

# Airport Boulevard Bridge Replacement Project NES



Discussion of a Biological Assessment, Aquatic Resources Delineation and Coachella Valley Multiple Species Habitat Conservation Plan Analysis

Community of Thermal and City of Coachella

Riverside County, California

District 8 – RIV – Airport Boulevard - Approximately 0.10 mile southwest of Postmile RIV R16.861 from California State Route 86

BRLS-5956(231)

**November 2022**



# Natural Environment Study

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District 8 – RIV – Airport Blvd - Approximately 0.10 mile southwest of Postmile RIV  
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**November 2022**

STATE OF CALIFORNIA

Department of Transportation

County of Riverside Transportation Department

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## Acronyms List

AADT	Annual Average Daily Traffic
ARD	Aquatic Resources Delineation
Bargas	Bargas Environmental Consulting, LLC
BIOS	Biogeographic Information and Observation System
BRE	Biological Resources Evaluation
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CVMSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
CVSC	Coachella Valley Stormwater Channel
CVWD	Coachella Valley Water District
CWA	Clean Water Act
DED	Draft Environmental Document
DOT	Department of Transportation
EBL	Eligible Bridge List
ED	Environmental Document
EO	Executive Order
ESA	Environmentally Sensitive Area
FED	Final Environmental Document
FESA	Federal Endangered Species Act (referred to as ESA in USFWS/NOAA Fisheries literature)
FGC	Fish and Game Code
FHWA	Federal Highway Administration
HBP	Highway Bridge Program
HCP	Habitat Conservation Plan
IPaC	Information for Planning and Conservation
LAA	Likely to Adversely Affect
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NLAA	Not Likely to Adversely Affect
NOAA Fisheries	NOAA's National Marine Fisheries Service (sometimes abbreviated as NMFS)
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NWP	Nationwide Permit
PDT	Project Development Team
PPA/APE	Project Planning Area/Area of Potential Effects
CRTD	County of Riverside Transportation Department

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RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SCAG	Southern California Association of Governments
SB	Senate Bill
SER	Standard Environmental Reference
Services	U. S. Fish and Wildlife Service and NOAA's National Marine Fisheries Service
SM&I	Structure Maintenance and Investigations
SR	Sufficiency Rating
SSC	Species of Special Concern
STEVE	Standard Tracking and Exchange Vehicle for Environmental System
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USDA	U.S. Department of Agriculture
USACE	U. S. Army Corps of Engineers
USFWS	U. S. Fish and Wildlife Service
USGS	U. S. Geological Survey

## **Summary**

The County of Riverside (County) in cooperation with the California Department of Transportation (Caltrans) and City of Coachella (City) proposes to replace the existing Airport Boulevard Bridge over the Whitewater River (State Br. No. 56C-0020) (Project). The Airport Boulevard Bridge is located in the community of Thermal, in the County of Riverside, California.

This Natural Environment Study (NES) report contains the findings of the Aquatic Resources Delineation (ARD) and Biological Resources Evaluation (BRE), including consistency analysis with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) for the Project. The findings of the BRE are fully contained within the body of this NES report and the BRE is not a separate document. The purpose of the proposed Project is to update the existing facility to meet seismic, scour, flood, and design standards.

The need for the Project is outlined below:

- The existing bridge has reached its useful design life. The bridge has inadequate shoulder width, lane width and is found to be structurally inadequate to meet the basic required strength and resistance.
- The existing Airport Boulevard Bridge over Whitewater River needs to be replaced with a new bridge that will meet the current seismic, service load design standards, and provide an adequate facility for emergency response and general access across the Whitewater River.

Four site visits were conducted by biologists. The ARD was conducted on 01 July and 08 July 2021. The purpose of the ARD was to identify whether aquatic resources occur within the proposed Project area and to provide the U.S. Army Corps of Engineers (USACE) with sufficient information to determine if these identified aquatic resources are jurisdictional wetlands or other waters of the United States, as defined by the USACE under Section 404 of the Clean Water Act (CWA). The BRE was conducted to determine whether any special status plant or wildlife species, or their habitat, or sensitive habitats, occur within the Biological Study Area (BSA) that could pose a constraint to implementation of the proposed Project. The BSA identified for the Project includes the Project site and a 500-foot buffer around the Project footprint.

The proposed Project was further analyzed for its consistency with the CVMSHCP within the NES, a separate consistency report was not prepared. The Project is identified as a “Covered Activity” under the CVMSHCP. Covered Activities are not likely to result in “Take” of “Covered Species” as long as applicable avoidance, minimization, and mitigation measures described in the CVMSHCP are implemented. “Covered Activities” are certain activities carried out or conducted by Permittees, Participating Special Entities, Third Parties Granted Take Authorization, and others within the CVMSHCP Plan Area.

The proposed Project is consistent with the biological resource goals and objectives of the CVMSHCP.

Vegetative cover within the BSA has been removed and replaced with concrete-lining within the segment of the Whitewater River by a separate Coachella Valley Water District (CVWD) project referenced in this report as the CVWD Stormwater Channel Improvement Project. The field survey work conducted for the Project occurred prior to the CVWD Stormwater Channel Improvement Project starting and the area has now been impacted. At the time this report was finalized four plant communities/land uses were observed within the boundaries of the BSA during the summer 2021 field surveys: **Iodine Bush Scrub** (*Allenrolfea occidentalis* Shrubland Alliance), **Common and Giant Reed Marsh** (*Phragmites australis* – *Arundo donax* Herbaceous Semi-Natural Alliance), and **Salt Grass Flats** (*Distichlis spicata* Herbaceous Alliance). Adjacent land uses included a mixture of paved roads, commercial development, residential neighborhoods, and agricultural areas categorized as **Disturbed Areas**. Plant communities/land uses are described further in Chapter 4.

A desktop analysis was conducted using the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) QuickView Tool in the Biogeographic Information and Observation System (BIOS), CVMSHCP, the California Native Plant Society (CNPS) Online Rare Plants Inventory Database, and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) database, as well which queries federally listed species and critical habitats. A total of one (1) special status plant species and fourteen (14) special status animal species identified during the records search were deemed potentially occurring within the BSA. No sensitive natural communities were identified during the desktop analysis.

No special status plant or animal species were observed within the BSA during the BRE field analysis and are presumed to be absent based on habitat requirements for specific species availability, and quality of habitats needed by special status plant or animal species and known distributions.

Pursuant to the Migratory Bird Treaty Act (MBTA) of 1918, and the California Fish and Game Code (FGC), the removal of any trees, shrubs, or any other potential nesting habitat shall be conducted outside of the nesting bird breeding season. Construction activities shall not be scheduled to occur during special status bird breeding season identified as February 1st to August 31st, within 500 feet of all suitable habitat unless one of the following exceptions apply:

1. Completed protocol-level surveys conducted by a qualified biologist during the year of implementation determined the site to not be occupied.
2. Noise levels resulting from the Project's construction activities do not exceed the existing ambient noise level.

3. If this work window is not feasible, then pre-construction surveys for special status birds and migratory bird nests within a specified distance of the proposed Project impact area will be conducted by a qualified biologist. If an active nest is found during the pre-construction nesting bird surveys, then consultation with the USFWS and/or CDFW may be initiated.

If the Project activities cannot occur outside of the nesting bird breeding season, a pre-construction nesting bird clearance survey shall be conducted for avian species, including prairie falcon, black-tailed gnatcatcher, vermilion flycatcher, Crissal thrasher, Costa's hummingbird, least Bell's vireo, southwestern willow flycatcher, and Yuma Ridgway's rail, no more than three days prior to ground disturbance or vegetation removal activities to determine the presence or absence of nesting birds. The surveys shall be conducted by a qualified biologist at the appropriate time(s) of day. If an active avian nest is located, the bird shall be identified to species and a "no construction" buffer (up to 500 feet) shall be established in accordance with the guidelines provided in the CVMSHCP for the sensitivity of the species. The "no-construction" buffer shall remain in place until nesting has ceased or the young have fledged. The qualified biologist shall monitor the nest to ensure that work does not impact nesting birds.

Noxious weed species include species listed by the California Department of Food and Agriculture (CDFA) and other exotic pest plants designated by the California Invasive Plant Council (Cal-IPC). Invasive plant species are present within the BSA. Some of the more commonly occurring non-native plants in the BSA include tree tobacco (*Nicotiana glauca*), floating water primrose (*Ludwigia peploides*), Mexican fan palm (*Washingtonia robusta*), pricklyburr (*Datura innoxia*), and Saltcedar (*Tamarix ramosissima* or *chinensis*). None of the observed invasive plant species are listed on the U.S. Department of Agriculture (USDA) Federal Noxious Weed List. Prior to the proposed Project implementation, all construction equipment will be cleaned and inspected before use to minimize the introduction and spread of non-native plant material.

There are three (3) main agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The USACE Regulatory Branch regulates discharge of dredge or fill materials into "waters of the United States" pursuant to Section 404 of the Federal CWA and Section 10 of the Rivers and Harbors Act. Of the state agencies, the CDFW regulates alterations to streambed and bank under California FGC Sections 1600 et seq., and the California Regional Water Quality Control Board (RWQCB) regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Based on the results of the ARD report (Bargas 2022), the Coachella Valley Stormwater Channel (CVSC) further developed as part of the CVWD Stormwater Improvement Project flows to the Salton Sea, a traditional navigable water, and falls under the jurisdiction of the USACE, RWQCB, and CDFW. Therefore, it will be necessary for the Project to obtain the following regulatory approvals prior to construction within jurisdictional areas: 1) USACE CWA Section 404 Permit; 2) RWQCB

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CWA Section 401 Water Quality Certification; and 3) CDFW Section 1602 Streambed Alteration Agreement (SAA).

## Chapter 1: Introduction

The County of Riverside (County) in cooperation with the California Department of Transportation (Caltrans) and City of Coachella (City) proposes to replace the existing Airport Boulevard Bridge over the Whitewater River (State Br. No. 56C-0020). The Project location and biological study area are shown in Figures 1 and 2. The Airport Boulevard Bridge is located in the community of Thermal, in the County of Riverside, California.

### Project History

#### *Purpose and Need*

The purpose of the proposed Project is to update the existing facility to meet seismic, scour, flood, and design standards.

The need for the Project is outlined below:

- The existing bridge has reached its useful design life. The bridge has inadequate shoulder width, lane width and is found to be structurally inadequate to meet the basic required strength and resistance.
- The existing Airport Boulevard Bridge over Whitewater River needs to be replaced with a new bridge that will meet the current seismic, service load design standards, and provide an adequate facility for emergency response and general access across the Whitewater River.

### Project Description

The County of Riverside (County) in cooperation with the California Department of Transportation (Caltrans) and City of Coachella (City) proposes to replace the existing Airport Boulevard Bridge over the Whitewater River (State Br. No. 56C-0020). The Airport Boulevard Bridge is located in the community of Thermal, in the County of Riverside, California.

The proposed bridge work is consistent with the 2012-2035 Regional Transportation Plan (RTP) as published by the Southern California Association of Governments (SCAG). The Project is anticipated to utilize federal funds through the federal Highway Bridge Project (HBP), as such it requires compliance with the National Environmental Policy Act (NEPA). Caltrans is the lead agency under NEPA and the County is the lead agency under the California Environmental Quality Act (CEQA). The City is a responsible agency under CEQA as the bridge is partially owned by the City as it is partially within City limits and City sphere of influence.

The existing Airport Boulevard Bridge is a two-lane road approximately 366 feet long and 34 feet wide with thirteen spans over the Whitewater River. This road along with the bridge is classified as a “collector street” by the County of Riverside. The bridge was originally built in 1951 and sustained damage in the 1969 flood.

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Partial reconstruction of the bridge occurred in 1970, when the bents were retrofitted by placing in-fill walls between the bent columns and pile cap with additional steel piles driven at the two ends of the in-filled wall bents. In 2017 the bridge was rehabilitated to include a 5-foot sidewalk on the south side. Furthermore, this bridge also has scour issues that have exposed a portion of the existing steel-encased piles and is now classified as a “Scour Critical Bridge” as of September 2019 based on Caltrans’ inspection in August 2019.

The bridge is listed in the Federal Eligible Bridge List (EBL) with a Sufficiency Rating (SR) of 60 according to the Bridge Inspection Report prepared by Caltrans Structure Maintenance and Investigations (SM&I). Since the bridge has a SR lower than 80, the bridge is eligible for major rehabilitation in accordance with the Highway Bridge Program (HBP) guidelines.

Additionally, the FEMA Flood Plain Report indicated significant inundation for the Airport Boulevard Bridge in a 100 year flood event. The Coachella Valley Water District (CVWD) has proposed improvements of the channel at the bridge location, including lowering of the riverbed by 5 feet and installing concreting lining from bank to bank underneath the existing bridge. The purpose of the CVWD Stormwater Channel Improvement Project is to restore channel flow conditions to convey the 100-year flood, provide requisite freeboard and to remove the existing threat of flooding during a 100-year storm event to the parcels within the area of benefit. CVWD’s project is currently underway, to counter the impact of lowering the channel, four of the bents/support required temporary retrofit, strengthening of these bents/support is also a part of the CVWD Stormwater Channel Improvement Project.

It has been determined that a seismic structural retrofit would cost approximately \$1 million dollars more than replacement of the bridge, and with the significant hydraulic constraint cited above, the County proposes to replace Airport Boulevard Bridge with a new concrete structure. This Project proposes to replace the existing 2 lane Airport Boulevard Bridge over Whitewater River with a new, wider, 2 lane bridge and reconstruct the connecting approach roadways to meet current Caltrans seismic design codes. The new bridge would be widened to approximately 71 feet and include 6 foot wide sidewalks on both sides of the bridge, 8 foot wide shoulders, a 14 foot wide eastbound and westbound lane, and a 12 foot wide striped median/turn lane. The new bridge would have foundations placed below the potential scour plane. The Project would raise the bridge profile by approximately 2-3 feet in order to maintain a minimum freeboard from the flood water. The reprofiling would extend into approximately 850 feet of approach roadway to the west that will also be reconstructed. See Figure 3 for project features.

The Project may also include minor retaining walls and offsite improvements in order to maintain access to the existing mobile home community on the south side of Airport Boulevard. Roadway improvements also include transition pavement to the existing grade separation structure to the west and improvement of the



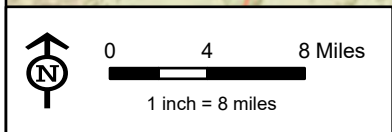
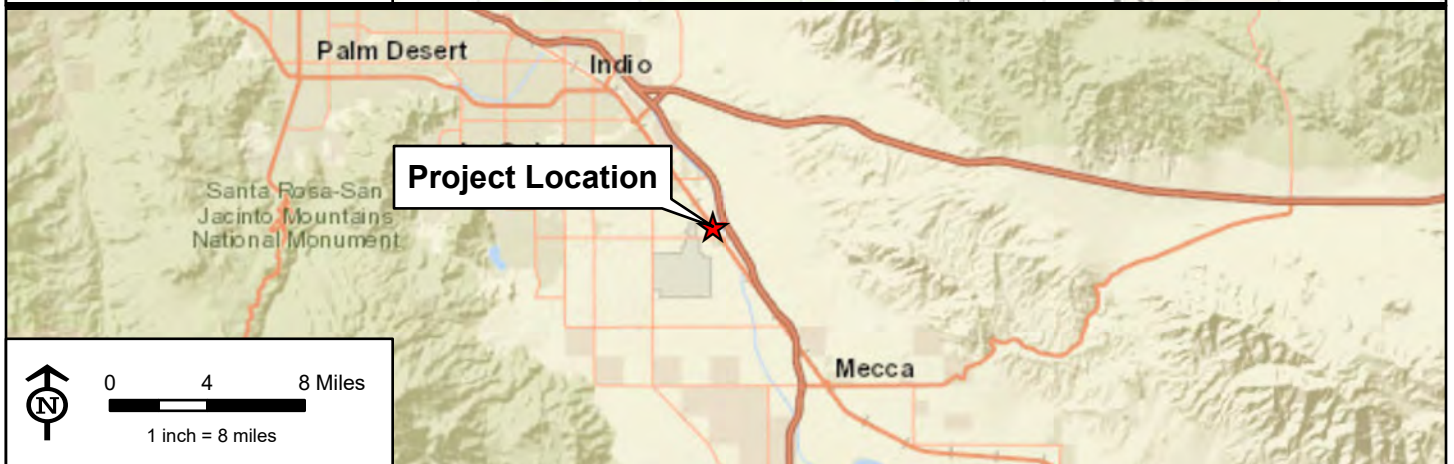
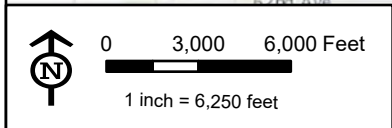
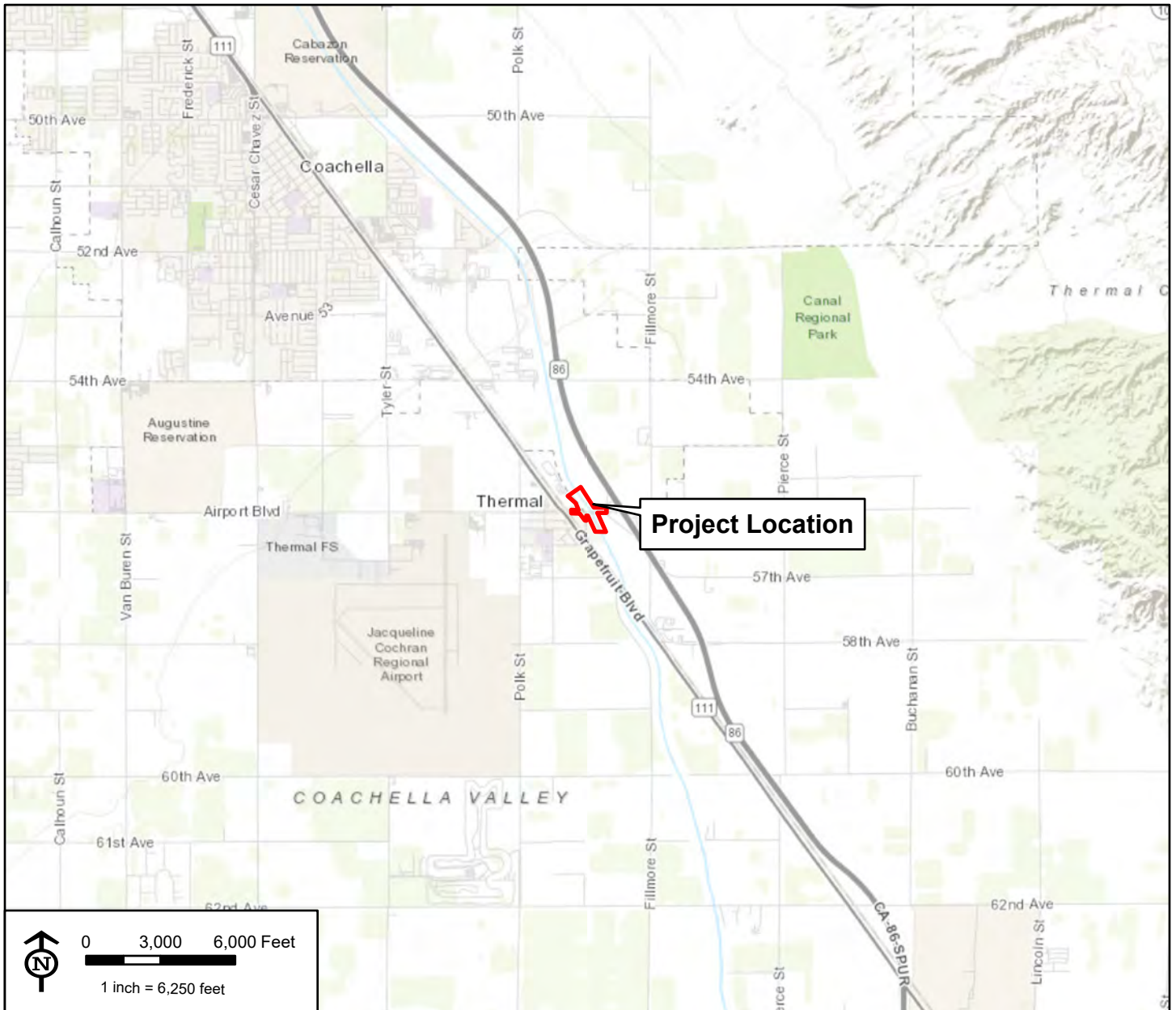
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intersection at Orange Street and Airport Boulevard. The Project will also provide sidewalk improvements on the south side of the new bridge as well as accommodate future connectivity to the Coachella Valley Link Trail, which is anticipated to connect to Airport Boulevard along the unnamed local road in the northwestern quadrant of the Project.

Depending on the Project design, utility relocation may be required. Coordination with the following utilities to determine actions that may need to be taken once Project design is established include: Coachella Valley Water District, Imperial Irrigation, Kinder Morgan Energy Partners, Level 3 Communications/CenturyLink, MCI (Verizon Business), So Cal Gas (Distribution - Palm Desert division), and Utilquest for Frontier.

The new bridge will be constructed in two stages. Stage 1 is to construct the north half of the bridge along the north edge of the existing structure, while the traffic on Airport Boulevard would remain on the existing bridge in each direction, unless necessary to reduce traffic control to one-way traffic to temporarily accommodate construction vehicles. Once Stage 1 is constructed, two lanes of traffic will be shifted to the newly constructed bridge while the existing bridge is demolished in Stage 2. Upon completion of demolition, the remaining south half of the proposed bridge will be constructed and completed once joined to the north half of the bridge with a closure pour.

Sliver takes for right of way acquisition would be required, and the commercial land in the northeast quadrant adjacent to the Project area would potentially be considered as a staging area.



Source: ESRI ArcGIS Online Basemap - World Topographic Map, World Street Map

Public Land Survey System (PLSS):  
 San Bernardino Meridian, Township 6S, Range 8E, Section 15  
 USGS Quad(s): Indio (1977)  
 Watershed: Whitewater River (18100201)  
 Project Location Coordinates: -116.138°W 38.64°N

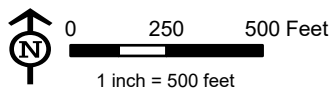


**Figure 1**  
**Project Location**  
*Airport Blvd Bridge Replacement Project*





Source: Bing Maps Hybrid

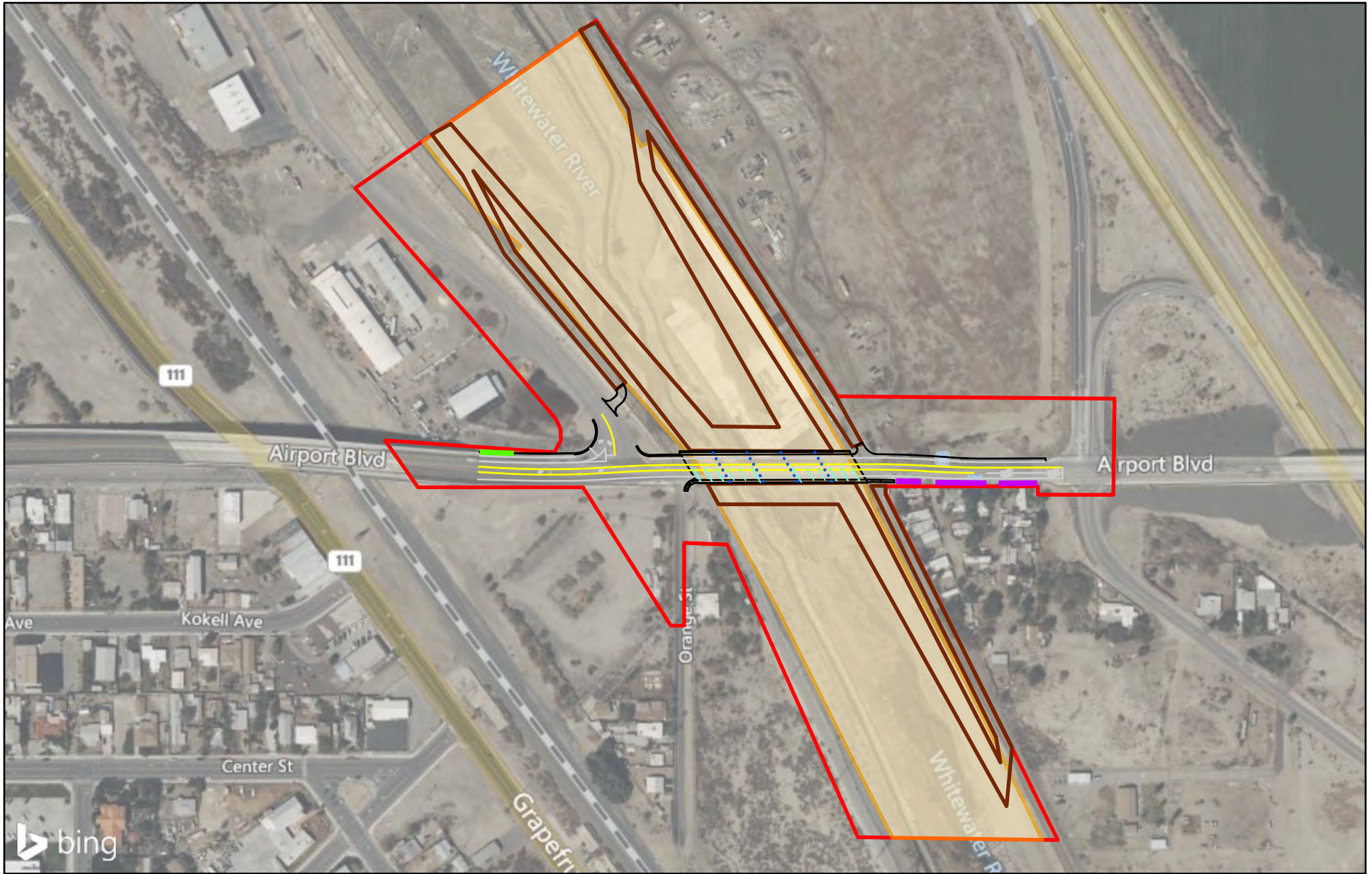


- Project Footprint
- Biological Study Area

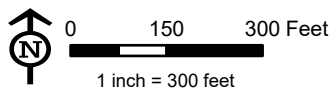
**Figure 2**  
**Biological Study Area and Project Footprint**

*Airport Blvd Bridge  
Replacement Project*





Source: Bing Maps Hybrid



Project Footprint

CVWD Concrete Channel Lining

Access Roads

Metal Beam Guardrail

Median Striping

Lane Striping

Pavement Edges

**Bridge Piers**

Proposed Bridge Piers (0.003 acres)

Removed Bridge Piers (0.02 acres)

**Figure 3  
Project Features**

*Airport Blvd Bridge  
Replacement Project*

## Chapter 2 – Study Methods

An evaluation of biological resources was conducted to determine whether any special status plant or wildlife species, or their habitat, or sensitive habitats, occur in the BSA. Data on special status species and habitats known in the area were obtained from state and federal agencies. Maps and aerial photographs of the BSA and surrounding areas were reviewed. A field survey was conducted to determine the habitats present. The field survey, map review, and a review of the biology of evaluated species and habitats were used to determine the special status species and sensitive habitats that could occur in the BSA. Special status species in this NES are those listed (or candidate or proposed) under the federal or state Endangered Species Acts, under the California Native Plant Protection Act, as a California species of special concern (SSC) or fully protected by the CDFW, or that are assigned a California Rare Plant Rank (CNPS 2021). Special status natural communities in this NES are waters, riparian communities, and any natural community ranked S1, S2, or S3 by CDFW (2021).

### Regulatory Requirements

The purpose of the NES is to document biological studies and perform analyses and evaluations necessary to satisfy the legal requirements of federal, state, and local statutes. Applicable statutes are described below.

#### ***Clean Water Act***

The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 404: Establishes a permit program administered by USACE which regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). USACE has jurisdiction over fill materials in essentially all water bodies, including wetlands. All federal agencies are to avoid impacts to wetlands whenever there is a practicable alternative.

Section 402(p): Establishes a permit under the National Pollution Discharge Elimination System (NPDES) program for discharges of storm water resulting from ground disturbing construction activities such as grading. For ground disturbing construction activities of more than one acre, a NPDES Phase II permit from the RWQCB is required. The preparation of a Stormwater Pollution Prevention Plan (SWPPP) is a requirement of the NPDES Phase II permit.

Section 401: Requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S., must obtain a state certification that the discharge complies with other provisions of the CWA. The State Water Resources Control Board (SWRCB) and RWQCB administer the certification program in California.

The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practical alternative that would have less adverse impacts.

***Rivers and Harbors Act***

The Rivers and Harbors Act requires permits in navigable waters of the U.S. for all structures such as riprap, and activities such as dredging. Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. USACE grants or denies permits based on the effects on navigation. Most activities are covered under this act.

***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act regulatory law is becoming more prominent on projects involving impact to isolated waters of the State (non 404/401 waters). The RWQCB is increasingly requiring Waste Discharge Requirements permits for impacts to waters of the State.

***Migratory Bird Treaty Act***

The Migratory Bird Treaty Act is an agreement with Canada, Mexico, and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code Sections 3503 and 3503.5 (protection of birds' nests) and 3513 (taking Migratory Bird Treaty Act birds) also prohibit the destruction of any nest, egg, or nestling. Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg, or parts thereof listed in this document. The Secretary of the Interior can issue permits for incidental take of migratory bird species. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

***Executive Order 11990 – Protection of Wetlands***

Executive Order 11990 established a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The U.S. Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this directive. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included.

This must be documented in a specific Wetlands Only Practicable Alternative Finding.

An additional requirement is to provide early public involvement in projects affecting wetlands. Federal Highway Administration (FHWA) provides technical assistance in the *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (Technical Advisory T 6640.8A) and reviews environmental documents for compliance.

### ***Executive Order 13112 – Invasive Species***

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the Invasive Species Council of California, to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

Under the EO, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the U.S. or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

### ***National Wild and Scenic Rivers Act***

The National Wild and Scenic Rivers Act prohibits federal agencies from activities that would adversely affect the values for which a river was designated. FHWA consults with the managing agencies during the NEPA process on projects that affect designated rivers or their immediate environments to reduce potential conflicts with wild and scenic river values that are protected by the Act.

### ***Federal Endangered Species Act of 1973***

The Federal Endangered Species Act (FESA) of 1973 defines an endangered species as any animal or plant listed by regulation as being in danger of extinction throughout all or a significant portion of its geographical range. A threatened species is any animal or plant that is likely to become endangered within the foreseeable future throughout all or a significant portion of its geographical range. Without a special permit, federal law prohibits the “take” of any individuals or habitat of federally listed species.

- Under Section 9 of the FESA, take is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” The term “harm” has been clarified to include “any act which actually kills or injures fish or wildlife and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.” Enforcement of

FESA is administered by the USFWS. Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.

- Critical habitat is designated for the survival and recovery of species listed as threatened or endangered under the FESA. Critical habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of a FESA listed species and which may require special management considerations or protection. Critical habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.
- Section 7 (a)(2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its “critical habitat.”

As defined by FESA, “individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Section 10(a) of the FESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans (see Section 3.3 below).

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the FESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the FHWA or a permit from the USACE).

If USFWS determines that Critical Habitat will be lost or adversely modified from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with Caltrans to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy critical habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency follows the opinion.



**California Environmental Quality Act (CEQA) (P.R.C. 21000 et seq.)**

CEQA requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval.

**California Endangered Species Act (CESA) (California Fish & Game Code 2050 et seq.)**

The California Endangered Species Act (CESA) prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. “Take” is defined under California FGC as any action or attempt to “hunt, pursue, catch, capture, or kill.” CESA allows exceptions for take that occur during otherwise lawful activities. Section 2081 of the California FGC describes the requirements needed for incidental take applications under CESA. Incidental take of state-listed species may be authorized if an applicant submits a plan that minimizes and mitigates the impacts of take. California FGC Sections 1602, 86, 1900-1913) Section 1602 of the California FGC requires any person, government agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel, or bank of any river, stream, or lake, or proposes to use any material from a streambed, must first notify the CDFW of such proposed activity. The California FGC defines ‘take’ (Section 86) and prohibits ‘taking’ of a species listed as threatened or endangered under CESA (California FGC Section 2080) or otherwise fully protected, as defined in California FGC Sections 3511, 4700, and 5050. Section 1900-1913 of the California FGC describes regulations to determine if a species, subspecies, or variety of native plant is endangered or rare; and governing the taking, possession, propagation, transportation, exportation, importation, or sale of endangered or rare native plants.

**Coachella Valley Multiple Species Habitat Conservation Plan**

The County of Riverside and City of Coachella are participants of the CVMSHCP. The CVMSHCP aims to conserve over 240,000 acres of open space and protect 27 plant and animal species. By providing comprehensive compliance with federal and state endangered species laws, the Plan not only safeguards the desert’s natural heritage for future generations, but it also allows for more timely construction of roads and other infrastructure that is essential to improving quality of life in the Coachella Valley.

**County of Riverside General Plan**

The Project occurs within the jurisdiction of the Eastern Coachella Valley Area Plan, a component of the County of Riverside 2015 General Plan (County General Plan). This Project has been designed to be consistent with the County General Plan. Impacts to biological resources will be avoided and minimized to the maximum extent practicable. Coordination with appropriate regulatory agencies

including CVAG (Coachella Valley Association of Governments), CDFW, USFWS, and USACE will ensure impacts to sensitive resources are minimized or mitigated for, as appropriate. The County of Riverside will incorporate specific requirements of the CVMSHCP into design plans. With the implementation of project measures, Caltrans Standard Best Management Practices (BMPs), permit conditions, and project design, the Project is in conformance with the following County General Plan Policies and Codes: Circulation Element Policy 20.7 (Environmental Considerations), Land Use Element Policy 4.1 (Project Design), Multipurpose Open Space Element Policy 9.3 (Vegetation), Eastern Coachella Valley Area Plan Policy 4.1 (Light Pollution).

### ***City of Coachella General Plan***

The Project occurs within the limits of the City of Coachella and falls under the authority of the City of Coachella 2035 General Plan (Coachella General Plan). The Project has been designed to be consistent with all goal, objectives, and policies of the Coachella General Plan. Impacts to biological resources will be avoided and minimized to the maximum extent practicable. Coordination with appropriate regulatory agencies including Caltrans, CVAG, CDFW, USFWS, and USACE will ensure impacts to sensitive resources are minimized or mitigated for, as appropriate. With the implementation of project measures, Caltrans Standard BMPs, permit conditions, and project design, the Project is in conformance with the following Coachella General Plan Policies and Codes:

Sustainability and Natural Environment Policies 2.5 (Construction Standards), 2.9 (Energy-efficient street lighting), 3.7 (Landscape design), 6.5 (Dark sky), 7.1 (Pollution prevention), 7.2 (Soil erosion), 7.4 (Water quality), 9.3 (Wildlife corridors), 9.5 (Multiple species habitat conservation plan), 9.7 (Landscape design), 10.1 (Open space network), 10.2 (Whitewater river corridor), 10.6 (Grading and vegetation removal), 10.7 (Wildlife corridors), 10.8 (Preservation of natural land features), 13.9 (City-wide open space network), 13.11 (Coachella Whitewater Trail), and 13.13 (Nature access).

Land Use and Community Character Policies 2.4 (Natural context), 2.18 Open space conservation, 8.4 (Parks and open space), 9.5 Green/open space network, and 11.13 (Natural environment).

Infrastructure and Public Services 4.6 (Stormwater Pollution Prevention).

### **Studies Required**

The database search includes the following items:

- An official species list was obtained from the IPaC website based on the Carlsbad Fish and Wildlife Office information on 28 November 2022 (Appendix A). The list identifies federal-listed, candidate, and proposed

## *Natural Environment Study*

species within USFWS jurisdiction that potentially occur in or could be affected within the BSA.

- The CNDDDB was queried for known occurrences of special status species on the Project site quad (Indio) on 21 November 2022 (Appendix A).
- The CNPS inventory of rare and endangered plants was queried on 21 November 2022 for known occurrences of special status plants in or near the BSA (Indio Quad and the three surrounding quads [Mecca, Thermal Canyon, and Valerie], Appendix A).
- Data received from USFWS, CNDDDB, and CNPS were used to compile a table of regional species and habitats of concern (Appendix E).
- This Project is located outside of National Oceanic and Atmospheric Administration (NOAA) Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated. A NMFS data search is not required.

**Field Reviews** - The general biological survey consisted of walking through the BSA to determine if any special status species or their habitat were present. Natural communities, plant and wildlife species, and notable habitat characteristics were recorded. Appendix C is a list of species observed during surveys. Photographs of the BSA are in Appendix B.

**BSA** - The BSA was defined based on anticipated construction drawings and methods. The BSA identified for the Project includes the Project site and a 500-foot buffer around the Project footprint. The BSA includes all areas potentially affected by the Project including temporary and permanent impacts plus additional areas to allow for equipment access, staging, and any minor design changes that may occur as the Project design is finalized. The BSA is shown on Figures 2

**Survey Methods** - The general biological survey consisted of walking through the BSA to determine if any special status species or their habitat were present. Transects were walked in a fashion to provide full line of sight coverage of entire BSA. Natural communities, plant and wildlife species, and notable habitat characteristics were recorded. Appendix C is a list of species observed during surveys. Photographs of the BSA are in Appendix B. Furthermore, the goals and objectives of the CVMSHCP were reviewed for applicability to the BSA.

**ARD** - An ARD was conducted according to the USACE Wetland Delineation Manual (Corps 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; Corps 2008). The results of the jurisdictional delineation are incorporated into this NES. Vegetation, soil, and hydrology were sampled in accordance with USACE delineation methods.

**Personnel and Survey Dates**

David Carr, B.S., Biologist is the Principal-in-Charge. Lauren Zameito, M.S., Environmental Biology is the Project Manager. Biologists Dennis Peterson, B.S., Tatiana Torrez, B.S., Biologist and Jane Gao, M.S., Natural Resources, conducted the fieldwork for the biological survey, and aquatic resources delineation of wetlands and waters. The NES was prepared by David Carr, Lauren Zameito, and Wendy Fisher, B.S., Plant/Wetland Ecologist and Certified Arborist. Marcus England, B.S. Biology, provided editorial review. David Duncan, GIS Analyst, prepared the figures and calculated Project impacts. The field assessments for biological resources on the proposed Project site were conducted on 18 June 2021, and 01 July 2021; and an aquatic resources assessment was conducted on 01 July 2021 and 08 July 2021, as shown in Table 1, below.

**Table 1: Personnel and Survey Dates**

Date	Personnel	Purpose of Visit/Survey
June 18, 2021	Dennis Peterson, Biologist Jane Gao, Biologist	Pre-construction survey to construct a species list on the day of survey. Establish the viability of habitat for protected species.
July 1, 2021	Dennis Peterson, Biologist Jane Gao, Biologist	Pre-construction survey to construct a species list on the day of survey. Conduct ARD.
July 8, 2021	Dennis Peterson, Biologist	Complete ARD.

**Agency Coordination and Professional Contacts**

No agency coordination or professional contacts were initiated at this time for the NES. As part of the literature review for the proposed Project, Bargas received a list of species from USFWS to be addressed in the NES in June 2021.

**Limitations That May Influence Results**

Field studies were conducted in accordance with acceptable protocols and industry standards, and in a way to maximize the detectability of special status species that may be present within the BSA during the time of the survey. Surveys were conducted during the appropriate season, in good weather conditions, by qualified staff. Therefore, no limitations that may influence the results of field surveys associated with this Project are known to have occurred at the time of surveys completed in June/July 2021.

After the field studies were completed, the CVWD Stormwater Channel Improvement Project greatly altered the land through vegetation removal and the concrete-lining of the river. Bargas has not been directly involved with the CVWD Stormwater Channel Improvement Project. Bargas staff have relied on subsequent field updates from Dokken Engineering regarding the CVWD

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Stormwater Channel Improvement Project. Dokken Engineering is the County's consultant preparing the engineering plans and environmental documentation.

## Chapter 3 – Results: Environmental Setting

### Description of the Existing Physical and Biological Conditions

The BRE was conducted by Bargas Biologists Dennis Peterson and Jane Gao on June 18 and July 1, 2021, to determine whether any special status plant or wildlife species, or their habitat, or sensitive habitats, occur within the BSA that could pose a constraint to implementation of the proposed Project. The BSA identified for the Project includes the Project site and a 500-foot buffer around the Project footprint. After the BRE was completed, vegetative cover was removed and replaced with concrete-lining within the segment of the Whitewater River within the BSA as part of the CVWD Stormwater Channel Improvement Project. Furthermore, the BSA is located within the boundaries of the CVMSHCP.

#### ***Biological Study Area***

The BSA is located both within the city limits of Coachella and unincorporated lands in the community of Thermal, Riverside County, California. The BSA identified for the Project includes the Project site and a 500-foot buffer around the Project footprint; refer to Figure 2. The BSA is depicted on Section 22, Township 6 South, Range 8 East of the San Bernardino Baseline Meridian of the Coachella 7.5-minute United States Geological Survey (USGS) quadrangle topographic map. The approximately 25-acre Project site is approximately 366 feet long and 34 feet wide. The Project site extends from approximately 4400 feet north of Avenue 54 downstream (south) to approximately 4500 feet north of Avenue 58 in Thermal. The existing BSA is bounded by earthen flood control levees, although concrete wall reinforcement is present in the northern portion of the Project site and near bridges. Land surrounding the BSA within two miles consists of desert scrub, desert riparian, undeveloped grazing land, orchards, agricultural facilities, a few rural residences, a patchwork of commercial buildings and single-family rural residential dwellings, a sheriff's station, and natural lands (undeveloped, some of which have been previously disturbed).

#### ***Physical Conditions***

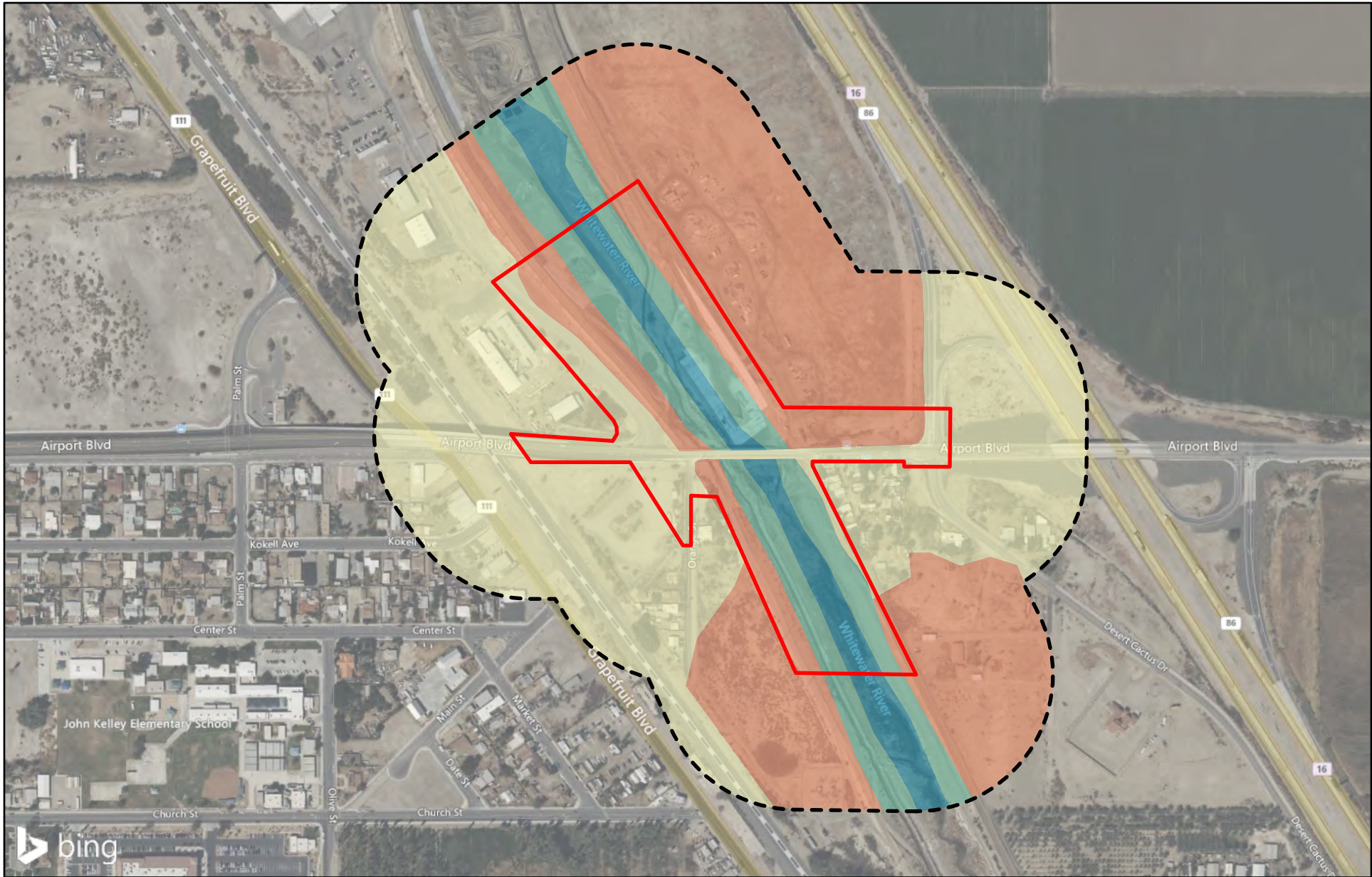
The BSA is located on the Indio quad (T6S, R8E, Sections 15 and 22, San Bernardino Principal Meridian) and is in the Salton Sea Hydrologic Unit (Hydrologic Unit Code 18100200). The centroid of the BSA is located at 33.64209° North, -116.13710 ° West (WGS84), and its UTM coordinates are 580020.77 m East, 3722806.62 m North (Zone 11S, WGS84). Elevation in the BSA ranges from approximately 125 to 135 feet below sea level. Soils in the BSA consist primarily of fluvents (found in flood plains), with 0-2% slope. The parent material is well-drained, alluvium, hydric soil (NRCS Riverside County, Coachella Valley 2021).

### ***Biological Conditions***

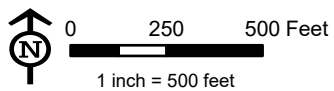
Biological communities are defined by species composition and relative abundance. Biological communities found within the BSA in the summer of 2021 are listed in Table 2 and shown on Figure 4. Vegetation alliances were identified according to CDFW (2018) protocol. Biological communities in the BSA are described below. The descriptions include plant species identified during the field surveys.

The BSA contains a 3,040 linear foot segment of the excavated drainage for the Whitewater River. This drainage is highly disturbed under normal conditions. Aerial photography shows reoccurring clearance of vegetation and movement/disturbance of topsoil. Photography as recent as March 2022 show almost complete removal of vegetation and grading of topsoil over most of the Project area. Vegetation has now been completely removed within the Project area and the topsoil has been lined with concrete as a result of the CVWD Stormwater Channel Improvement Project that occurred as shown on Figure 5, Project Impacts. The Whitewater River bisects the Project site and is a perennial riverine system bordered by palustrine permanently and semi-permanently flooded wetlands (wetlands classification codes R2UBHx, R5UBFx, and PUBHx).






Source: Bing Maps Hybrid



 Biological Study Area

 Project Footprint

 Common and Giant Reed Marsh/Wetland Riverine (4.0 Acres)

 Disturbed Area (5.7 Acres)

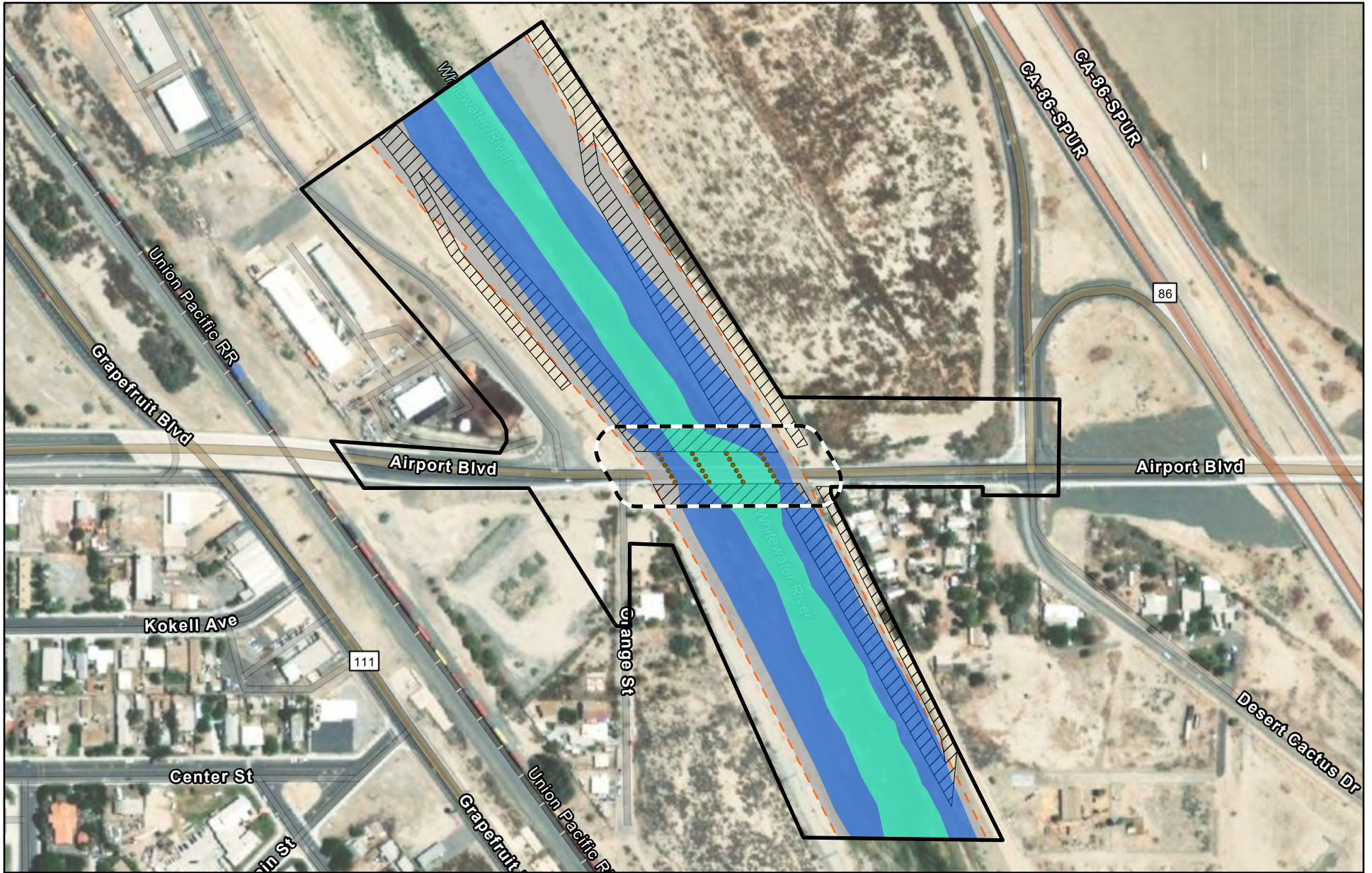
 Iodine Bush Scrub (8.5 Acres)

 Salt Grass Flats (7.5 Acres)

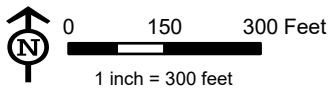
**Figure 4**  
**Biological Communities Map**

*Airport Blvd Bridge Replacement Project*





Source: Bing Maps Hybrid



Surveyor Name: Dennis Peterson  
 Map Date: 9/5/2021  
 Map Author: Coral Fenech  
 Date Revised: N/A  
 Aerial Source: Bing Maps Hybrid  
 Coordinate System:  
 NAD 1983 State Plane  
 Zone 6 (US Feet)

**CVWD Stormwater Channel Improvement Project**

- CVWD Stormwater Channel Improvement Project
- Channel Bed
- Channel Sideslopes

**Bridge Project**

- Project Footprint
- Project Staging/Access
- 50-ft Temporary Impact Area
- Bridge Piers

Note: Figure 5 shows recent channel impact areas from CVWD Stormwater Channel Improvement Project activities.

**Figure 5**  
**Project Impacts**

*Airport Blvd Bridge Replacement Project*

**Table 2. Biological Communities at the time of the field survey in June and July of 2021**

<b>Biological Community</b>	<b>Acreage</b>
Iodine Bush Scrub	8.5
Salt Grass Flats	7.5
Common and Giant Reed Marsh (Wetland Riverine)	4.0
Disturbed Area	7.3

A 1,970 linear foot segment of the Whitewater River flows from north to south within the Project site. This excavated drainage is highly disturbed under normal conditions. Aerial photography shows reoccurring clearance of vegetation and movement/disturbance of topsoil. Aerial photographs as recent as December 2019 show almost complete removal of vegetation and grading of topsoil over most of the Project area. Vegetation has since been completely removed within the Project area and the topsoil has been lined with concrete as part of the CVWD Stormwater Channel Improvement Project. Currently, the Whitewater River bisects the Project and is a perennial riverine system bordered by riverine permanently and semi-permanently flooded wetlands.

**Common and Giant Reed Marsh**

At the time of the field surveys in June/July of 2021, the wetland riverine (R2UBHx) and immediate surrounding vegetation community at the time of the 2021 survey was best characterized as Common and Giant Reed Marsh (*Phragmites australis* - *Arundo donax* Herbaceous Semi-Natural Alliance) (MCV2). Species observed in this portion of the Project site at the time of the field survey included common reed (*Phragmites australis*), alkali bulrush (*Bulboschoenus maritimus*), broad-leaved cattail (*Typha latifolia*), bush seepweed (*Suaeda nigra*), saltgrass (*Distichlis spicata*), bigpod sesbania (*Sesbania herbacea*), common knotweed (*Polygonum californicum*), floating water primrose (*Ludwigia peploides*), verrucose seapurslane (*Sesuvium verrucosum*), Mexican fan palm (*Washingtonia robusta*), and iodine bush (*Allenrolfea occidentalis*). Tree species observed include saltcedar (*Tamarix ramosissima*), Goodding’s black willow (*Salix gooddingii*), and narrow-leaved willow (*Salix exigua*), many of these trees were at the sapling stage. The early stage of tree species is likely due to reoccurring removal of vegetation. Common and Giant Reed Marsh in the Whitewater River channel have since been removed and replaced with concrete as part of the CVWD Stormwater Channel Improvement Project.

**Salt Grass Flats**

At the time of the field surveys in June/July of 2021, the permanently or semi permanently flooded areas transitioned into salt grass flats (*Distichlis spicata* Herbaceous Alliance) dominated by salt grass and saplings of saltcedar. Less prevalent vegetation included bush seepweed, common sunflower (*Helianthus annuus*), pricklyburr (*Datura innoxia*),

and tree tobacco (*Nicotiana glauca*). The salt grass flats laid upslope of the riverine wetland and continued upslope toward the top of bank. Salt grass flats have since been removed and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project.

### ***Iodine Bush Scrub***

At the time of the field surveys in June/July of 2021, the vegetation community bordered and was upslope of the Salt Grass flats, where not developed, is best characterized as disturbed Iodine Bush Scrub (*Allenrolfea occidentalis* Shrubland Alliance) (MCV2). This area is dominated by iodine bush and big saltbush. Other vegetation occurring in this area included common sunflower, pricklyburr, and tree tobacco. Iodine bush scrub has since been removed and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project.

### ***Disturbed Areas***

Buffering the project is a combination of paved roads, commercial development, and residential neighborhoods. Commercial and residential landscaping make up most of the vegetation. Agricultural fields lie just outside the Project buffer area.

Subsequently after the field surveys (as late as March 2022), CVWD began further development of the area, removing vegetation and soil to lower the channel as part of the CVWD Stormwater Channel Improvement Project involving concrete lining of the river both up and downstream of the bridge itself.

### ***Invasive Species***

Invasive and noxious weed species include species listed by the CDFR, and other exotic pest plants designated by the Cal-IPC. At the time of the field surveys in June/July of 2021, invasive plant species were present within the BSA. Some of the more commonly occurring non-native plants in the BSA include tree tobacco (*Nicotiana glauca*), floating water primrose, Mexican fan palm, pricklyburr, and saltcedar. None of the observed invasive plant species are listed on the USDA Federal Noxious Weed List. Invasive species have since been removed from the BSA and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project.

### ***Habitat Connectivity***

Similar as documented in the Caltrans NES for the State Route 89/Avenue 50 New Interchange Project (Caltrans 2018), habitat linkages provide interconnection between larger undeveloped habitat areas that are separated by development. Wildlife corridors are like linkages but provide specific opportunities for animals to disperse or migrate between areas and do not necessarily provide “live-in” habitat. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate



for one species but inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

There are no known habitat linkages or migration corridors within the BSA. Further, the CVSC has not been identified in the CVMSHCP as a habitat linkage or migration corridor. Areas surrounding the BSA are highly disturbed comprised of residential, transportation, and flood control uses which have eliminated the connection between the BSA and naturally occurring natural communities. Although channelized, the CVSC had the potential to provide movement opportunities for a limited variety of wildlife species such as coyotes. Further, emergent vegetation that was present along the active channel of the CVSC had the potential to provide stopover habitat for migrating avian species. However, this riparian and emergent vegetation has been removed and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project. Habitat/vegetation remaining within the Project is limited to the top of bank closest to the disturbed areas.

#### ***Natural Communities not Included in the CVMSHCP***

Two natural plant communities were observed in the BSA in June/July of 2021, including Salt Grass Flats and Iodine Bush Scrub. These disturbed communities are affected by channel maintenance and would revert to one or more of the communities above if trees and shrubs were not being actively removed through channel maintenance. Prior to concrete-lining activities associated with the CVWD Stormwater Channel Improvement Project, present at the time this report was finalized, Salt Grass Flats encompassed approximately seven and a half (7.5) acres and Iodine Bush Scrub approximately eight and half (8.5) acres of the BSA. Both of these communities have since been removed and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project.

#### ***Regional Species and Habitats and Natural Communities of Concern***

The CNDDDB was queried for reported locations of listed and special status plant and animal species as well as special status natural plant communities in the Indio USGS 7.5-minute quadrangle. A search of published records of these species within this quadrangle was conducted using the CNDDDB RareFind 5 online software and the CDFW BIOS database. The CNPS Inventory of Rare and Endangered Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity of the BSA. The habitat assessment was used to assess the ability of the plant communities found on-site to provide suitable habitat for relevant special status plant and animal species. In addition, the IPaC database was searched for special status wildlife species that USFWS believes may occur within the BSA. This database search is based off specific site boundaries, rather than the quadrangle(s) that a project occurs in. It also does not necessarily indicate special regulatory protection, as many species listed in the IPaC database are migratory birds that are only protected by the MBTA.

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The CNDDDB and CNPS literature search identified fourteen (14) special status plant species and nineteen (19) special status animal species as having the potential to occur within the Indio USGS 7.5-minute quadrangle. No natural communities of special concern were identified. The IPaC database search identified six (6) federally listed species that could occur within the BSA. A total of nineteen (19) special status species have the potential to occur within the BSA given the combined results of the CNDDDB, CNPS, and IPaC database searches and are shown below in Table 3: Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area (also found in Appendix E). Special status plant and animal species were evaluated for their potential to occur within the Project boundaries based on habitat requirements, availability, and quality of suitable habitat, and known distributions. No special status plant or animal species or natural communities of special concern were identified within the BSA during the field assessment. Appendix E summarizes conclusions from analysis and field surveys regarding the potential occurrence of listed and special status plant and animal species within the BSA.

**Table 3: Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.**

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
<b>ANIMAL SPECIES</b>						
burrowing owl	<i>Athene cunicularia</i>	Fed: CA: CVMSHCP:	None SSC Covered	Common yearlong resident of southern California. Prefers open, annual, or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Requires fossorial burrows for roosting and nesting surrounded by relatively short vegetation and open habitat for foraging and watching for predators. Also known to occupy man-made structures including drainpipes, debris piles, and development pads.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
ferruginous hawk	<i>Buteo regalis</i>	Fed: CA: CVMSHCP:	None WL Not Covered	Fairly common winter resident of southern California frequently seen in grassland and scrub habitats in foothill areas. Typically present in California from September through May. Requires large areas of treeless grasslands with sparse shrub cover for foraging. Does not breed in California.	A	Marginally suitable foraging habitat present in disturbed areas along the margins of the BSA. Species does not nest in California, therefore, it was determined that “No Effect” to the species will occur.
monarch butterfly	<i>Danaus plexippus</i>	Fed: CA: CVMSHCP:	FC S2S3 Not Covered	Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico. Roost located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
southwestern willow flycatcher	<i>Empidonax tailii extimus</i>	Fed: CA: CVMSHCP:	FE SE Covered	Uncommon summer resident of southern California. Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
				These areas typically have standing or running water or are at least moist.		
western mastiff bat	<i>Eumops perotis californicus</i>	Fed: CA: CVMSHCP:	None SSC Not Covered	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	A	There is no suitable roosting habitat (i.e., cliffs, caves, bridges) within or adjacent to the BSA.
prairie falcon	<i>Falco mexicanus</i>	Fed: CA: CVMSHCP:	None WL Not Covered	Uncommon permanent resident that ranges from southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada. Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Mostly absent from northern coastal fog belt. Not found in upper elevations of Sierra Nevada. Breeding sites located on cliffs, but forages far afield.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur.
desert tortoise	<i>Gopherus agassizii</i>	Fed: CA: CVMSHCP:	FT ST Covered	Occurs in desert scrub, desert wash, and Joshua tree habitats with friable, sandy, well-drained soils for nest and burrow construction. Highest densities occur in creosote bush scrub with extensive annual wildflower blooms and succulents with little to no non-native plant species.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur.
western yellow bat	<i>Lasiurus xanthinus</i>	Fed: CA: CVMSHCP:	None SSC Covered	Uncommon in California, known only in Los Angeles and San Bernardino Counties. Occurs in valley foothill	A	There is no suitable roosting habitat (i.e., palm trees) within or adjacent to the BSA.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
				riparian, desert riparian, desert wash, and palm oasis habitats. Prefers to roost and feed in, and near, palm oases and riparian habitats.		
Palm Springs pocket mouse	<i>Perognathus longimembris bangsi</i>	Fed: CA: CVMSHCP:	None SCC Covered	Species occurs only in restricted portions of the Coachella Valley. Inhabits flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils (often windblown) of desert wash, Sonoran desert scrub communities with preference to creosote dominated desert scrub. Species is unlikely to utilize areas with compacted, stony, and cobbly soils, in saltbush dominated communities, or in areas of human disturbance. Hibernation is believed to occur below ground from October-March.	A	Project site contains desert scrub dominated by iodine bush but lacks creosote dominated desert scrub communities or windblown sandy soils; habitat unsuitable for Palm Springs pocket mouse. The nearest CNDDDB occurrence is greater than 5 miles from the project. Therefore, it was determined that "No Effect" to the species will occur.
Flat-tailed horned lizard	<i>Phrynosoma mcallii</i>	Fed: CA: CVMSHCP:	None SCC Not Covered	Species inhabits desert scrub, desert wash, succulent shrub, and alkali scrub habitats. Requires fine sands for burrowing, shrubs or grass for vegetative cover, relatively flat topography and an adequate source of ants for food; species is an ant specialist. Hibernation occurs as early as October and can extend to March, but may emerge in January or February. Breeds in early spring and may produce multiple clutches within a breeding season; young appear in July through September.	HP	Project site contains desert scrub habitat with relatively flat topography and fine sandy soils.. The nearest CNDDDB occurrences are presumed extant but are greater than 5 miles from the project location. Therefore, it was determined that "No Effect" to the species will occur.
black-tailed gnatcatcher	<i>Poliioptila melanura</i>	Fed: CA: CVMSHCP:	None WL Not Covered	In Mojave, Great Basin, Colorado, and Sonoran Desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No



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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
				creosote bush and saltbush with scattered bursage, burroweed, ocotillo, saguaro, barrel cactus, prickly pear cactus and cholla.		Effect” to the species will occur.
vermillion flycatcher	<i>Pyrocephalus rubinus</i>	Fed: CA: CVMSHCP:	None SSC Not Covered	Occurs in a variety of open habitats including open woodland, clearings, desert scrub, savannah, agricultural land, golf courses, and recreational parks. The species tends to stay near water, often occurring in riparian vegetation characterized by cottonwoods, mesquite ( <i>Prosopis</i> spp.), willows, and sycamores ( <i>Platanus</i> spp.).	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
Yuma Ridgway’s rail	<i>Rallus obsoletus yumanensis</i>	Fed: CA: CVMSHCP:	FE ST Covered	Nests in freshwater marshes. Prefers stands of cattails and tules dissected by narrow channels of flowing water.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
American badger	<i>Taxidea taxus</i>	Fed: CA: CVMSHCP:	None SCC Not Covered	Prefers treeless, dry, open areas within most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Also found in forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows up to 12,000 feet elevation. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse overstory cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons.	HP	The project site contains desert scrub habitat with friable sandy soils adjacent to large undeveloped areas to the north and east of the project site. However, no burrows were observed during surveys conducted in June and July, 2021. The lack of burrow suggests transient individuals may be seen in the project area but permanent residents are unlikely. Additionally, the project area is within the OHWM of the White Water

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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
						River and subject to burrow-destroying flooding. Therefore, it was determined that “No Effect” to the species will occur.
Crissal thrasher	<i>Toxostoma crissale</i>	Fed: CA: CVMSHCP:	None SSC Covered	Common yearlong resident in southern California. Occupies arid habitats including desert washes, riparian brush, and mesquite thickets at lower elevations and dense scrub in arroyos at higher elevations. Occurs in areas dominated by mesquite hummocks and thickets with acacias, arrow weed, and in desert saltbush scrub.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
LeConte’s thrasher	<i>Toxostoma lecontei</i>	Fed: CA: CVMSHCP:	None SCC Covered	An uncommon desert resident inhabiting open desert wash, desert scrub, alkali desert scrub, desert succulent shrub and Joshua tree habitats with scattered desert shrubs and cacti. Often nests in dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground. Breeds January-June.	HP	The site contains desert scrub habitat with dense shrubby areas suitable for this species. The nearest CNDDDB occurrence was documented in 1924 greater than 5 miles from the project location. This species has the potential to be impacted by project activities conducted during the nesting season.
Coachella Valley Fringe-toed lizard	<i>Uma inornata</i>	Fed: CA: CVMSHCP:	FT SE Covered	Sparsely vegetated arid areas with fine wind-blown sand, including dunes, washes, alkali scrub, and flats with sandy hummocks formed around the bases of vegetation. Requires fine, loose, wind-blown sand for burrowing.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
least Bell’s vireo	<i>Vireo bellii pusillus</i>	Fed: CA: CVMSHCP	FE SE Covered	Uncommon summer resident of southern California. Prefers riparian habitat near waterbodies that typically feature a dense, stratified canopy. Species is typically	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No

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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
				associated with southern willow scrub, cottonwood-willow forest, mule-fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, willow riparian forest, or mesquite in desert regions.		Effect” to the species will occur.
Palm Springs round-tailed ground squirrel	<i>Xerospermophilus tereticaudus chlorus</i>	Fed: CA: CVMSHCP:	None SSC Covered	Prefers open, flat, grassy areas in fine-textured, sandy soil. Habitats include mesquite- and creosote-dominated sand dunes, creosote bush scrub, creosote-palo verde, and saltbush/alkali scrub. Substrates include wind-blown sand, coarse sand, and packed silt with desert pavement.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
<b>PLANT SPECIES</b>						
chaparral sand-verbena	<i>Abronia villosa var. aurita</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.1	An annual herb inhabiting sandy soils of chaparral, coastal sage scrub, and desert dune communities. Flowers January-August (256- 5,249 feet).	A	No suitable habitat occurs within or adjacent to the BSA. The project site’s elevation is at -132 feet, well below the species lower elevation range; habitat unsuitable for chaparral sand-verbena. The nearest occurrence is greater than 5 miles from the project. Therefore, it was determined that “No Effect” to the species will occur.
singlewhorl burrobush	<i>Ambrosia monogyra</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	A perennial shrub inhabiting sandy soils within chaparral and Sonoran desert scrub communities. Blooms August-November (32-1640 feet).	A	The project site’s elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that “No Effect” to the species will occur.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>cochellae</i>	Fed: CA: CNPS: CVMSHCP:	FE None 1B.2 Covered	Occurs in dunes and sandy flats along disturbed margins of sandy washes and in sandy soils along roadsides adjacent to existing sand dunes. May also occur in sandy substrates in creosote bush scrub. Found at elevations ranging from 130 feet to 2,150 feet above msl. Blooming period is February to May.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur. Habitat within the BSA is generally disturbed and/or comprised of agricultural and residential land uses.
Lancaster milk-vetch	<i>Astragalus preussii</i> var. <i>laxiflorus</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	A perennial herb inhabiting alkaline flats of Chenopod scrub communities. Species is only known to be extant near Lancaster and Edwards Air Force Base. Blooms March –May (2,296-2,329 feet).	A	No suitable habitat occurs within or adjacent to the BSA. The project site’s elevation is at -132 feet, well below the species lower elevation range and is outside the known species occurrence localities; habitat unsuitable for Lancaster milkvetch. The nearest CNDDDB occurrence is more than 70 years old and greater than 5 miles from the project. Therefore, it was determined that “No Effect” to the species will occur.
gravel milk-vetch	<i>Astragalus sabulonum</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual to perennial herb inhabiting sandy and sometimes gravelly soils of flats, washes and roadsides within desert dune, Mojavean scrub, and Sonoran desert scrub communities. Blooms February – June (-196 -3,051 feet).	A	The project site contains sandy soils within desert scrub habitat potentially suitable for the species. The nearest CNDDDB occurrence is over 100 years old and greater than 5 miles from the project.

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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
						Surveys conducted during the blooming season on June 18, 2021 did not detect the species. Therefore, it was determined that "No Effect" to the species will occur.
little-leaf elephant tree	<i>Bursera microphylla</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	A perennial tree inhabiting rocky slopes of Sonoran desert scrub communities. Blooms in June (0-2,296 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
glandular ditaxis	<i>Ditaxis claryana</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual to perennial herb inhabiting sandy soils of creosote bush scrub, desert wash, Mojavean desert scrub and Sonoran desert scrub communities. Blooms December-March (0-1,525 feet).	A	No suitable habitat occurs within or adjacent to the BSA. The project site's elevation is at -132 feet, well below the species lower elevation range; The nearest CNDDB occurrence is greater than 5 miles from the project. Therefore, it was determined that "No Effect" to the species will occur.
Santa Rosa mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>Hallii</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	A perennial herb inhabiting desert canyons of pinyon and juniper woodland and Sonoran desert scrub communities. Species is known only from the Santa Rosa Mountains. Blooms May (3,280-6,561 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.

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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
slender cottonheads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual herb inhabiting sandy soils of coastal dunes, desert dunes, and Sonoran desert scrub communities. Blooms March-May (-164-1,640 feet).	A	Suitable sandy soils in desert scrub habitat are present at the project site. However, no CNDDDB records are present in the Indio quad; this species was not detected during surveys conducted in June and July of 2021. Therefore, it was determined that “No Effect” to the species will occur.
narrow-leaf sandpaper plant	<i>Petalonyx linearis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	A perennial shrub inhabiting sandy or rocky canyons of Mojavean desert scrub and Sonoran desert scrub communities. Species generally occurs in creosote-bush scrub. Blooms March-May (-82 – 3,658 feet).	A	The project site’s elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that “No Effect” to the species will occur.
slender-stem bean	<i>Phaseolus filiformis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	An annual herb inhabiting washes of Sonoran desert scrub communities. Blooms April (393-426 feet).	A	The project site’s elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that “No Effect” to the species will occur.
Cove’s cassia	<i>Senna covesii</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	A perennial herb inhabiting dry, sandy desert washes and slopes of desert wash and Sonoran desert scrub communities. Blooms March-April (1,000-3,510 feet).	A	The project site’s elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that “No Effect” to the species will occur.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
jackass-clover	<i>Wislizenia refracta</i> <i>ssp. refracta</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual herb inhabiting sandy washes, roadsides, and alkaline flats of desert dune, Mojavean desert scrub, playas, and Sonoran desert scrub communities. Blooms April-October (295- 3,805 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
Mecca aster	<i>Xylorhiza cognata</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Covered	A perennial herb inhabiting arid canyons and washes of creosote-bush scrub and Sonoran desert scrub communities. Species is known mostly from Indio Hills and Mecca Hills. Blooms January-June (65-1,312 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.

<sup>1</sup>Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - Project footprint is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC) Sate Watch List (WL); California Native Plant Society (CNPS); Covered by the Coachella Valley Multiple Species Conservation Plan (Covered).

## **Chapter 4 – Results: Biological Resources, Discussion of Impacts, and Mitigation**

This chapter provides survey results and analyzes the effects of the proposed Project on natural communities, special status species, and other protected biological resources in the BSA. Wetlands and waters potentially subject to Clean Water Act jurisdiction, birds listed under the Federal Migratory Bird Treaty Act, birds listed under CA Fish and Game Code § 3503.5 and impacts to sensitive natural communities are also discussed. Figure 5 and 6 provides a summary of impacts to biological resources.

The BSA does not provide suitable habitat for federal or state-listed species, nor does the BSA provide habitat for other special status species.

The BSA does not contain federal designated critical habitat.

### **Habitats and Natural Communities of Special Concern**

Habitats are of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring on site. State and/or federal jurisdictional features are considered natural communities of special concern.

No natural communities of special concern were identified by the CNDDDB during the records search as occurring within the Indio USGS 7.5-minute quad. The only natural community of special concern identified within the BSA is jurisdictional waters. Waters of the U.S. and state qualify as natural communities of special concern, as they are regulated by state and federal resource agencies.

#### ***Discussion of Jurisdictional Waters***

The only aquatic resource present in the Project area is the excavated drainage of the Whitewater River (1,970 linear feet, 4.22 acres). This permanently or semi-permanently flooded area in the bed of the channel is subject to large scale periodic disturbance, periodic scouring, and vegetation clearance for stormwater maintenance.

At the time of finalization of this report, CVWD was in the process of lining Whitewater River with concrete at the location of the Airport Boulevard Bridge (see Appendix B, Photos 11 and 12 for recent photos from 2022) as part of the CVWD Stormwater Channel Improvement Project. During the June 2021 survey, there was evidence of widescale disturbance on the soil surface from use of large-tracked vehicles. Review of historical aerial photography from December 2019 shows almost complete removal of vegetation and grading of topsoil over most of the Project area. Vegetation has since been completely removed within the boundaries of the channel bed and side slopes, in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project. Despite the recent permanent impacts to this segment of the channel and banks it is anticipated the Whitewater River would be considered a jurisdictional water.



## Survey Results

Survey efforts identified areas consistent with one wetland riverine (Whitewater River) feature encompassing 4.22 acres. Figure 4 in the Aquatic Resource Delineation (ARD) provides a labeled view of the wetland riverine feature. In addition, delineation data sheets are included in Appendix A of the ARD, and representative photographs are included in Appendix B of the ARD (Refer to Appendix D for a copy of the *Aquatic Resources Delineation* report).

## Project Impacts

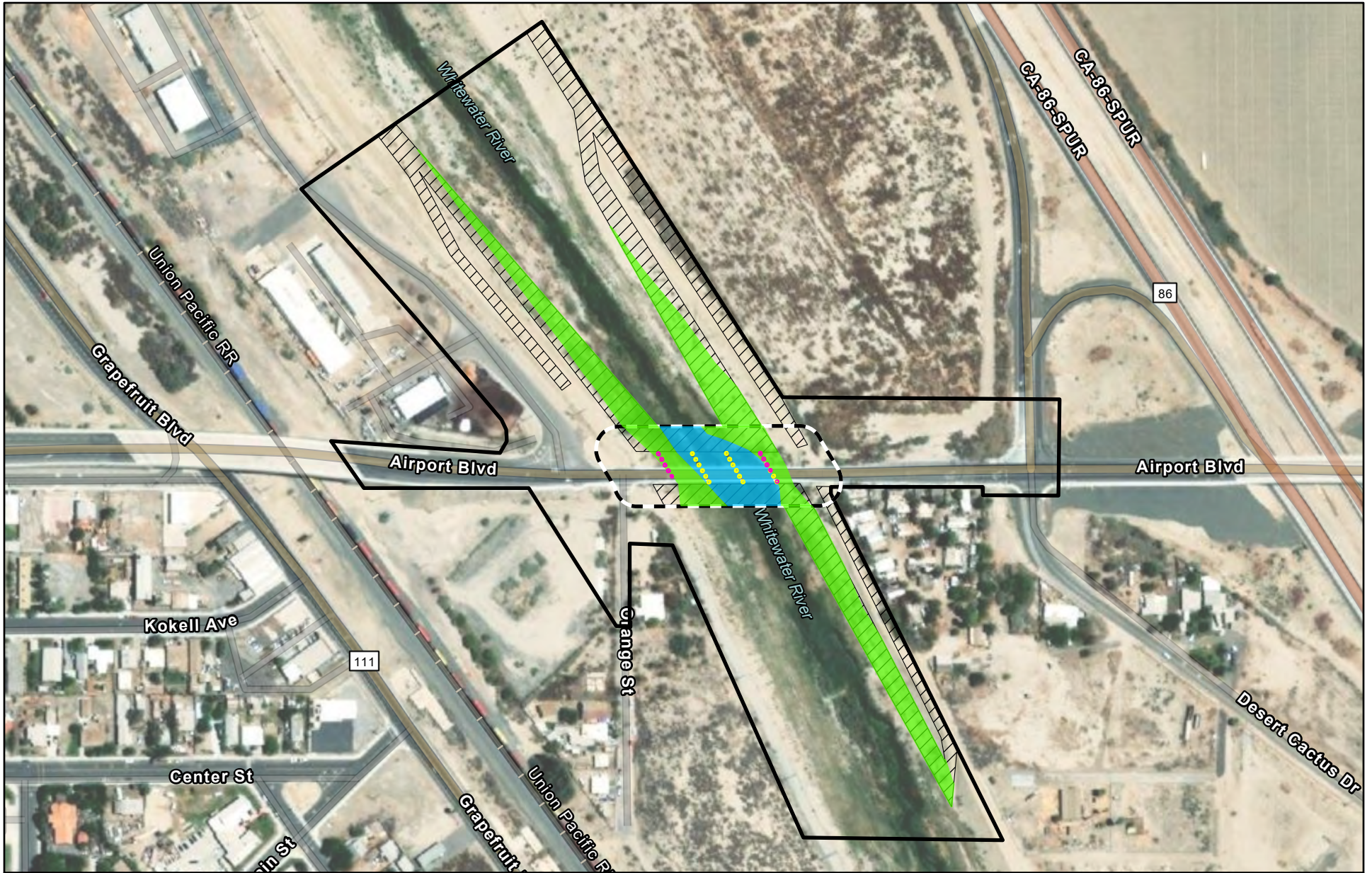
Based on a review of current design plans for the proposed Project and the ongoing CVWD Stormwater Channel Improvement Project, 50 2.5-foot diameter supporting columns and two piers will be removed, resulting in 0.57 acre of temporary impact to USACE/RWQCB jurisdictional areas and 2.26 acres of temporary impact to CDFW jurisdictional areas. Twenty-four (24) 2.5-foot diameter supporting columns will be installed, resulting in approximately 0.003 acres of permanent impact to USACE, RWQCB and CDFW jurisdictional areas.

Both permanent and temporary impacts to CDFW jurisdiction have recently occurred as a result of the CVWD Stormwater Channel Improvement Project, permanently removing vegetated habitat within the proposed Project footprint. Figure 5 shows recent channel impact areas from CVWD Stormwater Channel Improvement Project concrete-lining activities and Figure 6 shows temporary and permanent impact to jurisdictional areas.

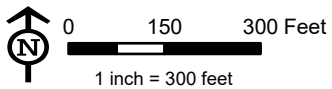
Despite recent concrete-lining activities as part of the CVWD Stormwater Channel Improvement Project, a USACE Section 404 Nationwide Permit (NWP) 14, a RWQCB Section 401 Water Quality Certification, and a CDFW Section 1600 Streambed Alteration Agreement are anticipated to be required prior to the Project implementation. A segment of the Whitewater River was identified within the Project site. The river met all three criteria to be considered a jurisdictional wetland where hydrophytic vegetation, hydric soils, and wetland hydrology were present. Although the recent lining of the channel with concrete associated with CVWD Stormwater Channel Improvement Project has altered plant communities significantly, it is anticipated that the Whitewater River would still be considered a Water of the US in the form of an “other water”.

## Avoidance and Minimization Efforts

The Project is not subject to CVMSHCP avoidance, minimization, and mitigation measures as there were no resources determined to be present or likely to occur. However, there are additional measures that have been identified and highlighted below for resources not covered by the CVMSHCP.



Source: Bing Maps Hybrid



Surveyor Name: Dennis Peterson  
 Map Date: 9/5/2021  
 Map Author: Coral Fenech  
 Date Revised: N/A  
 Aerial Source: Bing Maps Hybrid  
 Coordinate System:  
 NAD 1983 State Plane  
 Zone 6 (US Feet)

- Project Footprint
- Project Staging/Access
- 50-ft Temporary Impact Area

**Permanent Impacts**

- USACE (0.002 Acre)
- CDFW (0.001 Acre)

**Temporary Impacts**

- USACE (0.57 Acre)
- CDFW (2.26 Acre)

**Figure 6**  
**Jurisdictional Impacts**

*Airport Blvd Bridge Replacement Project*

### **Compensatory Mitigation**

The proposed Project would result in minimal direct impacts (less than 0.01 acre). Indirect impacts to aquatic resources would be avoided and minimized with implementation of avoidance, minimization, and mitigation measures described below. Given the small amount of permanent direct impact, no compensatory mitigation will be required with implementation of Avoidance and Minimization Efforts including **BIO-1 and BIO-2** as described below.

### **Cumulative Impacts**

No reasonably foreseeable future projects within the current proposed Project's BSA are known at this time outside of the current CVWD Stormwater Channel Improvement Project previously discussed. It is not expected that any projects in the surrounding area would have any notable cumulative impacts to special status plant species because of the extensive development surrounding the BSA.

### **Special Status Plant Species**

Special status plant species are considered to be of special concern based on (1) federal, state, or local law regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special status plants occurring on site. No special status plants were found to be present within the BSA and no occurrences of special status plants are shown on the Biological Communities Map (Figure 3). Marginally suitable habitat for one (1) special status plant species, Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) occurred within the BSA based on the field survey and CNDDDB, CNPS, and IPaC records search. The CVWD Stormwater Channel Improvement Project has removed invasive species in the Whitewater River channel and has lined it with concrete.

### ***Discussion of Plant Species***

No special status plant species were observed or determined potentially occur within the BSA during the BRE field analysis.

### **Survey Results**

No special status plant species were observed within the BSA during the BRE field analysis. None of the regionally occurring special status plant species were expected to occur within the BSA prior to the CVWD Stormwater Channel Improvement Project and are presumed absent.

### **Project Impacts**

No special status plant species are expected to occur within the BSA and are presumed absent because of the lack of suitable habitat within the BSA. Thus, no direct impacts to special status plant species are anticipated to occur because of the proposed Project. The proposed Project development does have the potential to result in indirect impacts



to special status plant species that may occur within habitats surrounding the BSA, such as fugitive dust and non-native seed dispersal.

### **Avoidance and Minimization Efforts**

The Project is not subject to CVMSHCP avoidance, minimization, and mitigation as there were no resources determined to be present or likely to occur. However, there are additional measures that have been identified and listed below for resources not covered by the CVMSHCP.

**BIO-1:** Project-related debris, spoils, and trash will be contained and removed to a proper waste disposal facility.

**BIO-2:** Equipment, vehicles, and materials staged and stored in right-of-way will be situated in previously paved or previously disturbed areas only.

### **Compensatory Mitigation**

The proposed Project would not result in indirect impacts to special status plant species and no compensatory mitigation will be required with implementation of Avoidance and Minimization Measure **BIO-1** and **BIO-2** described above.

### **Cumulative Impacts**

No reasonably foreseeable future projects within the current proposed Project's BSA are known at this time outside of the current Project previously discussed. It is not expected that any projects in the surrounding area would have any notable cumulative impacts to special status plant species because of the extensive development surrounding the BSA. The CVWD Stormwater Channel Improvement Project removed invasive species in the Whitewater River channel and has lined it with concrete.

### **Special Status Animal Species**

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status animals occurring on site. A total of fourteen (14) special status animal species were identified during the CNDDDB and IPaC records search as potentially occurring within the BSA. None of these animals were found to be present within the BSA and no occurrences of these species are shown on the Biological Communities Map (Figure 3).

### ***Discussion of Animal Species***

No individual special status animal species were observed or determined potentially occur within the BSA during the BRE field analysis. Nesting birds were the only determined animals likely to occur within the BSA.

### **Survey Results**

None of the nineteen special status animal species are expected to occur within the BSA and are presumed absent because of the lack of suitable habitat within the BSA. Thus, no direct impacts to special status animal species are anticipated to occur because of the proposed Project. The proposed Project does have the potential to result in indirect impacts to nesting birds that may occur within habitats surrounding the BSA such as the Iodine Bush Scrub, depicted in Figure 4. CVWD Stormwater Channel Improvement Project has removed all vegetation in the Whitewater River channel and has lined it with concrete.

### **Project Impacts**

Nesting birds are protected pursuant to the MBTA and California FGC. (Sections 3503, 3503.3, 3511, and 3513 of the California FGC prohibit the take, possession, or destruction of birds, their nests, or eggs). To protect migratory bird species, nesting bird clearance surveys need to be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered “take” and is potentially punishable by fines and/or imprisonment.

Vegetation within and surrounding the BSA has the potential to provide refuge cover from predators, perching sites, and favorable conditions for avian nesting that could be directly and indirectly impacted by construction activities associated with the proposed Project. Disturbances associated with the proposed Project, including noise, vibration, and dust may result in indirect impacts to avian species if Project activities occur during active nesting efforts.

If construction can occur outside of the bird nesting season (February 1st to August 31st) no direct impacts to nesting birds would occur. Preconstruction surveys for nesting birds (including swallows) and avoidance measures (if needed) will help to ensure that direct mortality would not occur, should construction occur during the nesting season. Construction-related noise or visual disturbances during the nesting bird breeding season may result in temporary impacts on individuals that may be attempting to incubate eggs or raise young within proximity to the BSA. Construction-related noise or visual disturbances may disrupt nesting activities or may cause birds to leave the area until construction is completed. In cases of extreme disturbance, nesting efforts may be abandoned, resulting in taking of young or eggs.

### **Avoidance and Minimization Efforts**

The Project is not subject to CVMSHCP avoidance, minimization, and mitigation measures as there were no resources determined to be present or likely to occur. However, there are additional measures that have been identified and highlighted below for resources not covered by the CVMSHCP based on the natural habitat/vegetation remaining.

**BIO-3:** Prior to vegetation removal or initial ground disturbance during the nesting bird season (February 1st through August 31st) a pre-construction nesting bird survey must be conducted by a Project biologist prior to the start of work. The nesting bird survey must include the Project area plus a 300-foot buffer. Within 2 weeks of the nesting bird survey, all areas surveyed by the biologist must be cleared by the contractor or a supplemental nesting bird survey is required. A minimum 300-foot no work buffer will be established around any active nests of a raptor species. A 100-foot no work buffer will be established around any active nests for other migratory birds. If an active nest is discovered during construction, the contractor must immediately stop work in the nesting area until the appropriate buffer is established. The contractor is prohibited from conducting work that could disturb the birds (as determined by a project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by a project biologist and approved by CDFW.

#### **Compensatory Mitigation**

With implementation of Avoidance and Minimization Measure **BIO-3** described above, the Project would not result in impacts to nesting birds and no compensatory mitigation will be required.

#### **Cumulative Impacts**

No reasonably foreseeable future projects within the current Project's BSA are known at this time, and due to the extensive development surrounding the BSA, it is not expected that any projects in the surrounding area would have any notable cumulative impacts to special status animal species.

## Chapter 5 – Conclusions and Regulatory Determinations

### Federal Endangered Species Act Consultation Summary

The Federal Endangered Species Act (FESA) protects plant and animal species listed as threatened or endangered. In this case, no federally listed species are present within the Project area (IPaC March 7, 2022). Therefore, no impact will occur to listed species because of the Airport Boulevard Bridge Replacement Project. The Project area does not lie within or adjacent to any designated critical habitat for federally listed species therefore none will be affected, and no further FESA consultation is required. Results are summarized below in Table 4.

**Table 4: Federally Listed Species with Potential to Occur in the Project Area**

Common Name	Scientific Name	Potential	Fed. Status	Determination
least Bell's vireo	<i>Vireo bellis pusillus</i>	Presumed absent	Endangered	No effect
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Presumed absent	Endangered	No effect
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	Presumed absent	Threatened	No effect
desert tortoise	<i>Gopherus agassizii</i>	Presumed absent	Threatened	No effect
monarch butterfly	<i>Danaus plexippus</i>	Presumed absent	Candidate	No effect
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Presumed absent	Endangered	No effect

This Project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated.

### Essential Fish Habitat Consultation Summary

No essential fish habitat occurs within the BSA; therefore, no essential fish habitat consultation for this Project is required.

### California Endangered Species Act Consultation Summary

The California Endangered Species Act (CESA) protects plant and animal species listed as threatened or endangered. In this case, no state-listed species are present within the Project area. Therefore, no impact will occur to listed species because of the Airport Boulevard Bridge Replacement Project, and no consultation or mitigation is required.

### Wetlands and Other Waters Coordination Summary

An ARD Report was prepared for the Project, refer to Appendix D of this NES. Whitewater River is a potential water of the U.S. within the BSA. The segment of the Whitewater River within the BSA is characterized as a perennial riverine system bordered by riverine

permanently and semi-permanently flooded wetlands (R2UBHx). This single wetland riverine feature encompasses a total of 4.22 acres (1,970 linear feet) of the BSA.

Bargas biologist Dennis Peterson conducted the field work for the ARD on 01 June 2021, and 08 June 2021. Permanent impacts in the form of lining the channel with concrete were authorized and implemented by CVWD as part of the CVWD Stormwater Channel Improvement Project, by the time this report was finalized. The drainage is highly disturbed under normal conditions and has experienced recurring clearance of vegetation and disturbance of the topsoil. Aerial photos as recent as December 2019 show the almost complete removal of vegetation and grading of topsoil over most of the Project area. Vegetation has since been completely removed and replaced with concrete in the Whitewater River channel as part of the CVWD Stormwater Channel Improvement Project.

At the time of the field surveys, the segment of the Whitewater River within the BSA met the three criteria of a jurisdictional wetland (hydrophytic vegetation, hydric soils, and wetland hydrology). Whitewater River drains into the Salton Sea, a riverine water with precedence of being claimed as jurisdictional by the USACE. This feature is subject to the interpretation and verification of the USACE Los Angeles District Regulatory Division.

The Project will result in 0.57 acres of temporary impact and 0.01 acres of permanent impact to jurisdictional areas Whitewater River. In addition to Section 401 and 1600 permits, a USACE Nationwide Permit (NWP) 14 is anticipated to be required prior to Project implementation. Since impacts to jurisdictional wetlands will be less than 0.10 acre (the threshold for NWP 14) and no riparian trees will be removed as part of the project, no compensatory mitigation is anticipated to be required.

### **Invasive Species**

One invasive plant species was found within the Project area. Saltcedar is an uncontrollably invasive shrub that dominates riparian areas and is known to displace native plants. Saltcedar drastically alters habitats and depletes water sources in addition to increasing erosion and flood damage, soil salinity, and fire potential. Saltcedar was observed within the survey area, within areas previously cleared in the excavated drainage of the Whitewater River. Invasive species were removed from the BSA as a result of the CVWD Stormwater Channel Improvement Project.

### **Other**

#### ***Migratory Bird Treaty Act***

Excluded from coverage under the CVMSHCP are a variety of common bird species that are protected by the MBTA. Avoidance of impacts to nesting migratory and resident birds is a requirement of the federal permit issued for the CVMSHCP. To avoid impacting nesting birds, construction should occur outside of the avian nesting season (February 1<sup>st</sup> to August 31<sup>st</sup>). If construction is to occur during nesting bird season, a preconstruction nesting bird survey by a qualified biologist will be needed prior to disturbance. If nesting



birds are present, no work would be permitted near the nest until young have fledged. While there is no established protocol for nest avoidance, when consulted, the CDFW generally recommends avoidance buffers of about 500 feet for birds-of-prey, and 100 to 300 feet for songbirds. The only nest sites detected to date in the Project area were inactive cliff swallow nests beneath the Airport Boulevard Bridge. Refer to **BIO-3**, above, for further information on nesting bird mitigation.

### ***Coachella Valley Multiple-Species Habitat Conservation Plan***

The proposed Project is located in the City of Coachella and is entirely within the CVMSHCP area. Therefore, the Project is obligated to comply with the requirements set forth in the CVMSHCP. The CVMSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in the Coachella Valley region of Riverside County. The proposed Project was further analyzed for its consistency with the CVMSHCP within the NES, and a separate consistency report was not prepared. Section 6.6.1.1 (Joint Project Review Process within Conservation Areas) specifies that the Joint Project Review Process pertains only to projects in a Conservation Area that could result in disturbance to habitat, natural communities, biological corridors, or essential ecological processes (CVMSHCP 2022). While the proposed Project is located within the CVMSHCP boundaries, it is not located within any CVMSHCP identified Conservation Areas (CVCC 2022). Thus, the proposed Project is not subject to the Joint Project Review. The project is not adjacent to a Conservation Area, and it is not subject to Land Use Adjacency Guidelines under Section 4.5 of the CVMSHCP. The Project is identified as a “Covered Activity” under the CVMSHCP Section 7.2.3 (Regional Road Projects), Table 7-3 (CVAG Regional Road Projects). The proposed Project is specifically designated in CVMSHCP Table 7-3 as the “AVENUE 56 / AIRPORT BLVD” Street under the “SPRR to East side of Bridge over Coachella Valley Storm Channel” segment. According to CVMSHCP Section 7.0 (Take Authorization for Covered Activities and Term of Permit), Covered Activities are not likely to result in “Take” of “Covered Species” under the CVMSHCP as long as applicable avoidance, minimization, and mitigation measures described in the CVMSHCP are implemented. The Project is not subject to CVMSHCP avoidance, minimization, and measures as there were no resources determined to be present or likely to occur within the BSA. See Chapter 4 (Avoidance and Minimization Efforts) of this report. Additionally, the Project fulfills mitigation requirements per CVMSHCP Section 5.2.1.3 (Regional Road Projects Mitigation) and Section 6.6.1 (Obligations of Local Permittees). These sections describe obligations of the local permittees for mitigation for regional road projects and projects outside of Conservation Areas. Per Section 5.2.1.3, mitigation for the proposed Project as a Covered Activity per Section 7.2.3, is covered through the Riverside County Measure A half-cent sales tax. Section 6.6.1 requires public projects to be consistent with Section 4.4 mitigation measures, and overall CVMSHCP compliance for public projects. As discussed previously in this portion of this report, the proposed Project is consistent with CVMSHCP requirements for public projects. Thus, the proposed Project is consistent with the biological resource goals and objectives of the CVMSHCP

***Other Bird Species Included in the CVMSHCP (however, MBTA Take is not Permitted)***

The following bird species are covered species under the CVMSHCP; however, the federal permit for the CVMSHCP does not allow their take under the MBTA: Crissal Thrasher, Le Conte's Thrasher, Yellow Warbler, Yellow-breasted Chat, and Summer Tanager. Nesting habitat is not present within the channel due to the recent clearing of vegetation and on-going channel maintenance by the CVWD. Additionally, the CVWD Stormwater Channel Improvement Project will prohibit nesting habitat from re-establishment within the stormwater channel itself.

***Other Special status Bird Species Not Included in the CVMSHCP***

Cooper's Hawk, Costa's Hummingbird, Vermilion Flycatcher, Loggerhead Shrike, Black-Tailed Gnatcatcher, and Albert's Towhee are all special status species not included in the CVMSHCP which have, in the past, been known to occur within the channel vicinity of the Whitewater River Channel. However, no nesting habitat currently occurs within the Project area for these species. Regardless of their status, these birds are all protected by the MBTA. Completing nesting bird surveys for compliance with the MBTA will prevent impacts to nesting bird species. Refer to **BIO-3**, above.

**Special Status Plant Species**

Sensitive plants are presumed absent and are not anticipated to occur within the BSA. Therefore, no direct impacts to special status plant species are anticipated to occur because of the proposed Project.

**Special Status Animal Species**

No special status animal species were identified within the BSA during the habitat assessment. Special status animal species are not expected to occur within the BSA and are presumed to be absent based on deficiency of suitable habitat requirements.

## Chapter 6 – References

- Bargas Environmental Consulting. 2022. Aquatic Resources Delineation – Airport Blvd Bridge Replacement, Riverside County, California. Report prepared for Zach Liptak on behalf of Dokken Engineering.
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- United States Fish and Wildlife Service (USFWS), 2021. Environmental Conservation Online System (ECOS), Information for Planning and Consultation (IPaC). Retrieved from <https://ecos.fws.gov/ipac/>
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## **Appendix A - Public Database Search Results**



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Query Criteria: Quad<span style='color: Red'> IS </span>(Indio (3311662))

Name (Scientific/Common)	CNDDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand-verbena	G5T2? S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	25 25	98 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Astragalus lentiginosus</i> var. <i>cochellae</i> Coachella Valley milk-vetch	G5T1 S1	Endangered None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture		69 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Astragalus preussii</i> var. <i>laxiflorus</i> Lancaster milk-vetch	G4T2 S1	None None	Rare Plant Rank - 1B.1		5 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Astragalus sabulorum</i> gravel milk-vetch	G4G5 S2	None None	Rare Plant Rank - 2B.2		19 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Athene cucicularia</i> burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	-120 730	2011 S:5	0	1	0	0	1	3	2	3	4	0	1
<i>Buteo regalis</i> ferruginous hawk	G4 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	40 40	107 S:1	0	0	0	0	0	1	0	1	1	0	0
<i>Ditaxis claryana</i> glandular ditaxis	G3G4 S2	None None	Rare Plant Rank - 2B.2		26 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Eumops perotis californicus</i> western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern		296 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Euparagia unidentata</i> Algodones euparagia	G1G2 S1S2	None None		40 40	3 S:1	0	0	0	0	0	1	1	0	1	0	0



# Summary Table Report

## California Department of Fish and Wildlife

### California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Lasiurus xanthinus</i> western yellow bat	G4G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	-120 70	58 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Macrobaenetes valgum</i> Coachella giant sand treader cricket	G1G2 S1S2	None None	IUCN_VU-Vulnerable	40 40	5 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Perognathus longimembris bangsi</i> Palm Springs pocket mouse	G5T2 S1	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern	75 330	30 S:2	0	1	1	0	0	0	2	0	2	0	0
<i>Phrynosoma mcallii</i> flat-tailed horned lizard	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	-10 200	340 S:3	0	1	0	0	0	2	3	0	3	0	0
<i>Polioptila melanura</i> black-tailed gnatcatcher	G5 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	-120 -120	34 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Pyrocephalus rubinus</i> vermilion flycatcher	G5 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	120 120	25 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Taxidea taxus</i> American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	-10 -10	594 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Toxostoma crissale</i> Crissal thrasher	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	-120 -14	67 S:3	0	0	0	0	0	3	3	0	3	0	0
<i>Toxostoma lecontei</i> Le Conte's thrasher	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	-10 -10	238 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Uma inornata</i> Coachella Valley fringe-toed lizard	G1Q S1	Threatened Endangered	IUCN_EN-Endangered	-110 200	162 S:21	0	0	1	1	0	19	21	0	21	0	0



## Summary Table Report

### California Department of Fish and Wildlife California Natural Diversity Database



Name (Scientific/Common)	CNDDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Xerospermophilus tereticaudus chlorus</i> Palm Springs round-tailed ground squirrel	G5T2Q S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern	35 70	11 S:3	0	0	0	2	0	1	3	0	3	0	0





## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Carlsbad Fish And Wildlife Office  
2177 Salk Avenue - Suite 250  
Carlsbad, CA 92008-7385  
Phone: (760) 431-9440 Fax: (760) 431-5901

In Reply Refer To:  
Project Code: 2023-0019147  
Project Name: Airport Boulevard Bridge Replacement

November 28, 2022

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

### To Whom It May Concern:

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

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

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

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

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

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

<https://www.fws.gov/endangered/what-we-do/faq.html>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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

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Attachment(s):

- Official Species List

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Carlsbad Fish And Wildlife Office**

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

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## Project Summary

Project Code: 2023-0019147  
Project Name: Airport Boulevard Bridge Replacement  
Project Type: Bridge - Replacement  
Project Description: The County of Riverside (County) in cooperation with the California Department of Transportation (Caltrans) and City of Coachella (City) proposes to replace the existing Airport Boulevard Bridge over the Whitewater River (State Br. No. 56C-0020). The Airport Boulevard Bridge is located in the community of Thermal, in the County of Riverside, California.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.64232885,-116.13693803068858,14z>



Counties: Riverside County, California

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## Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Birds

NAME	STATUS
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5945">https://ecos.fws.gov/ecp/species/5945</a>	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6749">https://ecos.fws.gov/ecp/species/6749</a>	Endangered

### Reptiles

NAME	STATUS
Coachella Valley Fringe-toed Lizard <i>Uma inornata</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2069">https://ecos.fws.gov/ecp/species/2069</a>	Threatened
Desert Tortoise <i>Gopherus agassizii</i> Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4481">https://ecos.fws.gov/ecp/species/4481</a>	Threatened

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## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Flowering Plants

NAME	STATUS
Coachella Valley Milk-vetch <i>Astragalus lentiginosus var. coachellae</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7426">https://ecos.fws.gov/ecp/species/7426</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## **IPaC User Contact Information**

Agency: Bargas Environmental Consulting  
Name: Owen Routt  
Address: 3604 Fair Oaks Blvd., Ste. 180  
City: Sacramento  
State: CA  
Zip: 95864  
Email: oroutt@bargasconsulting.com  
Phone: 9165310867

## **Lead Agency Contact Information**

Lead Agency: Department of Transportation

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## CNPS Rare Plant Inventory



## Search Results

21 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3311652:3311651:3311661:3311662]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
<a href="#"><u><i>Abronia villosa</i></u></a> <a href="#"><u>var. <i>aurita</i></u></a>	chaparral sand- verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	None	None	G5T2?	S2	1B.1	 © 2011 Aaron E. Sims
<a href="#"><u><i>Ambrosia monogyra</i></u></a>	singlewhorl burrobrush	Asteraceae	perennial shrub	Aug-Nov	None	None	G5	S2	2B.2	 © 2014 Keir Morse
<a href="#"><u><i>Astragalus lentiginosus</i></u></a> var. <a href="#"><u><i>coachellae</i></u></a>	Coachella Valley milk-vetch	Fabaceae	annual/perennial herb	Feb-May	FE	None	G5T1	S1	1B.2	No Photo Available
<a href="#"><u><i>Astragalus preussii</i></u></a> var. <a href="#"><u><i>laxiflorus</i></u></a>	Lancaster milk- vetch	Fabaceae	perennial herb	Mar-May	None	None	G4T2	S1	1B.1	No Photo Available
<a href="#"><u><i>Astragalus sabulonum</i></u></a>	gravel milk- vetch	Fabaceae	annual/perennial herb	Feb-Jun	None	None	G4G5	S2	2B.2	No Photo Available
<a href="#"><u><i>Bursera microphylla</i></u></a>	little-leaf elephant tree	Burseraceae	perennial deciduous tree	Jun-Jul	None	None	G4	S2	2B.3	No Photo Available
<a href="#"><u><i>Ditaxis claryana</i></u></a>	glandular ditaxis	Euphorbiaceae	perennial herb	Oct-Mar	None	None	G3G4	S2	2B.2	No Photo Available
<a href="#"><u><i>Horsfordia alata</i></u></a>	pink velvet- mallow	Malvaceae	perennial shrub	Feb-Dec	None	None	G5	S4	4.3	No Photo Available
<a href="#"><u><i>Horsfordia newberryi</i></u></a>	Newberry's velvet-mallow	Malvaceae	perennial shrub	Feb-Dec	None	None	G5	S4	4.3	No Photo Available
<a href="#"><u><i>Johnstonella costata</i></u></a>	ribbed cryptantha	Boraginaceae	annual herb	Feb-May	None	None	G4G5	S4	4.3	No Photo Available
<a href="#"><u><i>Johnstonella holoptera</i></u></a>	winged cryptantha	Boraginaceae	annual herb	Mar-Apr	None	None	G4G5	S4	4.3	No Photo Available
<a href="#"><u><i>Juncus acutus</i></u></a>	southwestern	Juncaceae	perennial	(Mar)May-	None	None	G5T5	S4	4.2	


ssp. leopoldii spiny rusn

rhizomatous herb JUN



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Belinda Lo

<u>Leptosiphon floribundus</u> ssp. <u>hallii</u>	Santa Rosa Mountains leptosiphon	Polemoniaceae	perennial herb	May-Jul(Nov)	None	None	G4T1T2	S1S2	1B.3		© 2016 Keir Morse
<u>Lycium torreyi</u>	Torrey's box-thorn	Solanaceae	perennial shrub	(Jan-Feb)Mar-Jun(Sep-Nov)	None	None	G4G5	S3	4.2		No Photo Available
<u>Nemacaulis denudata</u> var. <u>gracilis</u>	slender cottonheads	Polygonaceae	annual herb	(Mar)Apr-May	None	None	G3G4T3?	S2	2B.2		No Photo Available
<u>Petalonyx linearis</u>	narrow-leaf sandpaper-plant	Loasaceae	perennial shrub	(Jan-Feb)Mar-May(Jun-Dec)	None	None	G4	S3?	2B.3		No Photo Available
<u>Phaseolus filiformis</u>	slender-stem bean	Fabaceae	annual herb	Apr	None	None	G5	S1	2B.1		No Photo Available
<u>Senna covesii</u>	Cove's cassia	Fabaceae	perennial herb	Mar-Jun(Aug)	None	None	G5	S3	2B.2		No Photo Available
<u>Tetracoccus hallii</u>	Hall's tetracoccus	Picrodendraceae	perennial deciduous shrub	Jan-May	None	None	G4	S4	4.3		No Photo Available
<u>Wislizenia refracta</u> ssp. <u>refracta</u>	jackass-clover	Cleomaceae	annual herb	Apr-Nov	None	None	G5T5?	S1	2B.2		No Photo Available
<u>Xylorhiza cognata</u>	Mecca-aster	Asteraceae	perennial herb	Jan-Jun	None	None	G2	S2	1B.2		No Photo Available

Showing 1 to 21 of 21 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website <https://www.rareplants.cnps.org> [accessed 21 November 2022].

Appendix B - Site Photographs



Photo 1. The Common and Giant Reed Marsh plant community within the active channel underneath the Airport Bridge Blvd.



Photo 2. Common and Giant Reed Marsh, Salt Grass Flats, and Iodine Bush Scrub plant communities within the active channel underneath and adjacent to the Airport Bridge Blvd.



Natural Environment Study



Photo 3. The Common Reed and Marsh plant community in the foreground within the active channel facing the Airport Blvd Bridge.

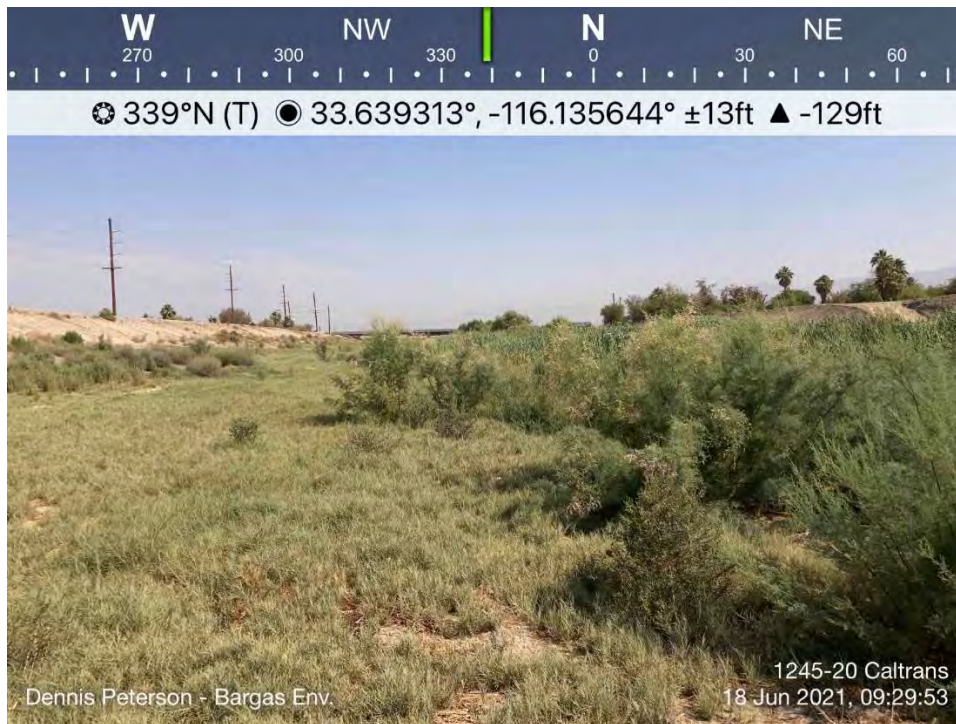


Photo 4. The invasive salt cedar noted throughout the active channel facing the Airport Blvd Bridge.



Natural Environment Study

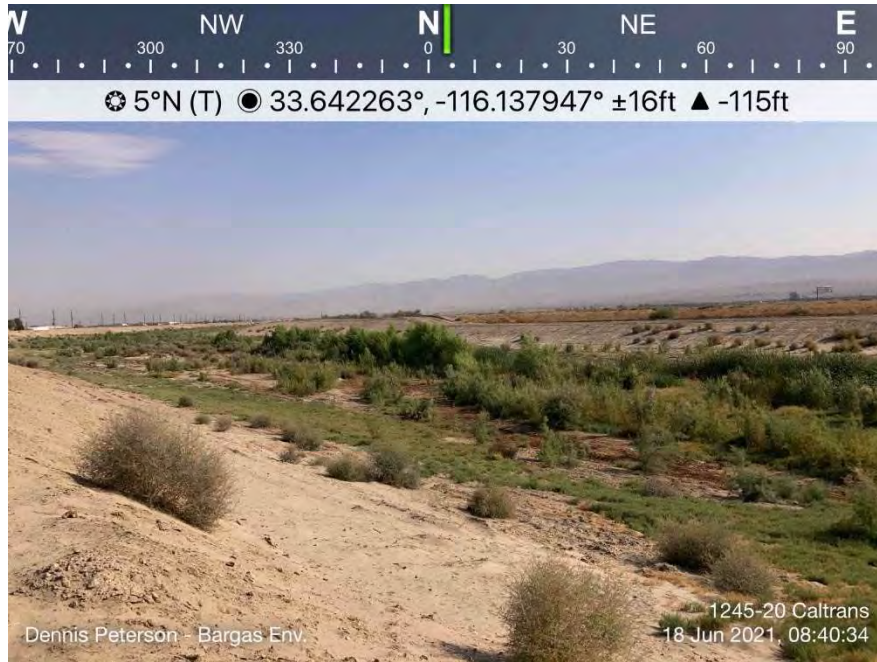


Photo 5. Disturbed area highlighted in the foreground between SR-86 and SR-111 in the northern portion of the project. The channel has been regularly maintained with frequent vegetation removal.



Photo 6. Active channel of Whitewater River with an overview of the Airport Blvd Bridge.

Natural Environment Study



Photo 7. Common Reed / Marsh and Salt Grass Flats plant communities south of the Airport Bridge Blvd.



Photo 8. Looking at the Salt Grass Flats and Common and Giant Reed Marsh communities south of the Airport Bridge Blvd.



Natural Environment Study



Photo 9. Looking at the access route representative of the Disturbed Areas in the BSA.



Photo 10. Looking at the access route along the edge of the Whitewater River.



*Natural Environment Study*



*Photo 11. CVWD Stormwater Channel Improvement Project construction lowering the riverbed and replacing Whitewater River with a concrete lined channel at the Airport Boulevard Bridge in March 2022.*



*Photo 12. CVWD Stormwater Channel Improvement Project construction lowering the riverbed and replacing Whitewater River with a concrete lined channel at the Airport Boulevard Bridge in March 2022.*

## **Appendix C - Flora and Fauna Compendium**

**Table C – 1: Plant Species**

<b>Common Names</b>	<b>Scientific Names</b>
<b>PLANT SPECIES</b>	
<i>Allenrolfea occidentalis</i>	iodine bush
<i>Atriplex lentiformis</i>	big saltbush
<i>Bolboschoenus maritimus ssp. paludosus</i>	saltmarsh bulrush, alkali bulrush
<i>Datura inoxia</i>	pricklyburr
<i>Distichlis spicata</i>	salt grass
<i>Helianthus annuus</i>	common sunflower
<i>Ludwigia peploides</i>	floating water primrose
<i>Nicotiana glauca</i>	tree tobacco
<i>Persicaria lapathifolia</i>	willow weed
<i>Phragmites australis</i>	common reed
<i>Populus fremontii</i>	Fremont cottonwood
<i>Salix exigua var. exigua</i>	narrow-leaved willow, coyote willow
<i>Salix gooddingii</i>	Goodding's black willow
<i>Sesbania herbacea</i>	bigpod sesbania, coffee weed, Colorado River hemp
<i>Sesuvium verrucosum</i>	western sea-purslane
<i>Suaeda nigra</i>	bush seepweed
<i>Tamarix chinensis</i>	fivestamen tamarisk
<i>Tamarix ramosissima</i>	saltcedar
<i>Typha latifolia</i>	broad-leaved cattail
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Xanthium strumarium</i>	cocklebur

**Table C – 2: Animal Species**

Scientific Name	Common Name
<b>ANIMAL SPECIES</b>	
<i>Ardea herodias</i>	great blue heron
<i>Callipepla californica</i>	California quail
<i>Cathartes aura</i>	turkey vulture
<i>Charadrius vociferus</i>	killdeer
<i>Columba livia</i>	rock pigeon
<i>Falco sparverius</i>	American kestrel
<i>Melospiza melodia</i>	song sparrow
<i>Nycticorax nycticorax</i>	black-crowned night-heron
<i>Passer domesticus</i>	house sparrow
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<i>Quiscalus mexicanus</i>	great-tailed grackle
<i>Streptopelia decaocto</i>	Eurasian collared-dove
<i>Zenaida macroura</i>	mourning dove
<b>INSECT SPECIES</b>	
<i>Apoidea sp.</i>	mud dauber wasp
<i>Argia vivida</i>	vivid dancer
<i>Chrysis spp.</i>	cuckoo wasp
<i>Coccinella septempunctata</i>	seven-spotted lady beetle
<i>Danaus gilippus</i>	queen butterfly
<i>Hermetia illucens</i>	black soldier fly
<i>Myrmeleontidae sp.</i>	antlion
<i>Pachydiplax longipennis</i>	blue dasher
<i>Veromessor sp.</i>	black harvester ants
<b>MAMMAL SPECIES</b>	
<i>Canis latrans</i>	coyote
<i>Sylvilagus audubonii</i>	desert cottontail
<b>REPTILE SPECIES</b>	
<i>Teiidae sp.</i>	whiptail lizard

## **Appendix D – Aquatic Delineation Report**



## **Aquatic Resource Delineation**

### **Airport Blvd Bridge Replacement, Riverside County, California**



**Prepared For:** Dokken Engineering  
Contact: Zach Liptak

**Report Date:** July 2022



Sacramento 🌿 Orange 🌿 Pasadena 🌿 Riverside 🌿 Temecula 🌿 San Diego  
**Bargas.com**





## Project Team

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<b>Review Committee:</b>	David Carr, Marcus England, Wendy Fisher

**Recommended Citation:** Bargas Environmental Consulting. 2022. Aquatic Resources Delineation – Airport Blvd Bridge Replacement, Riverside County, California. Report prepared for Zach Liptak on behalf of Dokken Engineering.





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- C. NRCS Custom Soil Resource Report
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- E. ORM Upload Spreadsheet



## 1 Introduction

This report presents the results of an Aquatic Resources Delineation conducted by Bargas Environmental Consulting, LLC (Bargas) for the proposed County of Riverside Airport Boulevard Bridge Replacement project (Project) located in Riverside County, California. The purpose of the delineation was to identify whether aquatic resources occur within the Project site and to provide the U.S. Army Corps of Engineers (USACE) with sufficient information to determine if these aquatic resources are jurisdictional wetlands or other waters of the United States, as defined by the USACE under Section 404 of the Clean Water Act (CWA). Permission is hereby granted to USACE by the Agent (Bargas) and the Applicant (Dokken Engineering) to enter the proposed Project site to complete field verification.

### 1.1 Project Site Location and Description

The County of Riverside (County) in cooperation with the California Department of Transportation (Caltrans) and City of Coachella (City) proposes to replace the existing Airport Boulevard Bridge over the Whitewater River (State Br. No. 56C-0020). The Airport Boulevard Bridge is located in the community of Thermal, in the County of Riverside, California.

The proposed bridge work is consistent with the 2012-2035 Regional Transportation Plan (RTP) as published by the Southern California Association of Governments (SCAG). The Project is anticipated to utilize federal funds through the federal Highway Bridge Project (HBP), as such it requires compliance with the National Environmental Policy Act (NEPA). Caltrans is the lead agency under NEPA and the County is the lead agency under the California Environmental Quality Act (CEQA). The City is a responsible agency under CEQA as the bridge is partially owned by the City as it is partially within City limits and City sphere of influence.

The existing Airport Boulevard Bridge is a two-lane road approximately 366 feet long and 34 feet wide with thirteen spans over the Whitewater River. This road along with the bridge is classified as a “collector street” by the County of Riverside. The bridge was originally built in 1951 and sustained damage in the 1969 flood. Partial reconstruction of the bridge occurred in 1970, when the bents were retrofitted by placing in-fill walls between the bent columns and pile cap with additional steel piles driven at the two ends of the in-filled wall bents. In 2017 the bridge was rehabilitated to include a 5-foot sidewalk on the south side. Furthermore, this bridge also has scour issues that have exposed a portion of the existing steel-encased piles and is now classified as a “Scour Critical Bridge” as of September 2019 based on Caltrans’ inspection in August 2019.

The bridge is listed in the Federal Eligible Bridge List (EBL) with a Sufficiency Rating (SR) of 60 according to the Bridge Inspection Report prepared by Caltrans Structure Maintenance and Investigations (SM&I). Since the bridge has a SR lower than 80, the bridge is eligible for major rehabilitation in accordance with the Highway Bridge Program (HBP) guidelines.

Additionally, the FEMA Flood Plain Report indicated significant inundation for the Airport Boulevard Bridge in a 100-year flood event. The Coachella Valley Water District (CVWD) has proposed improvements of the channel at the bridge location, including lowering of the riverbed by 5 feet and installing concreting lining from bank to bank underneath the existing bridge. The purpose of the CVWD project is to restore channel flow conditions to convey the 100-year flood, provide requisite freeboard and to remove the existing threat of flooding during a 100-year storm event to the parcels within the area of benefit. This project is currently underway, to counter the impact of



lowering the channel, four of the bents/support required temporary retrofit, strengthening of these bents/support is also a part of this project.

It has been determined that a seismic structural retrofit would cost approximately \$1 million dollars more than replacement of the bridge, and with the significant hydraulic constraint cited above, the County proposes to replace Airport Boulevard Bridge with a new concrete structure. This project proposes to replace the existing 2 lane Airport Boulevard Bridge over Whitewater River with a new, wider, 2 lane bridge and reconstruct the connecting approach roadways to meet current Caltrans seismic design codes. The new bridge would have foundations placed below the potential scour plane. The project would raise the bridge profile by approximately 2-3 feet in order to maintain a minimum freeboard from the flood water. The reprofiling would extend into approximately 850 feet of approach roadway to the west that will also be reconstructed.

The project may also include minor retaining walls and offsite improvements in order to maintain access to the existing mobile home community on the south side of Airport Boulevard. Roadway improvements also include transition pavement to the existing grade separation structure to the west and improvement of the intersection at Orange Street and Airport Boulevard. The project will also provide sidewalk improvements on the south side of the new bridge as well as accommodate future connectivity to the Coachella Valley Link Trail, which is anticipated to connect to Airport Boulevard along the unnamed local road in the northwestern quadrant of the project.

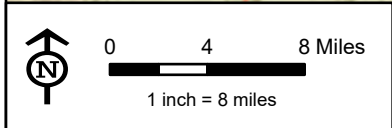
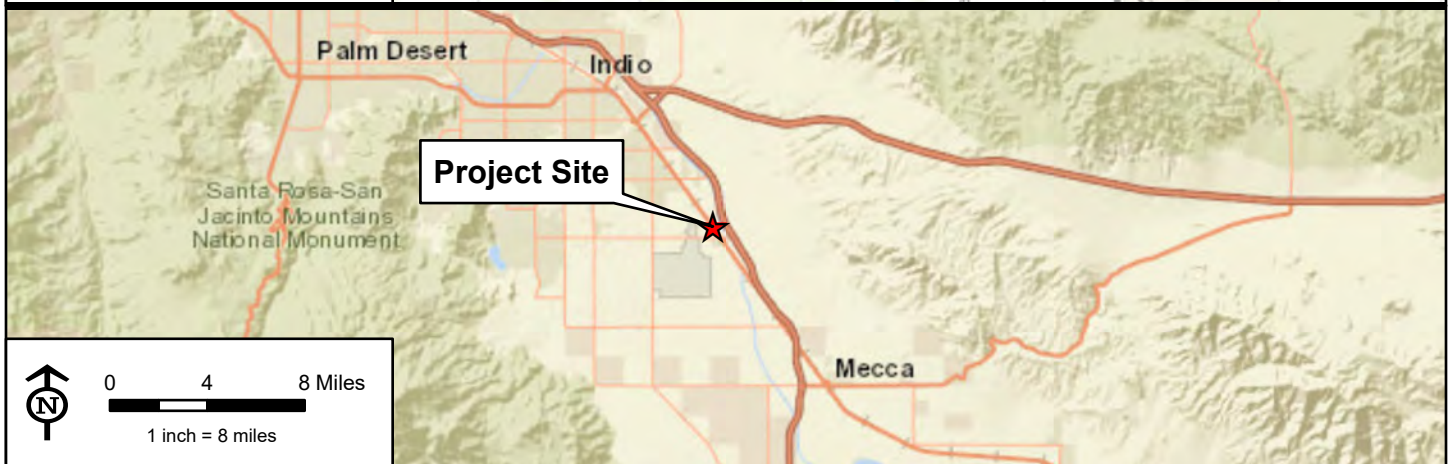
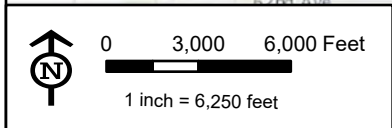
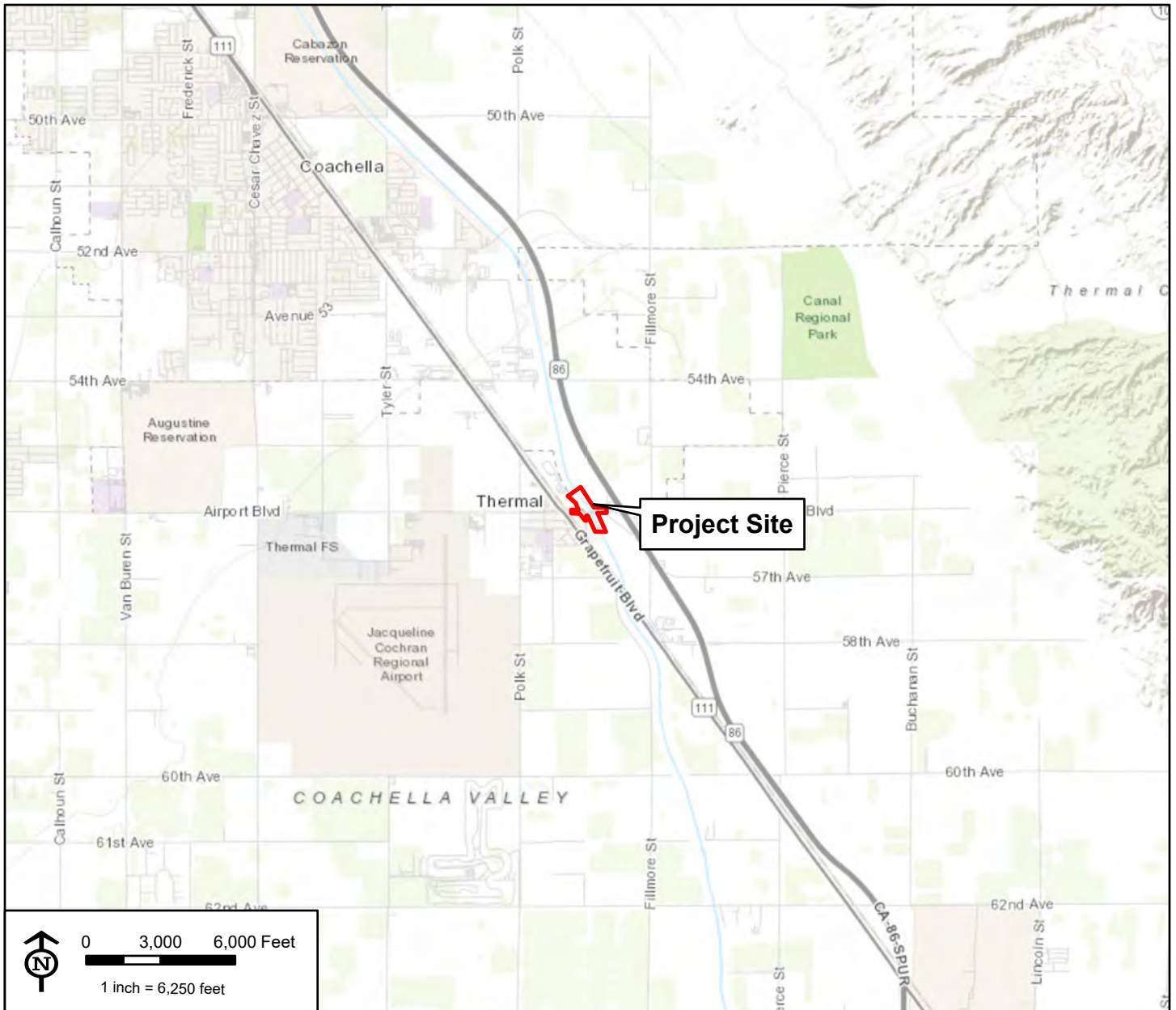
Depending on the project design, utility relocation may be required. Coordination with the following utilities to determine actions that may need to be taken once project design is established include: Coachella Valley Water District, Imperial Irrigation, Kinder Morgan Energy Partners, Level 3 Communications/CenturyLink, MCI (Verizon Business), So Cal Gas (Distribution - Palm Desert division), and Utiliquest for Frontier.

The new bridge will be constructed in two stages. Stage 1 is to construct the north half of the bridge along the north edge of the existing structure, while the traffic on Airport Boulevard would remain on the existing bridge in each direction, unless necessary to reduce traffic control to one-way traffic to temporarily accommodate construction vehicles. Once Stage 1 is constructed, two lanes of traffic will be shifted to the newly constructed bridge while the existing bridge is demolished in Stage 2. Upon completion of demolition, the remaining south half of the proposed bridge will be constructed and completed once joined to the north half of the bridge with a closure pour.

Sliver takes for right of way acquisition would be required, and the commercial land in the northeast quadrant adjacent to the project area would potentially be considered as a staging area.

## 1.2 Project Applicant and Agent

Applicant	Agent
Dokken Engineering 110 Blue Ravine Road Suite 200 Folsom, CA 95630	Bargas Environmental Consulting, LLC 3604 Fair Oaks Boulevard Suite 180 Sacramento, CA 95864



Source: ESRI ArcGIS Online Basemap - World Topographic Map, World Street Map

Public Land Survey System (PLSS):  
 San Bernardino Meridian, Township 6S, Range 8E, Section 15  
 USGS Quad(s): Indio (1977)  
 Watershed: Whitewater River (18100201)  
 Project Site Coordinates: -116.138°W 38.64°N



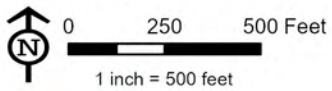
**Figure 1**  
**Project Site and Vicinity**

*Airport Blvd Bridge Replacement Project*





Source: Bing Maps Hybrid



- Project Boundary
- Study Area

**Figure 2**  
**Study Area**

*Airport Blvd Bridge  
Replacement Project*



## 2 Regulatory Setting

The Environmental Protection Agency (EPA) published a revised definition of "waters of the United States" on December 7, 2021, in response to the U.S. District Court of the District of Arizona ruling resulting in "vacating and remanding" the Navigable Waters Protection Rule (Federal Register 2021). This revised definition is consistent with the pre-2015 regulations based upon the Supreme Court cases of *Rapanos vs. United States* and *Carabell vs. United States* (USEPA and USACE 2008), over traditional navigable waters (TNW) and the following types of features determined to have "significant nexus" to a TNW:

1. wetlands adjacent to TNWs
2. non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally
3. wetlands that directly abut non-navigable tributaries of TNWs

Projects that place fill in jurisdictional wetlands and non-wetland waters of the US require a permit from the USACE under Section 404 of the CWA. The USACE issues nationwide permits for specific types of activities with minimal individual or cumulative adverse environmental impacts. Individual permits are required for large and/or complex projects or projects that exceed the impact threshold for nationwide permits.

These waters may be sorted into two broader categories of waters: wetlands and non-wetland waters.

### 2.1 Wetlands

Wetlands are defined under 33 C.F.R. 328.3(c)(16) as:

*Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*

In order for an area to be considered a wetland under Section 404, it must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Several indicators may be analyzed to determine whether or not the criteria are satisfied.

#### 2.1.1 Hydrophytic Vegetation

Hydrophytic vegetation is typically adapted to live in permanently or periodically saturated soils. Hydrophytic indicator species are those included on the *National Wetland Plant List, version 3.5: Arid West Region* (USACE 2020). Each species on the list is rated according to a wetland indicator category, as shown in **Table 1** below.

To be considered hydrophytic, more than 50% of the dominant species of each stratum must have wetland indicator status (i.e., be rated as obligate [OBL], facultative wetland [FACW], or facultative [FAC]).





Table 1. Indicator Status' for Hydrophytic Vegetation

Category	Indicator Status	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability > 99 percent)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99 percent)
Facultative	FAC	Equally likely to occur in wetlands and non-wetlands (estimated probability 34–66 percent)
Facultative Upland	FACU	Usually occur in non-wetlands (estimated probability 67–99 percent)
Obligate Upland	OBL	Almost always occur in non-wetlands (estimated probability > 99 percent)
No Investigation	NI	Undetermined

\*Source: USACE 2020.

### 2.1.2 Hydric Soils

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Soils are considered likely to meet the definition of a hydric soil when one or more of the following criteria are met:

1. All Histels except Folistels and Histosols except Folists; or
2. Soils that are frequently ponded for long duration or very long duration during the growing season; or
3. Soils that are frequently flooded for long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. The *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0)* (USACE 2008a) has a number of field indicators that may be used to identify hydric soils. The Natural Resources Conservation Service (NRCS) has also developed a number of field indicators that may demonstrate the presence of hydric soils (NRCS 2018). These indicators include hydrogen sulfide generation; accumulation of organic matter; and reduction, translocation, and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

### 2.1.3 Wetland Hydrology

Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (USACE 1987). Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators that are commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.





## 2.2 Non-Wetland Waters

Tributary non-tidal waters that may be regulated by the USACE extend to the Ordinary High Water Mark (OHWM), which is defined under 33 CFR 328.3(c)(7) as:

*That line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

## 2.3 Non-Aquatic Hydrologic Features

The *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) defines non-aquatic features as:

*Upland and lowland areas that are neither deep water aquatic habitats, wetlands nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only a brief period of time during the growing season. If these features are vegetated, they normally support species that are predominantly adapted to aerobic soil conditions.*



### 3 Methodology

This report has been prepared per the Regulatory Division of the Sacramento District, USACE minimum standards (2016a). The following manuals and guidance were used to delineate waters of the US and wetlands that are potentially subject to USACE jurisdiction under Section 404 of the CWA:

- *Corps of Engineers Wetlands Delineation Manual* (USACE 1987);
- *Regional Supplement to the Corps Wetland Delineation Manual: Arid West (Version 2.0)* (USACE 2008);
- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual* (Lichvar and Mccolley 2008); and
- *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

Before conducting the field delineation, the following information sources were reviewed:

- Aerial imagery of the Project site and the vicinity in Google Earth;
- Natural Resources Conservation Service (NRCS) soil survey maps and unit descriptions, Web Soil Survey, Sacramento County (NRCS 2021);
- NOAA National Weather Service/Climate observed weather for Coachella Valley region;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) - Wetlands Online Mapper (USFWS 2021); and
- U.S. Geological Survey's National Hydrography Dataset (NHD) (USGS 2022).

#### 3.1 Delineation Survey and Field Conditions

Bargas biologist Dennis Peterson conducted the aquatic resources delineation on Thursday June 1, 2021 and Thursday June 8, 2021. The field survey consisted of walking along the side slopes and upper banks of the Whitewater River to identify aquatic features potentially under the jurisdiction of the USACE, as defined by the 1987 Manual (USACE - Environmental Laboratory 1987), the Regional Supplemental Manual (U.S. Army Corps of Engineers 2010), and Guide to OHWM (Mersel and Lichvar 2014).

Where aquatic features were suspected to be present based on aerial signatures and conditions observed in the field, wetland sampling points collected vegetation, soils, and hydrology data at nine locations. Plant community names follow *A Manual of California Vegetation: Second Edition* (CNPS 2021), where applicable. Plant nomenclature followed Jepson eFlora (2021). The USACE National Wetland Plant List, version 3.4 (USACE 2018), was used to determine the status of observed plants as wetland indicator species. Soil series in the Project site were mapped using the NRCS Web Soil Survey, Custom Soil Resource Report (NRCS 2021) (Figure 3). A standard Munsell® Soil Color Chart was used to determine soil matrix and mottle colors (Kollmorgen Instruments Company 2000) in the field. Wetland data sampling included excavation of soil pits to a depth of approximately 20 inches or until an impermeable layer was reached. Presence or absence of the three wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) were evaluated following the USACE protocol for the Arid West (USACE 2008).

Datasheets are presented in **Appendix A**. Site photographs are presented in **Appendix B**.



### 3.2 Mapping

Wetland sampling locations and aquatic features within the Project site were mapped using a Juniper Geode GNS1 Global Positioning System (GPS) technology receiver paired with the Geode Connect and ESRI ArcMap Field Maps applications. This GPS is capable of real-time differential correction and sub-meter accuracy. The GPS data were downloaded through ArcGIS Online and converted into ESRI shapefile format. The geographic coordinate system used to reference the data was Universal Transverse Mercator (UTM–Zone 10), North American Datum (NAD83) in meters.

Aquatic features were mapped at a level of accuracy of less than one meter. Soil pits of approximately 20” in depth were hand-excavated to obtain soil samples in search of redoximorphic features or low chromas. Evidence of ordinary high water (such as sediment deposits, change in vegetative species, change in vegetative cover, or break in bank slope. Aquatic features were surveyed by collecting evidence of wetland vegetation, hydric soils, wetland hydrology, or OHWM, followed by recording GPS lines of the boundary once established. GPS data was overlaid onto an aerial photograph provided by ESRI ArcGIS World Imagery. The ESRI data and GIS software were used to calculate the acreage of each polygon. Mapping requirements, as set forth by the USACE under the guidance of *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016a) and the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2016b), were followed.

### 3.3 Determination Methods

Data for each aquatic feature was collected using the *USACE Wetland Determination Data Form – Arid West Region* (USACE 2013). Data forms were completed at representative locations to determine whether suspect features qualify as jurisdictional wetlands or other waters of the U.S. (see **Appendix A**). Aquatic features were mapped based on the presence of the three factors that define wetlands – indicators of dominant hydrophytic vegetation, hydric soils, and wetland hydrology.



## 4 Environmental Setting

The Project site includes the Whitewater River running north to south, and the Airport Boulevard Bridge perpendicular, west to east. Interconnecting dirt roads, best described as ruderal/disturbed land cover, were located north and south of the bridge (east and west of the Whitewater River), used for commercial land use. The Historic Google Earth aerial imagery indicates the boundary of this area has been used for commercial transportation, while most of the Project site remains undisturbed (Google 2021). Land uses adjacent to the Project site include residential west and south, commercial uses north, and agricultural fields to the east. The Jacqueline Cochran Regional Airport is located to the west and southwest of the Project Site.

Average rainfall in this area is 3.85 inches annually over the last 20 years. Annual rainfall for 2020 and 2021 were 3.87 inches and 2.57 inches respectively (NOAA 2022). Conditions just prior to the survey were considered to be typical for this region and do not deviate greatly from the average.

The Project site includes a 1,970 linear foot segment of the highly maintained Whitewater River. The excavated channel is subject to large scale periodic disturbance, scoured periodically, and cleared of vegetation for stormwater maintenance. Review of historical arial photography from December 2019 shows almost complete removal of vegetation and grading of topsoil over most of the Project area. During the June 2021 survey, there was evidence of widescale disturbance on the soil surface from use of large-tracked vehicles.

Additionally, the FEMA Flood Plain Report indicated significant inundation for the Airport Boulevard Bridge in a 100-year flood event. At the time this report was being finalized, Coachella Valley Water District was in the process of lining Whitewater River with concrete at the location of the Airport Boulevard Bridge.

### 4.1 Soils

Mapped soil series in the Project site were determined using the NRCS Web Soil Survey, Custom Soil Resource Report (NRCS 2021). **Table 1** identifies each soil type by series and subgroup, map symbol, and hydric characteristics (**Figure 3**). Soils in the Project site are primarily fluvents, subject to periodic stream channel flooding with poorly developed soil horizons. The NRCS soil report for the Project site is included as **Appendix C**.

*Table 2. Soil Types within the Project site*

Soil Series	Map Symbol	Parent Material	Drainage/Permeability	Hydric Rating
Fluvents	Fe	Alluvium	Somewhat poorly drained; very slow permeability	Predominantly Non-hydric
Gilman fine sandy loam, wet, 0 to 2 percent slopes	GcA	Alluvium	Well drained; moderate permeability	Nonhydric
Indio very fine sandy loam, wet	It	Alluvium	Well or moderately well drained; permeability moderate	Nonhydric

Source: NRCS 2021

### 4.2 Hydrology

The Project site is situated within the Salton Sea Hydrologic Unit Code (HUC 12)-181002010802. The Whitewater River runs north to south directly through the Project site and is a mapped feature characterized as R2UBHx (NWI



2022). The NWI map prepared for the Project site is found in **Appendix D**. This is a perennial riverine system characterized by a low gradient with a substrate of primarily sand and mud that has been excavated. The feature normally has water flowing year-round and was inundated at the time of the surveys. The hydrologic regime in the Project site is also influenced by irrigation, seasonal precipitation, stormwater runoff from adjacent lands, and irrigation runoff from adjacent parcels. This system is fed by smaller tributaries in the San Bernardino Mountains and terminates at the Salton Sea in the Colorado Desert.

### 4.3 Delineation Results

Results of the survey found one aquatic resources within the Project site: riverine wetland (Whitewater River) encompassing 1,970 linear feet (4.22 acres) (**Table 2**). Aquatic resources mapped within the Project site are shown on **Figure 4**. A list of vascular plant species observed within the Project site, as well as their National Wetland Plant indicator status, is presented in **Appendix D**.

*Table 2. Aquatic Features Observed on the Project Site*

Aquatic Feature	Label	Area (acres)*	Length (linear feet)
Riverine/Wetland	R2UBHx	4.22	1,970
	<b>Total</b>	<b>4.22</b>	<b>1,970</b>

Source: Bargas, 2020. \*Acreages are calculated estimations that are subject to modification pending formal verification by USACE.

\*\*Features labeled PEM are potentially jurisdictional waters of the state.

A total of nine sample points were evaluated to determine the boundaries of the riverine aquatic resource. Five of these sample points (sample points 1,2,4,6, and 8), met all three criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) to be considered a jurisdictional wetland. Four of the sample points did not meet all three criteria, (sample points 3,5,7,9) and were determined to be upland in nature. All four of these upland points did have hydrophytic vegetation, but lacked indicators for hydric soils and hydrology. The boundaries of the aquatic resource were mapped by an observable vegetation break between wetland and upland sample points.

#### 4.3.1 Aquatic Resources

##### 4.3.1.1 Riverine Wetland

A 1,970 linear foot segment of the Whitewater River flows from north to south within the Project site. This excavated drainage is highly disturbed under normal conditions. Aerial photography shows reoccurring clearance of vegetation and movement/disturbance of topsoil. Photographs as recent as December 2019 show almost complete removal of vegetation and grading of topsoil over most of the Project area. Currently, the Whitewater River bisects the project and is a perennial riverine system bordered by riverine permanently and semi-permanently flooded wetlands.

The wetland riverine (R2UBHx) and immediate surrounding vegetation community is best characterized as Common and Giant Reed Marsh (*Phragmites australis* - *Arundo donax* Herbaceous Semi-Natural Alliance) (MCV2). Species observed in this portion of the Project site include Common Reed (*Phragmites australis*)(FACW), Alkali Bulrush (*Bulboschoenus maritimus*)(OBL), Broad-leaved Cattail (*Typha latifolia*) (OBL), Bush Seepweed (*Suaeda nigra*) (OBL), Saltgrass (*Distichlis spicata*) (FAC), Bigpod Sesbania (*Sesbania herbacea*) (FACW), Common Knotweed (*Polygonum californicum*) (FACW), Floating Water Primrose (*Ludwigia peploides*) (OBL), Verrucose Seapurslane (*Sesuvium verrucosum*) (FACW), Mexican Fan Palm (*Washingtonia robusta*) FACW, and Iodine Bush (*Allenrolfea*



*occidentalis*) (FACW). Tree species observed include Saltcedar (*Tamarix ramosissima*) (FAC), Goodding's Black Willow (*Salix gooddingii*) (FACW), and Narrow-leaved Willow (*Salix exigua*) (FACW). Many of these trees were at the sapling stage. The early stage of tree species is likely due to reoccurring removal of vegetation.

Hydric soils were present at all sample points taken within the riverine habitat. Sandy redox (S5), stratified layers (A5), and depletion below a dark surface (A11) were indicative of soils in sample points 1,2,4, and 6. Sample point 8 was saturated to the surface and soils showed evidence of sandy mucky mineral (S1) and loamy mucky mineral (F1). Soils in this area are fine sand and sandy loam with some muck deposits.

Within the riverine habitat, wetland hydrologic indicators were observed in abundance. One of the most obvious indicators was recent iron reduction in tilled soils (C7). Other wetland hydrology indicators observed consisted of surface soil cracks (B6), biotic crust (B12), oxidized rhizospheres (C3), reduced iron (C4), and sediment deposits (B2). For sample points 1,2,4, and 6 a water table was encountered between 17 and 19 inches. Saturation at these points occurred between 16 to 18 inches. At sample point 8 saturation was observed at the surface providing a hydrological indicator (A3) and the water table was observed at 4 inches also indicative of a hydrologic feature (A2). As mentioned above, OHWM observed on site is best described as the vegetation community transition between giant reed marsh and salt grass flats. This vegetation break was clearly observable and was mapped in the field.

### 4.3.2 Non-Aquatic Habitats

Non-aquatic habitats within the Project site consisted of Salt Grass Flats, Iodine Bush Scrub, and Disturbed Areas. All habitats were extremely ruderal in nature.

#### 4.3.2.1 Salt Grass Flats

The permanently or semi permanently flooded areas transition into Salt Grass Flats (*Distichlis spicata* Herbaceous Alliance) dominated by Salt Grass (FAC) and saplings of Saltcedar (FAC). Less prevalent vegetation included Bush Seepweed (OBL), Common Sunflower (*Helianthus annuus*)(FACU), Pricklyburr (*Datura innoxia*) (UPL), and Tree Tobacco (*Nicotiana glauca*)(FAC). The Salt Grass Flats lie upslope of the riverine wetland and continue upslope toward the top of bank.

This area is highly disturbed as evidenced by tracked vehicle marks and the existence of only sapling stage Salt Cedar. Although hydrophytic vegetation was present, Salt Grass Flats lacked indicators of hydric soils and wetland hydrology. Soils in this region consisted of fine sands with a mostly uniform profile containing no redox or depletion features. No evidence of wetland hydrology was observed, however recent and ongoing soil disturbance could mask OHWM such as drift deposits or surface cracks. The only indicator of OHWM was the vegetation break between Riverine Wetland and Salt Grass Flats habitats.

#### 4.3.2.2 Iodine Bush Scrub

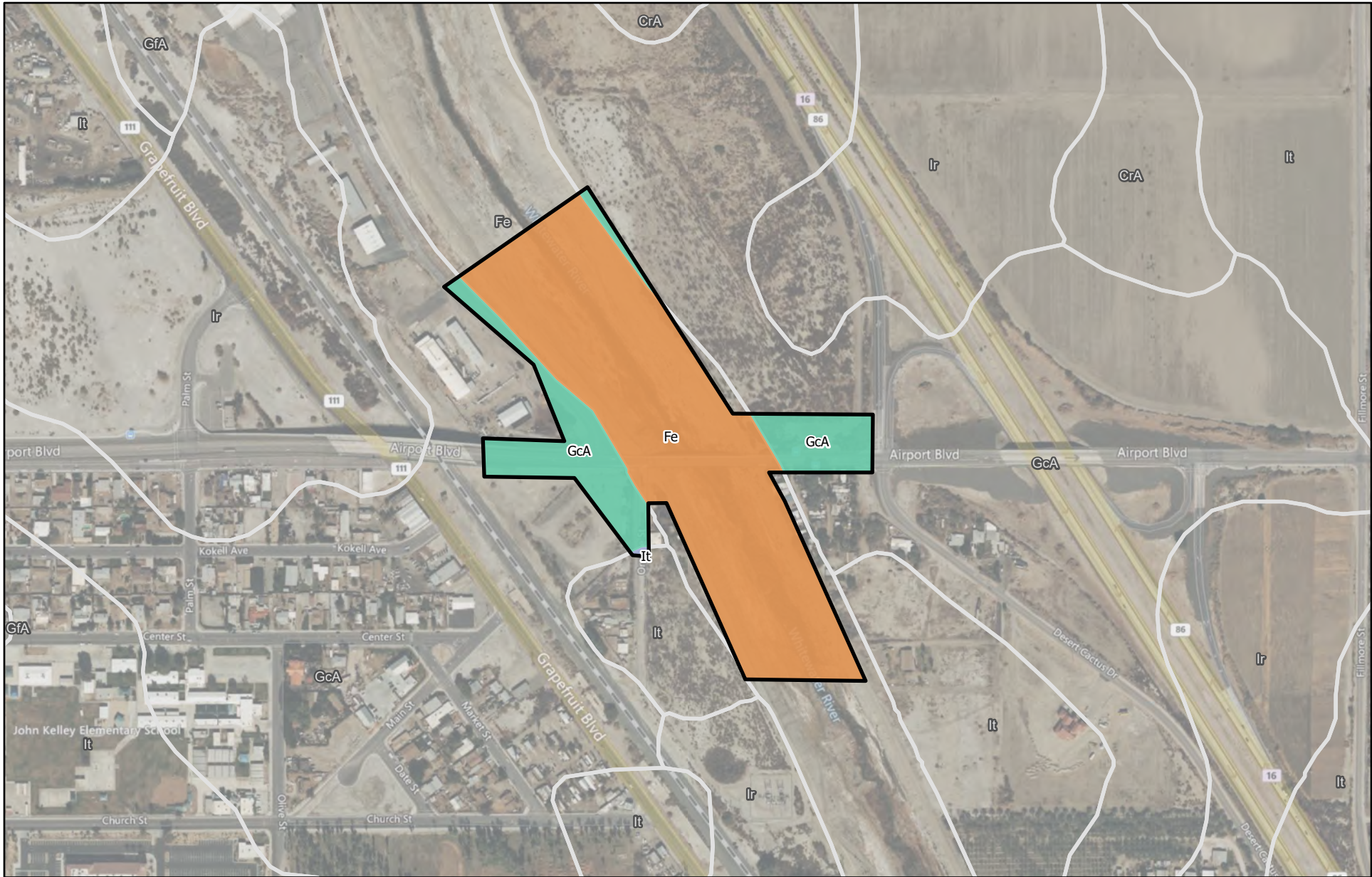
The vegetation community bordering and upslope of the Salt Grass Flats, where not developed, is best characterized as disturbed Iodine Bush Scrub (*Allenrolfea occidentalis* Shrubland Alliance)(MCV2). This area is dominated by Iodine Bush (FACW) and Big Saltbush (*Atriplex lentiformis*) (FAC). Other vegetation occurring in this area included Common Sunflower (FACU), Pricklyburr (UPL), and Tree Tobacco (FAC).



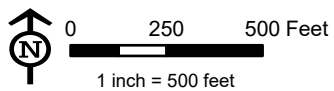
#### *4.3.2.3 Disturbed Areas*

Buffering the project is a combination of paved roads, commercial development, and residential neighborhoods. Commercial and residential landscaping make up most of the vegetation. No evidence of hydric soils or wetland hydrology was observed in disturbed upland areas.





Source: ESRI World Imagery (1/21/2019)



- Project Boundary
  - Surrounding SSURGO Soils
  - GcA - Grangeville loam, slightly saline-alkali, 0 to 1 percent slopes
  - It - Indio very fine sandy loam, wet
  - Fe - Fluents
- SSURGO Soils



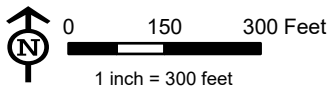
**Figure 3  
Soils Map**

*Airport Blvd Bridge  
Replacement Project*





Source: Bing Maps Hybrid



Surveyor Name: Dennis Peterson  
 Map Date: 9/5/2021  
 Map Author: Coral Fenech  
 Date Revised: N/A  
 Aerial Source: Bing Maps Hybrid  
 Coordinate System:  
 NAD 1983 State Plane Zone 6 (US Feet)

- Project Boundary
- Wetland Riverine
- Sample Point

**Figure 4**  
**Aquatic Resource Delineation**

*Airport Blvd Bridge Replacement Project*



## 5 Conclusion

A segment of the Whitewater River totaling 4.22 acres and 1,970 linear feet was identified within the Project site. The river met all three criteria to be considered a jurisdictional wetland where hydrophytic vegetation, hydric soils, and wetland hydrology were present. Although recent lining of the channel with cement associated with another project has altered plant communities significantly, it is anticipated that the Whitewater River would still be considered a Water of the US in the form of an “other water”. The mapped feature labeled R2UBHx (Whitewater River) is likely to be considered a tributary water, and it drains into the Salton Sea. Precedent exists where the Salton Sea has been considered a TNW.

Aquatic resources delineated in this report are subject to the interpretation and verification of the USACE Los Angeles District Regulatory Division.





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## Appendix A. Arid West Wetland Data Forms

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7/01/2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 1  
 Investigator(s): Dennis Peterson / Jane Gao Section, Township, Range: S15 T6S R8E, T6S R8E  
 Landform (hillslope, terrace, etc.): Riverbed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): LRR 2 Lat: 33.649559 Long: -116.137699 Datum: NAD 83  
 Soil Map Unit Name: FE, Fluvents NWI classification: R2UBHx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>Sample site within excavated WhiteWater River drainage. Heavy equipment trucks visible on site. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of:                      Multiply by: OBL species <u>30</u> x 1 = <u>30</u> FACW species _____ x 2 = _____ FAC species <u>55</u> x 3 = <u>165</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>85</u> (A) <u>195</u> (B) Prevalence Index = B/A = <u>2.29</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)</b>				
1. <u>Tamarix ramosissima</u>	<u>5</u>	<u>YES</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>				
1. <u>Distichlis spicata</u>	<u>50</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Bolbo Schoenus maritimus</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	
3. <u>Typha latifolia</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>	
4. <u>Ludwigia peploides</u>	<u>5</u>	<u>NO</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust <u>5</u>		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: _____				

**SOIL**

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-0.5	7.5 YR	2.5/2 100					Fine sand	
0.5-8	10YR 4/2	98	5YR 4/6	2	RM	PL	Sandy loam	
8-24	2.5Y	3/1 100					Sandy loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

Soil is disturbed from heavy equipment traffic.

**HYDROLOGY**

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 18  
 Saturation Present? Yes  No  Depth (inches): 16  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Anthropogenic disturbance could be hiding other indicators.



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7/01/2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 2  
 Investigator(s): Dennis Peterson/Jon Gao Section, Township, Range: S15, T6S, R9E  
 Landform (hillslope, terrace, etc.): Riverbed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): Q Lat: 33.6425318 Long: -116.137798 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>Sample site within excavated whitewater river drainage. Heavy equipment tracks and disturbance visible on site. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species <u>30</u> x 1 = <u>30</u> FACW species _____ x 2 = _____ FAC species <u>55</u> x 3 = <u>165</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>85</u> (A) <u>195</u> (B) Prevalence Index = B/A = <u>2.29</u>
= Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' radius</u> ) 1. <u>Tamarix ramosissima</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> ) 1. <u>Distichlis spicata</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Bolboschoenus maritimus</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Typha latifolia</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
4. <u>Ludwigia peploides</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____) 1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>20</u>	% Cover of Biotic Crust <u>5</u>			
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: _____				

**SOIL**

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/1	95	5YR 4/6	2	RM	PL	Sandy loam	
2-10	10YR 4/1	100					Sandy loam	
10-24	Gley 12.5N	100					Sandy loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: Heavy equipment tracks in sample area.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 18  
 Saturation Present? Yes  No  Depth (inches): 16  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7/01/2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 3  
 Investigator(s): Dennis Peterson / Jane Gao Section, Township, Range: S15, T6S, R8E  
 Landform (hillslope, terrace, etc.): Riverbed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): 0 Lat: 33.642512 Long: -116.137862 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHX

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>sample point within excavated whitewater river drainage. Heavy equipment tracks visible on site. Less than normal precipitation this year</u>	

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b>
1. <u>Tamarix ramosissima</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>2</u> x 1 = <u>2</u>
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>55</u> x 3 = <u>165</u>
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
				Column Totals: <u>57</u> (A) <u>167</u> (B)
				Prevalence Index = B/A = <u>2.93</u>
<u>Herb Stratum</u> (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0' _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Distichlis spicata</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Suaeda nigra</u>	<u>2</u>	<u>NO</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
= Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>48</u> % Cover of Biotic Crust <u>0</u>				
Remarks: _____				

**SOIL**

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR	5/2 100					Fine Sand	
3-24	10YR	3/4 100%					Fine Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)     |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)    |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)    | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)            | <input type="checkbox"/> Redox Dark Surface (F6)    |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Depressions (F8)     |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Vernal Pools (F9)          |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          |   |   |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks: *No redox or depletion features.*

**HYDROLOGY**

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7)                        | <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-01-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 4  
 Investigator(s): Dennis Peterson/Jane Gao Section, Township, Range: S15, T6S, R8E  
 Landform (hillslope, terrace, etc.): river bed Local relief (concave, convex, none): Concave Slope (%): 1-2 %  
 Subregion (LRR): 0 Lat: 33.647778 Long: -116.137505 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>sample point within excavated whitewater river drainage. Heavy equipment tracks visible in sample area. Less than normal precipitation this year</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Tamarix ramosissima</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: OBL species <u>26</u> x 1 = <u>26</u>
2. _____	_____	_____	_____	FACW species <u>3</u> x 2 = <u>10</u>
3. _____	_____	_____	_____	FAC species <u>40</u> x 3 = <u>120</u>
4. _____	_____	_____	_____	FACU species _____ x 4 = _____
5. _____	_____	_____	_____	UPL species _____ x 5 = _____
= Total Cover				Column Totals: <u>71</u> (A) <u>156</u> (B)
				Prevalence Index = B/A = <u>2.2</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Tamarix ramosissima</u>	<u>35</u>	<u>YES</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Bolboschoenus maritimus</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <u>Allenrolfea occidentalis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <u>Typha latifolia</u>	<u>3</u>	<u>NO</u>	<u>OBL</u>	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. <u>Ludwigia peploides</u>	<u>3</u>	<u>NO</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>66</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>34</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

Remarks: \_\_\_\_\_

**SOIL**

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2.5	2.5Y 5/1	100					SL	
2.5-23	10YR 2/1	100					SL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

Decomposition smell present, but not quite the strong H<sub>2</sub>S smell.

**HYDROLOGY**

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)   | <input checked="" type="checkbox"/> Water Marks (B1) (Riverine)       |
| <input type="checkbox"/> High Water Table (A2)                     | <input checked="" type="checkbox"/> Biotic Crust (B12)                            | <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                              | <input type="checkbox"/> Drift Deposits (B3) (Riverine)               |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                               | <input type="checkbox"/> Drainage Patterns (B10)                      |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)                  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                            | <input type="checkbox"/> Crayfish Burrows (C8)                        |
| <input checked="" type="checkbox"/> Surface Soil Cracks (B6)       | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)               | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7)                                   | <input type="checkbox"/> Shallow Aquitard (D3)                        |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 | <input type="checkbox"/> Other (Explain in Remarks)                               | <input type="checkbox"/> FAC-Neutral Test (D5)                        |

Field Observations:

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 19  
 Saturation Present? Yes  No  Depth (inches): 1.8  
 (includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Total soil disturbed lots of redox color in treadmarks.



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-01-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 5  
 Investigator(s): Dennis Peterson / Jane GAO Section, Township, Range: S15, T6S, R8E  
 Landform (hillslope, terrace, etc.): river bed Local relief (concave, convex, none): concave Slope (%): 1-2%  
 Subregion (LRR): Q Lat: 33.642616 Long: -116.137078 Datum: NAD 83  
 Soil Map Unit Name: Fe Fluvents NWI classification: R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <u>sample site within excavated whitewater river drainage. Heavy equipment tracks visible on site. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of:                      Multiply by: OBL species <u>4</u> x 1 = <u>4</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>32</u> x 3 = <u>96</u> FACU species    _____                      x 4 = _____ UPL species     _____                      x 5 = _____ Column Totals: <u>39</u> (A) <u>106</u> (B) Prevalence Index = B/A = <u>2.7</u>
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)</b>				
1. <u>Tamarix ramosissima</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>				
1. <u>tamarix ramosissima</u>	<u>12</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Suaeda nigra</u>	<u>4</u>	<u>YES</u>	<u>OBL</u>	
3. <u>Allenrolfea occidentalis</u>	<u>3</u>	<u>NO</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>81</u>		% Cover of Biotic Crust _____		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
Remarks: _____				

**SOIL**

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2.5	2.5Y	5/1	100				Fine Sand	
2.5-23	10YR	3/4	100				Fine Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-01-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 6  
 Investigator(s): Dennis Peterson/Jane Gao Section, Township, Range: S15, T6S, R8E  
 Landform (hillslope, terrace, etc.): river bed Local relief (concave, convex, none): concave Slope (%): 1-2%  
 Subregion (LRR): 0 Lat: 33.641817 Long: -116.137091 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>sample point within excavated whitewater river drainage. Heavy equipment tracks visible. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix exigua</u>	<u>3</u>	<u>YES</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Salix gooddingii</u>	<u>2</u>	<u>YES</u>	<u>FACW</u>	
3. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
4. _____				
<u>5</u> = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>41</u> x 3 = <u>123</u> FACU species      _____      x 4 = _____ UPL species      _____      x 5 = _____ Column Totals: <u>81</u> (A) <u>178</u> (B)  Prevalence Index = B/A = <u>2.2</u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>76</u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Herb Stratum (Plot size: <u>5' radius</u> )				
1. <u>Distichlis spicata</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Balboschoenus maritimus</u>	<u>25</u>	<u>YES</u>	<u>OBL</u>	
3. <u>Phragmites australis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
4. <u>Tamarix ramosissima</u>	<u>1</u>	<u>NO</u>	<u>FAC</u>	
5. _____				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				
7. _____				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8. _____				
<u>76</u> = Total Cover				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: _____)				
1. _____				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____				
<u>24</u> = Total Cover				_____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
% Bare Ground in Herb Stratum <u>24</u> % Cover of Biotic Crust _____				

Remarks: \_\_\_\_\_

**SOIL**

Sampling Point: 6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 4/2	100					SL	Some redox at pos < 2%
5-6	Gley 12.5/6	100					SL	
6-8	10YR 4/2	100					SL	
8-22	2.5Y 2.5/1	100					SL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input checked="" type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): 17

Saturation Present? Yes  No  Depth (inches): 16

(includes capillary fringe)

Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-01-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 7  
 Investigator(s): Dennis Peterson/Jane Gao Section, Township, Range: S15, T6S, R8E  
 Landform (hillslope, terrace, etc.): river bed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): 0 Lat: 33.641804 Long: -116.137121 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHX

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <u>Sample point within excavated drainage for Whitewater river. Heavy equipment tracks visible. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>93</u> x 3 = <u>189</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>93</u> (A) <u>189</u> (B) Prevalence Index = B/A = <u>3</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>				
1. <u>Distichlis spicata</u>	<u>90</u>	<u>YES</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Tamarix ramosissima</u>	<u>3</u>	<u>NO</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>93</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks: _____				



**SOIL**

Sampling Point: 7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 4/2	100					Fine Sand	
12-20	12.5Y 2.5/1	100					Fine Sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-08-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 8  
 Investigator(s): Dennis Peterson Section, Township, Range: S15, T6S, R9E  
 Landform (hillslope, terrace, etc.): riverbed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): 0 Lat: 33.641202 Long: -116.136416 Datum: NAD 83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>Sample point within excavated whitewater river drainage. No signs of recent disturbance at sample point. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix gooddingii</u>	<u>20</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
4. _____				
<u>20</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>110</u> x 2 = <u>220</u>
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: <u>110</u> (A) <u>220</u> (B)
				Prevalence Index = B/A = <u>2</u>
Herb Stratum (Plot size: <u>5' radius</u> )				Hydrophytic Vegetation Indicators:
1. <u>Phragmites australis</u>	<u>90</u>	<u>YES</u>	<u>FACW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. _____				____ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks: Well defined bank ~~at~~ creates sharp vegetation break.

**SOIL**

Sampling Point: 8

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 4/2	100					SL-Loamy Muck	Saturated slightly mucky
1-24	10YR 2/1	100					SL	Saturated

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input checked="" type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_  
 Hydric Soil Present? Yes  No

Remarks: Saturated at surface. Water table at 4"

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): 4  
 Saturation Present? (includes capillary fringe) Yes  No  Depth (inches): 0  
 Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 \_\_\_\_\_  
 Remarks:  
 \_\_\_\_\_

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: 1245-20 Caltrans City/County: Thermal/Riverside Sampling Date: 7-08-2021  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 9  
 Investigator(s): Dennis Peterson Section, Township, Range: S16, T6S, R8E  
 Landform (hillslope, terrace, etc.): river bed Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): Q Lat: 33.641224 Long: -116.136388 Datum: NAD83  
 Soil Map Unit Name: Fe, Fluvents NWI classification: R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <u>Sample point within excavated whitewater river drainage. No recent disturbance at sample point. Less than normal precipitation this year.</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
4. _____	_____	_____	_____	
= Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)</b>				
1. <u>Tamarix ramosissima</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>30</u> x 4 = <u>320</u> UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>380</u> (B) Prevalence Index = B/A = <u>3.8</u>
2. <u>Atriplex lentiformes</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>				
1. <u>Cynodon dactylon</u>	<u>80</u>	<u>Yes</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Distichlis spicata</u>	<u>10</u>	<u>NO</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
= Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust _____		

Remarks: \_\_\_\_\_



**SOIL**

Sampling Point: 9

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-24	10 YR 4/3	100					Fine Sand	NO Features

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Saturation Present? (includes capillary fringe) Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_

Wetland Hydrology Present? Yes \_\_\_\_\_ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





## Appendix B. Representative Site Photographs



Photo 1. The common reed, salt grass, and salt cedar scrub plant community within the active channel underneath the Airport Bridge Blvd.



Photo 2. The common reed, salt grass, and salt cedar scrub plant community within the active channel underneath the Airport Bridge Blvd.



Photo 3. The common reed, salt grass, and salt cedar scrub plant community within the active channel facing the Airport Blvd Bridge.



Photo 4. The salt cedar scrub plant community within the active channel facing the Airport Blvd Bridge.





Photo 5. The willow salt cedar scrub plant community between SR-86 and SR-111 in the northern portion of the project.



Photo 6. The salt cedar scrub plant community within the active channel of Whitewater River with an overview of the Airport Blvd Bridge.





Photo 7. The common cattail and willow scrub plant community south of the Airport Bridge Blvd.



Photo 8. Looking at the salt grass scrub plant community south of the Airport Bridge Blvd.





*Photo 9. Looking at the access route with an overview of the scrub plant community.*



*Photo 10. Looking at the access route with an overview of the scrub plant community.*





## Appendix C. NRCS Custom Soil Resource Report

Established Series  
Rev. JLL/GRB  
09/2006

## FE SERIES

The Fe series consists of very deep, somewhat poorly drained, very slowly permeable soils on alluvial fans in valleys. They formed in clayey sediments that weathered from igneous rocks and limestone. Near the type location, the mean annual precipitation is about 35 inches and the mean annual temperature is about 77 degrees F. Slopes range from 0 to 2 percent.

**TAXONOMIC CLASS:** Fine, smectitic, isohyperthermic Sodic Haplusterts

**TYPICAL PEDON:** Fe clay - native grass. (Colors are for moist soil unless otherwise stated.)

**Ap--**0 to 7 inches; dark reddish brown (5YR 3/2) clay; moderate fine angular blocky parting to moderate fine granular structure; very hard; firm; moderately sticky; moderately plastic; common fine roots; slightly effervescent; moderately alkaline; clear wavy boundary.

**A--**7 to 17 inches; dark reddish brown (5YR 3/3) clay; moderate medium angular blocky structure; very hard; extremely firm; moderately sticky, moderately plastic; common fine roots along ped faces; many pressure faces on surfaces of peds; about 2 percent, by volume, pebbles; strongly effervescent; strongly alkaline; clear smooth boundary. (Combined thickness of the A and Ap horizons ranges from 11 to 20 inches.)

**Bssz1--**17 to 28 inches; dark reddish brown (5YR 3/3) clay; moderate medium angular blocky structure; firm; slightly sticky; moderately plastic, few fine roots flattened on primary surfaces; common fine slickensides having distinct polished and grooved surfaces; common fine salt crystals; about 2 percent, by volume, pebbles; strongly effervescent; strongly alkaline; clear smooth boundary.

**Bssz2--**28 to 42 inches; dark reddish gray (5YR 4/2) clay; moderate fine and medium angular blocky structure; firm, slightly sticky, plastic, few fine roots flattened on primary surfaces; common medium slickensides having distinct polished and grooved surfaces; few fine salt crystals; about 2 percent, by volume, pebbles; strongly effervescent; strongly alkaline; diffuse wavy boundary. (Combined thickness of the Bssz horizons ranges from 16 to 32 inches.)

**Bss--**42 to 56 inches; dark reddish gray (5YR 4/2) clay; moderate fine and medium angular blocky structure; firm; slightly sticky, plastic, about 10 percent, by volume, pebbles; common medium slickensides having distinct polished and grooved surfaces; strongly effervescent; strongly alkaline.

**TYPE LOCATION:** Suroeste SCD, Lajas Valley Area, Puerto Rico. Approximately 4.3 miles south of the city of Sabana Grande from the intersection of P.R. Hwy 102 and P.R. Hwy 121; approximately 2.1 miles southwest from the intersection of P.R. Hwy 2 and P.R. Hwy 117; about 1,000 feet west of dirt road (Municipality limits boundary between Lajas and Guanica) in hayfield. Sabana Grande topographic quadrangle; lat. 18 degrees 01 minutes 04 seconds N.; long. 66 degrees 57 minutes 46 seconds W. PRD 1940.

**RANGE IN CHARACTERISTICS:** Solum thickness is more than 60 inches. Content of pebbles is less than 15 percent, by volume. Reaction is moderately alkaline to strongly alkaline throughout. Depth to moderate salinity ranges from 5 to 8 inches.

The A or Ap horizon has hue of 5YR to 10YR, value of 2 or 3, and chroma of 2 or 3. Texture is clay.

The Bss and Bssz horizons have hue of 5YR or 7.5YR, value of 3 through 5, and chroma of 2 through 4. The Bssz horizons are moderately saline and the ESP ranges from 25 to 40. Texture is clay.

**COMPETING SERIES:** [Hogensborg](#) soils are in the same family. The well drained Hogensborg soils are on similar positions and have more sodium within 40 inches of the surface.

**GEOGRAPHIC SETTING:** Fe soils are on alluvial fans in valleys. They formed in clayey sediments that weathered from igneous rocks and limestone. Slopes range from 0 to 2 percent. The climate is tropical semiarid. The average annual precipitation ranges from 32 to 38 inches and the average annual temperature ranges from 76 to 78 degrees F.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These include [Aguirre](#), [Cartagena](#), [Fraternidad](#), and [Guanica](#) soils. The poorly drained Aguirre soils are on lower positions and have more clay in the subsoil. The moderately well drained Fraternidad soils are on similar positions and are nonsaline. Cartagena soils are on similar positions and have mixed mineralogy. Guanica soils are on lower positions, are non saline, have more clay in the control section, and have masses of calcium carbonate below a depth of 32 inches.

**DRAINAGE AND PERMEABILITY:** Somewhat poorly drained; very slow permeability.

**USE AND VEGETATION:** Most areas of Fe soil are used for pasture. Some small areas are used for sugarcane. The vegetation consists of Angletongrass, Paraguita grasses, Rayo, Mesquite, weeds, salt-tolerant plants, and other native and introduced species.

**DISTRIBUTION AND EXTENT:** Coastal plains of southern Puerto Rico. This soil is of small extent.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Raleigh, North Carolina.

**SERIES ESTABLISHED:** Puerto Rico 1936.

**REMARKS:** Diagnostic horizons and features recognized in this pedon:

Mollic epipedon the zone from 0 to 28 inches. (Ap, A, and Bssz1 horizons)

Vertic feature - Slickensides from 17 to 56 inches (Bssz1, Bssz2, and Bss horizons).

Sodic feature the zone from 17 to 42 inches (Bssz1 and Bssz2 horizons).

**ADDITIONAL DATA:** Characterization sample - S61PR121-001. Additional samples - S61PR-14-1, S61PR-14-2, and S89PR-079-001. Samples by NSSL, Lincoln, NE.

Fe soils are in MLRA 273.

Established Series  
Rev. MSJ/YHH  
04/2009

## GILMAN SERIES

The Gilman series consists of very deep, well drained soils that formed in stratified stream alluvium. Gilman soils are on flood plains and alluvial fans and have slopes of 0 to 3 percent. The mean annual precipitation is about 7 inches and the mean annual air temperature is about 71 degrees F.

**TAXONOMIC CLASS:** Coarse-loamy, mixed, superactive, calcareous, hyperthermic Typic Torrifuvents

**TYPICAL PEDON:** Gilman loam - cultivated. (Colors are for dry soil unless otherwise noted.)

**Ap--**0 to 13 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few fine and medium roots; few fine tubular and common fine irregular pores; common fine and very fine mica flakes; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (6 to 18 inches thick)

**C1--**13 to 28 inches; pale brown (10YR 6/3) stratified very fine sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and slightly plastic; common fine and few medium roots; few fine tubular and common fine irregular pores; common to many fine and very fine mica flakes; few fine gravel; strongly effervescent; moderately alkaline (pH 8.0); gradual wavy boundary. (8 to 40 inches)

**C2--**28 to 60 inches; brown (10YR 5/3) stratified very fine sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and slightly plastic; few fine roots; few fine tubular and common fine and very fine irregular pores; common fine and very fine mica flakes; few fine gravel; strongly effervescent; moderately alkaline (pH 8.2).

**TYPE LOCATION:** Maricopa County, Arizona; 2,500 feet south and 1,270 feet east of the northwest corner of section 10, T. 2 S., R. 7 E. Latitude of 33 degrees, 16 minutes, 14 seconds N., Longitude of 111 degrees, 37 minutes, 50 seconds W., NAD 83.

### RANGE IN CHARACTERISTICS:

Soil moisture - Intermittently moist in some part of the soil moisture control section during July-September and December-February. Driest during May and June. Typic aridic soil moisture regime.

Rock fragments - Less than 35 percent gravel

Reaction - Neutral to very strongly alkaline

**Salinity-** Nonsaline to strongly saline

**SAR-** Usually is less than 4, but ranges up to 15 in some pedons

A horizon

Hue: 10YR, 7.5YR

Value: 4 through 7 dry, 3, 4, 5 or 6 moist

Chroma: 2, 3, 4 or 6 dry, 2, 3, 4 or 5 moist

Texture: loamy sand to clay

Organic matter: less than 1 percent; decreases irregularly with depth  
Calcium Carbonate: noneffervescent to strongly effervescent

C horizon

Hue: 10YR, 7.5YR

Value: 3, 4, 5, 6 or 7 dry, 3, 4, 5 or 6 moist

Chroma: 2, 3, 4 or 6 dry, 2 through 6 moist

Texture: loam, very fine sandy loam, silt loam; some have minor strata of finer or coarser textures.

Calcium Carbonate: slightly to violently effervescent; disseminated or mycelia-like filaments.

Buried horizons: buried argillic horizons occur below 40 inches in some pedons

**COMPETING SERIES:** These are the [Antho](#) (AZ) and [Mariposa](#) (AZ) series. Antho soils have moderately coarse textured (sandy loam and fine sandy loam) C horizons. Mariposa soils are underlain by sand at 20 to 40 inches.

**GEOGRAPHIC SETTING:** The Gilman soils are on flood plains and alluvial fans and have slopes of 0 to 3 percent. Elevations are 75 to 2500 feet. The soil formed in stratified stream alluvium from mixed sources. The mean annual precipitation is 2 to 10 inches. Mean annual air temperature is 70 to 76 degrees F. Frost-free period is about 240 to 350 days.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the competing [Antho](#) soils and the similar [Carrizo](#), [Glenbar](#), [Mohall](#), [Pimer](#) and [Vint](#) soils. Carrizo soils are skeletal. Glenbar soils are fine-silty. Mohall soils have argillic horizons. Pimer soils are fine-silty and have more than 1 percent organic matter. Vint soils are sandy.

**DRAINAGE AND PERMEABILITY:** Well drained; slow runoff; moderate permeability.

**USE AND VEGETATION:** Used for livestock grazing and irrigated cropland. Under cultivation, Gilman soils are used for growing alfalfa, cotton, grains, sugar beets and truck crops such as melons, lettuce, onion, carrots, broccoli and potatoes. Native vegetation is mesquite, catclaw, creosotebush, arrowweed and saltbush. Cottonwoods, willows and salt cedar grow in open areas.

**DISTRIBUTION AND EXTENT:** Southern Arizona. Gilman soils are extensive. Total extent is about 409,000 acres. MLRA is 40.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** Phoenix, Arizona

**SERIES ESTABLISHED:** Gila River Project, Soil Conservation Service, Arizona; 1936.

**REMARKS:** Diagnostic horizons and features recognized in this pedon are:

Entisol feature - the absence of diagnostic subsurface horizons

Classified according to Soil Taxonomy, Second Edition, 1999; Keys to Soil Taxonomy, Tenth Edition, 2006.

Revised for the correlation of AZ661, 01/2009, WWJ

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National Cooperative Soil Survey  
U.S.A.



LOCATION INDIO

CA+AZ

Established Series  
Rev. AAK/LAB/PDC  
04/2015

## INDIO SERIES

The Indio series consists of very deep, well or moderately well drained soils formed in alluvium derived from mixed rock sources. Indio soils are on alluvial fans, lacustrine basins and flood plains and have slopes of 0 to 3 percent. The mean annual precipitation is about 4 inches and the mean annual air temperature is about 72 degrees F.

**TAXONOMIC CLASS:** Coarse-silty, mixed, superactive, calcareous, hyperthermic Typic Torrifuvents

**TYPICAL PEDON:** Indio very fine sandy loam - cultivated; on a less than 1 percent slope at an elevation of about 110 feet. (Colors are for dry soil unless otherwise noted).

**Ap**--0 to 10 inches; light brownish gray (2.5Y 6/2) very fine sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common fine roots; few small fresh water shells and fragments of shells; micaceous; strongly effervescent, disseminated calcium carbonate; moderately alkaline (pH 8.2); clear smooth boundary. (6 to 12 inches thick)

**C**--10 to 60 inches; light brownish gray (2.5Y 6/2) stratified very fine sandy loam and silt loam; massive and weak thick plates; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; few small fresh water shells and fragments of shells; micaceous; strongly effervescent, disseminated calcium carbonate; moderately alkaline (pH 8.2). (More than 30 inches thick)

**TYPE LOCATION:** Riverside County, California; about 100 feet east and 50 feet south of the north 1/4 corner of section 30, T.6 S., R.8 E.

### **RANGE IN CHARACTERISTICS:**

Soil moisture - Intermittently moist in some part of the soil moisture control section during December - February and July - September. Driest during May and June. Typic aridic soil moisture regime.

Soil temperature - 72 to 76 degrees F.

Organic matter - less than 1 percent in the upper 10 inches and decreases irregularly with depth

A, AC, Ap horizons

Hue: 7.5YR, 10YR, 2.5Y

Value: 5 through 7 dry, 3 through 5 moist

Chroma: 2 through 6, dry or moist

Texture: very fine sandy loam, silt loam, loam, fine sandy loam, sandy loam, silty clay loam, clay loam

C horizon

Hue: 7.5YR, 10YR, 2.5YR

Value: 5 through 7 dry, 3 through 5 moist

Chroma: 2 through 6, dry or moist

Texture: stratified very fine sandy loam, loam, silt loam, silt (less than 18 percent clay and less than 15 percent fine and coarser sand)

Stratification: strata of loamy fine sand, sandy loam, silt loam, silt, silty clay loam, clay, silty clay

Rock fragments: less than 3 percent gravel and/or few small shell fragments

Reaction: moderately to very strongly alkaline

Calcium carbonate: disseminated throughout

Salinity: 0 to 51 dS/m

Sodium Adsorption Ratio: 0 to 523

**COMPETING SERIES:** There are no competing series.

**GEOGRAPHIC SETTING:** Indio soils are on lacustrine basins, alluvial fans and floodplains at elevations ranging from about 1400 feet above sea level to 230 feet below sea level. Slopes are 0 to 3 percent except for a few low banks next to stream channels. The soils formed in young calcareous, silty mixed alluvium. The mean annual precipitation is 3 to 10 inches. Summer storms are infrequent, erratic, and may be violent, and winter rains are infrequent and gentle. The average January temperature is about 50 degrees F., the average July temperature is about 90 degrees F., the mean annual air temperature is about 70 to 74 degrees F. The frost-free period is about 240 to 365 days.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the [Coachella](#), [Holtville](#), [Imperial](#), and [Rositas](#) soils. Holtville soils have silty clay or clay texture in the upper part of the control section. Imperial soils are dominantly silty clay. Rositas and Coachella soils are sandy.

**DRAINAGE AND PERMEABILITY:** Indio soils are well or moderately well drained. Some irrigated areas with a water table have tile drains to maintain water below depths of 3 to 5 feet and to remove soluble salts. Runoff is slow. Permeability is moderate.

**USE AND VEGETATION:** Used for irrigated cropland and livestock grazing. Common crops are cotton, barley, grapes, citrus, dates, and other crops. In other areas, the present vegetation is shadscale, bursage, arrowweed, and other plants. Such areas provide ephemeral grazing in unusually wet years.

**DISTRIBUTION AND EXTENT:** Southeastern California and southern Arizona. Indio soils are moderately extensive. MLRA is 30 or 31 and 40 in hyperthermic areas used for irrigated cropland.

**MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE:** PHOENIX, ARIZONA

**SERIES ESTABLISHED:** Riverside County, California; Coachella Valley; 1923. The name is from the town of Indio.

**REMARKS:** The activity class was added to the classification in January of 2003. Competing series were not checked at that time. - ET

Diagnostic horizons and features recognized in this pedon are:

Entisol feature - The absence of diagnostic subsurface horizons

Responsibility for this series was transferred from Davis to Phoenix 4/2015. The last revision to the series was 1/2003. ET

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## Appendix D. List of Plant Species Observed

Scientific Name	Common Name	Wetland Indicator Status*
<i>Tamarix ramosissima</i>	Salt cedar	FAC
<i>Bolboschoenus maritimus</i>	Alkali bulrush	OBL
<i>Typha latifolia</i>	Broadleaf cattail	OBL
<i>Ludwigia peploides</i>	Floating primrose	OBL
<i>Suaeda nigra</i>	Bush seepweed	OBL
<i>Allenrolfea occidentalis</i>	Iodinebush	FACW
<i>Salix exigua</i>	Sandbar willow	FACW
<i>Salix gooddingii</i>	Gooddings black willow	FACW
<i>Distichlis spicata</i>	Saltgrass	FAC
<i>Phragmites australis</i>	Common reed	FACW
<i>Cynodon dactylon</i>	Bermuda grass	FACU
<i>Atriplex lentiformis</i>	Quail bush	FAC
<i>Sesbania herbacea</i>	Bigpod Sesbania	FACW
<i>Persicaria lapathifolia</i>	Common Knotweed	FACW
<i>Xanthium strumarium</i>	Rough Cocklebur	FAC
<i>Sesuvium verrucosum</i>	Verrucose Seapurslane	FACW
<i>Datura innoxia</i>	Pricklyburr	UPL
<i>Helianthus annuus</i>	Common sunflower	FACU
<i>Nicotiana glauca</i>	Tree tobacco	FAC
<i>Populus fremontii</i>	Fremont Cottonwood	FAC
<i>Washingtonia robusta</i>	Mexican fan palm	FACW

\*Definitions:

- FAC – Facultative
- FACU – Facultative Upland
- FACW – Facultative Wetland
- UPL – Obligate Upland
- OBL – Obligate Wetland
- NL – Not Listed



## Appendix E. ORM Upload Spreadsheet



Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
RPW	California	R2	RIVERINE	Linear	3010	FOOT	TNW	33.64233400	#####	Whitewater River
				Area	3.96	ACRE				

**Appendix E – Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.**

**Table E – 1: Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area**

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
<b>ANIMAL SPECIES</b>						
burrowing owl	<i>Athene cunicularia</i>	Fed: CA: CVMSHCP:	None SSC Covered	Common yearlong resident of southern California. Prefers open, annual, or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Requires fossorial burrows for roosting and nesting surrounded by relatively short vegetation and open habitat for foraging and watching for predators. Also known to occupy man-made structures including drainpipes, debris piles, and development pads.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
ferruginous hawk	<i>Buteo regalis</i>	Fed: CA: CVMSHCP:	None WL Not Covered	Fairly common winter resident of southern California frequently seen in grassland and scrub habitats in foothill areas. Typically present in California from September through May. Requires large areas of treeless grasslands with sparse shrub cover for foraging. Does not breed in California.	A	Marginally suitable foraging habitat present in disturbed areas along the margins of the BSA. Species does not nest in California, therefore, it was determined that “No Effect” to the species will occur.
monarch butterfly	<i>Danaus plexippus</i>	Fed: CA: CVMSHCP:	FC S2S3 Not Covered	Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico. Roost located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
southwestern willow flycatcher	<i>Empidonax tailii extimus</i>	Fed: CA: CVMSHCP:	FE SE Covered	Uncommon summer resident of southern California. Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water or are at least moist.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
western mastiff bat	<i>Eumops perotis californicus</i>	Fed: CA: CVMSHCP:	None SSC Not Covered	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	A	There is no suitable roosting habitat (i.e., cliffs, caves, bridges) within or adjacent to the BSA.
prairie falcon	<i>Falco mexicanus</i>	Fed: CA: CVMSHCP:	None WL Not Covered	Uncommon permanent resident that ranges from southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada. Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Mostly absent from northern coastal fog belt. Not found in upper elevations of Sierra Nevada. Breeding sites located on cliffs, but forages far afield.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur.
desert tortoise	<i>Gopherus agassizii</i>	Fed: CA: CVMSHCP:	FT ST Covered	Occurs in desert scrub, desert wash, and Joshua tree habitats with friable, sandy, well-drained soils for nest and burrow construction. Highest densities occur in creosote bush scrub with extensive annual wildflower blooms and succulents with little to no non-native plant species.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur.
western yellow bat	<i>Lasiurus xanthinus</i>	Fed: CA: CVMSHCP:	None SSC Covered	Uncommon in California, known only in Los Angeles and San Bernardino Counties. Occurs in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Prefers to roost and feed in, and near, palm oases and riparian habitats.	A	There is no suitable roosting habitat (i.e., palm trees) within or adjacent to the BSA.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
Palm Springs pocket mouse	<i>Perognathus longimembris bangsi</i>	Fed: CA: CVMSHCP:	None SCC Covered	Species occurs only in restricted portions of the Coachella Valley. Inhabits flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils (often windblown) of desert wash, Sonoran desert scrub communities with preference to creosote dominated desert scrub. Species is unlikely to utilize areas with compacted, stony, and cobbly soils, in saltbush dominated communities, or in areas of human disturbance. Hibernation is believed to occur below ground from October-March.	A	Project site contains desert scrub dominated by iodine bush but lacks creosote dominated desert scrub communities or windblown sandy soils; habitat unsuitable for Palm Springs pocket mouse. The nearest CNDDDB occurrence is greater than 5 miles from the project. Therefore, it was determined that "No Effect" to the species will occur.
Flat-tailed horned lizard	<i>Phrynosoma mcallii</i>	Fed: CA: CVMSHCP:	None SCC Not Covered	Species inhabits desert scrub, desert wash, succulent shrub, and alkali scrub habitats. Requires fine sands for burrowing, shrubs or grass for vegetative cover, relatively flat topography and an adequate source of ants for food; species is an ant specialist. Hibernation occurs as early as October and can extend to March, but may emerge in January or February. Breeds in early spring and may produce multiple clutches within a breeding season; young appear in July through September.	HP	Project site contains desert scrub habitat with relatively flat topography and fine sandy soils.. The nearest CNDDDB occurrences are presumed extant but are greater than 5 miles from the project location. Therefore, it was determined that "No Effect" to the species will occur.
black-tailed gnatcatcher	<i>Polioptila melanura</i>	Fed: CA: CVMSHCP:	None WL Not Covered	In Mojave, Great Basin, Colorado, and Sonoran Desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by creosote bush and saltbush with scattered bursage, burroweed, ocotillo, saguaro, barrel cactus, prickly pear cactus and cholla.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur.
vermillion flycatcher	<i>Pyrocephalus rubinus</i>	Fed: CA: CVMSHCP:	None SSC Not Covered	Occurs in a variety of open habitats including open woodland, clearings, desert scrub, savannah, agricultural	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No



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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
					Effect” to the species will occur.
Yuma Ridgway's rail	<i>Rallus obsoletus yumanensis</i>	Fed: CA: CVMSHCP:	FE ST Covered	Nests in freshwater marshes. Prefers stands of cattails and tules dissected by narrow channels of flowing water.	A No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
American badger	<i>Taxidea taxus</i>	Fed: CA: CVMSHCP:	None SCC Not Covered	Prefers treeless, dry, open areas within most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Also found in forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows up to 12,000 feet elevation. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse overstory cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons.	HP The project site contains desert scrub habitat with friable sandy soils adjacent to large undeveloped areas to the north and east of the project site. However, no burrows were observed during surveys conducted in June and July, 2021. The lack of burrow suggests transient individuals may be seen in the project area but permanent residents are unlikely. Additionally, the project area is within the OHWM of the White Water River and subject to burrow-destroying flooding. Therefore, it was determined that “No Effect” to the species will occur.
Crissal thrasher	<i>Toxostoma crissale</i>	Fed: CA: CVMSHCP:	None SSC Covered	Common yearlong resident in southern California. Occupies arid habitats including desert washes, riparian	A No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No

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Common Name	Scientific Name	Status		General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale
				brush, and mesquite thickets at lower elevations and dense scrub in arroyos at higher elevations. Occurs in areas dominated by mesquite hummocks and thickets with acacias, arrow weed, and in desert saltbush scrub.		Effect” to the species will occur.
LeConte’s thrasher	<i>Toxostoma lecontei</i>	Fed: CA: CVMSHCP:	None SCC Covered	An uncommon desert resident inhabiting open desert wash, desert scrub, alkali desert scrub, desert succulent shrub and Joshua tree habitats with scattered desert shrubs and cacti. Often nests in dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground. Breeds January-June.	HP	The site contains desert scrub habitat with dense shrubby areas suitable for this species. The nearest CNDDDB occurrence was documented in 1924 greater than 5 miles from the project location. This species has the potential to be impacted by project activities conducted during the nesting season.
Coachella Valley Fringe-toed lizard	<i>Uma inornata</i>	Fed: CA: CVMSHCP:	FT SE Covered	Sparsely vegetated arid areas with fine wind-blown sand, including dunes, washes, alkali scrub, and flats with sandy hummocks formed around the bases of vegetation. Requires fine, loose, wind-blown sand for burrowing.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
least Bell’s vireo	<i>Vireo bellii pusillus</i>	Fed: CA: CVMSHCP	FE SE Covered	Uncommon summer resident of southern California. Prefers riparian habitat near waterbodies that typically feature a dense, stratified canopy. Species is typically associated with southern willow scrub, cottonwood-willow forest, mule-fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, willow riparian forest, or mesquite in desert regions.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.
Palm Springs round-tailed ground squirrel	<i>Xerospermophilus tereticaudus chlorus</i>	Fed: CA: CVMSHCP:	None SSC Covered	Prefers open, flat, grassy areas in fine-textured, sandy soil. Habitats include mesquite- and creosote-dominated sand dunes, creosote bush scrub, creosote-palo verde, and saltbush/alkali scrub. Substrates include wind-blown	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that “No Effect” to the species will occur.

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
				sand, coarse sand, and packed silt with desert pavement.		
<b>PLANT SPECIES</b>						
chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.1	An annual herb inhabiting sandy soils of chaparral, coastal sage scrub, and desert dune communities. Flowers January-August (256- 5,249 feet).	A	No suitable habitat occurs within or adjacent to the BSA. The project site's elevation is at -132 feet, well below the species lower elevation range; habitat unsuitable for chaparral sand-verbena. The nearest occurrence is greater than 5 miles from the project. Therefore, it was determined that "No Effect" to the species will occur.
singlewhorl burrobush	<i>Ambrosia monogyra</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	A perennial shrub inhabiting sandy soils within chaparral and Sonoran desert scrub communities. Blooms August-November (32-1640 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>cochellae</i>	Fed: CA: CNPS: CVMSHCP:	FE None 1B.2 Covered	Occurs in dunes and sandy flats along disturbed margins of sandy washes and in sandy soils along roadsides adjacent to existing sand dunes. May also occur in sandy substrates in creosote bush scrub. Found at elevations ranging from 130 feet to 2,150 feet above msl. Blooming period is February to May.	A	No suitable habitat occurs within or adjacent to the BSA. Therefore, it was determined that "No Effect" to the species will occur. Habitat within the BSA is generally disturbed and/or comprised of agricultural and residential land uses.
Lancaster milk-vetch	<i>Astragalus preussii</i> var. <i>laxiflorus</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	A perennial herb inhabiting alkaline flats of Chenopod scrub communities. Species is only known to be extant near Lancaster and Edwards Air Force Base. Blooms March –May (2,296-2,329 feet).	A	No suitable habitat occurs within or adjacent to the BSA. The project site's elevation is at -132 feet, well below the species

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
					lower elevation range and is outside the known species occurrence localities; habitat unsuitable for Lancaster milkvetch. The nearest CNDDDB occurrence is more than 70 years old and greater than 5 miles from the project. Therefore, it was determined that “No Effect” to the species will occur.	
gravel milk-vetch	<i>Astragalus sabulonum</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual to perennial herb inhabiting sandy and sometimes gravelly soils of flats, washes and roadsides within desert dune, Mojavean scrub, and Sonoran desert scrub communities. Blooms February – June (-196 -3,051 feet).	A	The project site contains sandy soils within desert scrub habitat potentially suitable for the species. The nearest CNDDDB occurrence is over 100 years old and greater than 5 miles from the project. Surveys conducted during the blooming season on June 18, 2021 did not detect the species. Therefore, it was determined that “No Effect” to the species will occur.
little-leaf elephant tree	<i>Bursera microphylla</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	A perennial tree inhabiting rocky slopes of Sonoran desert scrub communities. Blooms in June (0-2,296 feet).	A	The project site’s elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that “No Effect” to the species will occur.
glandular ditaxis	<i>Ditaxis claryana</i>	Fed: CA:	None None	An annual to perennial herb inhabiting sandy soils of creosote bush scrub, desert	A	No suitable habitat occurs within or adjacent to the

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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
		CNPS: CVMSHCP:	2B.2 Not Covered	wash, Mojavean desert scrub and Sonoran desert scrub communities. Blooms December-March (0-1,525 feet).		BSA. The project site's elevation is at -132 feet, well below the species lower elevation range; The nearest CNDDDB occurrence is greater than 5 miles from the project. Therefore, it was determined that "No Effect" to the species will occur.
Santa Rosa mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>Hallii</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.3 Not Covered	A perennial herb inhabiting desert canyons of pinyon and juniper woodland and Sonoran desert scrub communities. Species is known only from the Santa Rosa Mountains. Blooms May (3,280-6,561 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
slender cottonheads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual herb inhabiting sandy soils of coastal dunes, desert dunes, and Sonoran desert scrub communities. Blooms March-May (-164-1,640 feet).	A	Suitable sandy soils in desert scrub habitat are present at the project site. However, no CNDDDB records are present in the Indio quad; this species was not detected during surveys conducted in June and July of 2021. Therefore, it was determined that "No Effect" to the species will occur.
narrow-leaf sandpaper plant	<i>Petalonyx linearis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	A perennial shrub inhabiting sandy or rocky canyons of Mojavean desert scrub and Sonoran desert scrub communities. Species generally occurs in creosote-bush scrub. Blooms March-May (-82 – 3,658 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.



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Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent <sup>1</sup>	Rationale	
slender-stem bean	<i>Phaseolus filiformis</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.1 Not Covered	An annual herb inhabiting washes of Sonoran desert scrub communities. Blooms April (393-426 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
Cove's cassia	<i>Senna covesii</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	A perennial herb inhabiting dry, sandy desert washes and slopes of desert wash and Sonoran desert scrub communities. Blooms March-April (1,000-3,510 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
jackass-clover	<i>Wislizenia refracta</i> <i>ssp. refracta</i>	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	An annual herb inhabiting sandy washes, roadsides, and alkaline flats of desert dune, Mojavean desert scrub, playas, and Sonoran desert scrub communities. Blooms April-October (295- 3,805 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.
Mecca aster	<i>Xylorhiza cognata</i>	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Covered	A perennial herb inhabiting arid canyons and washes of creosote-bush scrub and Sonoran desert scrub communities. Species is known mostly from Indio Hills and Mecca Hills. Blooms January-June (65-1,312 feet).	A	The project site's elevation is at -132 feet, well below the species lower elevation range. Therefore, it was determined that "No Effect" to the species will occur.

**Appendix F – CVMSHCP Covered Species**

## 3.2 Species and Natural Communities Considered

This section delineates the species and natural communities identified in the Planning Agreement and identifies those now included in the Plan. Species considered but not covered by the Plan, and natural communities not included in the Conservation Areas are also identified. Information on the Covered Species and conserved natural communities that are protected in the Conservation Areas is presented in Sections 9 and 10.

### 3.2.1 Review of Species Identified in the Planning Agreement

The Planning Agreement among the local, state, and federal agencies comprising the Plan Participants that initiated development of the Plan identified 52 species to be considered for inclusion in the Plan and targeted all the natural communities in the Plan Area. As information was gathered through the planning process, the planning team continuously reviewed the list. Other experts on individual species were also consulted. The Covered Species in the Plan are listed in Table 3-1. These are species for which sufficient information existed or was gathered during the planning process to enable the development of Conservation measures.

Table 3-2 lists the species from the Planning Agreement that are not proposed for coverage under the Plan. Generally, the reasons for not covering a species include lack of known locations in the Plan Area or insufficient data to facilitate Conservation planning. Section 3.8 of Appendix I provides additional information on reasons why these species are not proposed for coverage.

**Table 3-1: Species Covered under the Plan**

<p><b><u>Plants</u></b> Mecca aster, <i>Xylorhiza cognata</i><sup>1</sup> Coachella Valley milkvetch, <i>Astragalus lentiginosus</i> var. <i>coachellae</i> (FE) Triple-ribbed milkvetch, <i>Astragalus tricarinatus</i> (FE) Orocopia sage, <i>Salvia greatae</i><sup>1</sup> Little San Bernardino Mountains linanthus, <i>Linanthus maculatus</i> (or <i>Gilia maculata</i>)<sup>1</sup></p> <p><b><u>Invertebrates - Insects</u></b> Coachella Valley giant sand-treader cricket, <i>Macrobaenetes valgum</i> Coachella Valley Jerusalem cricket, <i>Stenopelmatus cahuilensis</i></p> <p><b><u>Fish</u></b> Desert pupfish, <i>Cyprinodon macularius</i> (FE/SE)</p>
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Table 3-1: Species Covered under the Plan (cont.)

**Amphibians**

Arroyo toad, *Bufo californicus* (FE/CSC)

**Reptiles**

Desert tortoise, *Gopherus agassizii* (FT/ST)

Flat-tailed horned lizard, *Phrynosoma mcallii* (CSC)

Coachella Valley fringe-toed lizard, *Uma inornata* (FT/SE)

**Birds**

Yuma clapper rail, *Rallus longirostris yumanensis* (FE/ST/SFP)

California black rail, *Laterallus jamaicensis* (ST/SFP)

Burrowing owl, *Athene cunicularia* (CSC)

Southwestern willow flycatcher, *Empidonax traillii extimus* (SE/FE)

Crissal thrasher, *Toxostoma crissale* (CSC)

Le Conte's thrasher, *Toxostoma lecontei* (CSC)

Least Bell's vireo, *Vireo bellii pusillus* (FE/SE)

Gray vireo, *Vireo vicinior* (CSC)

Yellow warbler, *Dendroica petechia brewsteri* (CSC)

Yellow-breasted chat, *Icteria virens* (CSC)

Summer tanager, *Piranga rubra*<sup>1</sup>

**Mammals**

Southern yellow bat, *Lasiurus ega* or *xanthinus*<sup>1</sup>

Coachella Valley round-tailed ground squirrel, *Spermophilus tereticaudus chlorus* (C/CSC)

Palm Springs pocket mouse, *Perognathus longimembris bangsi* (CSC)

Peninsular bighorn sheep, *Ovis canadensis nelsoni* (FE/ST/SFP)

(Footnotes are explained below.)

The status codes used in the table are identified in the following key, as listed in the *California Natural Diversity Data Base Special Animals List and Special Plants List* from July 2000 (CNDDDB 2000).

Key:	FE	=	Federal Endangered
	FT	=	Federal Threatened
	FC	=	Federal Candidate
	SE	=	State Endangered
	ST	=	State Threatened
	SC	=	State Candidate
	SFP	=	State Fully Protected
	CSC	=	Species of Special Concern (a state list of species that are at risk due to habitat modification or destruction, over-collecting, disease, or other threats)
	CNPS	=	Rare in California

<sup>1</sup> These species have no official status at this time; however, USFWS, CDFG, and the SAC have recommended inclusion of the species because of the likelihood of their being elevated to listing status in the coming years due to their rarity and decline. Note, also, that the Department of the Interior eliminated the category of FC2 subsequent to the adoption of the Planning Agreement.

**Table 3-2: Species Considered but Not Proposed for Coverage under the Plan**

**Plants**

California ditaxis, *Ditaxis californica*  
Cliff spurge, *Euphorbia misera*  
Flat-seeded spurge, *Chamaesyce platysperma*  
Glandular ditaxis, *Ditaxis clariana*  
Robison's monardella, *Monardella robisonii*

**Invertebrates - Insects**

Casey's June beetle, *Dinacoma caseyi*  
Coachella Valley grasshopper, *Spaniacris deserticola*  
Pratt's dark aurora blue butterfly *Euphilotes enoptes cryptorufes*

**Invertebrates - Other**

Morongo desert snail, *Eremarionta morongoana*  
Thousand Palms desert snail, *Eremarionta millepalmarum*

**Amphibians**

California red-legged frog, *Rana aurora draytonii* (FT)  
Desert slender salamander, *Batrachoseps aridus* (FE)  
Lowland leopard frog, *Rana yavapiensis*  
Mountain yellow-legged frog, *Rana muscosa* (FE)

**Reptiles**

California legless lizard, *Anniella pulchra pulchra*  
San Diego horned lizard, *Phrynosoma coronatum blainvillei*

**Mammals**

California leaf-nosed bat, *Macrotus californicus*  
California (Western) mastiff bat, *Eumops perotis californicus*  
Fringed myotis, *Myotis thysanodes*  
Long-eared myotis, *Myotis evotis*  
Long-legged myotis, *Myotis volans*  
Pallid bat, *Antrozous pallidus*  
Pocketed free-tailed bat, *Nyctinomops femorosaccus*  
Townsend's (Western) big-eared bat, *Corynorhinus townsendii pallescens*  
Western small-footed myotis, *Myotis ciliolabrum*  
Yuma myotis, *Myotis yumanensis*

### **3.2.2 Review of Natural Communities Identified in the Planning Agreement**

The Planning Agreement listed 23 natural communities known to occur in the Plan Area. Through the planning process a total of 46 natural communities were identified in the Plan Area. Of these, 27 natural communities provide Habitat for the Covered Species and are the focal point for the establishment of Conservation Areas. The conserved natural communities included in the



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Plan's Conservation Areas are listed in Table 3-3, as named and described in *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), with the addition of five new natural community types developed by the SAC to distinguish better among the blow-sand communities in the Plan Area. Figure 3-1 depicts the natural communities within the Plan Area, as well as developed areas.

**Table 3-3: Natural Communities Included in the Plan**

Active desert dunes
Stabilized and partially stabilized desert dunes
Active desert sand fields
Ephemeral desert sand fields
Stabilized and partially stabilized desert sand fields
Stabilized shielded desert sand fields
Mesquite hummocks
Sonoran creosote bush scrub
Sonoran mixed woody and succulent scrub
Mojave mixed woody scrub
Desert saltbush scrub
Desert sink scrub
Chamise chaparral
Red shank chaparral
Semi-desert chaparral
Interior live oak chaparral
Cismontane alkali marsh
Coastal and valley freshwater marsh
Southern arroyo willow riparian forest
Sonoran cottonwood-willow riparian forest
Mesquite bosque
Desert dry wash woodland
Desert fan palm oasis woodland
Southern sycamore-alder riparian woodland
Arrowweed scrub
Mojavean pinyon and juniper woodland
Peninsular juniper woodland and scrub

The other natural communities are already adequately protected in the Plan Area on public lands outside the Conservation Areas, except for tamarisk scrub, active shielded desert dunes, and Riversidean desert scrub. This existing protection adds to the overall Conservation value of the Plan in protecting watersheds, providing Habitat for large predators, protecting overall biological diversity in the Plan Area, providing buffers for Conservation Areas established under this Plan, and providing areas that could become important to Covered Species under conditions of potential future climatic change. With regard to tamarisk scrub, it is not a "natural" community in that it is dominated by an exotic plant species, i.e. tamarisk. In areas where some tamarisk scrub is included in the Conservation Areas, the intent is to restore it to the appropriate natural community to the maximum extent possible. The natural communities that are not included in the Plan are listed in Table 3-4. Additional information about these natural communities and why they were not included in the Plan is found in Section 3.9 of Appendix I.

***Table 3-4: Natural Communities Considered but Not Included in the Plan***

Tamarisk scrub
Active shielded desert dunes
Riversidean desert scrub
Mojave mixed steppe
Blackbush scrub
Upper Sonoran mixed chaparral
Upper Sonoran manzanita chaparral
Mixed montane chaparral
Northern mixed chaparral
Scrub oak chaparral
Canyon live oak forest
Black oak forest
Coulter pine forest
Bigcone spruce-canyon oak forest
Westside ponderosa pine forest
Sierran mixed coniferous forest
Jeffrey pine forest
Jeffrey pine-fir forest
Southern California subalpine forest

**Appendix G - Section 4.4 of the CVMSHCP**

## ***4.4 Required Avoidance, Minimization, and Mitigation Measures***

This section describes certain avoidance, minimization, and mitigation requirements for Covered Activities within the Conservation Area, in addition to Conservation Area specific measures described in the Conservation Area subsections in Section 4.3. The measures described in this section do not apply to single-family homes, emergency response activities, and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. To assist Permittees with implementation of these measures, CVCC will maintain maps of modeled Habitat and a natural communities map and will provide them to each of the Permittees. CVCC will also maintain a list of Acceptable Biologists who may be used to conduct surveys for specified Covered Species identified in this section. Any Permittee may submit the names of biologists for inclusion in the initial list of Acceptable Biologists. The list shall be updated at least annually. CVCC will develop procedures for individual biologists to submit their name for inclusion on the list. Individuals conducting survey activities for listed endangered or threatened species or species for which a state or federal protocol exists must have the appropriate permit (i.e., in accordance with the federal Endangered Species Act, Section 10(a)(1)(A), or state Endangered Species Act, California Fish and Game Code, Section 2081(a)) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the Wildlife Agencies for review. The Wildlife Agencies shall have thirty (30) days to provide input on the qualifications of any biologists on the list. If the Wildlife Agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

In the event that a survey of a parcel is required pursuant to the MSHCP, it will be conducted by an Acceptable Biologist. The survey shall be conducted in the appropriate season, in accordance with established accepted protocols if they exist. Within one (1) year of Permit issuance, the Wildlife Agencies and the MPA, in consultation with CVCC, shall develop survey protocols for those species for which a protocol is required. CVCC will maintain a list of accepted survey protocols. For those species for which protocols do not exist at the time surveys are needed, the Acceptable Biologist shall use a survey protocol generally accepted by biologists familiar with the species. Survey results shall be documented in both mapped and text form and shall be presented for review by the appropriate Permittee and CVCC. Wildlife Agencies' concurrence or acceptance of the surveys and/or the results contained therein is not required by the MSHCP.

**Biological Corridors.** Specific roads in Conservation Areas, where culverts or undercrossings are required to maintain Biological Corridors, are delineated in the Section 4.3 subsections on individual Conservation Areas.

**Burrowing Owl.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities other than levees, berms, dikes, and similar features that are known to contain burrowing owl burrows. O&M of

roads is not subject to this requirement. For other projects that are subject to CEQA, the Permittees will require burrowing owl surveys in the Conservation Areas using an accepted protocol (as determined by the CVCC in coordination with the Permittees and the Wildlife Agencies). Prior to Development, the construction area and adjacent areas within 500 feet of the Development site, or to the edge of the property if less than 500 feet, will be surveyed by an Acceptable Biologist for burrows that could be used by burrowing owl. If a burrow is located, the biologist will determine if an owl is present in the burrow. If the burrow is determined to be occupied, the burrow will be flagged and a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the burrow. The buffer will be staked and flagged. No Development or O&M activities will be permitted within the buffer until the young are no longer dependent on the burrow.

If the burrow is unoccupied, the burrow will be made inaccessible to owls, and the Covered Activity may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

Within one (1) year of Permit issuance, CVCC will cooperate with County Flood Control, CVWD and IID to conduct an inventory of levees, berms, dikes, and similar features in the Plan Area maintained by those Permittees. Burrowing owl burrow locations will be mapped and each of these Permittees will incorporate the information into its O&M practices to avoid impacts to the burrowing owl to the maximum extent Feasible. CVCC in cooperation with County Flood Control, CVWD, and IID will prepare a manual for maintenance staff, educating them about the burrowing owl and appropriate actions to take when owls are encountered to avoid impacts to the maximum extent Feasible. The manual will be submitted to the Wildlife Agencies for review and comment within two (2) years of Permit issuance. In conjunction with the Monitoring Program, the maps of the burrowing owl locations along the above-described levees, berms, dikes, and similar features will be periodically updated.

**Covered Riparian Bird Species.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. Riparian Habitat here refers to the following natural communities: southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, and southern sycamore-alder riparian woodland in the Cabazon, Stubbe and Cottonwood Canyons,



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Whitewater Canyon, Upper Mission Creek/Big Morongo Canyon, Thousand Palms, Indio Hills Palms, Joshua Tree National Park, Mecca Hills and Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas. Covered Activities, including O&M of facilities and construction of permitted new projects, in riparian Habitat will be conducted to the maximum extent Feasible outside of the March 15 – September 15 nesting season for least Bell's vireo, and the May 1 – September 15 nesting season for southwestern willow flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests are present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird Species are not present, the Covered Activity may proceed.

**Crissal Thrasher.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled crissal thrasher Habitat in the Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, and Coachella Valley Stormwater Channel and Delta Conservation Areas, surveys will be conducted by an Acceptable Biologist prior to the start of construction activities during the nesting season, January 15 – June 15, to determine if active nest sites for this species occur on the construction site and/or within 500 feet of the construction site, or to the edge of the property boundary if less than 500 feet. If nesting crissal thrashers are found, a 500-foot buffer, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction activities will be permitted within the buffer during the breeding season of January 15 – June 15 or until the young have fledged.

**Desert tortoise.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to

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June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the *Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises* and *Guidelines for Handling Desert Tortoises During Construction Projects*, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right-of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

***Inactive Season Protocol.*** This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.
2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the

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- plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.
3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of-way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of-way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the pre-construction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.
  4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.
  5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.
  6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.
  7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.
  8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

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The following terms are established to protect the desert tortoise during utility-related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.
- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist
- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.
- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.
- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.
- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open ended pipeline segments that are welded in place shall be capped during periods of

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construction inactivity to prevent entry by desert tortoises.

- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.
- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.
- Powerlines associated with water development, such as to provide power for pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds, and shall adhere to the electrical distribution protocol which follows.
- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.
- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.
- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.
- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.
- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.
- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities



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shall not be permitted between dusk and dawn in areas not previously graded.

**Active Season Protocol.** This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction activities, as long as a final check for desert tortoises is conducted at the time of construction.
- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep-sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.
- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.
- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

**Disposition of Sick, Injured, or Dead Specimens.** Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained

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veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

**Fluvial Sand Transport.** Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

**Le Conte's Thrasher.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled Le Conte's thrasher Habitat in all the Conservation Areas, during the nesting season, January 15 - June 15, prior to the start of construction activities, surveys will be conducted by an Acceptable Biologist on the construction site and within 500 feet of the construction site, or to the property boundary if less than 500 feet. If nesting Le Conte's thrashers are found, a 500 foot buffer, or to the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction will be permitted within the buffer during the breeding season of January 15 - June 15 or until the young have fledged.

**Mesquite Hummocks and Mesquite Bosque Natural Communities.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. Construction activities in the Cabazon, Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas will avoid mesquite hummocks and mesquite bosque to the maximum extent Feasible.

**Peninsular Bighorn Sheep Habitat.** Completion of Covered Activities in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas will be conducted outside of the January 1 - June 30 lambing season unless otherwise authorized through a Minor Amendment to the Plan with concurrence from the Wildlife Agencies. O&M of Covered Activities, including but not limited to refinishing the inside of water storage tanks, shall be scheduled to avoid the lambing season, but may extend into the January 1 – June 30 period if necessary to complete the activity, upon concurrence with the Wildlife Agencies.

For new projects in the above listed Conservation Areas, no toxic or invasive plant species may be used for landscaping. For existing public infrastructure facilities which have landscaping in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas, the

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Permittees who have such facilities will, with respect to those facilities, develop and implement a plan and schedule to remove or prevent access to oleander and any other plants known to be toxic to Peninsular bighorn sheep. The plan and schedule will be prepared within one (1) year of Permit issuance.

**Triple-ribbed milkvetch.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. It is understood that O&M for infrastructure developed as part of a private development approved in compliance with the MSHCP that is later transferred to a public entity is included as a Covered Activity. For Covered Activities within modeled triple-ribbed milkvetch Habitat in the Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, and Santa Rosa and San Jacinto Mountains Conservation Areas, surveys by an Acceptable Biologist will be required for activities during the growing and flowering period from February 1 - May 15. Any occurrences of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent Feasible. In particular, known occurrences on a map maintained by CVCC shall not be disturbed.

**Palm Springs Pocket Mouse.** To avoid impacts to the Palm Springs pocket mouse and its habitat in the Upper Mission Creek/Big Morongo Canyon and Willow Hole Conservation Areas, Flood Control-related construction activities will comply with the following avoidance and minimization measures.

- **Clearing:** For construction that would involve disturbance to Palm Springs pocket mouse habitat, activity should be phased to the extent feasible and practicable so that suitable habitat islands are no farther than 300 feet apart at any given time to allow pocket mice to disperse between habitat patches across non-suitable habitat (i.e., unvegetated and/or compacted soils). Prior to project construction, a biological monitor familiar with this species should assist construction crews in planning access routes to avoid impacts to occupied habitat as much as feasible (i.e., placement of preferred routes on project plans and incorporation of methods to avoid as much suitable habitat/soil disturbance as possible). Furthermore, during construction activities, the biological monitor will ensure that connected, naturally vegetated areas with sandy soils and typical native vegetation remain intact to the extent feasible and practicable. Finally, construction that involves clearing of habitat should be avoided during the peak breeding season (approximately March to May), and activity should be limited as much as possible during the rest of the breeding season (January to February and June to August).
- **Revegetation:** Clearing of native vegetation (e.g., creosote, rabbitbrush, burrobush, cheesebush) should be followed by revegetation, including natural reestablishment and other means, resulting in habitat types of equal or superior biological value for Palm Springs pocket mouse.
- **Trapping/Holding:** All trapping activity should be conducted in accordance with accepted protocols and by a qualified biologist who possesses a Memorandum of

Understanding with CDFG for live-trapping of heteromyid species in Southern California.

- **Translocation:** Should translocation between distinct population groups be necessary, as determined through the Adaptive Management and Monitoring Program, activity should be conducted by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California. Trapping and subsequent translocation activity should be conducted in accordance with accepted protocols. Translocation programs should be coordinated by or conducted by the CVCC and/or RMOC to determine the appropriate trapping, holding, marking, and handling methods and potential translocation sites.

**Little San Bernardino Mountains Linanthus.** This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. To avoid and minimize impacts to this species as much as possible, the following avoidance and minimization effort shall occur:

- **Salvage:** Salvage of top soil and/or seeds should occur prior to ground disturbance in accordance with Section 6.6.1. Salvage should be conducted by or in cooperation with the CVCC.