosion/sediment control plan address construction activities such as infrastructure and structures? ☐ YES ☐ NO

Name of local agency: _____ Phone: ( ) –

B. Is this project or any part thereof, subject to conditions imposed under a CWA Section 404 permit or 401 Water Quality Certification? ☐ YES ☐ NO

If yes, provide details: _____

VII. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):

1. ☐ **Indirectly to waters of the State**
2. ☐ **Storm drain system - Enter owner's name:** _____
3. ☐ **Directly to waters of State (e.g. , river, lake, creek, stream, wetlands)**

B. Name of receiving water: (river, lake, creek, stream, wetlands): _____

VIII. BEST MANAGEMENT PRACTICES (BMP) PLAN AND FEE

Have you included a BMP Plan with this submittal? .. ☐ YES ☐ NO

Have you included payment of the annual fee with this submittal? ☐ YES ☐ NO

X. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: _____

Signature: _____ **Date:** _____

Title: _____

ATTACHMENT "E"

BEST MANAGEMENT PRACTICES PLAN

The purpose of the Best Management Practices (BMP) plan is to evaluate potential sources of sediment and other pollutants at the construction site and put controls in place that will effectively prevent pollutant discharges to surface and ground waters. The following general pollution control elements should be addressed in the BMP Plan:

1. retain soil and sediment on the construction site;
2. prevent non-storm water discharges that would discharge pollutants off site;
3. prevent the discharge of other pollutants associated with construction activities to land or surface waters;
4. permanently stabilize disturbed soils; and
5. minimize the effects of increased storm water runoff from impervious surfaces.

For detailed information on construction related BMPs, the EPA document Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices may be found at the following website:
http://cfpub.epa.gov/npdes/pkeyword.cfm?keywords=BMPs&program_id=0

Additional information may be also be obtained by contacting the Lahontan Regional Water Quality Control Board.

Specific guidance for completing the Best Management Practices (BMP) Plan is provided below. The BMP Plan must be submitted with the Notice of Intent (NOI) to obtain coverage under the General Permit. Use the attached form for preparing the BMP plan.

Temporary Erosion Control

This element of the BMP Plan addresses temporary erosion control or soil stabilization measures to be implemented during the time while active construction and land disturbing work is active. The most efficient way to address erosion control is to preserve existing vegetation where feasible, limit disturbance, and stabilize and revegetate disturbed areas as soon as possible after grading or construction. Use of temporary erosion control measures is especially important on large graded sites where soil exposure to rainfall and wind can cause significant soil loss if left unprotected during the time active construction activities are conducted. Some of these measures may overlap with the permanent soil stabilization measures discussed later in the section. Until permanent vegetation is established, temporarily covering the soil is the most cost-effective and expeditious method to prevent and minimize erosion.

Indicate on the BMP Plan what methods will be used to prevent erosion from cut and fill slopes and other disturbed areas after grading activities are completed, but before permanent soil stabilization measures can be implemented. Options may include, but are not limited to:

- **Covering with mulch**
- **Temporary seeding or planting**
- **Applying soil stabilizers or binders (tackifier)**

- **Placing fiber rolls/logs on bare slopes**
- **Covering surfaces with erosion control blankets**
- **Diverting run off around disturbed areas using stabilized conveyances**

Sediment Control

Sediment control BMPs are required at appropriate locations along the site perimeter and at all internal inlets to the storm drain system. Sediment controls used in combination with the erosion controls described above can effectively prevent the discharge of pollutants off site. Effective filtration devices, barriers, and settling devices shall be selected, installed and maintained properly. The sediment control plan must also include provisions to temporarily stabilize construction access points such that soil, sediment, and other construction related materials are not tracked out beyond the site perimeter.

Indicate on the BMP Plan what sediment controls will be used at the site. Options may include, but are not limited to:

Filter barriers -
- **fiber rolls/logs**
- **silt fence**
- **straw bale barriers**
- **gravel inlet filters**

Retention structures -
- **sediment traps**
- **settling basins**

Stabilized access points/good housekeeping –
- **crushed rock**
- **mulch**
- **landing mats**
- **frequent sweeping**

Stabilization

All disturbed areas of the construction site must be stabilized once construction is complete. Disturbed areas include drainage ditches or channels. Stabilization means implementing permanent rather than temporary erosion controls. It is recommended to stabilize disturbed areas in inactive (no further land disturbance planned) portions of the site as soon as feasible. Final stabilization for the purposes of submitting a Notice of Termination (NOT) is satisfied when all soil disturbing activities are completed AND EITHER OF THE TWO FOLLOWING CRITERIA ARE MET:

1. A uniform vegetative cover with 70 percent coverage has been established OR:

2. equivalent stabilization measures have been employed. These measures include the use of such BMPs as mulch, erosion blankets, rip rap, fiber treatments, or other erosion resistant soil coverings or treatments.

Where background native vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted as follows: if the native vegetation on adjacent undisturbed areas covers 50 percent of the ground surface, 70 percent of 50 percent (.70 X .50=.35) would require 35 percent total uniform surface coverage.

Indicate on the BMP Plan what stabilization measures will be used at the site. Options may include, but are not limited to:

- **Seeding and/or planting (including hydro mulching/seeding)**
- **Mulching (wood chips, gravel, other) in combination with seeding/planting**
- **Installing erosion blankets (typically used on steeper disturbed slopes or unlined drainage ditches in combination with permanent seeding/planting)**
- **Placing rip rap**

Non-Storm Water Management

Non-storm water discharges should be eliminated or reduced to the extent feasible. Certain non-storm water discharges (e.g. irrigation of vegetative erosion control measures, pipe flushing and testing) may be necessary for the completion of some construction projects and are authorized by this General Permit. Other non-storm water discharges such as concrete washout, and driveway and street washing that would flush sediment or other pollutants to storm drains or surface waters are not allowed and would be a violation of this General Permit. De-watering waste should be discharged to land and infiltrated. A separate permit may be necessary if de-watering waste must be discharged to surface waters due to site constraints.

Indicate on the BMP Plan how unauthorized non-storm water discharges will be controlled. Options include, but are not limited to:

- **Approved off-site wash-out and wash-down areas**
- **Lined wash-out containment basins/traps**
- **De-watering waste infiltration or containment**

Spill Prevention and Control

The BMP Plan must describe measures to prevent and control potential leaks/spills of petroleum products such as fuels and lubricating materials, and other potentially hazardous materials. Secured storage areas for fuels and chemicals should be established and sufficient spill cleanup materials should be at the site to respond to accidental spills.

Indicate on the BMP Plan what spill prevention and control measures will be used. Options include, but are not limited to:

- **Covered material storage**
- **Material storage containment (berms, lined surfaces, secondary containment devices etc.)**
- **Regular equipment leak inspections**
- **Drip pans**
- **Absorbents**

Post-Construction Storm Water Management

Post-construction storm water controls are needed to reduce the impacts of adding impervious surfaces to the landscape and adding potential pollutant sources within storm water drainage areas. Additional impervious surfaces reduce storm water infiltration and storage and increase the volume and velocity of run off down stream from developed sites. Whenever possible, use of infiltration and treatment devices is encouraged. Specific requirements for infiltration or treatment of storm water runoff volume from a 20-year, 1-hour storm from all impervious surfaces in the Truckee River, Little Truckee River, and Mammoth Lakes watersheds must be met (see Attachment "G") Design approaches that limit overall land disturbance and reduce the amount of impervious surfaces are encouraged. Additional post-construction BMPs should also be incorporated into projects as appropriate and be properly maintained.

Indicate on the BMP Plan what post-construction BMPs will be implemented. Options include, but are not limited to:

- **Infiltration structures**
- **Detention/retention basins**
- **Storm water treatment vaults**
- **Biofilter BMPs (typically vegetated swales, strips, and buffers)**
- **Energy dissipation devices (structures designed to prevent erosion and slow water velocity associated with conveyance systems**
- **Efficient irrigation systems**
- **Proper drain plumbing (e.g. ensuring that interior drains are not connected to a storm sewer system)**

Maintenance, Inspection, and Repair

BMPs implemented at the site must be properly maintained to be effective. The BMP plan shall include provisions to inspect and maintain all BMPs identified in the plan throughout the duration of the project. Sites that are inactive and winterized through the wet season should be checked periodically to ensure the site remains stable. For sites where construction activity is conducted through the wet season, the Discharger must ensure that BMPs remain effective.

Indicate on the BMP Plan how BMPs will be inspected and repaired in accordance with the following minimum program:

For inactive construction sites during wet season -

- **Cease construction through wet season and winterize (see Attachment "G")**

For active construction sites during wet season -

- **Inspect BMPs before and after storm events**
- **Inspect BMPs once each 24-hour period during extended storm events**
- **Implement repairs or design changes as soon as feasible depending upon worker safety and field conditions**
- **Have provisions to respond to failures and emergencies**

BEST MANAGEMENT PRACTICES PLAN

Discharger Name: _____

Site Name: _____

Street Address: _____

City: _____

County: _____

Use the template provided below to identify BMPs to be implemented at the construction site. Check the boxes next to the BMPs that will be used. If other BMPs will be used, describe them in the space provided for "Other BMP." Attach additional sheets if needed.

TEMPORARY EROSION CONTROL

Erosion from graded or disturbed areas, including cut and fill slopes, will be temporarily protected once soil disturbing activities are completed by the following method(s):

- ❑ **Covering with mulch**
- ❑ **Temporary seeding or planting**
- ❑ **Applying soil stabilizers or binders (tackifier)**
- ❑ **Placing fiber rolls/logs on bare slopes**
- ❑ **Covering surfaces with erosion control blankets**
- ❑ **Diverting run off around disturbed areas using stabilized conveyances**
- ❑ **Other (describe below)**

BEST MANAGEMENT PRACTICES PLAN

SEDIMENT CONTROL

Excess sediment will be prevented from running off the site or to storm drain inlets by the following method(s):

Filter barriers -

- ☐ **fiber rolls**
- ☐ **silt fence**
- ☐ **straw bale barriers**
- ☐ **gravel inlet filters**

Retention structures -

- ☐ **sediment traps**
- ☐ **settling basins**

Stabilized access points/good housekeeping –

- ☐ **crushed rock**
- ☐ **mulch**
- ☐ **landing mats**
- ☐ **frequent sweeping**

☐ **Other (describe below)**

BEST MANAGEMENT PRACTICES PLAN

STABILIZATION

Disturbed soil areas not covered with impervious surfaces will be permanently stabilized by the following method(s):

- ❑ **Seeding and/or planting (including hydro mulching/seeding)**
- ❑ **Mulching (wood chips, gravel, other) in combination with seeding/planting**
- ❑ **Installing erosion blankets (typically used on steeper disturbed slopes or unlined drainage ditches in combination with permanent seeding/planting)**
- ❑ **Placing rip rap (describe location)**
- ❑ **Other (describe below)**

NON-STORM WATER MANAGEMENT

Unauthorized non-storm water discharges will be controlled using the following method(s):

- ❑ **Approved off-site wash-out and wash-down areas (describe location)**
- ❑ **Lined wash-out containment basins/traps (describe location)**
- ❑ **De-watering waste infiltration or containment (describe location)**
- ❑ **Other (describe below)**

BEST MANAGEMENT PRACTICES PLAN

POST-CONSTRUCTION STORM WATER MANAGEMENT

The following post-construction BMPs will be implemented to reduce impacts from additional impervious surfaces and pollutant sources (include design calculations used to size BMPs):

- ❑ **Infiltration structures**
- ❑ **Detention/retention basins**
- ❑ **Storm water treatment vaults**
- ❑ **Biofilter BMPs (typically vegetated swales, strips, and buffers)**
- ❑ **Energy dissipation devices (structures designed to prevent erosion and slow water velocity associated with conveyance systems**
- ❑ **Efficient irrigation systems**
- ❑ **Proper plumbing design (e.g. ensuring that interior drains are not connected to a storm sewer system)**
- ❑ **Other (describe below)**

MAINTENANCE, INSPECTION, AND REPAIR

BMPs will be inspected and repaired in accordance with the following minimum program:

<u>For inactive construction sites during wet season</u> (October 15 – May 1) –

- ❑ **Cease construction through wet season and winterize (see Attachment "G")**

<u>For active construction sites during wet season</u> (October 15 – May 1) –

- ❑ **Inspect BMPs, and repair if needed, before and after storm events**
- ❑ **Inspect BMPs once each 24-hour period during extended storm events**
- ❑ **Implement repairs or design changes as soon as feasible depending upon worker safety and field conditions**
- ❑ **Have provisions to respond to failures and emergencies**
- ❑ **Other (describe below)**

ATTACHMENT "F"

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

WASTE DISCHARGE PROHIBITIONS AND EXCEPTION CRITERIA FOR PROJECTS WITHIN THE TRUCKEE RIVER HYDROLOGIC UNIT

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) prohibits the discharge or threatened discharge, attributable to human activities, of solid or liquid waste[1] materials (including, but not limited to, soil, silt, clay, sand and other organic and earthen materials) to lands within the 100-year floodplain of the Truckee River or within the 100-year floodplain of any tributary[2] to the Truckee River. The Regional Board may grant exceptions to the prohibition for repair or replacement of existing structures provided that a loss of additional floodplain area or volume does not occur, and Best Management Practices and mitigation measures are used to minimize any potential soil erosion and/or surface runoff problems.

The Regional Board may also grant exceptions to the prohibition for the following types of new projects:

(1) Projects solely intended to reduce or mitigate existing sources of erosion or water pollution, or to restore the functional value to previously disturbed floodplain areas.

(2) Bridge abutments, approaches, or other essential transportation facilities identified in an approved county general plan.

(3) Projects necessary to protect public health or safety, or to provide essential public services.

(4) Projects necessary for public recreation.

(5) Projects that will provide outdoor public recreation within portions of the 100-year flood plain that have been substantially altered by grading and/or filling activities which occurred prior to June 26, 1975.

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1 Waste includes earthen material placed in a water body or carried to waters by erosive forces. Construction activity involving ground disturbance within 100-year floodplain areas is generally considered to constitute a threat of discharge.

2 Tributaries include: perennial surface waters (rivers. streams, lakes, wetlands) and ephemeral (seasonal) watercourses exhibiting evidence of the occurrence of flowing water, and having the potential to transport water and/or sediment to another water body, including, but not limited to, named and unnamed streams, wetlands, and lakes.

The Basin Plan allows an exception to the prohibitions for new projects only when the Regional Board makes all of the following findings:

- The project is included in one or more of the five categories listed above.
- There is no reasonable alternative to locating the project or portions of the project within the 100-year flood plain.
- The project, by its very nature, must be located within the 100-year flood plain. (The determination of whether a project, by its very nature, must be located in a 100-year flood plain shall not apply to projects in category (5), above, and shall be based on the type of project proposed, not the particular site proposed.)
- The project incorporates measures which will ensure that any erosion and surface runoff problems caused by the project are mitigated to levels of insignificance.
- The project will not individually or cumulatively with other projects, directly or indirectly, degrade water quality or impair beneficial uses of water.
- The project will not reduce the flood flow attenuation capacity, the surface flow treatment capacity, or the ground water flow treatment capacity from existing conditions. All 100-year flood plain areas and volumes lost as a result of the project must be completely mitigated by restoration of previously-disturbed floodplain within or as close as practical to the project site.[3] The restored, new, or enlarged floodplain shall be of sufficient area and volume to more than compensate for the flood flow attenuation capacity, surface flow treatment capacity and ground water flow treatment capacity which are lost as a result of the project.

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[3] This finding will not be required for new projects necessary to protect public health and safety. For new projects necessary to provide essential public services, this finding will not be required when the Regional Board finds mitigation measures to be infeasible because the financial resources of the project proponent are severely limited.

ATTACHMENT "G"

LAHONTAN REGION
PROJECT GUIDELINES FOR EROSION CONTROL

In the interest of protecting surface water quality from unnatural or accelerated erosion caused by land development, the following guidelines shall be followed:

Guidelines Applicable To: **Little Truckee River Hydrologic Unit (HU No. 636.00)**
Truckee River Hydrologic Area (HU No. 635.20)
West Fork Carson River Hydrologic Unit (HU No. 633.00)
East Fork Carson River Hydrologic Unit (HU No. 632.00)
Mono Hydrologic Unit (HU No. 601.00)
Long Hydrologic Area (HU No. 603.10)

Temporary Construction BMPs

1. Surplus or waste materials shall not be placed in drainage ways or within the 100-year flood plain of surface waters.

2. All loose piles of soil, silt, clay, sand, debris, or earthen materials shall be protected in a reasonable manner to prevent discharge of pollutants to waters of the State. Material stockpiles should be placed on the upgradient side of excavation whenever possible. Stockpiles may also be protected by covering to prevent contact with precipitation and by placing sediment barriers around the stockpiles.

3. Dewatering shall be done in a manner so as to prevent the discharge of pollutants, including earthen materials, from the site. The first option is to discharge dewatering waste to land. A separate permit may be required if, due to site constraints, dewatering waste must be discharged to surface waters. Contact the Regional Board for information on discharging to surface waters.

4. All disturbed areas shall be stabilized by appropriate erosion and/or sediment control measures by October 15 of each year.

5. All work performed between October 15th and May 1st of each year shall be conducted in such a manner that the project can be winterized within 48 hours. Winterized means implementing erosion and/or sediment controls that will prevent the discharge of earthen materials from the site and the controls will remain effective throughout the rainy/snow season without requiring maintenance. In general, this requires stabilizing bare disturbed soils with mulch, erosion protection blankets, or other suitable materials, and installing perimeter sediment controls such as fiber logs or other similar materials that will remain effective during significant rain and snow events.

6. After completion of a construction project, all surplus or waste earthen material shall be removed from the site and deposited at a legal point of disposal.

7. All non-construction areas (areas outside of the construction zone that will remain undisturbed) shall be protected by fencing or other means to prevent unnecessary encroachment outside the active construction zone.

8. During construction, temporary erosion control facilities (e.g., impermeable dikes, filter fences, weed-free straw bales, etc.) shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff.

9. Control of run-on water from offsite areas shall be managed (protected, diverted, treated, etc.) to prevent such water from degrading before it discharges from the site.

10. Where construction activities involve the crossing and/or alteration of a stream channel, such activities require a prior written agreement with the California Department of Fish and Game and shall be timed whenever possible to occur during the period in which streamflow is expected to be lowest for the year. Other control measures may be used as necessary to prevent adverse effects from work in surface waters.

Permanent Construction BMPs

1. Impervious surfaces should be constructed with infiltration trenches or comparable infiltration structures along downgradient sides to infiltrate the increase in runoff resulting from the new impervious surfaces. Infiltration structures should also be constructed to accept runoff from structural (roof top) drip lines. Other control measures may be considered if design and/or site constraints are such that construction of infiltration devices is infeasible. Additional specific design specifications are required for the Truckee, Little Truckee and Long Hydrologic Units/Areas (see specific requirements below).

2. Where possible, existing drainage patterns shall not be significantly modified.

3. Drainage swales disturbed by construction activities shall be stabilized by the addition of crushed rock or riprap, as necessary, or other appropriate stabilization methods.

4. Revegetated areas shall be regularly and continually maintained in order to assure adequate growth and root development. Physical erosion control measures (controls other than live vegetation) shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.

Additional Requirements for Specific Watersheds

Truckee River Hydrologic Area and Little Truckee Hydrologic Unit

1. Runoff from impervious surfaces shall be treated or contained onsite. For purposes of this requirement, the volume of water to be contained or treated is the 20-year, one-hour storm, which is equal to 0.7 inches of rain.

2. Except in the event of emergencies, land disturbance associated with project construction is prohibited between October 15th and May 1st of the following year. Exemptions may be granted by the Executive Officer on a case by case basis.

Long Hydrologic Area

Policy: (Contact the Regional Water Quality Control Board for information on permitting requirements delegated to the Town of Mammoth Lakes under a Memorandum of Understanding)

1. For Mammoth Lakes watershed at an elevation above 7,000 feet, drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent transport of the runoff from a 20-year, 1-hour design storm from the project site. A 20-year, 1-hour design storm for the Mammoth Lakes area is equal to 1.0 inch of rainfall.

ATTACHMENT "H"

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the waste discharge requirements;

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The owner(s) of, and discharger upon, property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the waste discharge requirements shall be reported to the Regional Board. Notification of applicable waste discharge requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a discharger becomes aware that any information submitted to the Regional Board is incorrect, the discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the waste discharge requirements, and other information requested by the Regional Board, must be signed by a duly authorized representative of the discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1000) for each day of violation.

f. If the discharger becomes aware that their waste discharge requirements are no longer needed (because the project will not be built or the discharge will cease) the discharger shall notify the Regional Board in writing and request that their waste discharge requirements be rescinded.

3. Right to Revise Waste Discharge Requirements

The Board reserves the privilege of changing all or any portion of the waste discharge requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the waste discharge requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the discharger, when necessary to achieve compliance with the conditions of the waste discharge requirements.

7. Waste Discharge Requirement Actions

The waste discharge requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for waste discharge requirement

modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

8. Property Rights

The waste discharge requirements do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the waste discharge requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the waste discharge requirements shall kept and maintained by the discharger and be available at all times to operating personnel.

11. Severability

Provisions of the waste discharge requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6T-2003-0004
GENERAL WASTE DISCHARGE REQUIREMENTS

FOR

SMALL CONSTRUCTION PROJECTS, INCLUDING UTILITY, PUBLIC WORKS, AND MINOR STREAMBED/LAKEBED ALTERATION PROJECTS
LAHONTAN REGION
EXCLUDING THE LAKE TAHOE HYDROLOGIC UNIT

A. An inspection of the construction site shall be made daily during active construction and monthly during long periods of inactivity (e.g. winter), by the Discharger, resident engineer, superintendent, general contractor, or equivalent. The purpose of the inspection is to discover potential water quality problems at the construction site so that the Discharger can implement corrective measures. The following items should be inspected at the site, as applicable:

1. Damaged containment dikes or erosion fencing
2. Unauthorized access by vehicles and/or sediment tracking off the site
3. Boundary fence damage or removal
4. Disturbed areas with no erosion control protection
5. Evidence of any sediment leakage through erosion control fencing or containment dikes
6. Soil piles unprotected or located in drainage ways
7. Spilled chemicals, paints, fuels, oils, sealants, etc.
8. Upstream runoff diversion structures in place and operational
9. Any signs of downstream erosion from runoff discharges
10. Sediment accumulation within onsite storm water drainage facilities

B. Following completion of project construction, the Discharger shall submit a notice of completion and request for revocation of coverage under the permit. The notice of completion should include the following information:

1. Details on any modification from the construction plans to the proposed stormwater collection, treatment, or disposal facilities.

2. Details on any changes to the amount of impervious coverage for this project.

3. Any significant problems which occurred during project construction and remedial measures taken.

4. Statement that onsite stabilization/revegetation measures have been completed.

5. Certification that project is in compliance with the requirements of the General Permit.

The final report shall contain the name of the project and shall be signed and dated by the property owner or his legal representative. The report shall be submitted to the Regional Board office in South Lake Tahoe.

Ordered by _____ Date: Jan 8, 2003
HAROLD J. SINGER
EXECUTIVE OFFICER

BA/cgT: Small Construction M&R

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought,
Help save water!

To : **Ms. Justine Niu**
Office Chief (Acting)
Design M

Attention: Ike Maatubang

Date : **June 25, 2015**

File No: **08-SBd-40- PM 0.0/R25.0**
Re-grade Median
EA 08-0R120
PN 0812000026

From: **DEPARTMENT OF TRANSPORTATION**
Bruce W. Kean, District 8 Materials Engineer

Subject: **Materials Recommendation**

This Materials Recommendation was prepared per your request dated April 21, 2015. Information contained herein was based on an analysis of historical data for other past projects near the project limits, the documentation that accompanied your request and followed the requirements for Materials Report and pavement design specified in Topic 111 and Topic 114 series of the Caltrans Highway Design Manual (HDM) Sixth Edition.

1.0 GENERAL

1.1 Proposed Improvements

It is proposed to re-grade the median of Interstate 40 (I-40), from I-15 (SBd-40 PM 0.0) to PM R 25.0, 1.4 miles east of Fort Cady Road. Drainage improvements/modifications and preserving and improving CHP cross-overs are also included in this project.

1.2 Existing Facilities

Interstate 40 (I-40) is a major east-west route in the Interstate Highway System. In District 8, it starts out at the junction with I-15 in Barstow and heads east across the Mojave Desert in San Bernardino County past the Clipper Mountains to Needles, before it crosses into Arizona east of Kingman.

Within the limits of this project, I-40 is a 4 lane freeway with two lanes in each direction. All lanes, shoulders and ramps are AC pavement, with rumble strips on both shoulders in both directions. Lanes are 12 feet wide, outside shoulders are 10 feet wide and inside shoulders are paved to between two and 4 feet wide with some additional shoulder backing. The National Trails Hwy exits at Newberry Springs and Ft. Cady Rd. off ramps have concrete ramp termini.
There are 51 structures including 34 drainage structures (wash or ditch) at 19 locations and 17 roadway over/undercrossings structures at 11 locations.

The unpaved median varies in width from 65 to 100 feet. Some slopes within the clear recovery zone are between 2:1 and 6:1. These areas will be re-graded to 10:1 or flatter to improve safety for drivers who run off the road in the median.

1.3 Climate

On the Statewide Climate Region Map (HDM Figure 615.1), this project is located in the Desert Climate Region.

Weather data from Daggett FAA Airport #042257 was surveyed. The period of record was 1948 to 2012. The mean annual rainfall total was 3.8 inches with the highest precipitation occurring July through September and December through February. Snow occasionally falls between November and February. The daily precipitation record was 2.3 inches (October 1976.) Temperatures vary between day and night and from winter to summer, with an annual mean temperature of 81.6^0 F (27.5^0 C). The lowest recorded temperature was 5.0^0 F (-15.0^0 C) on December 25, 1985 and the recorded high was 118^0 F (47.7^0 C) on June 30, 1994. The prevailing wind is from the west and averages 8 mph, with gusts up to 30 mph. General Climate Summaries were obtained from the Western Regional Climate Center website.

1.4 Geology

The elevation within the project limits is predominantly level, sloping gently from 2200 ft. above sea level at I-15 to 1790 ft. east of Fort Cady Rd.
According to the US Department of Agriculture Web Soil Survey, the foot print of I-40 within the project limits is composed of well-drained soils on alluviums derived from granite sources with varying composition of sand and loam. The predominant types of soil are 50% Cajon Sand (varying slopes), 16% Halloran Sandy Loam and 4.5% Rosamond Loam Strongly Saline-Alkali (especially between National Trails Highway UC and Newberry Rd. OC) and 4% Nebona-Cuddeback Complex (2-9% slopes.)

United States Geological Survey, 2010 Fault Activity Map was reviewed for active faults within the project limits. Nearest the I-15 there is the Harper Lake Fault, just north of Barstow which runs south-east toward Daggett. This fault is dated to the Late Quaternary period and appears to remain on the north side of I-40. In the Newberry Springs area, there is the Calico Fault, which does cross the I-40, once at Newberry Rd. OC with a Holocene Age displacement and again just east with a displacement in historic times, an earthquake in 1992. This section is considered active.
The Department of Water Resources Water Data Library was consulted for locations near the I-40 with recent data. Three location with data for 2015 show recent water depth at 106 feet or deeper. The information was obtained at this website: http://www.water.ca.gov/waterdatalibrary/

1.5 Existing Median

According to the as-built plans, the structural section of the base and sub base extends beyond the shoulder for the entire length of this project.

As-Built plans dated July, 1963 for project 08-04930 for the construction of the present alignment of I-40 between PM R 0.5 and R 10.3 shows the base and sub-base extending up to 10 feet beyond the 2' paved inside shoulder, labeled "Future Lane." The width of this prepared subgrade varies

from 3 to 10 feet. While concrete treated base is shown beneath the paved traveled way, only 0.33' Aggregate Base and 0.67' Aggregate Subbase is found beyond the paved shoulder.

As-Built plans dated June, 1966 for project 08-03931 for the construction of the present alignment of I-40 between PM R 8.9 and R 31.0 shows the base and sub base extending up to 10 feet beyond the 2' paved inside shoulder. The width of this prepared subgrade varies from 3 to 10 feet. While concrete treated base is shown beneath the paved traveled way, only 0.50' Aggregate Base and 1.7' Aggregate Subbase is found beyond the paved shoulder.

2.0 EXISTING SUBGRADE

Recent R-value results for this roadway were not found. Since the realignment of I-40, most projects in the area have been overlay, structure related or other items which do not require a soil R-value. Since detour paving may not be required for this project, and there is no paving of the traveled way included in the work, it is reasonable to assume the R-values from the mid- to late 1960s are still accurate.

A Materials Information Report dated October 8, 1963 was found for the realignment of I-40 project EA 08-04930. This project relocated the I-40 freeway to a more southerly location from PM 0.5 to about PM 10.0. The results of 24 samples along the new alignment were all between 77 and 84.

A Materials Information Report dated July 18, 1966 was found for the realignment of I-40, project EA 08-03931. This project relocated an additional portion of the I-40 freeway to a more southerly location from PM 8.9 to about PM 31.0. The results of 20 samples along the new alignment were all between 77 and 82 with the exception of one location with an R-value of 64.

Since the Highway Design Manual Section 613.3 recommends the use of an R-value no higher than 50 for pavement structural section, an R-value of 50 will be used for this report.

3.0 MATERIALS RECOMMENDATIONS

3.1 Detours on Shoulders or Haul Roads

If staging conditions require using the shoulders temporarily to detour mainline traffic, then these shoulders should be overlayed or reconstructed to handle the volume of temporary traffic. In some circumstances, temporary haul roads are desired, to allow trucks bringing fill material to decelerate/accelerate in the median, off the mainline. If the situation requires one roadbed to be closed, traffic can be detoured to the opposite roadbed by constructing temporary cross-overs. The sections below are suitable for all the above uses. The approved Project Report shows 45% truck traffic in current ADT (2015), so the sections below are designed accordingly.

The flexible pavement sections shown below were obtained employing CalFP version 1.1, based on traffic volume information in the approved Project Report for this project and Table 613.3 C of the HDM.

Pavement Structural Sections for Shoulders, Detours or Temporary Pavement

Design period	Outside Shoulder Section
2-Year Detour (TI=12.5)	0.65' HMA Type A 0.80' AB Cl 2
1.5-Year Detour (TI=12.0)	0.60' HMA Type A 0.80' AB Class 2
1-Year Detour (TI=11.5)	0.60' HMA Type A 0.70' AB Cl 2
6 -Month Detour (TI=10.5)	0.55' HMA Type A 0.65' AB Class 2

3.2 Shoulder Backing

Please eliminate any shoulder drop off by constructing shoulder backing at the edge of pavement. This should include the outside shoulders as well as the median. Please see the Standard Specifications Section 19-9 for more information.

3.3 Culvert Corrosion

Improvement or modification of drainage is included in this project. Culverts and drainage structures at washes and ditches will be extended. As-built plans show Reinforced Concrete Pipe (RCP) Reinforced Concrete Box (RCB) and Corrugated Metal Pipe (CMP) were constructed in 1963 and 1966 within the project limits, which brings them to the end of their 50 year design life. A corrosion investigation has been performed by District 8 Maintenance forces. Several culverts need clearing of vegetation or rubbish. If pipe is found to be in poor condition it may need to be repaired or replaced rather than extended.

Please provide a list of culvert locations, so that soil samples for corrosion testing can be taken to determine pipe materials that will perform best in the field. Alternativelty, culverts can be extended using the same gauge as the existing culvert.

4.0 MATERIALS SPECIFICATIONS

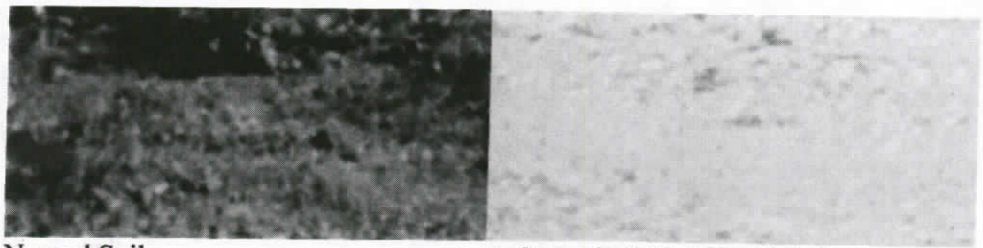
4.1 Earthwork

Please note, due to the ongoing drought conditions, projects have recently been advised to use reduced or no water during compaction activity. It is uncertain whether this condition will persist. Please consult Engineering Services for more information.

Clearing and grubbing is recommended as per section 16 of the Standard Specifications, to remove vegetation, topsoil, and any artificial fills or debris, and to prepare the site for the proposed work.

Any imported or local borrow required should conform to requirements described in Section 19-7 of the 2010 Caltrans Standard Specifications. The minimum R-value for the imported borrow material placed within 4 feet of the grading plane must be 40 as specified in Topic 614.6(2) of the HDM. This minimum R-value should be specified in the corresponding SSP, and also shown in the project plans.

Fill materials from within the project limits should be satisfactory for use on the project with the exception of the soil in the vicinity of Newberry Springs, where it is strongly saline-alkali loam or clay. This material is unsatisfactory for subgrade, and is readily identified by its very pale surface color.



Normal Soil Strongly Saline-Alkali Soil

Relative compaction of 95 percent shall be obtained for a minimum depth of 2.5 feet below the finished grade for the width of the traveled way plus 3 feet on each side, according to Standard Specifications Section 19, "Earthwork". Reference on cuts and excavations should be obtained from the Geotechnical Design Report for this project. Also, please refer to HDM Section 304 "Side Slopes" which recommends a 1:4 (V:H) slope.

4.2 Flexible Pavement

- Aggregate for any permanent flexible pavement should comply with 1-inch aggregate gradation. Aggregate shall be treated with lime slurry, per Pavement Design and Rehabilitation Committee Memo dated June 1, 2001. Asphalt Concrete shall be HMA Type A. Layer thicknesses should be between 0.25' and 0.45'. HMA Type A should conform to Standard Special Provision 39-2 and Non-Standard Special Provision 39-2.02. Lime Slurry will conform to Standard Special Provision 39-1.02.
- Asphalt Binder for HMA Type A should be PG 64-28 M.
- Asphalt Binder for RHMA Type G should be PG 64-16.
- Aggregate Base (AB) shall be Class 2 conforming to Section 26 of the 2010 Standard Specifications.
- Prime Coat shall be applied to base material prior to placing hot mix asphalt concrete. If the quantity required exceeds one ton, it shall be included as a pay item in the engineer's estimate. Prime Coat shall conform to Standard Special Provision 39-1.03 C (3).
- Tack Coat shall be applied to the existing AC surface and between successive layers of HMA.
- If Rumble Strips are included in this project, they are to be ground into the pavement surface per Standard Plan A40B.

5.0 REFERENCE

- Original Preliminary Materials Report for project EA 08-0K120 for proposed rehabilitation of I-15, dated May 14, 2015.
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- Materials Information Report dated July 18, 1966 for I-40 realignment project EA 08-03931.
- District 8 Maintenance Culvert Assessment Report, I-40 PM 0.0-25.0.
- Highway Design Manual – Sixth Edition 2010, California Department of Transportation.
- CalFP Version 1.1, a computer program for HMA pavement design.
- As-built plans.

- 1971 United States Department of Agriculture (USDA) "Soil Survey of Western Riverside County, California" and USDA Natural Resources Conservation Service Web Soil Survey, location: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
- California Department of Water Resources, Water Data Library: http://www.water.ca.gov/waterdatalibrary/
- Western Regional Climate Center, Desert Research Institute. Website location: http://www.wrcc.dri.edu and http://www.raws.dri.edu/wraws/scaF.html
- USGS Geologic Hazards Science Center, Fault Activity Map http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html
- Ground Penetrating Radar (iGPR) tool, link to data: http://www.ucprc.ucdavis.edu/iGPR/

If you have any questions, you may contact Susan Hess of my staff at (909) 806-3977 or myself at (909) 888-2029.

Attachments
BWK:sh

Caltrans

Information Brochure

Protection
Of the
DESERT TORTOISE
(Gopherus agassizii)
During
LIMITED SCOPE PROJECTS

WEG/TortoiseBrochure (Limited Scope Projects)

THE

DESERT TORTOISE

(A THREATENED SPECIES)

"IS PROTECTED BY LAW"

**ANY UNAUTHORIZED PERSON
WHO COLLECTS, HANDLES
OR DELIBERATELY MOLESTS A
TORTOISE
CAN
BE
PROSECUTED**

VIOLATIONS CAN RESULT IN

1) FINES UP TO $50,000

AND/OR

2) IMPRISONMENT UP TO 1 YEAR

APPLICABLE LAWS INCLUDE:

The Federal Endangered Species Act of 1973
(16 U.S.C. 1531-1543)

and

The California Endangered Species Act

THIS BROCHURE IS INTENDED TO PROVIDE YOU WITH INFORMATION AND GUIDANCE TO AVOID VIOLATION OF THE ENDANGERED SPECIES ACTS

RESOURCE AGENCY FORMAL CONSULTATION

Limited scope projects normally have a low risk of encountering or harming a tortoise and no "TAKE" is anticipated. Therefore, Formal Consultation between Caltrans and the U.S. Fish and Wildlife Service under Section 7 of the federal Endangered Species Act has not been undertaken for this project to authorize "TAKE" during the conduct of this project.

"TAKE" is defined as:

Harassing, Harming, Pursuing, Hunting, Shooting, Wounding, Killing, Capturing, Collecting, or attempting to engage in any such conduct. Engaging in any of these activities can place you in violation of the law.

Tortoises found within Caltrans Right of Way are not exempt from this protection.

WHAT TO DO AND NOT DO.

CHECK UNDER MOTORIZED EQUIPMENT & VEHICLES – that have been parked over night or stationary for some length of time before moving the vehicle.

CHECK AROUND MATERIAL STACKS & UNITS - that have been stored in the open before moving them.

VISUALLY CHECK AROUND THE WORK AREA – for the presence of live tortoise that may have wandered into the disturbance zone. It is not intended to divert your attention from your work tasks and create a hazard for your or others on the job, but it is good practice to utilize a few seconds and visually scan the area around you when it is safe to do so.

IF A TORTOISE IS PRESENT – stop all work activities that could harm the tortoise and contact the Resident Engineer or designated contact person, or on-site biologist to have the tortoise removed to safety. Contact your supervisor (contractor's) for direction on proceeding with work activities.

DO NOT HANDLE OR MOVE A TORTOISE – yourself. Only a qualified biologist is authorized to do so.

DO NOT RETURN A TORTOISE – to the wild that has been held in captivity. They may have been infected with a pneumonia type virus that is the cause of pneumonia infections in humans. The tortoise is highly susceptible to this virus which attacks the lungs and the tortoise has no means to cure itself. More tortoises die from pneumonia than any other cause. Symptoms of infection include runny or bubbly nose, loss of appetite and gasping for breath. Returning them to the wild increases the potential for exposure of the virus into an otherwise healthy tortoise population.

HELP MAKE THE LITTER CONTROL REQUIREMENTS ON THIS PROJECT – work by using the closeable trash containers to dispose of left over food scraps, wrappers, cans bottles, etc., or secure and remove them from the project with you when you leave the job site. The purpose of litter control is to avoid attracting Ravens which are highly efficient hunters and killers of baby tortoises.

DO NOT NEEDLESSLY VENTURE OUT OF THE DESIGNATED WORK AREA – into adjoining habitat areas unless directed to do so after the area has been approved for such activity. Doing so, disturbs habitat which is also protected under the Endangered Species Acts.

ASK YOUR SUPERVISOR - if any other environmentally related special provisions have been placed in the contract exist that you should know about. We do recommend that environmental protection measures be reiterated and discussed at on-site "tail gate" meetings with safety and other project related issues brought up by your supervisor(s).

WE THANK YOU FOR YOUR COOPERATION AND CARE

IN KEEPING WITH AMERICA'S DESIRE TO PROTECT THE ENVIRONMENT

WEG/Tortoise Brochure (Ltd Scope)

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought,
Help save water!

To : **Ms. Justine Niu**
Office Chief (Acting)
Design M

Attention: Ike Maatubang

Date : **June 25, 2015**

File No: **08-SBd-40- PM 0.0/R25.0**
Re-grade Median
EA 08-0R120
PN 0812000026

From: **DEPARTMENT OF TRANSPORTATION**
Bruce W. Kean, District 8 Materials Engineer

Subject: **Materials Recommendation**

This Materials Recommendation was prepared per your request dated April 21, 2015. Information contained herein was based on an analysis of historical data for other past projects near the project limits, the documentation that accompanied your request and followed the requirements for Materials Report and pavement design specified in Topic 111 and Topic 114 series of the Caltrans Highway Design Manual (HDM) Sixth Edition.

1.0 GENERAL

1.1 Proposed Improvements

It is proposed to re-grade the median of Interstate 40 (I-40), from I-15 (SBd-40 PM 0.0) to PM R 25.0, 1.4 miles east of Fort Cady Road. Drainage improvements/modifications and preserving and improving CHP cross-overs are also included in this project.

1.2 Existing Facilities

Interstate 40 (I-40) is a major east-west route in the Interstate Highway System. In District 8, it starts out at the junction with I-15 in Barstow and heads east across the Mojave Desert in San Bernardino County past the Clipper Mountains to Needles, before it crosses into Arizona east of Kingman.

Within the limits of this project, I-40 is a 4 lane freeway with two lanes in each direction. All lanes, shoulders and ramps are AC pavement, with rumble strips on both shoulders in both directions. Lanes are 12 feet wide, outside shoulders are 10 feet wide and inside shoulders are paved to between two and 4 feet wide with some additional shoulder backing. The National Trails Hwy exits at Newberry Springs and Ft. Cady Rd. off ramps have concrete ramp termini.
There are 51 structures including 34 drainage structures (wash or ditch) at 19 locations and 17 roadway over/undercrossings structures at 11 locations.

The unpaved median varies in width from 65 to 100 feet. Some slopes within the clear recovery zone are between 2:1 and 6:1. These areas will be re-graded to 10:1 or flatter to improve safety for drivers who run off the road in the median.

1.3 Climate

On the Statewide Climate Region Map (HDM Figure 615.1), this project is located in the Desert Climate Region.

Weather data from Daggett FAA Airport #042257 was surveyed. The period of record was 1948 to 2012. The mean annual rainfall total was 3.8 inches with the highest precipitation occurring July through September and December through February. Snow occasionally falls between November and February. The daily precipitation record was 2.3 inches (October 1976.) Temperatures vary between day and night and from winter to summer, with an annual mean temperature of 81.6^0 F (27.5^0 C). The lowest recorded temperature was 5.0^0 F (-15.0^0 C) on December 25, 1985 and the recorded high was 118^0 F (47.7^0 C) on June 30, 1994. The prevailing wind is from the west and averages 8 mph, with gusts up to 30 mph. General Climate Summaries were obtained from the Western Regional Climate Center website.

1.4 Geology

The elevation within the project limits is predominantly level, sloping gently from 2200 ft. above sea level at I-15 to 1790 ft. east of Fort Cady Rd.
According to the US Department of Agriculture Web Soil Survey, the foot print of I-40 within the project limits is composed of well-drained soils on alluviums derived from granite sources with varying composition of sand and loam. The predominant types of soil are 50% Cajon Sand (varying slopes), 16% Halloran Sandy Loam and 4.5% Rosamond Loam Strongly Saline-Alkali (especially between National Trails Highway UC and Newberry Rd. OC) and 4% Nebona-Cuddeback Complex (2-9% slopes.)

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1.5 Existing Median

According to the as-built plans, the structural section of the base and sub base extends beyond the shoulder for the entire length of this project.

As-Built plans dated July, 1963 for project 08-04930 for the construction of the present alignment of I-40 between PM R 0.5 and R 10.3 shows the base and sub-base extending up to 10 feet beyond the 2' paved inside shoulder, labeled "Future Lane." The width of this prepared subgrade varies

from 3 to 10 feet. While concrete treated base is shown beneath the paved traveled way, only 0.33' Aggregate Base and 0.67' Aggregate Subbase is found beyond the paved shoulder.

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2.0 EXISTING SUBGRADE

Recent R-value results for this roadway were not found. Since the realignment of I-40, most projects in the area have been overlay, structure related or other items which do not require a soil R-value. Since detour paving may not be required for this project, and there is no paving of the traveled way included in the work, it is reasonable to assume the R-values from the mid- to late 1960s are still accurate.

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Since the Highway Design Manual Section 613.3 recommends the use of an R-value no higher than 50 for pavement structural section, an R-value of 50 will be used for this report.

3.0 MATERIALS RECOMMENDATIONS

3.1 Detours on Shoulders or Haul Roads

If staging conditions require using the shoulders temporarily to detour mainline traffic, then these shoulders should be overlayed or reconstructed to handle the volume of temporary traffic. In some circumstances, temporary haul roads are desired, to allow trucks bringing fill material to decelerate/accelerate in the median, off the mainline. If the situation requires one roadbed to be closed, traffic can be detoured to the opposite roadbed by constructing temporary cross-overs. The sections below are suitable for all the above uses. The approved Project Report shows 45% truck traffic in current ADT (2015), so the sections below are designed accordingly.

The flexible pavement sections shown below were obtained employing CalFP version 1.1, based on traffic volume information in the approved Project Report for this project and Table 613.3 C of the HDM.

Pavement Structural Sections for Shoulders, Detours or Temporary Pavement

Design period	Outside Shoulder Section
2-Year Detour (TI=12.5)	0.65' HMA Type A 0.80' AB Cl 2
1.5-Year Detour (TI=12.0)	0.60' HMA Type A 0.80' AB Class 2
1-Year Detour (TI=11.5)	0.60' HMA Type A 0.70' AB Cl 2
6 -Month Detour (TI=10.5)	0.55' HMA Type A 0.65' AB Class 2

3.2 Shoulder Backing

Please eliminate any shoulder drop off by constructing shoulder backing at the edge of pavement. This should include the outside shoulders as well as the median. Please see the Standard Specifications Section 19-9 for more information.

3.3 Culvert Corrosion

Improvement or modification of drainage is included in this project. Culverts and drainage structures at washes and ditches will be extended. As-built plans show Reinforced Concrete Pipe (RCP) Reinforced Concrete Box (RCB) and Corrugated Metal Pipe (CMP) were constructed in 1963 and 1966 within the project limits, which brings them to the end of their 50 year design life. A corrosion investigation has been performed by District 8 Maintenance forces. Several culverts need clearing of vegetation or rubbish. If pipe is found to be in poor condition it may need to be repaired or replaced rather than extended.

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4.1 Earthwork

Please note, due to the ongoing drought conditions, projects have recently been advised to use reduced or no water during compaction activity. It is uncertain whether this condition will persist. Please consult Engineering Services for more information.

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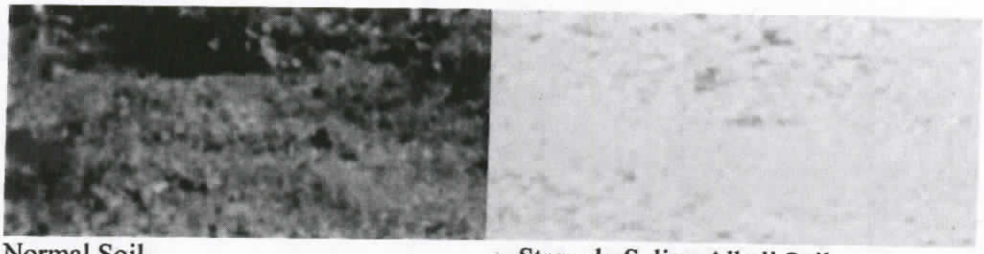
Fill materials from within the project limits should be satisfactory for use on the project with the exception of the soil in the vicinity of Newberry Springs, where it is strongly saline-alkali loam or clay. This material is unsatisfactory for subgrade, and is readily identified by its very pale surface color.



Normal Soil Strongly Saline-Alkali Soil

Relative compaction of 95 percent shall be obtained for a minimum depth of 2.5 feet below the finished grade for the width of the traveled way plus 3 feet on each side, according to Standard Specifications Section 19, "Earthwork". Reference on cuts and excavations should be obtained from the Geotechnical Design Report for this project. Also, please refer to HDM Section 304 "Side Slopes" which recommends a 1:4 (V:H) slope.

4.2 Flexible Pavement

- Aggregate for any permanent flexible pavement should comply with 1-inch aggregate gradation. Aggregate shall be treated with lime slurry, per Pavement Design and Rehabilitation Committee Memo dated June 1, 2001. Asphalt Concrete shall be HMA Type A. Layer thicknesses should be between 0.25' and 0.45'. HMA Type A should conform to Standard Special Provision 39-2 and Non-Standard Special Provision 39-2.02. Lime Slurry will conform to Standard Special Provision 39-1.02.
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If you have any questions, you may contact Susan Hess of my staff at (909) 806-3977 or myself at (909) 888-2029.

Attachments
BWK:sh

Existing Traffic Management System Elements during construction

Responsible Unit	Station No.	County	Post Mile	Route No.	Electrical Element Type	Direction	Location Description
TMS SUPPORT	45	SBD	2.86	RTE 40	CMS	WB	E/O MAIN
TMS SUPPORT	46	SBD	2.86	RTE 40	CMS	EB	E/O MAIN
Traffic Ops		SBd	7.181	RTE 40	Loops		Dagget/Yermo

Post miles are approximate.

TMS: Traffic Management System

Caltrans

Information Brochure

Protection
Of the
DESERT TORTOISE
(Gopherus agassizii)
During
LIMITED SCOPE PROJECTS

WEG/TortoiseBrochure (Limited Scope Projects)

THE

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(A THREATENED SPECIES)

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VIOLATIONS CAN RESULT IN

1) FINES UP TO $50,000

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and

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CHECK AROUND MATERIAL STACKS & UNITS - that have been stored in the open before moving them.

VISUALLY CHECK AROUND THE WORK AREA – for the presence of live tortoise that may have wandered into the disturbance zone. It is not intended to divert your attention from your work tasks and create a hazard for your or others on the job, but it is good practice to utilize a few seconds and visually scan the area around you when it is safe to do so.

IF A TORTOISE IS PRESENT – stop all work activities that could harm the tortoise and contact the Resident Engineer or designated contact person, or on-site biologist to have the tortoise removed to safety. Contact your supervisor (contractor's) for direction on proceeding with work activities.

DO NOT HANDLE OR MOVE A TORTOISE – yourself. Only a qualified biologist is authorized to do so.

DO NOT RETURN A TORTOISE – to the wild that has been held in captivity. They may have been infected with a pneumonia type virus that is the cause of pneumonia infections in humans. The tortoise is highly susceptible to this virus which attacks the lungs and the tortoise has no means to cure itself. More tortoises die from pneumonia than any other cause. Symptoms of infection include runny or bubbly nose, loss of appetite and gasping for breath. Returning them to the wild increases the potential for exposure of the virus into an otherwise healthy tortoise population.

HELP MAKE THE LITTER CONTROL REQUIREMENTS ON THIS PROJECT – work by using the closeable trash containers to dispose of left over food scraps, wrappers, cans bottles, etc., or secure and remove them from the project with you when you leave the job site. The purpose of litter control is to avoid attracting Ravens which are highly efficient hunters and killers of baby tortoises.

DO NOT NEEDLESSLY VENTURE OUT OF THE DESIGNATED WORK AREA – into adjoining habitat areas unless directed to do so after the area has been approved for such activity. Doing so, disturbs habitat which is also protected under the Endangered Species Acts.

ASK YOUR SUPERVISOR - if any other environmentally related special provisions have been placed in the contract exist that you should know about. We do recommend that environmental protection measures be reiterated and discussed at on-site "tail gate" meetings with safety and other project related issues brought up by your supervisor(s).

WE THANK YOU FOR YOUR COOPERATION AND CARE

IN KEEPING WITH AMERICA'S DESIRE TO PROTECT THE ENVIRONMENT

WEG/Tortoise Brochure (Ltd Scope)