2.2. Studies Required

The studies required for the proposed project included an initial field reconnaissance and habitat evaluation for special-status species; a delineation of jurisdictional waters, wetlands, and streambeds; and focused surveys for those special-status species with a reasonable potential to occur in the biological study area, including special-status plants, burrowing owl, Palms Springs round-tailed ground squirrel, Coachella Valley fringed-toed lizard, and listed/sensitive plant species.

The following subsections provide the basis for these studies and the methods used.

2.2.1. Report Terminology

The biological study area (BSA) that was evaluated for biological resources consisted of the proposed project footprint and up to a 300-foot buffer. The exception to this was the study area for the jurisdictional delineation (JD), which utilized up to a 200-foot buffer (JD study area). Since the field work was performed, the project footprint has been modified so that the BSA buffer is less than 300-feet in some areas but still encompasses the entire project impact area. The terms, *project footprint* or *project impact area* (PIA), are defined as the area proposed for direct impact, including permanent and temporary impacts (refer to Figure 3-1). The total area of the proposed PIA coincides with the proposed project.

2.3. Personnel and Survey Dates

This section describes the general biological resources as well as focused studies for rare plants, small mammals, burrowing owl, Coachella Valley fringe-toed lizard, and a delineation of potentially jurisdictional water resources.

2.3.1. Initial Review and Reconnaissance Survey

Prior to the initial site visit, potentially relevant reference literature and natural resource databases were reviewed to determine the potential value of the BSA to biological resources and habitat resources with special-status or resource value. Specific information for the BSA was developed in part through a careful, general field evaluation. Biologists performed field reconnaissance of the BSA in April 2012. This field evaluation determined if any, and what type of, focused evaluations and/or surveys were necessary within the BSA. Representative photographs were taken of the BSA and are provided in Appendix A. Table 2-1 lists survey dates and personnel.

Table 2-1. Dates and Personnel for the Reconnaissance and Focused Habitat Evaluations

Date	Time	Personnel	Weather Conditions
4/23/2012	0715–1145	Zackry West, Phil Richards	77–89 degrees (°) Fahrenheit (F), 6–17 miles per hour (mph) wind, good visibility, clear skies

Natural vegetation communities were mapped during the field reconnaissance and were organized into nine categories following the *California Manual of Vegetation* (Sawyer et al., 2009). For the vegetation mapping presented in this report, the minimum mapping unit was 0.05 acre.

Prior to the first site visit, the California Natural Diversity Database (CNDDB) (CDFW 2012a) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPS 2012) were queried for plants, animals, and natural communities in California that have special regulatory or management status and could potentially occur in the vicinity of the BSA. Specifically, the database searches were conducted for lands occurring on the United States Geological Survey (USGS) 7.5-minute quadrangle map (quadrangle) on which the BSA appears (Cathedral City – 1981; Palm Springs – 1996) and the immediately surrounding quadrangles (La Quinta, Rancho Mirage, Desert Hot Springs, Palm View Peak, Myoma, East Deception Canyon, Seven Palms Valley, Whitewater, San Jacinto Peak, Idyllwild). A complete list of the plant and animal species (including scientific nomenclature, regulatory status, and habitat requirements) and natural communities reviewed for the proposed project is provided in Appendix B. Finally, species were added, as appropriate, based on professional knowledge and experience with prior projects in the vicinity. To ensure the most up-to-date data was obtained, the CNDDB and CNPS queries were rerun in December 2014 (CDFW 2014).

Latin names conform to *The Jepson Manual: Vascular Plants of California*, Second Edition (Baldwin et al. 2012). Common names are drawn from two sources. All common names from the Jepson Manual have been retained, but in many cases the *Jepson Manual* does not provide common names. In those instances, the *USDA PLANTS* website (NRCS 2012a) from the U.S. Department of Agriculture (USDA) is used. For special-status plants, all nomenclature, including both common and scientific, and California Rare Plant Rank (CRPR) conforms to the CNPS online inventory (CNPS 2012).

Habitat evaluations for special-status species and resources were conducted during the reconnaissance survey by biologists familiar with species' habitat requirements. Furthermore, and official USFWS species list was obtained on December 9, 2014 (Appendix C).

2.3.2. Jurisdictional Delineation

A jurisdictional delineation of waters and wetlands was performed for the proposed project. The jurisdictional delineation report, including a full description of the methodology and results, is provided in Appendix D.

Prior to the fieldwork, a 200-foot-scale (1 inch = 200 feet) aerial photograph of the study area was obtained and compared with USGS 7.5-minute topographic quadrangles to identify drainage features within the JD study area as indicated by vegetation types, topographic changes, or visible drainage patterns. The National Hydrography Dataset (NHD) (USGS 2010) data for the JD study area and the National Wetlands Inventory (NWI) (USFWS 2012) were referenced to identify any mapped features such as streams and wetlands. Finally, the JD study area was carefully reviewed in Google Earth (Google Inc. 2012) in various scales, and potentially jurisdictional features were marked onto field maps.

Senior regulatory specialists Zackry West and Lexi Kessans conducted the jurisdictional waters and wetland delineation on May 24, 2012. The JD study area was originally defined as the proposed project impact area (PIA) and up to a 200-foot buffer (refer to Figures 4-1 and 4-2), including approximately 1,534 linear feet of the Whitewater River. The proposed PIA has been revised so that the study area buffer is less than 200 feet at some locations; however, the JD study area still encapsulates the entire PIA. The JD study area was surveyed on foot, and jurisdictional limits were recorded using a Trimble Yuma global positioning system (GPS) unit with a Geneq SX Blue II receiver, providing sub-meter accuracy.

A routine-level delineation of the mainline Whitewater River was conducted for a separate project in December 2011 and January 2012, for which portions delineated the mainline Whitewater River within the JD study area. This data was referenced in the field using sub-meter accuracy GPS units, and it was verified in the field that the indicators and conditions from which the OHWM was previously determined remained valid and correct during the May 24, 2012, study area visit.

Common plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the *Jepson Manual* (Baldwin et al. 2012).

In addition, the USDA Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database (NRCS 2012b) was reviewed to identify the soil series that occur in the JD study area.

Potential WoUS and wetlands were delineated using methods established in the *Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a), *A Field Guide to*

the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b), and *Draft Guidance on Identifying Waters Protected by the Clean Water Act* (USACE and EPA 2011). Non-wetland waters were delineated based on the presence of OHWM indicators, and an OHWM datasheet was recorded for Whitewater River. OHWM datasheets can be found in Appendix D of this report.

At each evaluation area, several parameters were considered to determine whether the sample point is within a wetland. Three criteria normally must be fulfilled in order to classify an area as a jurisdictional USACE wetland: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Wetland Determination Data Forms can be found in Appendix D of this report.

The criteria used to determine CDFW jurisdiction are (1) the presence of a defined bed and bank and (2) either potential habitat value for wildlife (including fish) or riparian and/or wetland vegetation. CDFW jurisdiction was delineated by measuring the outer width and length boundaries of potentially jurisdictional areas, consisting of the greater of either the top of bank measurement or the extent of associated riparian or wetland vegetation.

2.3.3. Special-Status Plants Focused Studies

Over 60 special-status plants species were determined to potentially occur within the BSA based on regional geography (USGS quads: Cathedral City, La Quinta, Rancho Mirage, Palm Springs, Desert Hot Springs, Palm View Peak, Myoma, East Deception Canyon, Seven Palms Valley, Whitewater, San Jacinto Peak, Idyllwild). For that portion of the project that occurs within the CVMSHCP Plan Area, focused surveys for covered plants, including Coachella Valley milk-vetch, were not required. For special-status plants not covered by the CVMSHCP or with potential to occur on the Tribal lands (i.e., outside the CVMSHCP Plan Area) evaluation for potential to occur was performed. Of particular interest was whether suitable habitat for the federally endangered Coachella Valley milk-vetch was present. The study area for focused plant surveys was the original proposed project impact area and up to a 300-foot buffer, the BSA. Refer to Section 3.2 below.

2.3.3.1. HABITAT ASSESSMENT

A habitat assessment was conducted on April 23, 2012, for special-status plants by Zackry West and Phil Richards, biologists experienced with the habitat requirements for the plant species listed in Section 3.2 below. Prior to the fieldwork, soil maps were checked for soils that might support one or more of the special-status plant species, to identify areas that required special attention during the focused survey work. Soils found within the BSA are shown on Figure 3-3.

Determinations for whether suitable habitat is present for special-status plants were based on the species' biological requirements, which can include one or more of the following: suitable habitat present, soils, hydrology, elevation, range, current land uses, and disturbances. Refer to Section 3.2 for potential for occurrence information and conclusions regarding special-status plants within the BSA.

2.3.3.2. FOCUSED SURVEY

The focused survey for special-status plants was performed by Zackry West and Phil Richards within areas that had been determined to provide suitable habitat for special-status plants. The survey followed CDFW guidelines (2000) in that they (1) were conducted during the flowering season for special-status plants known from the area, (2) were floristic in nature, (3) were consistent with conservation ethics, (4) systematically covered all habitat types along the project alignment, and (5) were well documented (including visiting reference populations to determine if target species would be in bloom during focused studies).

Table 2-2. Rare Plant Focused Survey Data

Date	Personnel
4/23/2012	Zackry West, Phil Richards

2.3.4. Coachella Valley Fringe-toed Lizard Focused Studies

Based on database searches, Coachella Valley fringe-toed lizard (CVFTL) had potential to occur within the vicinity of the BSA. This species is a Covered Species under the CVMSHCP, and a survey would not be required for the project. However, because a portion of the project occurs outside of the Plan area (i.e., on Tribal lands), a habitat assessment was conducted, followed by a focused survey. The study area for CVFTL was the original proposed project impact footprint and up to a 300-foot buffer, which is identical to the BSA.

2.3.4.1. HABITAT ASSESSMENT

The habitat assessment was conducted on April 23, 2012, concurrent with the general reconnaissance survey. This species has morphological adaptations that allow it to move efficiently on aeolian (wind-blown) sands. Suitable habitat was found present for CVFTL, which was mapped on an aerial photo.

2.3.4.2. FOCUSED SURVEY

Under CDFW guidelines, six surveys must be conducted over the BSA on separate days. If the species is found during any of the surveys, the remaining surveys would cease as the species would then have been determined present in the BSA. A focused survey was conducted by Zackry West

and Russell Sweet on April 25, 2012, on which date, the species was observed. The entire BSA was thoroughly checked by walking transects spaced five meters apart, so that all portions of the BSA could be checked for CVFTL. Under the protocol, surveys must occur from April to October between 0730 and 1100 when the temperature is one centimeter above the unshaded sand is greater than 95°F and less than 110°F. One surveyor focused on the substrate and habitat 30 to 40 meters in front while the other surveyor focused on the area two to ten meters in front. Vegetation and shrubs were gently tapped (so as not to damage the vegetation) to attempt to get any CVTFL possibly present to flush. The survey route was recorded using a sub-meter GPS.

2.3.5. Burrowing Owl Focused Studies

The CVMSHCP required that a habitat assessment (and focused survey, if potential was present) be conducted for burrowing owl. The study area for the species consisted of the PIA and up to a 300-foot buffer, which consists of the entire BSA (with an additional 200-foot buffer that was evaluated visually) and included both CVMSHCP and Tribal lands. The following sections present the methods for the habitat assessment and focused survey for burrowing owl.

2.3.5.1. HABITAT EVALUATION

An evaluation of the entire BSA was performed for potential presence of habitat for burrowing owl. The habitat evaluation followed the methods outlined in the CDFW March 7, 2012, *Staff Report on Burrowing Owl Mitigation* (CDFW 2012b). The habitat evaluation was performed at a cursory level to identify potential habitat at a broad landscape-level with the work performed during the initial reconnaissance survey. Open lands that were sparsely vegetated with native or nonnative vegetation were considered potentially suitable. All potentially suitable habitat was mapped on an aerial photograph, including potentially suitable burrows that could be used by burrowing owls.

2.3.5.2. FOCUSED SURVEY

A focused survey was conducted by Ryan Gilmore, a biologist experienced with the species' biology and identification of direct and indirect sign. The CDFW Staff Report (2012b) was released in March 2012; however, burrowing owl fieldwork for the proposed project was not authorized until May 2012. Therefore, focused surveys for burrowing owl began later in the season than is recommended by the 2012 protocol. Although the survey windows did not specifically follow the 2012 protocol, the survey methodology, time of year (i.e., breeding season), weather conditions, and time of day were strictly followed to successfully detect breeding burrowing owls in the BSA. Four survey visits were made to all potential habitat on four separate days. The visits were performed between morning civil twilight to 10:00 a.m. and/or two hours before sunset until evening civil twilight. Table 2-3 provides the site conditions and survey dates for the burrowing owl focused survey.

Table 2-3. Burrowing Owl Focused Survey Conditions

Date	Time	Personnel	Weather
5/11/2012	0545–0945	Ryan Gilmore	68–81°F, clear 1–3 mph wind
6/14/2012	0545–0945	Ryan Gilmore	70–86°F, clear, 0 mph wind
6/27/2012	0600–0915	Ryan Gilmore	77–88°F, clear, 0 mph wind
7/13/2012	0555–0935	Ryan Gilmore	85–91°F, 70–80% cloud cover, 0 mph wind

2.4. Coachella Valley Round-tailed Ground Squirrel Focused Studies

A habitat evaluation and focused survey were conducted for the Coachella Valley round-tailed ground squirrel (RTGS). The BSA does not occur within a CVMSHCP Conservation Area for RTGS, and, under the CVMSHCP, no survey would be required. However, because a portion of the project occurs outside the CVMSHCP Plan Area, evaluation was necessary.

2.4.1. Habitat Evaluation

A habitat assessment for RTGS was conducted concurrently with the general reconnaissance survey on April 23, 2012, by senior regulatory biologist Zackry West. The biologist reviewed the site to determine if suitable habitat, consisting of Sonoran creosote bush scrub and active sand dunes, was present within the Tribal lands of the BSA.

2.4.2. Focused Survey

A focused survey for RTGS was conducted by Phil Richards and Ryan Gilmore on June 21, June 28, and July 6, 2012. The presence/absence survey for RTGS was conducted within potentially suitable habitat. The site was visited three times from May 1 through July 31, 2012 per USFWS guidelines. Surveys consisted of walking ten-meter transects over the entire BSA (PIA and up to a 300-foot buffer). Surveys were conducted from one to four hours after sunrise during times of low wind speeds, with temperatures in the shade ranging from 80 to 91°F. Visual and auditory observation methods were used to detect RTGS. If an active RTGS burrow or the species was found within the BSA, the location was mapped using a GPS unit with sub-meter accuracy. No handling of species or trapping was necessary for this species. Table 2-4 summarizes dates, times, and conditions during the survey.

Table 2-4. Coachella Valley Round-tailed Ground Squirrel Survey Dates, Times, and Conditions

Date	Time	Personnel	Weather Conditions
6/21/2012	0650–0950	Phil Richards, Ryan Gilmore	80–91°F, 0–3 mph wind, sunny
6/28/2012	0650–0950	Phil Richards, Ryan Gilmore	80–95°F, no wind, sunny
7/6/2012	0640–0945	Phil Richards, Ryan Gilmore	80–93°F, 2–7 mph wind, clear

2.5. Agency Coordination and Professional Contacts

A meeting took place on May 30, 2012, between the City of Palm Springs, Agua Caliente Band of Cahuilla Indians, and the consultant to discuss the proposed target species for which focused surveys would be required for the proposed project. It was determined at this meeting that the target species discussed herein would meet the applicable survey requirements for a Covered Activity per the Agua Caliente Tribal HCP, and to adequately address potential impacts under CEQA.

A meeting took place on December 4, 2013 between the City of Palm Springs (Savat Khamphou), Agua Caliente Band of Cahuilla Indians (Dan Malcolm), CNS (James Lu), Caltrans (Scott Quinnell, Josh Jaffrey), and ICF (Brian Calvert, Tricia Campbell) to discuss the proposed impacts to biological resources on Tribal Lands and to determine the best approach for addressing the needs of the Tribe and the Tribal HCP. Dan Malcolm explained that all proposed impacts to biological resources within the existing ROW (up to 110 feet) would be fully covered by the Tribal HCP without fee payment and that any additional permanent impacts beyond the covered 110-foot ROW would be met through a mitigation fee payment of $2,731/acre. Any lands temporarily impacted and not restored (thus treated as permanent) would also be mitigated through the mitigation per acre fee. During the meeting it was also determined that for any proposed TCEs that occur outside of the existing ROW, coordination with the BIA would be necessary.

2.6. Limitations That May Influence Results

The current protocol for burrowing owl focused surveys (CDFW 2012b) was released in March 2012; however, burrowing owl fieldwork for the proposed project did not proceed until May 2012. Therefore, focused surveys for burrowing owl began later in the season than what is recommended by the 2012 protocol. Although the timing of the surveys did not specifically follow the protocol, the survey methodology, time of year (i.e., breeding season), weather

conditions, and time of day were strictly followed resulting in successfully detecting breeding burrowing owls in the BSA. The results of the focused survey are discussed further in Section 4.4.2

The purpose of the CVFTL focused survey was to determine the species presence or absence. Thus, focused surveys were ceased after the species was detected in the BSA. The focused survey did not determine the population size present within the BSA. The results of the focused survey and habitat evaluation are provided in Section 4.3.1.

A single parcel (APN 675040004) for which right of entry was not granted by the landholder is located within the Whitewater River in the BSA south of Vista Chino. This parcel formed the eastern extent of the Whitewater River in this portion of the BSA and was composed of Sonoran creosote bush scrub/active sand dunes habitat, contiguous with that occurring within surrounding parcels. This parcel was not physically accessed during any of the associated biological or aquatic studies. Due to this access constraint, presence is assumed within this parcel for target species for which the Sonoran creosote bush scrub/active sand dunes community provides suitable habitat.

In addition, 2012 marked a drought year; therefore, plants that may grow in a normal year may not have been detectable. To ensure the rare plant focused surveys are valid, a reference population was checked prior to the focused survey to ensure that the target species could be observed blooming in the BSA, if present.

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Chapter 3. Results: Environmental Setting

The proposed project occurs within the Coachella Valley, a gentle sloping, low-elevation valley situated in the westernmost extent of the Colorado Desert, a sub-region of the Sonoran Desert. The Coachella Valley is located within eastern Riverside County, approximately 50 miles east of the City of Riverside. The Whitewater River follows a gentle slope from northwest to southeast, with the headwaters forming in the San Bernardino Mountains and terminating at the Salton Sea.

The Coachella Valley is roughly bounded by the San Bernardino Mountains to the north, the Little San Bernardino Mountains to the northeast, the San Jacinto Mountains to the west, and the Santa Rosa Mountains to the south.

3.1. Description of the Existing Biological and Physical Conditions

This section describes the existing biological and physical conditions of the project site and the surrounding area.

3.1.1. Biological Study Area

Historically, the BSA consisted of primarily open space in the form of the active channel and flood terraces associated with the Whitewater River. The BSA is bisected by an existing roadway, Vista Chino, and is bordered on the north and south by the Whitewater River and open space, and on the east and west by residential, recreational, and commercial development (refer to Figure 3-1). Refer to Appendix A for representative photographs of the BSA.

3.1.2. Physical Conditions

The Whitewater River is a wide dry wash that traverses the majority of the BSA and occurs at the lowest point between two levees on either end.

3.1.2.1. TOPOGRAPHY

Elevation within the BSA ranges from around 430 feet above mean sea level (msl) to approximately 450 feet above msl (refer to Figure 3-2). Local topography includes the Whitewater River, a channelized low-gradient ephemeral stream designed to carry occasional high-intensity seasonal storm flows.

3.1.2.2. SOILS

A soil series is a group of soils with similar profiles. Only one soil series occurs on or in the immediate vicinity of the project site: Carsitas cobbly sand, two to nine percent slopes; Carsitas gravelly sand, zero to nine percent slopes; and Carsitas fine sand, zero to five percent slopes

(refer to Figure 3-3). These soils are consistent with field observations. The Carsitas cobbly sand and Carsitas gravelly sand are identified on the national or local hydric soil lists (NRCS 2012c) as partially hydric.

The Carsitas series consists of excessively drained, moderately deep soils that formed in alluvium. This series is found on alluvial fans, moderately steep valley fills, and dissected remnants of alluvial fans at elevations of about 220 feet below msl to 800 feet above msl. The typical soil texture is gravelly sand or gravelly coarse sand (with rapid permeability). Carsitas soils have a moderate extent and are found in southeastern California and possibly Arizona, Nevada, and New Mexico.

The main channel of the Whitewater River is composed primarily of riverwash, which consists of recently deposited alluvium. Riverwash is prone to frequent flooding and often carries recent sediment deposits and rocks from upstream. The banks and floodplain of the Whitewater River are composed of the Carsitas series (Figure 3-3).

3.1.3. Hydrology

The BSA is located within the Whitewater Hydrologic Unit (HU), within the Coachella Hydrologic Area (HA). This HA contains the Whitewater River and its tributaries and eventually drains to the Salton Sea. Hydrologic Units in the BSA are depicted in Figure 3-4 and Figures 5a and 5b in the Jurisdictional Delineation Report found in Appendix C of this report.

3.1.4. Biological Conditions in the Biological Study Area

The vegetation communities occurring within the BSA are Sonoran creosote bush scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, Desert Dry Wash Scrub, Freshwater Grassland (wetland), Disturbed Areas, and Ornamental Vegetation. Several developed areas, including the existing Vista Chino roadway, also occur within the BSA.

3.1.4.1. NATURAL COMMUNITIES AND VEGETATION

Over 50 plant species were identified within the BSA during all fieldwork for the proposed project (Appendix E of this report). Of the species detected, a single species holds special status: Coachella Valley milk-vetch (Federally Endangered [FE][1], CRPR[2] 1B.2; *Astragalus lentiginosus* var. *coachellae*). This species was found during the 2012 initial reconnaissance and 2012 rare plant focused survey, with additional incidental occurrences noted during additional focused species surveys. Chapter 4 provides additional review of this and other special-status plant resources.

[1] Federally Endangered
[2] California Rare Plant Rank

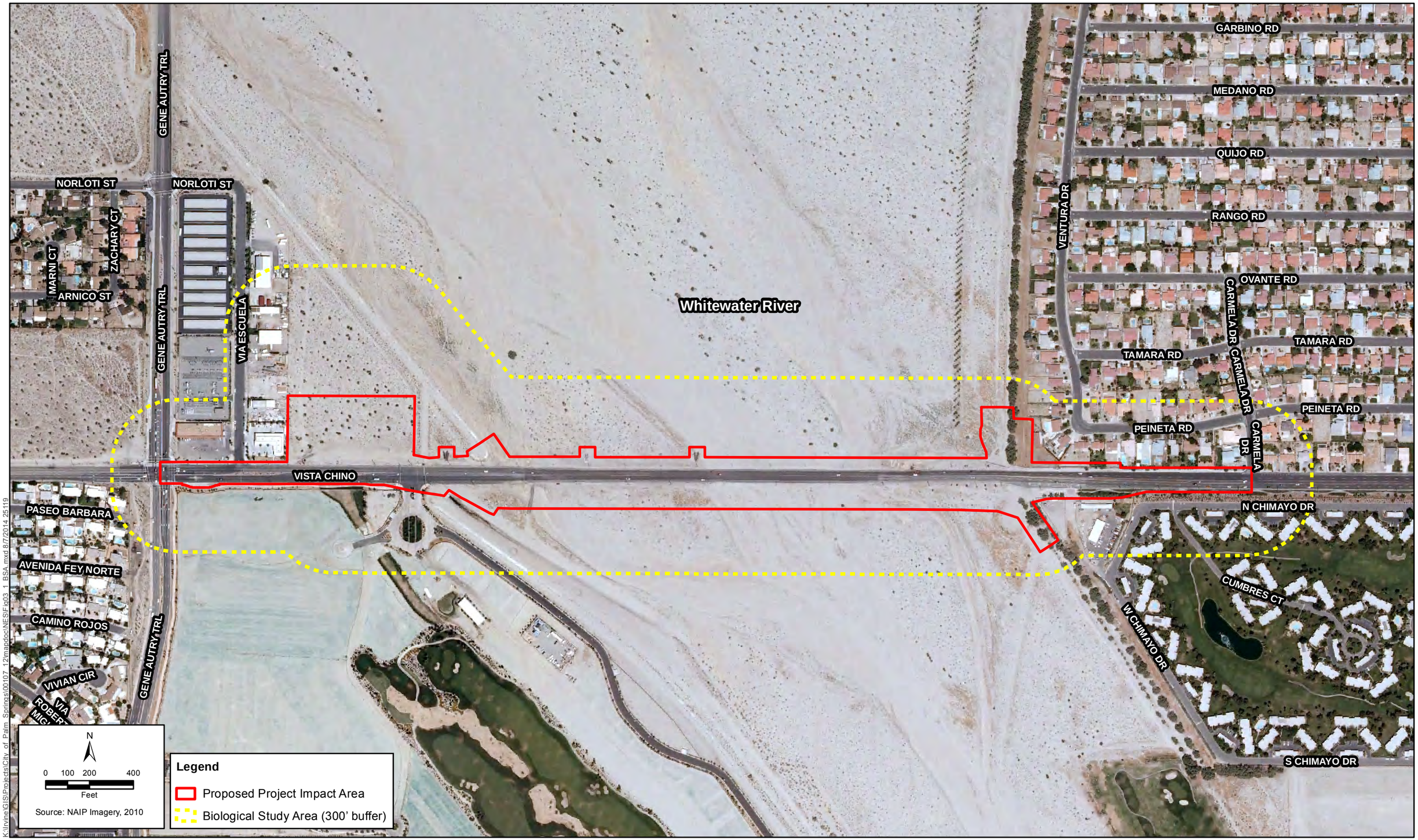

Figure 3-1
Biological Study Area
Vista Chino Low Water Crossing Bridge Replacement

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VISTA CHINO
Whitewater River
AGUA CALIENTE INDIAN RESERVATION
AGUA CALIENTE INDIAN RESERVATION
SOUTHERN PACIFIC R.R.
CITY BOUNDARY
LEVEE
AGUA CALIENTE INDIAN RESERVATION
AGUA CALIENTE INDIAN RESERVATION
492
480
477
440
420
1
6
6
5
12
7
7
8

N
0 250 500 1,000
Feet
Source: USGS 7.5 Quads:
Palm Springs (1977)
Cathedral City (1977)

Legend
- Proposed Project Impact Area
- Biological Study Area (300' buffer)

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Figure 3-2
USGS Topo
Vista Chino Low Water Crossing Bridge Replacement

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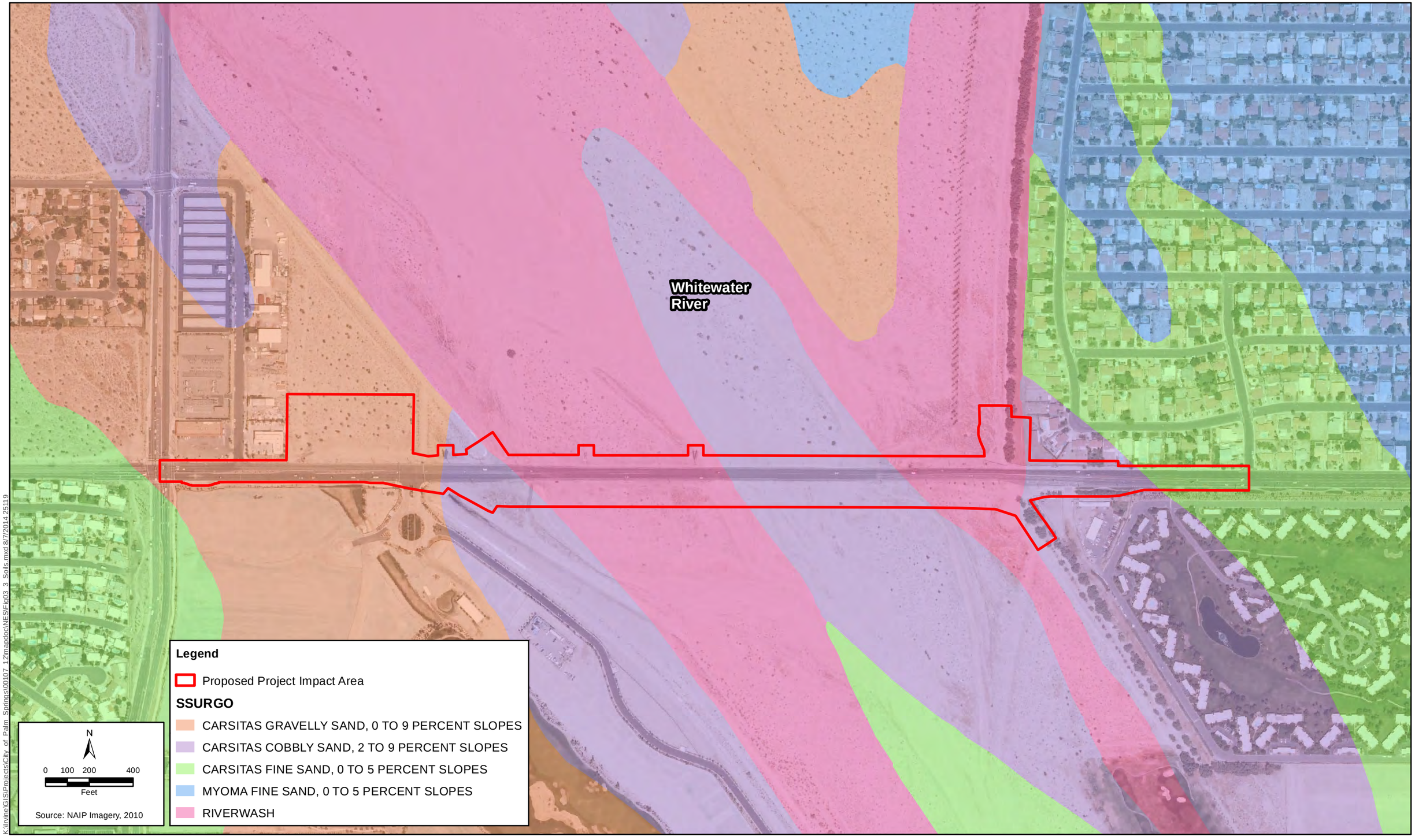

Figure 3-3
NRCS Soils Survey Map
Vista Chino Low Water Crossing Bridge Replacement

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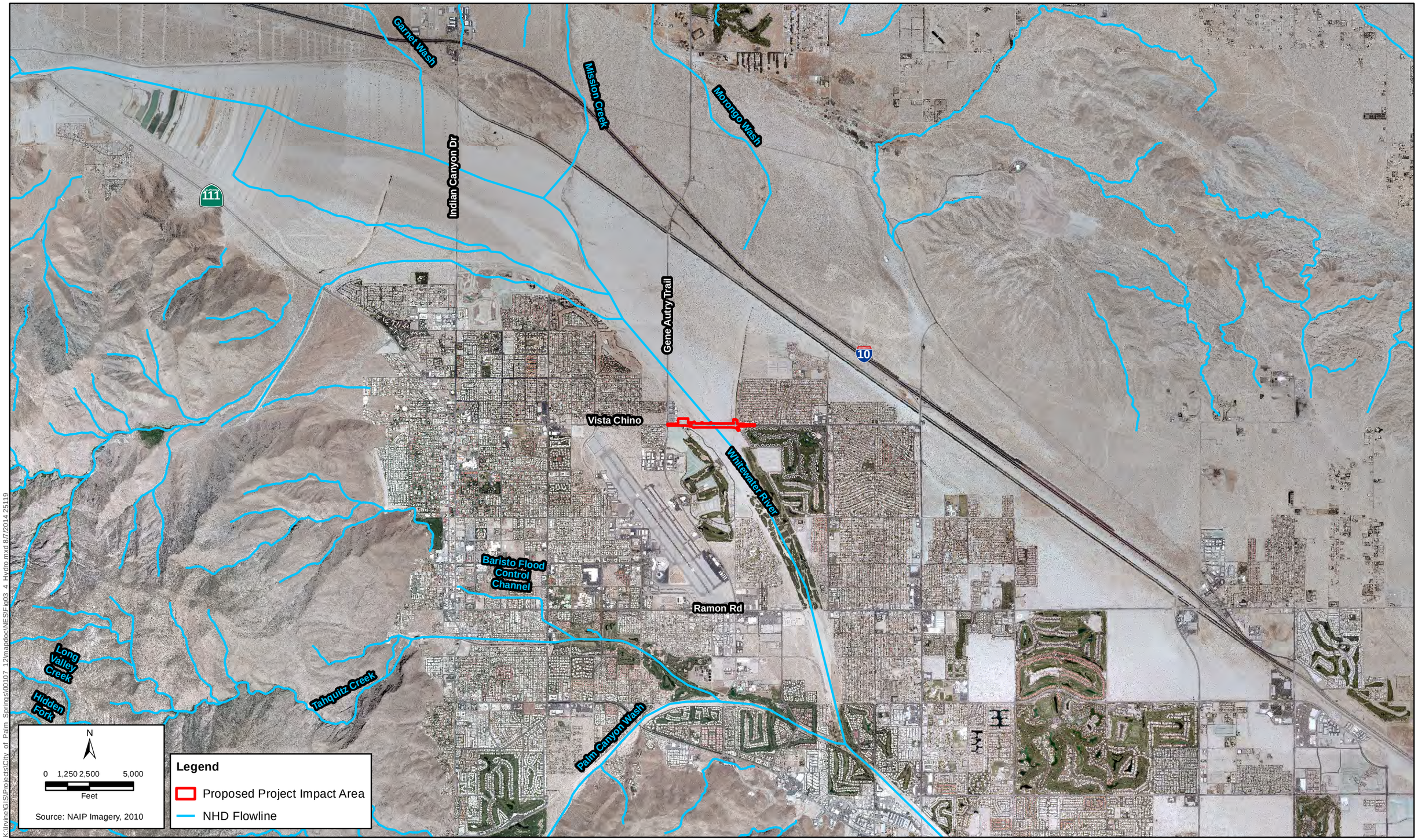

Figure 3-4
Hydrology
Vista Chino Low Water Crossing Bridge Replacement

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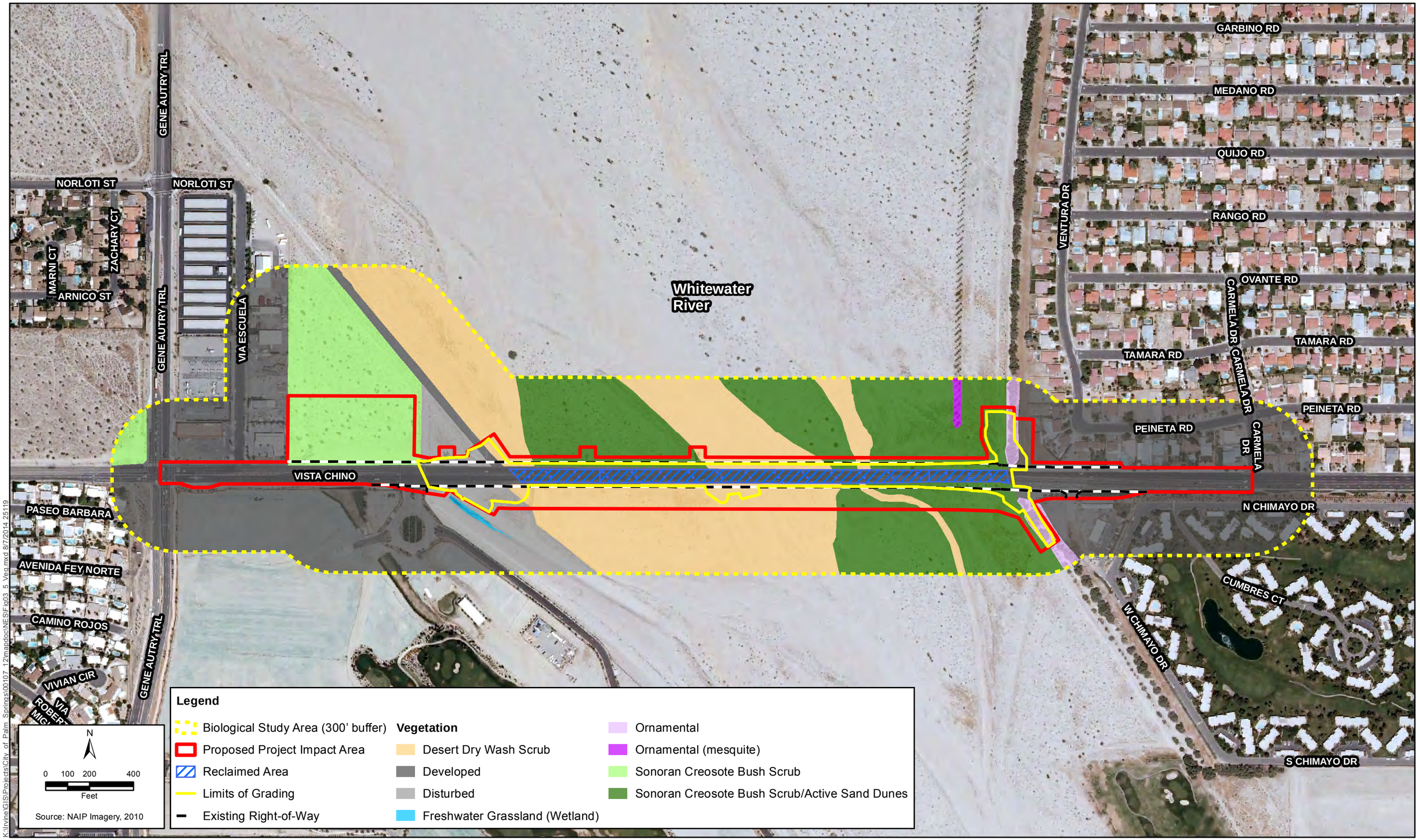

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Figure 3-5
Vegetation Communities
Vista Chino Low Water Crossing Bridge Replacement

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The BSA can be classified into the seven vegetation communities listed in Table 3-1, which provides the extent of each vegetation community within the BSA and the portion that is within the proposed project footprint. Figure 3-5 illustrates the vegetation communities within the BSA.

Table 3-1. Biological Study Area Acreages by Vegetation Community

Vegetation Community	Currently Existing within BSA (acres)	Proposed Impact Area in CVMSHCP (acres)	Proposed Impact Area in Tribal Lands (acres)		
			100% Take Authorized Area	Target Acquisition Area	
				Within ROW	Outside ROW
Sonoran Creosote Bush Scrub	10.64	0.01	3.98	0.20	0.01
Sonoran Creosote Bush Scrub/Active Sand Dunes	23.52	2.09	0.00	0.91	1.71
Desert Dry Wash Scrub	25.51	4.10	0.00	0.46	0.65
Freshwater Grassland (Wetland)	0.13	0.00	0.00	0.00	0.00
Disturbed	5.09	0.78	0.00	0.12	0.28
Ornamental	1.16	0.30	0.00	0.00	0.37
Ornamental (mesquite)	0.20	0.00	0.00	0.00	0.00
Developed	48.44	10.76	0.02	2.93	0.46
Total	**114.69**	**18.04**	**4.00**	**4.62**	**3.50**
Total Reclaimed Lands	**Within BSA (acres)**	**Within CVMSHCP (acres)**	**Within Tribal Lands (acres)**		
	2.97	**1.69**	**1.28**		

Note: Acreages are rounded to the nearest 1/100.

As a feature of the proposed project, the paved areas consisting of two westbound lanes of travel, two eastbound lanes of travel, and the associated shoulders, comprising the existing Vista Chino low water crossing facility, would be removed. Upon removal of the existing paved facility, approximately 2.97 acres of the Whitewater River channel that is now developed road would be graded to meet existing upstream and downstream elevations, and would become earthen in nature. Species currently associated with the surrounding Sonoran Creosote Bush Scrub/Active Sand Dune and Desert Dry Wash Scrub habitat communities would be allowed to populate this area over time, ultimately resulting in conditions similar to those surrounding the existing facility. This 2.97-acre area is referred to herein as the *Reclaimed Area* (refer to Figure 3-5). The Reclaimed Area would also serve to improve the Whitewater River within the BSA as a wildlife corridor, by allowing for animals to move between upstream and downstream habitat blocks without the risk of mortality from vehicle collisions. The reclaimed area would remain within existing city ROW.

Sonoran Creosote Bush Scrub

There is approximately 10.64 acres of Sonoran Creosote Bush Scrub within the BSA. This community is primarily found on the terraces surrounding the Whitewater River. This community consists primarily of shrubs approximately 1.5 to ten feet tall that are widely spaced with bare ground or few annuals in between. The dominant plant species in the Sonoran Creosote Bush Scrub community within the BSA were creosote bush (*Larrea tridentata*), white bur-sage (*Ambrosia dumos*a), burrobush (*A. salsola* var. *salsola*), sweetbush (*Bebbia juncea* var. *aspera*), and Palmer's tiquilia (*Tiquilia palmeri*).

Sonoran Creosote Bush Scrub/Active Sand Dunes

The Sonoran Creosote Bush Scrub/Active Sand Dunes community comprises approximately 23.52 acres within the Whitewater River. This community occurs just outside of the active floodplain of the river. This community is characterized by the Sonoran Creosote Bush Scrub with barren areas consisting of actively moving sand and/or dune sand accumulations that are stabilized or partially stabilized with species in the Sonoran Creosote Bush Scrub community, along with a few scattered low annual herbs. The dominant species were creosote bush and white bur-sage.

Coachella Valley milk-vetch was observed in the Whitewater River portion of the BSA.

Desert Dry Wash Scrub

Approximately 25.51 acres of Desert Dry Wash Scrub is present within the BSA. This community is located within the active floodplain of the Whitewater River. This community is associated with sandy or gravelly dry desert washes and has a few shrubs and annuals. The dominant plants within the active floodplain were desert twinbugs (*Dicoria canescens*) and fan-leaved tiquilia (*Tiquilia plicata*).

Freshwater Grassland (Wetland)

There is 0.13 acre of Freshwater Grassland within a small tributary channel south of Vista Chino and west of the active channel associated with the Whitewater River. There are a number of emergent species growing within this channel including Mexican sprangletop (*Leptochloa fusca* ssp. *uninervia*), tall flatsedge (*Cyperus eragrostis*), Dallis grass (*Paspalum dilatatum*), horseweed (*Erigeron canadensis*), and prickly lettuce (*Lactuca serriola*).

Disturbed

Roughly 5.09 acres of the BSA consists of disturbed vegetation. Disturbed areas typically lack natural topography because they are often in areas that have been manipulated by activities such as discing or grading, such that the disturbances discourage growth of native vegetation. The dominant species in ruderal areas are often tolerant of frequent disturbances or soil compaction, and are typically nonnative or weedy in nature. Within the BSA, the common ruderal vegetation

consisted of redstem filaree (*Erodium cicutarium*), Bermuda grass (*Cynodon dactlyon*), Sahara mustard (*Brassica tournefortii*), and four-wing saltbush (*Atriplex canescens*).

Ornamental

There are a number of trees and shrubs within the BSA (approximately 1.36 acre) that have been planted as ornamentals such as aleppo pine (*Pinus halepensis*), African sumac (*Searsia lancea*), common oleander (*Nerium oleander*), and olive (*Olea europaea*). These ornamental plants are not associated with any particular native vegetation community. In addition, there is a row of honey mesquite (*Prosopis glandulosa* var. *torreyana*) that has been planted as ornamentals within the BSA.

Developed

The remainder of the BSA (approximately 48.44 acres) consists of developed lands in the form of the active roadway associated with Vista Chino and bare ground (unvegetated) areas. Additional developed areas are composed of compacted dirt roadways. These dirt roadways have highly compacted soils that would not support vegetation growth. In addition, these areas are frequently used by vehicles that further compact soils, preventing future vegetation growth.

3.1.4.2. WILDLIFE

Over 30 species of wildlife were detected within the BSA during the fieldwork for the proposed project. Appendix F provides a complete list.

Birds were the most commonly detected group within the BSA, including species such as mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), Anna's hummingbird (*Calypte anna*), killdeer (*Charadrius vociferus*), verdin (*Auriparus falviceps*), western kingbird (*Tyrannus verticalis*), rock pigeon (*Columba livia*), and house sparrow (*Passer domesticus*). Many of these species are common to the region and have adapted to environments that have been disturbed by humans.

The most commonly detected mammals were desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis latrans*). These species commonly occur within the region and are tolerant of disturbed environments.

Reptiles that were observed within the BSA were desert iguana (*Dipsosaurus dorsalis*), zebratail lizard (*Callisarus draconoides*), coachwhip (*Masticophis flagellum*), and western whiptail (*Aspidoscelis tigris*). These species commonly occur in areas that have human disturbances.

There were three special-status animal species that were observed within the BSA during fieldwork, including the federally threatened and state endangered CVFTL, along with burrowing owl and RTGS, which are both state species of special concern (SSC).

3.1.4.3. AQUATIC RESOURCES

Three features were observed and documented within the JD study area (See Figure 4-1 and 4-2). All features within the JD study area were delineated with the understanding that a request for a Preliminary JD would be submitted for the project. As such, all features are considered WoUS under the jurisdiction of USACE and are subject to state jurisdiction, as regulated by the RWQCB. In addition, all features identified were determined to be subject to CDFW jurisdiction.

3.1.4.4. MIGRATION CORRIDORS

Within the BSA, the Whitewater River could be used by wildlife as a migration corridor for animals to traverse across the desert. Although the southern portion of the Whitewater River has been channelized and adjacent areas developed, the topography of the river is sufficient to accommodate animal movement. Currently animal movement through the river would traverse across the existing roadway.

3.1.4.5. INVASIVE SPECIES

There were ten plant species classified as California Invasive Plant Council (Cal-IPC, 2006) invasive plants species observed within the BSA. These plants are listed in Table 3-2 along with the Cal-IPC ranking.

Table 3-2. Cal-IPC Invasive Plant Species

Common Name	Scientific Name	Cal-IPC Ranking
Sahara Mustard	*Brassica tournefortii*	High
Downy Chess	*Bromus tectorum*	High
Bermuda Grass	*Cynodon dactylon*	Moderate
Redstem Filaree	*Erodium cicutarium*	Limited
Wall Barley	*Hordeum murinum*	Moderate
Olive	*Olea europaea*	Limited
Crimson Fountain Grass	*Pennisetum setaceum*	Moderate
Annual beard Grass	*Polypogon monspeliensis*	Limited
Common Mediterranean Grass	*Schismus barbatus*	Limited
Saltcedar	*Tamarix ramosissima*	High

3.2. Regional Species and Habitats of Concern

There are over 100 special-status plant and animal species and three depleted natural vegetation communities that are known to occur within the region based on database searches. A list of these species and vegetation communities, as well as habitat requirements, regulatory status, and potential for occurrence within the BSA, is provided in Appendix B. Determinations for likelihood of occurrence are based on presence of suitable habitat, quality of habitat, geographic range, elevation range, and tolerance to disturbances.

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Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

As presented in Appendix B, there are over 100 special-status plants and animals and three depleted natural vegetation communities that were found to have potential to occur within the BSA based on a review of database searches, described in Section 2.3.1. Many of the species presented in Appendix B would not occur in the BSA based on lack of suitable habitat, and geographic and elevation distribution. Therefore, in this chapter, only those resources with potential to occur will be discussed. Any species that do not have a potential to occur based on the above criteria are shaded gray in Appendix B and the rationale as to why no further discussion is warranted is given.

Because of existing easements within the LOD and land ownership, both of which retards the ability for the City to implement on-site restoration, direct impacts are considered permanent except for jurisdictional waters, raptor foraging, and burrowing owl. The potential for temporary indirect effects to occur are included in the analysis such as construction noise and dust.

As a feature of the proposed project, the paved areas consisting of two westbound lanes of travel, two eastbound lanes of travel and the associated shoulders, comprising the existing Vista Chino low water crossing facility, would be removed. Upon removal of the existing paved facility, approximately 2.97 acres of the Whitewater River channel that is now developed will be graded to meet existing upstream and downstream elevations, and will become earthen in nature. This 2.97-acre area is referred to as the *Reclaimed Area*. It is expected that species currently associated with the surrounding Sonoran Creosote Bush Scrub/Active Sand Dune and Desert Dry Wash Scrub habitat communities would populate this area over time, ultimately resulting in conditions similar to those surrounding the existing facility. However, it is anticipated that the reclaimed area will have greater levels of disturbance over the long-term than the surrounding areas due to future maintenance activities on the bridge (City ROW), future Southern California Edison (SCE) work within their easement, and from the shading that would occur in areas immediately surrounding the bridge structure; therefore, this area were not be considered for restoration of habitat for sensitive species.

Throughout this chapter, analysis of potential direct, indirect, and cumulative effects are discussed for the proposed project. Direct impacts are those effects that can be expected from direct removal and disturbances to the land. Examples of direct impacts include mortality to individuals and permanent loss of habitat. Indirect impacts are those effects that give rise to delayed, secondary effects. Examples of indirect impacts include habitat fragmentation,

increased environmental toxins, interruption of pollination, interruption of plant and wildlife dispersion, increased risk of fire, and an increase of invasion of nonnative plants and animals that out-compete natives. Indirect impacts would likely increase mortality, reduce productivity, and/or reduce the functions and value of natural open space for native species that inhabit it. Cumulative effects are the direct and indirect effects that the proposed project would contribute to in conjunction with other projects in the area.

4.1. Natural Communities of Special Concern

Three depleted natural vegetation communities have been identified within the general project vicinity: Desert Fan Palm Oasis, Mesquite Bosque, and Southern Riparian Forest; however, none of these communities are present within the BSA. Because none of the depleted natural vegetation communities are present within the BSA, no further discussion is presented herein.

Several potentially jurisdictional aquatic resources are present within the BSA, and each is described in Section 4.1.1, below.

4.1.1. Waters of the United States and Waters of the State Streambeds

The following section summarizes the results of the delineation of federal jurisdictional waters and wetlands and state streambeds. The jurisdictional delineation report is attached as Appendix D.

4.1.1.1. SURVEY RESULTS

Whitewater River

The Whitewater River at the existing Vista Chino crossing supports an ephemeral flow regime, consisting primarily of infrequent storm events and watershed runoff.

Within this area, the OHWM was identified by a change in vegetation species and cover, the presence of bed and bank, a change in average sediment texture, sediment sorting, the presence of drift and debris, benches, and a break in bank slope (OHWM-1; Appendix D). The OHWM ranged in width from 33 to 1,327 feet. One small area contained species with a wetland indicator status of facultative (FAC), facultative wetland (FACW), and obligate (OBL); however, this area did not meet the criteria for predominance of hydrophytic vegetation, and is believed to be supported by a spring condition, as no wetland hydrology indicators were observed. This area did not meet the three-parameter definition of a jurisdictional wetland (SP-01; Appendix D).

USACE and RWQCB/EPA jurisdictional areas associated with the Whitewater River within the JD study area totaled approximately 21.70 acres (1,534 linear feet) of non-wetland WoUS/WoS. CDFW jurisdiction totaled approximately 42.31 acre (1,534 linear feet) of unvegetated

streambed. No jurisdictional wetlands or CDFW riparian vegetation were observed within this portion of the JD study area. The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with the Whitewater River is shown on Figures 4-1 and 4-2.

Drainage 1

Drainage 1 is a small tributary channel to the mainline Whitewater River, located within the overall greater Whitewater River floodplain, as defined by the existing levee facilities. Drainage 1 enters the Whitewater River floodplain via a 78-inch diameter reinforced concrete pipe (RCIP) culvert under Vista Chino and appears to convey flows from the municipal storm drain system.

Within this area, the OHWM was identified by a change in vegetation species and cover, the presence of bed and bank, the presence of drift and debris, and a break in bank slope (OHWM-2; refer to Appendix D). The average OHWM for Drainage 1 measured 25 feet in width. In addition, portions of Drainage 1 met the three-parameter criteria for jurisdictional wetlands (SP-02; refer to Appendix D). The wetlands consisted of Emergent Freshwater Grassland and, for the purpose of this delineation, were extended to the greatest extent of vegetated areas within Drainage 1, as this area was located completely within the associated wetted perimeter and comprised a consistent species composition. Thus, it was assumed that the extent of the vegetated area within Drainage 1 meets the conditions of a three-parameter wetland.

USACE and RWQCB/EPA jurisdictional areas associated with the Whitewater River within the JD study area totaled approximately 0.14 acre (436 linear feet) of non-wetland WoUS/WoS and 0.13 acre (346 linear feet) of wetland WoUS/WoS.

For the purpose of this delineation, CDFW unvegetated streambed associated with Drainage 1 is represented within the area (acreage and linear feet) reported for the Whitewater River, as this area is within the overall top-of-bank measurement for the Whitewater River, as defined by the existing levee facilities. Approximately 0.10 acre (346 linear feet) of CDFW herbaceous vegetated streambed (riparian) was observed within this portion of the JD study area.

The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with Drainage 1 is shown on Figures 4-1 and 4-2.

Basin 1

Basin 1 is a constructed linear basin feature located south of Vista Chino and west of the Whitewater River. Basin 1 appears to have been constructed as portion of the surrounding development associated with the Escena Golf Club. Within this area, the OHWM was identified

by a change in vegetation species and cover, the presence of bed and bank, and a break in bank slope (OHWM-3; refer to Appendix D). The OHWM ranged in width from 42 to 94 feet. This area contained an existing geotextile fabric approximately one-half to one inch below the soil surface, which prevented digging below this depth. The basin bottom was vegetated with rabbitfoot grass (*Polypogon monspeliensis*), which appeared extremely stressed, as mature specimens were three inches or less in height, and were dead at the time of the May 24, 2012, field visit. The remainder of the basin was vegetated with ruderal species, and the presence of a sprinkler system suggested that this area is, or was at one time, irrigated. This area did not meet the three-parameter definition of a jurisdictional wetland (SP-03; Appendix D) and, due to the stressed and ruderal nature of the vegetation, is not considered as CDFW riparian.

USACE and RWQCB/EPA jurisdictional areas associated with Basin 1 within the JD study area totaled approximately 0.28 acre (239 linear feet) of non-wetland WoUS/WoS. CDFW jurisdiction totaled approximately 0.43 acre (239 linear feet) of unvegetated streambed. No jurisdictional wetlands or CDFW riparian vegetation was observed within this portion of the JD study area. The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with Basin 1 is shown on Figures 4-1 and 4-2.

Table 4-1. Jurisdictional Delineation Summary (JD Study Area)

Feature	Non-Wetland WoUS/ RWQCB/EPA (acres)	Wetland WoUS/ RWQCB/EPA (acres)	WoUS/ RWQCB/EPA (linear feet)	CDFW Streambed (acres)	CDFW Riparian (acres)	CDFW Linear Feet
Whitewater River	21.70	0.00	1,534	42.31	0.00	1,534
Drainage 1	0.14	0.13	436	0.00*	0.10	436
Basin 1	0.28	0.00	239	0.43	0.00	239
Total	**22.12**	**0.13**	**2,209**	**42.74**	**0.10**	**2,209**

*CDFW streambed acreage associated with Drainage 1 is included within that reported for the Whitewater River, as explained for Drainage 1 above.

4.1.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

Standard best management practices (BMPs) will be employed where jurisdictional waters are present adjacent to the project limits (Measure **M-9** in Appendix G). Measures **M-4** through **M-8** in Appendix G would also be implemented to ensure that water resources outside of the direct impact area are not affected during or after construction. Additionally, proposed project impacts were minimized with the reduction of the PIA in December of 2012.

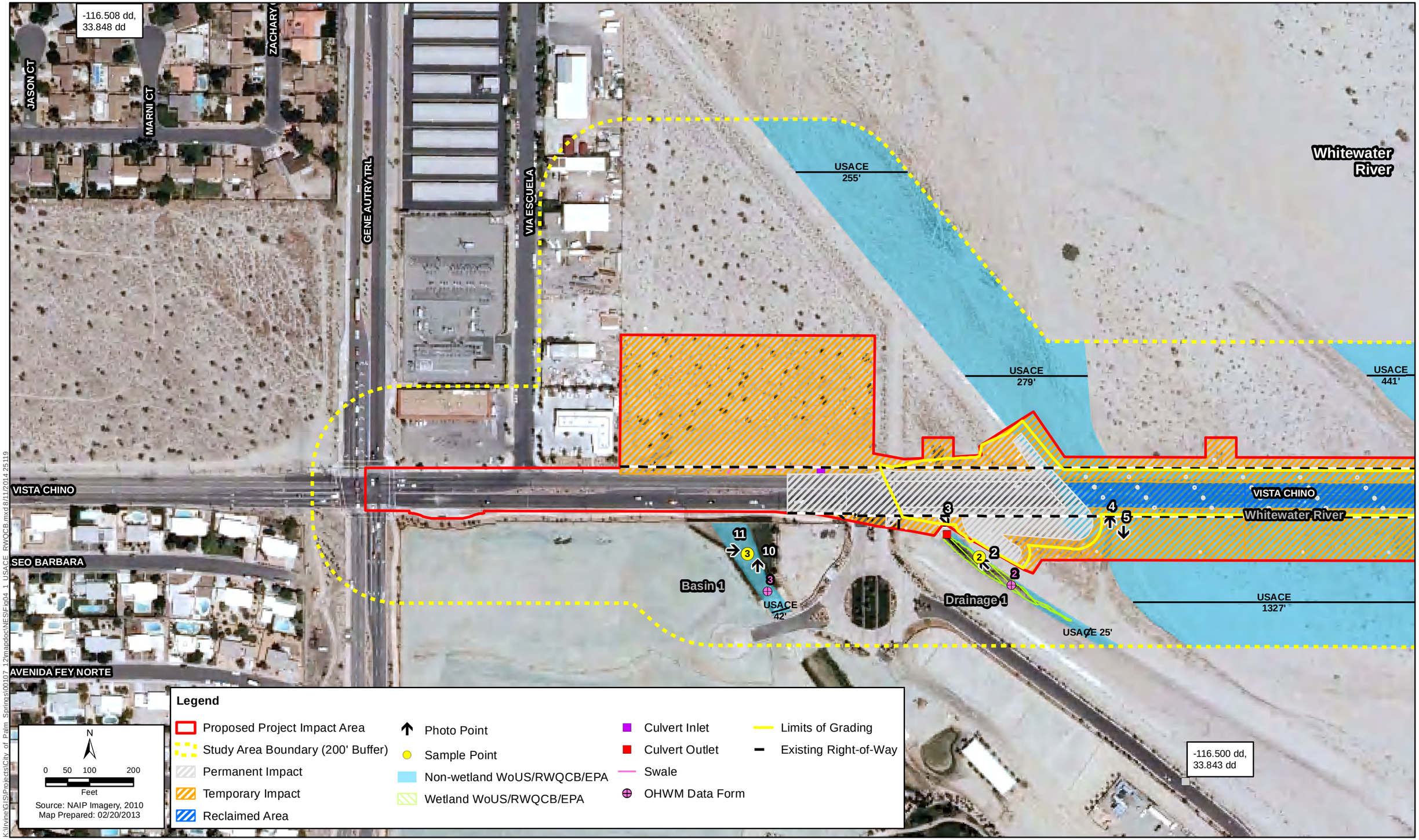

Figure 4-1
USACE/RWQCB/EPA Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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-116.498 dd,
33.848 dd

Whitewater River

OVANTE RD

CARMELA DR

TAMARA RD

PEINETA RD

VISTA CHINO

N CHIMA

W CHIMAYO

CUMBRES CT

-116.488 dd,
33.843 dd

USACE
441'

USACE
96'

USACE
1327'

USACE
33'

Whitewater River

Legend

- Proposed Project Impact Area
- Study Area Boundary (200' Buffer)
- Permanent Impact
- Temporary Impact
- Reclaimed Area
- Photo Point
- Sample Point
- Non-wetland WoUS/RWQCB/EPA
- Wetland WoUS/RWQCB/EPA
- Culvert Inlet
- Culvert Outlet
- Swale
- OHWM Data Form
- Limits of Grading
- Existing Right-of-Way

N

0 50 100 200

Feet

Source: NAIP Imagery, 2010
Map Prepared: 02/20/2013

K:\Irvine\GIS\Projects\City of Palm Springs\00107 12\mapdoc\NESF\g04 1 USACE RWQCB.mxd 8/11/2014 25:19

Figure 4-1
USACE/RWQCB/EPA Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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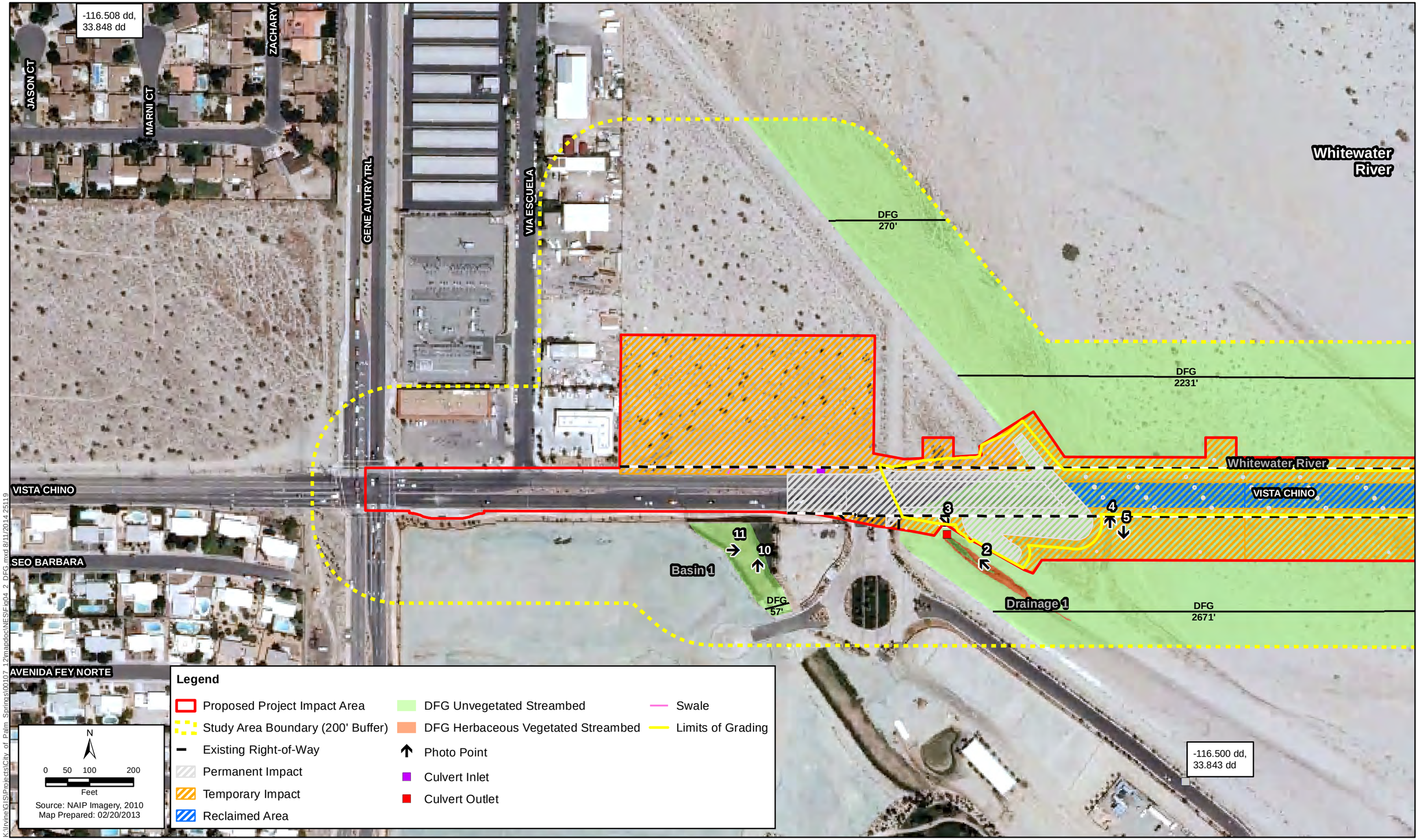

Figure 4-2
CDFW Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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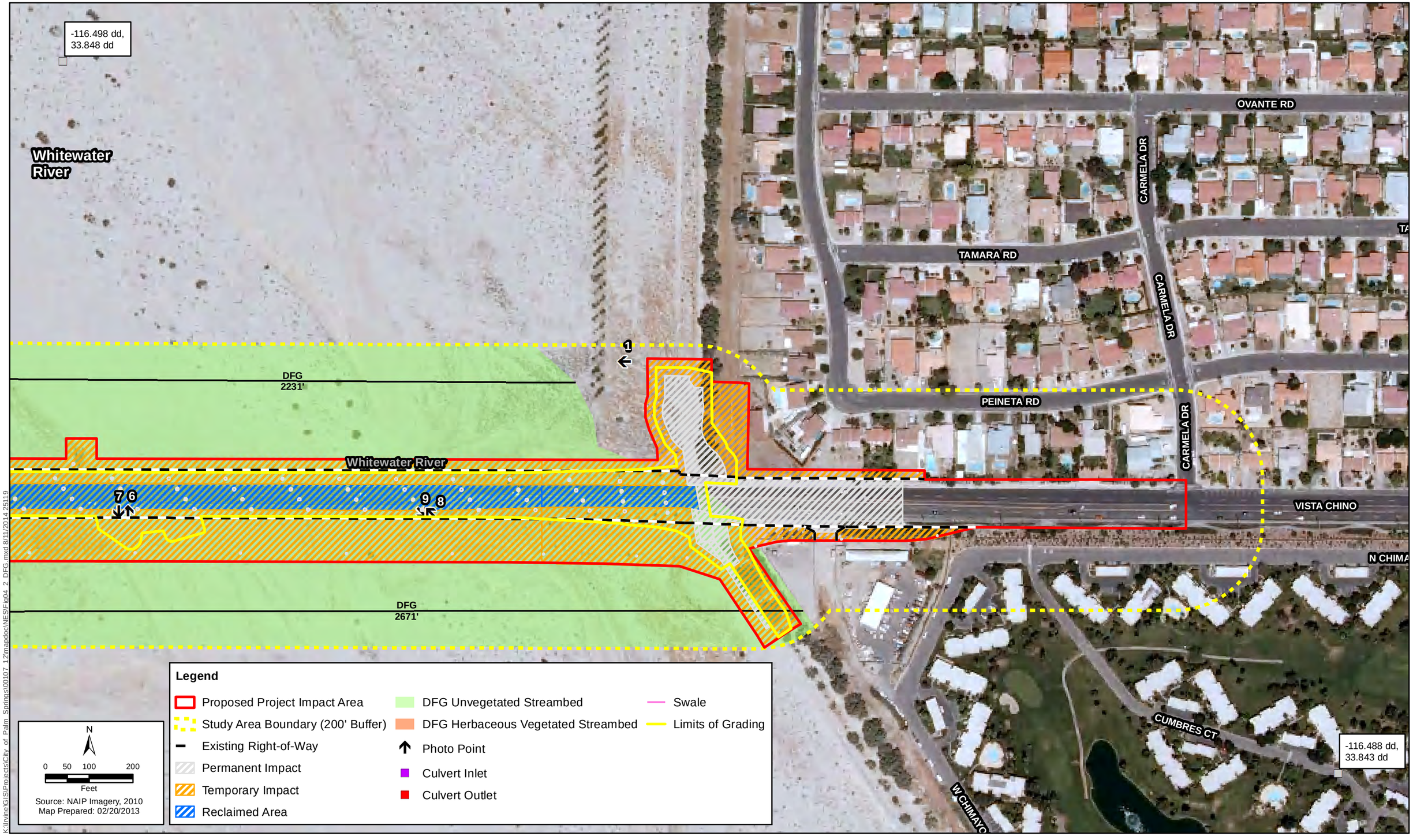

Figure 4-2
CDFW Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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4.1.1.3. PROJECT IMPACTS

The permanently impacted areas for the proposed project consist of improvements to the levee on the east and west ends of the proposed bridge, road improvements east and west of the levee, installation of bridge support columns, relocation of SCE utilities, and relocated billboards. Temporary impacts are those that would only occur during construction activities. Areas that would be temporarily impacted include the construction staging area at the west end of the proposed project and all other undeveloped areas within the TCE. Portions of the temporary impact area (excluding the limits of grading and SCE easement) would be restored to preconstruction conditions and will be referred to as the restored area.

As shown below in Table 4-2, the proposed project would directly affect 5.98 acres (643 linear feet) of WoUS and WoS, of which 0.21 acre (276 linear feet) of non-wetland waters would be permanently impacted and 5.77 acres (367 linear feet) would be temporarily impacted during construction. No wetland WoUS or WoS would be impacted by the proposed project. In addition, the proposed project would directly impact 11.71 acres (446 linear feet) of state streambeds, of which 1.49 acre (529 linear feet) of unvegetated streambed would be permanently impacted and 10.18 acres (430 linear feet) of unvegetated streambed would be temporarily impacted (refer to Table 4-3). Approximately 2.04 acres (70 linear feet) of non-wetland WoUS and 2.97 acres (66 linear feet) of state streambeds would be reclaimed through the removal of the existing Vista Chino low water crossing facility, and converted to an earthen channel condition within the Whitewater River floodplain. No impacts would occur to Basin 1, because this feature is located outside of the proposed PIA.

There is a potential for long-term indirect effects on jurisdictional waters from potential pollutants associated with vehicular traffic; however, this would not change from existing conditions because capacity would not be increased by the proposed project. The removal of the existing roadway from the riverbed would potentially reduce the amount of pollutants compared to the existing condition. During construction, there is a potential for increased risk of indirect impacts on adjacent jurisdictional waters, particularly downstream; however, the avoidance and minimization measures identified in Section 4.1.2.2 and in Appendix G are expected to address these potential indirect effects.

Table 4-2 summarizes the proposed permanent and temporary impacts on WoUS and WoS. Table 4-3 summarizes the proposed permanent and temporary impacts on state streambeds.

Table 4-2. Potential Impacts on WoUS and WoS

Feature	Non-Wetland WoUS/WoS acres (linear feet [lf])		Wetland WoUS/WoS (acres/lf)		Reclaimed WoUS/WoS (acres/lf)
	Perm	Temp	Perm	Temp	
Whitewater River	0.21 (276 lf)	5.77 (335 lf)	0.00 (0 lf)	0.00 (0 lf)	2.04 (70 lf)
Drainage 1	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)
Basin 1	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)
Total	0.21 (276 lf)	5.77 (335 lf)	0.00 (0 lf)	0.00 (0 lf)	2.04 (70 lf)

Table 4-3. Potential Impacts on State Streambeds

Feature	Unvegetated State Streambeds acres (linear feet [lf])			Herbaceous Vegetated State Streambeds acres (lf)		Reclaimed State Streambeds acres (lf)
	Perm	Temp	Restriping	Perm	Temp	
Whitewater River	1.49 (529 lf)	10.18 (430 lf)	0.33 (70 lf)	0.00 (0 lf)	0.00 (0 lf)	2.97 (66 lf)
Drainage 1	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.0 (0 lf)	0.00 (0 lf)	0.00 (0 lf)
Basin 1	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)	0.00 (0 lf)
Total	1.49 (529 lf)	10.18 (430 lf)	0.33 (70 lf)	0.00	0.00 (0 lf)	2.97 (66 lf)

4.1.1.4. COMPENSATORY MITIGATION

Permanent impacts on 0.21 acre of non-wetland WoUS/WoS and 1.49 acres of CDFW unvegetated streambeds are considered unavoidable and may require compensatory mitigation under Section 401 and Section 404 of the CWA and Section 1602 of the CDFW Code. Approximately 2.04 acres WoUS/WoS and 2.97 acres CDFW streambeds would be reclaimed through the removal of the existing Vista Chino low water crossing facility, and converted to an earthen channel condition within the Whitewater River floodplain. Aquatic permitting mitigation would be determined during the aquatic permit process. For CEQA, however, the reclamation of 2.04 acres of federal and 2.97 acres of CDFW jurisdictional resources would fully compensate for proposed permanent and temporary removal of such resources.

4.1.1.5. CUMULATIVE IMPACTS

The proposed project would reclaim and convert 2.04 acres WoUS/WoS and 2.97 acres CDFW streambeds to an earthen channel condition within the Whitewater River floodplain, which is more than that proposed for removal by the project. This would offset potentially cumulative

impacts. As no jurisdictional wetlands would be permanently impacted, the proposed project would not result in the net loss of wetlands. Additionally, Measures **M-4** through **M-9** identified in Appendix G would be implemented to ensure protection of federal and/or state jurisdictional features adjacent to the project footprint. Thus, the proposed project would not considerably contribute to cumulative impacts within the region to jurisdictional water resources.

4.1.2. Raptor Foraging and Nesting

Southern California is home to a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined in the region, affecting many species, but especially raptors. A few species, such as red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in the vicinity of nesting sites.

4.1.2.1. SURVEY RESULTS

During the fieldwork for the proposed project, three species of raptor were detected within the BSA: Cooper's hawk (*Accipiter cooperii*), American kestrel, and burrowing owl. A discussion of burrowing owl is provided in Section 4.4.2, and the species is not discussed further in this section. Open lands within the BSA (approximately 64.76 acres) provide suitable foraging habitat for raptor species. Suitable foraging habitat is present within Sonoran bush scrub, Sonoran bush scrub/active sand dunes, dry wash scrub, and disturbed areas. The BSA provides limited suitable nesting habitat for raptors in the mature ornamental vegetation (up to 1.33 acres).

4.1.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

Measure **M-1** through **M-8** in Appendix G would ensure that direct mortality of raptors and/or abandonment of nests with eggs and/or young would not occur and would comply with the MBTA and Fish and Game Code.

4.1.2.3. PROJECT IMPACTS

Approximately 1.01 acres of potential raptor foraging habitat would be directly and permanently removed by the proposed project, whereas14.29 acres would be temporarily disturbed during construction activities. There is potential for long-term direct effects on raptors foraging within the area due to the elevation of the new Vista Chino Bridge; however, this would not be an increase above the potential of mortality to occur from traffic collisions from the existing low water crossing. Although 1.01 acres of potential raptor foraging would be permanently impacted, approximately 2.97 acres of potential raptor foraging habitat would be reclaimed after construction has been completed (lands underneath the proposed bridge).

The proposed project would permanently remove approximately 0.20 acre of potential nesting habitat and temporarily remove another 0.48 acre of potential nesting habitat. Implementation of avoidance and minimization measures presented above, ensure that direct mortality of nesting raptors would not occur. The removal of 1.01 acres of potential raptor foraging habitat along with the permanent removal of 0.20 acre of potential nesting habitat would not pose a biologically important impact to raptors.

4.1.2.4. COMPENSATORY MITIGATION

No compensation needed.

4.1.2.5. CUMULATIVE EFFECTS

With the implementation of Measures **M-1** through **M-8**, no direct take of nesting raptors would occur. The project would permanently remove 0.20 acre of potential raptor nesting habitat in the form of mature ornamental vegetation and remove up to 1.01 acre of foraging habitat. The combined proposed impacts to raptors by the proposed project would not make a cumulatively considerable contribution to the regional decline of raptors in the Coachella Valley.

4.2. Special-Status Plant Species

There are a number of federally listed, state listed, and nonlisted special-status plants that are known to occur within the region. The following sections provide the results of the habitat evaluations, focused survey work, and relevant regulatory analysis.

4.2.1. Threatened and Endangered Plant Species

There are six federal and/or state threatened and endangered plant species that were reviewed for occurrence in the BSA based on the regional location of the proposed project: Coachella Valley milk-vetch, triple-ribbed milk-vetch (*Astragalus tricarinatus*), Mojave tarplant (*Deinandra mohavensis*), Parish's daisy (*Erigeron parishii*), Parish's meadowfoam (*Limnanthes alba* ssp. *parishii*), and Hidden Lake bluecurls (*Trichostema austromontanum* ssp. *compactum*). Of these, only the Coachella Valley milk-vetch was judged to have the potential to occur within the BSA based on the species habitat requirements and BSA conditions. Details for Coachella Valley milk-vetch are provided below. A "no effect" under Section 7 of FESA is anticipated for triple-ribbed milk-vetch, Mojave tarplant, Parish's daisy, Parish's meadowfoam, and Hidden Lake bluecurls. Appendix B provides the details of the determination for potential for presence within the BSA for each of these species.

4.2.1.1. SURVEY RESULTS

Sonoran Creosote Bush Scrub/Active Sand Dunes, Sonoran Creosote Bush Scrub, and Desert Dry Wash Scrub within the BSA were considered suitable habitat for Coachella Valley milk-vetch. Suitable habitat was deemed absent for all other federal- and/or state-listed species known to occur in the region. Table 4-4 provides a summary of the plant habitat evaluation and focused survey results. Figure 4-3a illustrates the location of the Coachella Valley milk-vetch found within the BSA during the rare plant focused survey.

Table 4-4. Summary of Listed Plant Habitat Evaluation and Focused Survey Results

Species	Habitat Evaluation Results	Focused Survey Results
Coachella Valley Milk-vetch (*Astragalus lentiginosus* var. *coachellae*)	Suitable habitat is present within the Sonoran creosote bush scrub/active sand dunes and Sonoran creosote bush scrub, and desert dry wash within the BSA.	Approximately 13 individuals were observed within the BSA during focused surveys performed in 2012.

Approximately 13 individual Coachella Valley milk-vetch were observed within the BSA during the 2012 focused survey. In addition, this species has been known to occur within the Section 6 Target Acquisition Area of the Whitewater River (Tribal HCP Section 3.3.2.7). No other federal- or state-listed plant species were detected within the BSA.

4.2.1.2. AVOIDANCE AND MINIMIZATION

Measures **M-1** through **M-9** in Appendix G would ensure potential habitat for Coachella Valley milk-vetch adjacent to the project impact area would be protected from potential temporary indirect effects (e.g., degradation of habitat by dust and fire) caused during construction activities.

4.2.1.3. PROJECT IMPACT

The proposed impacts on Coachella Valley milk-vetch are summarized in Table 4-5, below. The project would directly impact 14.12 acres of potential habitat. The location of eight of the individuals identified during the current field survey would be removed (refer to Table 4-5), and 2.97 acres of land that is currently covered by roadbed would be returned to its natural topography. Of the lands proposed for impact, 6.20 acres occur on CVMSHCP jurisdiction lands and 7.92 acres on the Tribe's land.

There is potential for temporary indirect effects, such as dust and fire, to occur to Coachella Valley milk-vetch individuals adjacent to the project impact area during project construction. Implementation of Measures **M-1** through **M-9** in Appendix G would ensure that this species adjacent to the project impact area is protected during construction activities.

The removal of the existing low water crossing and construction of the bridge would improve fluvial sand transport (AEI CASC Consulting 2013) and thus enhance the up- and down-stream connection of suitable habitat for the Coachella Valley milk-vetch.

There is a potential for long-term indirect effects on Coachella Valley milk-vetch from the expected increase and continued use of the roadway; however, these effects would not be worse than existing conditions. These indirect effects include spread of invasive weeds transported by vehicles and increased risk of fire.

The proposed impacts would be biologically significant to Coachella Valley milk-vetch and would have a "may affect" determination under FESA.

Table 4-5. Proposed Impacts on Coachella Valley Milk-vetch

Vegetation Community	Proposed Impact Area in CVMSHCP (acres)	Proposed Impact Area in Tribal Lands (acres)		
		100% Take Authorized Area	Within ROW	Outside ROW
Sonoran Creosote Bush Scrub	0.01	3.98	0.20	0.01
Sonoran Creosote Bush Scrub/ Active Sand Dunes	2.09[a]	0.00	0.91[b]	1.71[d]
Desert Dry Wash Scrub	4.10	0.00	0.46[c]	0.65
Total Impacts	**6.20**	**3.98**	**1.57**	**2.37**
Reclaimed Lands	**1.69**	**1.28**		

[a] Would impact three individuals
[b] Would impact two individuals
[c] Would impact one individual
[d] Would impact one individual

4.2.1.4. COMPENSATORY MITIGATION

Proposed impacts on Coachella Valley milk-vetch within CVMSHCP Plan Area lands would be mitigated by the Plan; thus 6.20 acres of impact to occupied and unoccupied habitat. As a permittee of the CVMSHCP, the City would receive take authorization under FESA. No compensation would be necessary for these proposed impacts.

Proposed impacts to Coachella Valley milk-vetch on the Tribe's land (7.92 acres) would not be covered by the CVMSHCP and as such would need to receive take authorization under Section 7 of FESA. A Section 7 Consultation separate from that conducted through the demonstration of compliance with the CVMSHCP would be necessary. Compensation for the loss of CVMV on Tribal land's would occur through measure **M-16**.

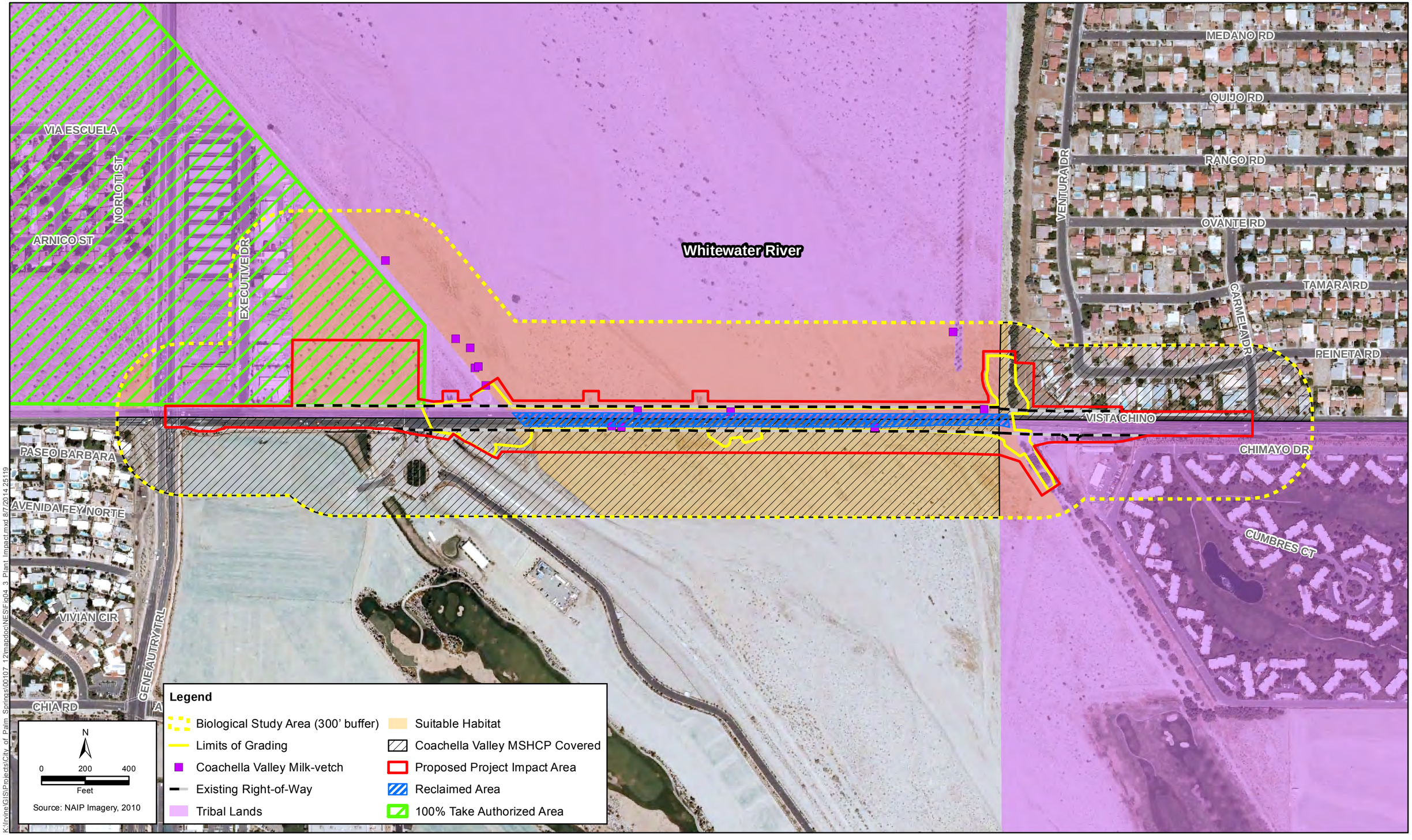

Figure 4-3
Rare Plant - Results
Vista Chino Low Water Crossing Bridge Replacement

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The proposed project would mitigate impacts to Coachella Valley milk-vetch on the Tribe's land at a minimum of a 1:1 ratio, which is consistent with the Tribe's requirements. However, additional mitigation may be required under FESA. Final compensatory mitigation required under FESA will be determined through Section 7 consultation with USFWS.

Consistency with the Agua Caliente Tribal HCP would require a fee payment for impacts to the Tribe's land outside of the existing ROW and outside of the 100% Take Authorized Area.

4.2.1.5. CUMULATIVE EFFECTS

Suitable habitat for Coachella Valley milk-vetch is present up- and down-stream of the proposed project. Other proposed projects (those that involve impacts on this species) in the regional vicinity may contribute to the regional decline of this species. This species relies on the Aeolian sand transport system of the Whitewater River, thus any projects affecting these processes upstream from the proposed project may have an effect on the population of Coachella Valley Milk-vetch in the BSA. Although the proposed project would remove occupied Coachella Valley milk-vetch habitat, 2.97 acres of currently developed lands under the proposed Vista Chino Bridge would be converted to natural topography and improve upstream and downstream connection of suitable habitat for the species. In addition all lands with potential for the species and proposed for impact would be fully mitigated by the CVMSHCP and by consistency with the Tribal HCP. Cumulative effects are not anticipated.

4.2.2. Nonlisted Special-status Plants

There are over 55 plant species ranked as nonlisted special status by CNPS that were initially reviewed for the proposed project. Of these, 17 were considered to have a potential of occurring within the BSA: chaparral sand verbena (*Abronia villosa* var. *villosa,* CRPR 1B.1), singlewhorl burrobush (*Ambrosia monogyra*, CRPR 2B.2), Abram's spurge (*Chamaesyce abramsiana*, CRPR 2B.2), Arizona spurge (*Chamaesyce arizonica*, CRPR 2B.3), flat-seeded spurge (*Chamaesyce platysperma*, CRPR 1B.2), ribbed cryptantha (*Cryptantha costata*, CRPR 4.3), winged cryptantha (*Cryptantha holoptera*, CRPR 4.3), pointed dodder (*Cuscuta californica* var. *apiculata*, CRPR 3), glandular ditaxis (*Ditaxis claryana*, CRPR 2B.2), California ditaxis (*Ditaxis serrata* var. *californica*, CRPR 3.2), Harwood's eriastrum (*Eriastrum harwoodi*, CRPR 1B.2), California Satintail (*Imperata brevifolia,* CRPR 2B.1), Little San Bernardino Mountains linanthus (*Linanthus maculatus*, CRPR 1B.2), slender cottonheads (*Nemacaulis denudata* var. *gracilis*, CRPR 2B.2), desert beardtongue (*Penstemon pseudospectabilis* ssp. *pseudospectabilis*, CRPR 2B.2), Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*, CRPR 2B.2), and Mecca-aster (*Xylorhiza cognata*, CRPR 1B.2).

The remaining non-listed special-status plant species evaluated for the proposed project were determined not to have a potential to occur based on one or more of the following variables: geographic and elevation distribution, lack of suitable habitat, lack of suitable soils, and/or intolerance to existing disturbances. A full list of the non-listed special-status plants initially evaluated for the BSA is provided in Appendix B.

4.2.2.1. SURVEY RESULTS

During the habitat assessment, up to 59.79 acres of suitable habitat for non-listed special-status plants in the form of Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, Desert Dry Scrub, and Freshwater Grassland Scrub were found. Table 4-6, below, summarizes the suitable habitat within the BSA and the results of the focused survey for each species.

Table 4-6. Suitable Habitat for Special-Status Nonlisted Plants

Species	Habitat Evaluation Results	Focused Survey Results
Chaparral Sand Verbena (*Abronia villosa* var. *villosa*)	Suitable habitat is present within sandy soils and active sand dunes present within the Whitewater River.	Species absent during focused surveys performed in 2012.
Singlewhorl Burrobrush (*Ambrosia monogyra*)	Suitable habitat is present within Sonoran Creosote Bush Scrub within the BSA.	Species absent during focused surveys performed in 2012.
Abram's Spurge (*Chamaesyce abramsiana*)	Suitable habitat is present within Sonoran Creosote Bush Scrub and Sonoran Creosote Bush Scrub/Active Sand Dunes within the BSA. The closest record of the species is in Indio, approximately 18 miles to the southeast.	Species absent during focused surveys performed in 2012.
Arizona Spurge (*Chamaesyce arizonica*)	Suitable habitat is present within Sonoran Creosote Bush Scrub in the BSA. There is a moderate potential for this species to occur.	Species absent during focused surveys performed in 2012.
Flat-seeded Spurge (*Chamaesyce platysperma*)	Suitable habitat is present within Sonoran Creosote Bush Scrub and Sonoran Creosote Bush Scrub/Active Sand Dunes in the BSA. The last documented California collection is from 1987. There is a low potential for this species to occur based on its rarity within the region.	Species absent during focused surveys performed in 2012.

Species	Habitat Evaluation Results	Focused Survey Results
Pointed Dodder (*Cuscuta californica* var. *apiculata*)	Suitable habitat is present within the Sonoran Creosote Bush Scrub, and this species has been found within the region. This species has a low potential to occur.	Species absent during focused surveys performed in 2012.
Glandular Ditaxis (*Ditaxis claryana*)	Suitable habitat is present in the BSA within Sonoran Creosote Bush Scrub. There is a low potential for this species to occur within the BSA.	Species absent during focused surveys performed in 2012.
California Ditaxis (*Ditaxis serrata* var. *californica*)	Suitable habitat is present in BSA within Sonoran Creosote Bush Scrub. There is a low potential for this species to occur within the BSA.	Species absent during focused surveys performed in 2012.
Harwood's Eriastrum (*Eriastrum harwoodii*)	Suitable habitat is present within Sonoran Creosote Bush Scrub/Active Sand Dune areas of the BSA. This species has a low potential to occur based on the location of the project site relative to the species' regional distribution.	Species absent during focused surveys performed in 2012.
California Satintail (*Imperata brevifolia*)	Suitable habitat is present within Sonoran Creosote Bush Scrub areas of the BSA.	Species absent during focused surveys performed in 2012.
Little San Bernardino Mountains. Linanthus (*Linanthus maculatus*)	Suitable habitat is present within the BSA (i.e., sandy areas in Sonoran Creosote Bush Scrub). This species has a low potential of occurrence based on surrounding land uses and disturbances.	Species absent during focused surveys performed in 2012.
Slender Cottonheads (*Nemacaulis denudata* var. *gracilis*)	Suitable habitat is present within the BSA within Sonoran Creosote Bush Scrub/Active Sand Dune habitat. This species has a low potential to occur based on surrounding site disturbances.	Species absent during focused surveys performed in 2012.
Desert Beardtongue (*Penstemon pseudospectabilis* ssp. *pseudospectabilis*)	Potentially suitable habitat is present within the Sonoran Creosote Bush Scrub. The species has a low potential to occur within the BSA.	Species absent during focused surveys performed in 2012.

Species	Habitat Evaluation Results	Focused Survey Results
Sonoran Maiden Fern (*Thelypteris puberula* var. *sonorensis*)	Suitable habitat within the BSA is limited to a small amount of Freshwater Grassland adjacent to the Whitewater River, which was heavily vegetated with dense grasses. As a result, this species has a low potential to occur within the BSA.	Species absent during focused surveys performed in 2012.
Mecca-aster (*Xylorhiza cognata*)	Suitable habitat is present within Sonoran Creosote Bush Scrub. This species has a low potential to occur within the BSA.	Species absent during focused surveys performed in 2012.

None of the species with potential to occur were found during the 2012 rare plant focused survey.

4.2.3. Avoidance and Minimization Efforts

Measures **M-1** through **M-9** in Appendix G would ensure that impacts on potential suitable habitat adjacent to the project footprint would be avoided.

4.2.3.1. PROJECT IMPACTS

Non-listed special-status species were not found present within the BSA. No impacts would occur.

4.2.3.2. COMPENSATORY MITIGATION

No compensation would be necessary, because project related impacts are not expected.

4.2.3.3. CUMULATIVE EFFECTS

The proposed project would not impact non-listed special-status plants, because none were found present in the BSA. No cumulative impacts are expected.

4.3. Threatened and Endangered Animals

There are ten federally and/or state threatened and endangered animal species known to occur within the project region (Appendix B). The following eight were found to have no potential for occurrence based on absence of suitable habitat, desert pupfish (*Cyprinodon macularius*), California red-legged frog (*Rana draytonii*), Sierra Madre yellow-legged frog (*Rana muscosa*), desert tortoise (*Gopherus agassizii*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and peninsular bighorn sheep (*Ovis canadensis nelsoni* DPS). A "no effect" determination applies to these species because there is no potential for these species to occur and to be impacted by the project.

Only two animal species, Coachella Valley fringe-toed lizard and Casey's June beetle, were judged to have potential to occur within the BSA based on species requirements and conditions within the BSA. The following section provides the results and regulatory analysis for these species.

4.3.1. Coachella Valley Fringe-toed Lizard

Coachella Valley fringe-toed lizard (CVFTL) is a federally threatened and state endangered species. This species occupies wind-blown dunes within the Coachella Valley.

4.3.1.1. SURVEY RESULTS

The suitable habitat for CVFTL within the BSA consists of Sonoran Creosote Bush Scrub/Active Sand Dune habitat and Desert Dry Wash Scrub. During the April 28, 2012, protocol survey, a single mature CVFTL was observed within the Sonoran Creosote Bush Scrub/Active Sand Dune habitat, south of Vista Chino (refer to Figure 4-4). As a result of the contiguous nature of suitable habitat (separated only by the existing roadbed associated with Vista Chino), and the presence of CVFTL within the Sonoran Creosote Bush Scrub/Active Sand Dune habitat south of Vista Chino, all CVFTL suitable habitat within the BSA is considered occupied.

The nearest mapped Designated Critical Habitat for CVFTL is approximately six miles east of the BSA. The Section 6 Target Acquisition area for the Tribal HCP (within the BSA on the north side of Vista Chino) is the only known location within Reservation lands, where CVTFL is known to occur (Tribal HCP Section 3.3.2.1).

4.3.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

Implementation of Measures **M-1** through **M-10**, and **M-17** in Appendix G would ensure no impacts would occur to CVFTL individuals, which are known to inhabit the Sonoran Creosote Bush Scrub/Active Sand Dune located to the north and south of the existing Vista Chino alignment. In addition, these measures would support Tribal HCP species objectives within the Section 6 Target Acquisition Area.

4.3.1.3. PROJECT IMPACTS

There is potential that a few individuals would be temporarily impacted (Measure **M-17** individuals transported by hand to lands outside the project impact boundary/fencing) by the proposed project during construction and habitat for the species would be directly and indirectly impacted. Table 4-7 provides a summary of proposed impacts on CVFTL. The proposed project would impact 6.19 acres of CVFTL habitat within the CVMSHCP Plan Area. The proposed project would impact 3.73 acres of CVFTL habitat on Tribal lands. Direct mortality would be avoided by Measure **M-17**

Table 4-7. Proposed Impacts on Coachella Valley Fringe-toed Lizard

Vegetation Community	Proposed Impact Area in CVMSHCP (acres)	Proposed Impact Area in Tribal Lands (acres)		
		100% Take Authorized Area	Within ROW	Outside ROW
Sonoran Creosote Bush Scrub/ Active Sand Dunes	2.09	0.00	0.91	1.71
Desert Dry Wash Scrub	4.10	0.00	0.46	0.65
Total Impacts	**6.19**	**0.00**	**1.37**	**2.36**
Reclaimed Area	**1.69**	**1.28**		

Indirect impacts (e.g., vibrations from construction equipment, increased risk of fire) may occur to areas outside of the project impact area. The measures in Section 4.3.1.2 would ensure any individuals adjacent to the impact area were avoided.

The existing Vista Chino Road crossing would be removed in concurrent phases with bridge construction. Over the long-term, areas underneath the Vista Chino Bridge (approximately 2.97 acres) would convert to natural topography and connect natural habitat on the north and south sides of Vista Chino. As a result, the conversion of Vista Chino from an at-grade crossing to a bridge would reduce potential direct mortality of CVFTL from vehicles and have a beneficial effect on the species.

Based on anticipated impacts to this species the proposed project could have a biologically substantial impact to CVFTL and would have a "may affect" determination under FESA. No designated CVFTL critical habitat would be affected by the proposed project. The proposed impacts within CVMSHCP Plan Area lands would be authorized and mitigated by the CVMSHCP. No additional mitigation would be required for these project impacts and take authorization under FESA and CESA would be provided.

4.3.1.4. COMPENSATORY MITIGATION

Within the CVMSHCP Plan Area, the proposed project is already covered under the Plan. Thus, no compensation would be required on CVMSHCP lands.

The proposed impacts to CVFTL on Tribal lands would not be covered by the CVMSHCP and because the Tribal HCP is not a permitted HCP, no take authorization under FESA or CESA would be provided. As such, take authorization would need to be obtained under Section 7 of FESA and Section 2010.1 under CESA.

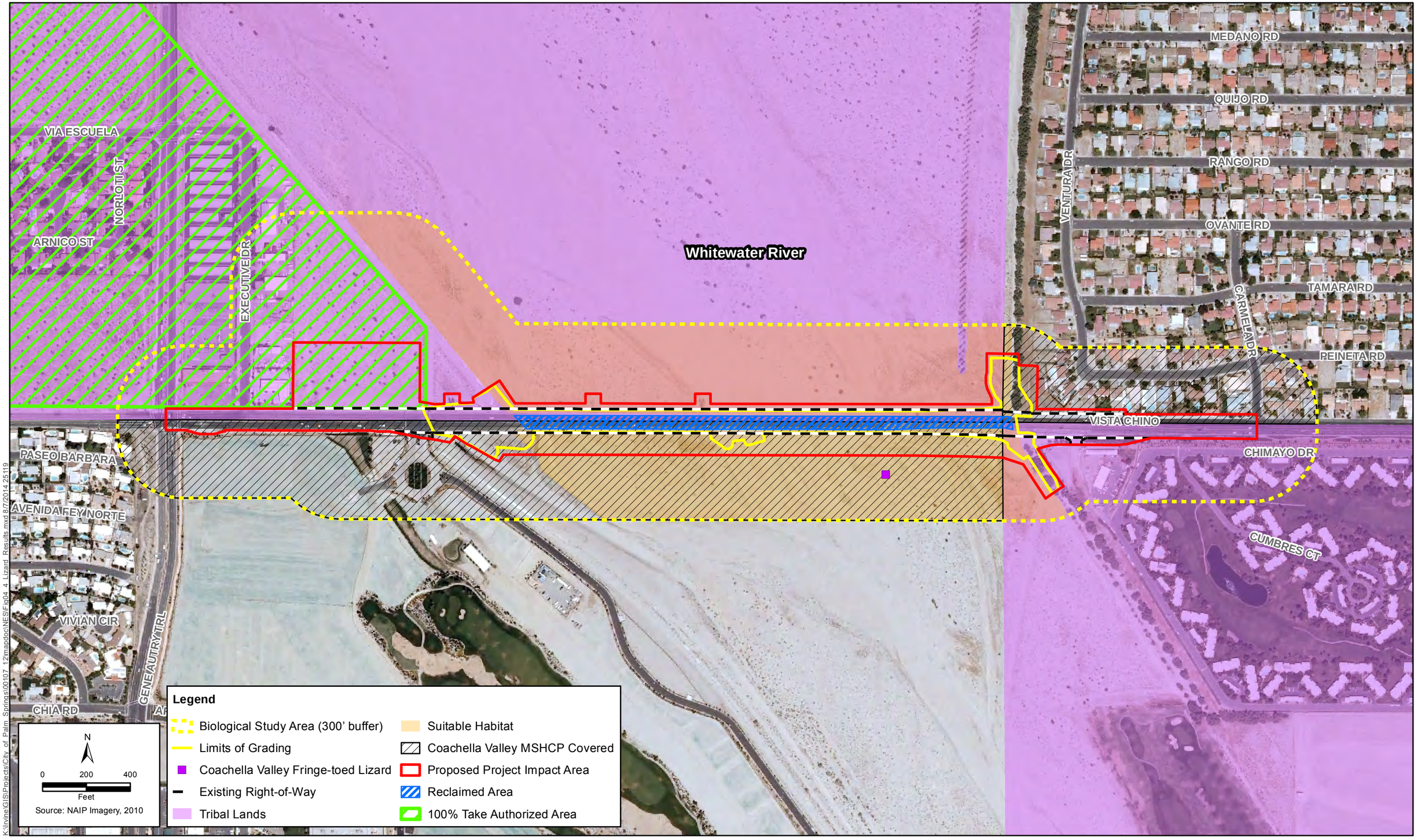

Figure 4-4
Coachella Valley Fringe-toed Lizard Results
Vista Chino Low Water Crossing Bridge Replacement

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The proposed project would mitigate impacts to CVFTL on the Tribe's land at a minimum of a 1:1 ratio, which is consistent with the Tribe's requirements. However, additional mitigation may be required under FESA and CESA. Final compensatory mitigation required under FESA and CESA would be determined through consultation with USFWS and CDFW.

Consistency with the Agua Caliente Tribal HCP would require a fee payment for impacts to the Tribe's land outside of the existing ROW and outside of the 100% Take Authorized Area.

4.3.1.5. CUMULATIVE IMPACTS

Road projects and improvements within the regional vicinity of the proposed project would likely increase the amount of vehicles traversing the region, potentially increasing mortality of individuals of CVFTL, increasing habitat fragmentation, and decreasing habitat quality. During construction, it is anticipated that a few individuals may be excluded from the proposed project impact area, constituting take and habitat would be impacted. However, the new bridge would reduce mortality of CVFTL by removing the roadway from the channel and an additional 2.97 acres of current roadbed would be reclaimed to open channel. Overall, the existing conditions for CVFTL would be expected to improve. All proposed impacts to this species would be fully mitigated by the CVMSHCP and through consistency with the Tribal HCP.

4.3.2. Casey's June Beetle

Casey's June beetle is a federally endangered species. This species occurs in Sonoran Desert Scrub habitats within alluvial fans and terraces and is only known to occur in the vicinity of the Palm Canyon Wash in the southern region of the City of Palm Springs.

4.3.2.1. SURVEY RESULTS

No focused surveys for Casey's June beetle were conducted because the BSA occurs outside of the species' range and distribution.

Although suitable habitat would appear to be present within the BSA, this species is not expected to occur based on its limited distribution, the fact that none of the known habitat remnants occur in the vicinity of the BSA, the species has not been documented in the Cathedral City quadrangle, and the low mobility of females (they are flightless). The only known populations of this species occur within the Palm Canyon Wash and adjacent tributaries, even though recent survey work for the species has been conducted within its historic range. Federally designated Critical Habitat is not present within the BSA of the proposed project.

4.3.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

Not applicable.

4.3.2.3. PROJECT IMPACTS

No proposed impacts would occur because there is no potential for the species to be present. Given the species absence, the project would have a "no effect" determination under FESA.

4.3.2.4. COMPENSATORY MITIGATION

No compensation would be necessary.

4.3.2.5. CUMULATIVE IMPACTS

No cumulative impacts on this species would occur.

4.4. Nonlisted Special-Status Animals

There are over 30 non-listed special-status animals known to occur within the regional vicinity that were evaluated for the proposed project. Non-listed special-status animals are those that are state species of special concern (SSC) or are tracked by the CNDDB.

The BSA provides suitable habitat for 14 non-listed special-status animal species: flat-tailed horned lizard (*Phrynosoma mcallii*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), crissal thrasher (*Toxostoma crissale*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), pallid bat (*Antrozous pallidus*), western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), Palm Springs pocket mouse (*Perognathus longimembris bangsi*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), Coachella Valley round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*), Coachella giant sand treader cricket (*Macrobaenetes valgum*), and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*). The following sections provide the results of the habitat evaluations, focused survey work, and relevant regulatory analysis.

4.4.1. Flat-tailed Horned Lizard

The Flat-tailed horned lizard (FTHL) is a SSC. It can be found in areas of fine sand within desert washes and flats with vegetation cover. Native ants are a primary food source for this species. This species is a covered species under the CVMCHP and the Tribal HCP.

4.4.1.1. SURVEY RESULTS

Suitable habitat for FTHL is present within the approximately 59.67 acres of Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dune habitat, and Desert Dry Wash Scrub within the BSA. No focused surveys were conducted for this species since there are no survey requirements for this species for covered projects in the Tribal HCP. This species was not observed during other fieldwork.

4.4.1.2. AVOIDANCE AND MINIMIZATION

Measures **M-1** through **M-10** and **M-17** in Appendix G would provide protection to potential FTHL habitat and individuals adjacent to the project limits. These measures would also support Tribal HCP species objectives within the Section 6 Target Acquisition Area.

4.4.1.3. PROJECT IMPACTS

The proposed project would impact 6.20 acres of FTHL habitat within the CVMSHCP Plan Area. The proposed project would impact 7.92 acres of FTHL habitat on Tribal lands. With implementation of Measure **M-17** during construction direct mortality would be avoided.

Indirect effects (e.g., vibrations from construction equipment, increased risk of fire) may occur to areas outside of the project impact area. The avoidance and minimization measures in Section 4.4.1.2 would ensure any individuals adjacent to the impact area were avoided.

The existing Vista Chino Road crossing would be removed in concurrent phases with bridge construction. Over the long-term, areas underneath the Vista Chino Bridge (approximately 2.97 acres) would return to dry sandy wash and/or active sand dunes, and connect natural habitat on the north and south sides of Vista Chino. In addition, the Vista Chino Bridge would reduce potential direct mortality of FTHL from vehicles. In the long-term the proposed project would have beneficial impacts on the species, if present.

The proposed project would not have biologically important impacts on this species.

4.4.1.4. COMPENSATORY MITIGATION

To be consistent with the Tribal HCP, impacted FTHL habitat outside of the existing ROW and outside of the 100% Take Authorized Area, would require a fee payment. This would be the same fee payment required for impacts to other Tribal HCP covered species. Refer to Section 5.7 for details. No other compensatory mitigation would be necessary.

4.4.1.5. CUMULATIVE IMPACTS

Just as for CVFTL, the proposed project would create potential habitat for FTHL and would reduce potential of direct mortality from vehicle collisions in the reclaimed area. Direct removal of potential habitat would occur, but the majority of this would eventually return to natural conditions. Any proposed impacts to this species would be fully mitigated under the CVMSHCP and through consistency with the Tribal HCP. Cumulative impacts would not be cumulatively considerable.

4.4.2. Burrowing Owl

Burrowing owl is a state SSC that inhabits open grasslands and shrublands where shrub cover is less than 30 percent (CBOC 1993). This owl occupies burrows created by burrowing mammals (e.g., California ground squirrel [*Spermophilus beechyi*]), but it can also be found within human-made features (i.e., debris piles, banks of basins, open pipes). This species is a covered species under the CVMCHP and the Tribal HCP.

4.4.2.1. SURVEY RESULTS

A habitat assessment was conducted for burrowing owl, and suitable habitat exists within the Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, Desert Dry Wash Scrub, and Disturbed habitat within the BSA. A few small mammal burrows were mapped within the BSA and were found scattered near the western end of the proposed PIA. There is also a potential for burrowing owl to forage in open lands within the project footprint and surrounding area.

Two adult burrowing owls and at least three young were observed on the berm at the west end of the Whitewater River, south of Vista Chino; occupying a burrow just outside the PIA and taking cover in the rip rap just inside the permanent impact area (see Figure 4-5). In addition, an adult burrowing owl and at least two fledglings were noted just outside of the BSA.

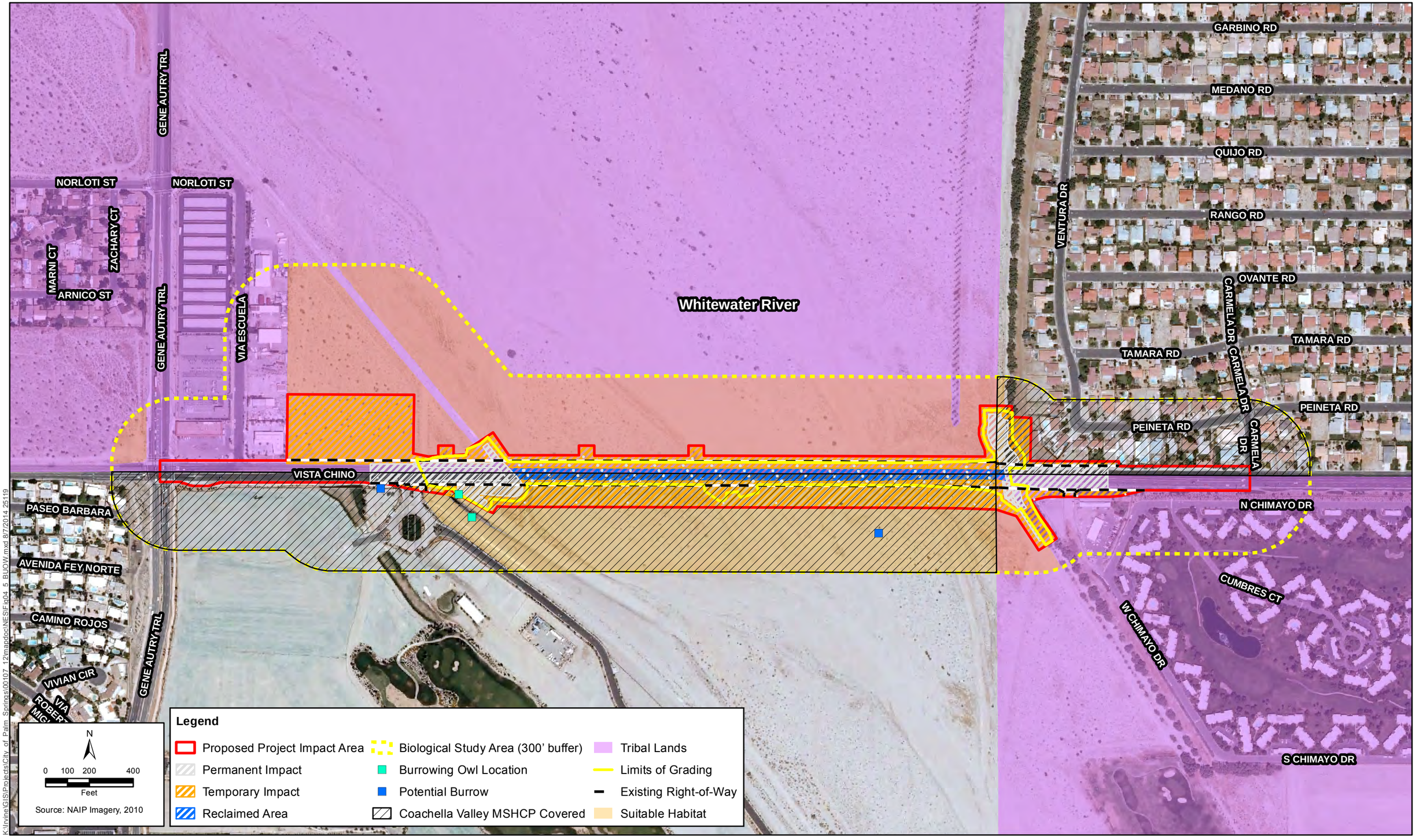
4.4.2.2. AVOIDANCE/MINIMIZATION EFFORTS

Implementation of Measures **M-1** through **M-10** in Appendix G would minimize potential impacts on burrowing owl occurring adjacent to the project limits. Measures **M-11** through **M-13** would ensure there is no direct mortality to any owls during construction.

4.4.2.3. PROJECT IMPACTS

The proposed project would remove approximately 15.30 acres of burrowing owl habitat that would be used for nesting and/or foraging.

Impacts would be occurring on CVMSHCP area lands and Tribal lands. On the CVMSHCP area land, 7.01 acres would be impacted. On Tribal land 8.32 acres would be impacted with 5.68 acres within the existing ROW and 100% Take Authorized Area. There is potential for the species to be directly impacted during construction by the removal of burrows that were not found occupied during the survey work but could have become occupied by the time construction occurs; however, with implementation of Measures **M-11** through **M-13** in Appendix G, no direct mortality of burrowing owl would occur.



K:\Irvine\GIS\Projects\City of Palm Springs\00107.12\mapdoc\NES\Fig04_5_BUOW.mxd 8/7/2014 25119

Figure 4-5
Burrowing Owl Focused Survey Results
Vista Chino Low Water Crossing Bridge Replacement

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There is potential for indirect impacts on suitable foraging habitat for burrowing owl adjacent to the project limits. These include spread of invasive plant species, increased fire risk during construction, and noise deterring burrowing owls from foraging adjacent to the project footprint. With the implementation of Measures **M-1** through **M-10** in Appendix G, these potential impacts would be greatly reduced. Because this owl is a low flying species that hunts prey on the ground, the bridging of the existing roadway is expected to reduce potential vehicle collisions.

Given the species' rare status in the region, proposed impacts to this species could be biologically substantial.

4.4.2.4. COMPENSATORY MITIGATION

The proposed impacts on Burrowing Owl within the CVMSHCP Plan Area would be fully mitigated by the Plan. Under the Tribal HCP, habitat occupied by burrowing owl "shall be avoided to the maximum extent practicable. If avoidance is determined by the Tribe to not be practicable, any individuals shall be relocated in accordance with the protocols in Section 4.8.4.2(f) and/or (g) above, as appropriate" (Helix 2007). The combined compensation received through the CVMSHCP and Tribal HCP would fully compensate for proposed impacts to this species. No additional compensation is needed.

4.4.2.5. CUMULATIVE EFFECTS

The proposed project would impact burrowing owl. Although the project would not remove occupied burrows, it would remove other potential burrows and foraging habitat with less than 5 acres of land permanently impacted. All lands proposed for impact occur within the boundary of the CVMSHCP and the Tribal HCP. Both plans would fully compensate for proposed impacts to this species. In addition the reclaimed lands would provide a benefit to the species through reduced potential for vehicle collision. In all, the project would not contribute to the regional decline of burrowing owl. No cumulative effects anticipated.

4.4.3. Loggerhead Shrike

The loggerhead shrike is a state SSC and is not a covered species under the CVMSHCP or the Tribal HCP. This species occurs within lowland and foothill areas of California and is often seen in open areas with sparse trees or shrubs.

4.4.3.1. SURVEY RESULTS

There was no suitable nesting habitat within the BSA for loggerhead shrike; however, there is foraging habitat within the BSA. Suitable foraging habitat is present within 66.25 acres of the BSA and is comprised of all open lands that have not been developed. This species was not observed during the fieldwork for this project.

4.4.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

The measures identified in Appendix G (**M-1** through **M-10**) would reduce potential impacts on foraging areas adjacent to the project footprint.

4.4.3.3. PROJECT IMPACTS

The proposed project would impact approximately 16.02 acres of suitable foraging habitat. Suitable nesting habitat is absent within the LOD. During construction, no individuals would be directly impacted by the proposed project based on the absence of suitable nesting habitat and the ability of the species to flee (if present) to avoid construction equipment. Any potential indirect effects from the long-term operation of the elevated roadbed would not increase from baseline conditions, but may decrease. There would be potential for indirect effects on potential foraging habitat adjacent to the disturbance limits during construction; however, these impacts would be temporary and would be greatly minimized and/or avoided with implementation of Measures **M-1** through **M-9** in Appendix G.

Because there is no potential for nesting to occur, the proposed impacts would be limited to potential foraging habitat. The proposed project would not restore lands disturbed during construction but the ability of these disturbed lands to return to foraging habitat for this species is great due to the mercurial nature of the sand transport system. In addition, 2.97 acres would be reclaimed lands. The potential impact to Loggerhead Shrike by the project would not be biologically substantial.

4.4.3.4. COMPENSATORY MITIGATION

No compensation would be necessary.

4.4.3.5. CUMULATIVE EFFECTS

As stated above, the proposed project would remove potential foraging habitat but in the long-term the project would result in very little removal of habitat with an improvement made through the reclamation of 2.97 acres of land from the roadbed removal. There would not be a potential cumulatively considerable contribution to the regional decline of loggerhead shrike by the proposed project.

4.4.4. Crissal Thrasher

This species is a state SSC and is a covered species under the CVMSHCP and the Tribal HCP. crissal thrasher is a year-round resident of the region and inhabits shrubs and low trees in desert riparian and wash habitat.

4.4.4.1. SURVEY RESULTS

There is low potential for crissal thrasher to forage within approximately 61.03 acres of suitable habitat within Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, Desert Dry Wash Scrub, and Ornamental areas. Suitable habitat is low quality due to low shrub cover for the species. Low quality suitable nesting habitat is present in Ornamental trees (approximately 1.36 acre) in the BSA because this species requires dense thickets and scrub/low trees to nest in. This species was not observed within the BSA during field surveys.

4.4.4.2. AVOIDANCE AND MINIMIZATION MEASURES

The measures identified in Appendix G (**M-1** through **M-10**, and **M-14**) would reduce potential impacts on suitable habitat adjacent to the project site for this species.

4.4.4.3. PROJECT IMPACTS

The proposed project would remove a total of 14.81 acres of potentially suitable foraging habitat of which 6.50 acres occur on CVMSHCP area lands and 8.31 acres occur on Tribal lands. Approximately 0.68 acre of low quality breeding habitat (ornamentals) would be removed. Measure **M-14** would ensure no direct impact would occur on breeding individuals within or adjacent to the PIA.

Any potential indirect effects from the long-term operation of the elevated roadway are not expected to increase above baseline conditions, and may actually decrease risk of direct mortality. There would also be a potential for indirect effects to occur on potential foraging habitat adjacent to the disturbance limits during construction; however, these impacts would be temporary and would be greatly minimized and/or avoided with implementation of Measures **M-1** through **M-10** in Appendix G.

The reclamation of 2.97 acres could provide potential foraging habitat and elevation of the road onto a bridge would reduce potential for direct mortality of individuals by vehicle collisions. This thrasher like many is low flying. The natural lands disturbed within the LOD during construction are expected to rehabilitate fairly quickly due to the dynamic Aeolian sand transport system present. The project would not cause biologically substantial impacts on crissal thrasher.

4.4.4.4. COMPENSATORY MITIGATION

No compensation is necessary. However the proposed impacts on CVMSHCP Plan Area lands would be authorized and mitigated by the CVMSHCP. For those proposed impacts to lands within the Tribal HCP, the tribe would need consistency with the HCP through a fee payment (refer to Section 5.7 for details).

4.4.4.5. CUMULATIVE IMPACTS

Mitigation would be provided by the CVMSHCP and the Tribal HCP and the project would create 2.97 acres of foraging habitat for the species in the long term (reclaimed lands). The proposed project would not make a cumulatively considerable contribution to a regional decline of crissal thrasher.

4.4.5. Special-Status Bats

This section addresses potential impacts on western yellow bat, pallid bat, and pocketed free-tailed bat, both of which are state SSC. Only western yellow bat is also a covered species under the Tribal HCP and the CVMSHCP.

4.4.5.1. SURVEY RESULTS

There is potential for the proposed project to provide suitable roosting and foraging habitat for three special-status bat species (western yellow bat, pallid bat, and pocketed free-tailed bat). There is approximately 66.25 acres of potential habitat (Freshwater Grassland, Disturbed, Ornamental, Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, and Desert Dry Wash Scrub) that could be used for foraging. No roost sites were noted during any of the survey work however, there is a low potential for western yellow bat and pallid bat to roost within the ornamental mature trees (approximately 1.16 acres) within the BSA. No suitable roosting areas were present in the BSA for pocketed free-tailed bat.

4.4.5.2. AVOIDANCE AND MINIMIZATION EFFORTS

Measure **M-15** in Appendix G would ensure that no direct mortality to special-status bat species would occur. Additionally Measures **M-1** through **M-10** in Appendix G would also provide protection to potential bat foraging habitat adjacent to the project footprint during construction.

4.4.5.3. PROJECT IMPACTS

Up to 16.02 acres of potentially suitable foraging habitat for special-status bats would be directly impacted by the proposed project. Within CVMSHCP area lands, 7.31 acres would be impacted. On Tribal lands, 8.71 acres would be impacted. Potential foraging habitat within the project limits is judged low quality. During construction there is a potential for temporary indirect effects to occur from construction noise, dust, etc., that could cause degradation of potential habitat. These effects are expected to potentially affect only a few individuals given the existing disturbance levels from Vista Chino and thus the low number of individuals expected to potentially forage in the BSA. Potential temporary indirect effects on special-status bats would be avoided and minimized through implementation of Measures **M-1** through **M-10** and **M-15**.

The proposed project would remove up to 0.68 acre of ornamental trees that could potentially be used for roosting by western yellow bat. Potential indirect effects on individuals roosting adjacent to the PIA would be avoided through implementation of the measures in Appendix G.

Overall, the project is not expected to have biologically substantial impacts to western yellow bat, pallid bat, and pocketed free-tailed bat.

4.4.5.4. COMPENSATORY MITIGATION

No compensation is necessary. However the proposed impacts to western yellow bat on CVMSHCP Plan Area lands would be authorized and mitigated by the Plan. For those proposed impacts to lands within the Tribal HCP, the tribe would need consistency with the HCP through a fee payment (refer to Section 5.7 for details).

4.4.5.5. CUMULATIVE EFFECTS

Mitigation would be provided by the CVMSHCP and the Tribal HCP and the project would create 2.97 acres of foraging habitat for these species in the long term (reclaimed lands). The proposed project would not make a cumulatively considerable contribution to a regional decline of western yellow bat, pallid bat, and pocketed free-tailed bat.

4.4.6. Terrestrial Mammals

This section addresses potential effects on northwestern San Diego pocket mouse, pallid San Diego pocket mouse, Palm Springs pocket mouse, Los Angeles pocket mouse, and Coachella Valley round-tailed ground squirrel. These species are all state SSC with Palm Springs pocket mouse and Coachella Valley round-tailed ground squirrel also being a covered species under the CVMSHCP and Tribal HCP.

4.4.6.1. SURVEY RESULTS

Suitable habitat for five special-status terrestrial mammals is present within the BSA. Approximately 64.76 acres within the Desert Dry Wash Scrub, Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, and Disturbed areas are suitable for these terrestrial mammals.

A focused survey for RTGS was performed and the species was detected in the northeast portion of the BSA on June 28, 2012 (see Figure 4-6). During other survey work, the species was observed in the same area on June 13, 2012. In addition there were incidental observations of RTGS south of the BSA on the terraces of the Whitewater River on June 28 and July 6, 2012.

Focused study (including trapping) was not performed on the other small mammals with potential to occur because the numbers of individuals potentially present would not constrain the project.

4.4.6.2. AVOIDANCE AND MINIMIZATION EFFORTS

Measures **M-1** through **M-10** in Appendix G would protect habitat adjacent to the project limits during construction. In addition these measures would support Tribal HCP species objectives for Palm Springs pocket mouse and Coachella Valley round-tailed ground squirrel within the Target Acquisition Area.

4.4.6.3. PROJECT IMPACTS

The proposed project would remove approximately 15.30 acres of potential habitat for these five special status mammals (CVMSHCP lands 6.98 acres, Tribal lands 8.32 acres]. The proposed removal of the roadbed and construction of the bridge would return 2.97 acres of roadbed to natural lands. Although the reclaimed lands would not be restored, it is anticipated that rehabilitation of this area would occur given the dynamic Aeolian sand transport system in which it occurs. The bridge would essentially eliminate the potential for vehicle collisions.

There is potential for construction-related indirect impacts on burrowing mammals adjacent to the project limits, such as collapse of burrows due to construction vibrations and increased risk of fire. Implementation of Measures **M-1** through **M-10** in Appendix G would reduce the potential for some indirect effects however, there is a potential for indirect effects to cause mortality to a few individuals, if present.

The residual loss of potential habitat for these five species of mammals by the proposed project is expected to be low (less than 5 acres) and would not pose a biologically substantial risk to these species.

4.4.6.4. COMPENSATORY MITIGATION

No compensation is necessary. However, proposed impacts on CVMSHCP lands would be fully mitigated by that Plan and consistency with the Tribal HCP would provide full mitigation for proposed impacts on tribal lands.

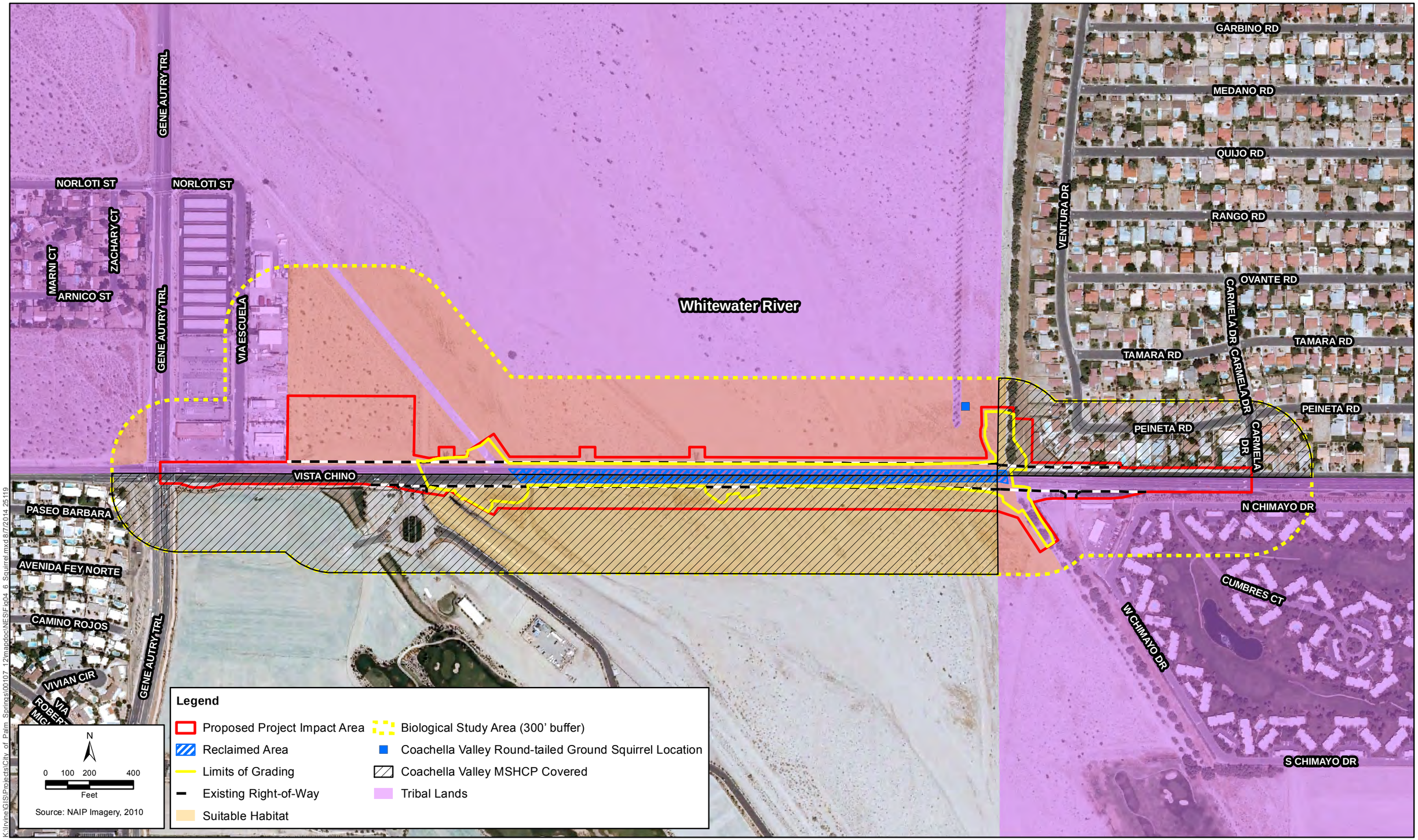

Figure 4-6
Coachella Valley Round-tailed Ground Squirrel Focused Survey Results
Vista Chino Low Water Crossing Bridge Replacement

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4.4.6.5. CUMULATIVE IMPACTS

The proposed project would ultimately remove less than 5 acres of potential habitat for these five species of small mammals. All proposed impacts would be mitigated fully by the CVMSHCP and the Tribal HCP. Hence the proposed project would not make a cumulatively considerable contribution to the regional decline of these species.

4.4.7. Coachella Giant Sand Treader Cricket

The Coachella giant sand treader cricket (*Macrobaenetes valgum*) is a blow-sand dependent species that occurs within un-stabilized, active sand dunes. This species is a covered species under the CVMSHCP and Tribal HCP.

4.4.7.1. SURVEY RESULTS

Suitable habitat (49.03 acres) for this species is present within the BSA and is comprised of Sonoran Creosote Bush Scrub/Active Sand Dunes and Desert Dry Wash Scrub communities (Figure 3-5 in Section 3.1.4), both containing active blow-sand. No focused surveys were conducted for this species, because its presence is assumed for the purpose of this analysis due to the presence of suitable habitat contiguous with the known occupied core habitat located within the Whitewater Floodplain Conservation Area approximately one mile upstream of the BSA.

4.4.7.2. AVOIDANCE AND MINIMIZATION EFFORTS

The CVMSHCP does not require avoidance and minimization measures for this species for the proposed project. Implementation of applicable measures identified in Section 4.9.3.1 (Covered Activities Within or Adjacent to Section 6 Target Acquisition Area) of the Tribal HCP (Helix 2007) for portions of the proposed project within Tribal lands would reduce potential impacts on this species. These are included as Measures **M-1** through **M-10** in Appendix G.

4.4.7.3. PROJECT IMPACTS

The proposed project would impact approximately 3.73 acres of suitable Coachella giant sand treader cricket habitat within land subject to the Tribal HCP and 6.19 acres of suitable habitat within the CVMSHCP boundary. As discussed above in Section 3.1.4 (Biological Conditions in the Biological Study Area), the roadbed removal and bridge construction would reclaim 2.97 acres of suitable habitat for this insect and would allow for movement of the species between upstream and downstream habitat blocks without potential mortality associated with crossing active traffic on the Vista Chino low water crossing. The reclaimed area would also benefit this species by improving fluvial sand transport functionality within the BSA by removing the existing Vista Chino low water crossing facility. This facility, in its current configuration causes

a sheet flow condition, potentially impeding fluvial sand transport to downstream habitat, as particles are caused to settle out of the water column, as suggested by the large amount of sand deposited on and adjacent to the westbound (upstream) shoulder.

Proposed impacts this species are not considered to be biologically substantial.

4.4.7.4. COMPENSATORY MITIGATION

Any impacts to this species would be fully mitigated by the CVMSHCP and the Tribal HCP. No further action is necessary.

4.4.7.5. CUMULATIVE EFFECTS

As stated in Section 4.4.7.3, the proposed project would impact 9.92 acres of potentially suitable Coachella giant sand treader cricket habitat. All proposed impacts would be fully mitigated by the CVMSHCP and through consistency with the Tribal HCP. The proposed project would not make a cumulatively considerable contribution to the regional decline of this species.

4.4.8. Coachella Valley Jerusalem Cricket

The Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*) occurs within sandy or gravelly soils associated with Sonoran Creosote Bush Scrub and Sonoran Mixed Woody/Succulent Scrub habitats. This species is a covered species under the CVMSHCP and Tribal HCP.

4.4.8.1. SURVEY RESULTS

Approximately 59.67 acres of potentially suitable habitat for this species is present within the BSA; comprised of Sonoran Creosote Bush Scrub, Sonoran Creosote Bush Scrub/Active Sand Dunes, and Desert Dry Wash Scrub Communities (Figure 3-5 in Section 3.1.4). No focused surveys were conducted for this species. It is considered to have potential to occur within the BSA.

4.4.8.2. AVOIDANCE AND MINIMIZATION EFFORTS

The CVMSHCP does not require avoidance and minimization measures for this species for the proposed project. Implementation of applicable measures identified in Section 4.9.3.1 (Covered Activities Within or Adjacent to Section 6 Target Acquisition Area) of the Tribal HCP for portions of the proposed project within Tribal lands would reduce potential impacts on this species. These are included as Measures **M-1** through **M-10** in Appendix G.

4.4.8.3. PROJECT IMPACTS

The proposed project would impact approximately 7.92 acres of potentially suitable Coachella Valley Jerusalem cricket habitat within land subject to the Tribal HCP and 6.20 acres of suitable habitat within the CVMSHCP Plan Area. As discussed in Section 3.1.4 of this report, the

reclaimed area would result in 2.97 acres of roadbed returned to natural lands. This would allow for movement of the species between upstream and downstream habitat blocks without potential mortality associated with crossing active traffic on the Vista Chino low water crossing. Although restoration would not occur, it is anticipated that the majority of the natural lands within the LOD would return to natural conditions over time.

The proposed impacts to this species are not considered biologically substantial.

4.4.8.4. COMPENSATORY MITIGATION

Any impacts to this species would be fully mitigated by the CVMSHCP and the Tribal HCP. No further action is necessary.

4.4.8.5. CUMULATIVE EFFECTS

As stated above, the proposed impacts to this species would be fully mitigated by the CVMSHCP and by consistency with the Tribal HCP. As such, the proposed project would not result in cumulative effects on Coachella Valley Jerusalem cricket.

4.5. Invasive Species

Seeds of invasive species can be transported to new areas through a variety of mechanisms including vehicles and animals. Recurring fires can encourage the establishment of invasive species, as can some forms of routine land maintenance (e.g., discing). The impact invasive species have on southern California native vegetation communities and the plants and animals that reside within these areas are in some circumstances catastrophic. Because of this, there is a need to identify and recommend measures for ground-disturbing projects that would reduce and/or avoid further transport of invasive species into natural open space areas.

4.5.1. Survey Results

Ten invasive plant species were identified within the BSA: Sahara mustard, downy chess, Bermuda grass, redstem filaree, wall barley, olive, crimson fountain grass, annual beard grass, common Mediterranean grass, and saltcedar. These species are classified as exotic pest plants by Cal-IPC (2006) and thus are known to invade natural open space areas and degrade native ecosystems.

4.5.2. Avoidance and Minimization

The proposed project is expected to disturb the ground and remove both nonnative vegetation and native vegetation. To ensure the proposed project does not promote the introduction of invasive species to the remaining open space within the BSA, the following Measures included in Appendix G would apply: **M-1**, **M-2**, and **M-5** through **M-9**.

4.5.3. Project Impacts

The proposed project would directly impact approximately 16.02 acres of undeveloped lands. During construction activities, construction vehicles may transport invasive plant species from past work sites to the BSA, or between work areas within the BSA. Post-construction bare ground can serve as a breeding ground for invasive plant species. The potential for adverse effects on natural open spaces from the introduction of invasive species is a possibility, and potential impacts could be severe. However, with implementation of the minimization and avoidance measures provided in Section 4.5.2, any potential indirect impacts from the potential introduction of invasive species during construction would be expected to have minimal effects on biological resources.

4.5.4. Compensatory Measures

No compensation is necessary.

4.5.5. Cumulative Impacts

With implementation of the avoidance and minimization measures specified in Section 4.5.2, the proposed project is found not to make a cumulatively considerable contribution to the introduction and/or establishment of invasive species to natural open space within the BSA and vicinity.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

There is one federally listed animal and one federally listed plant present within the BSA: CVFTL and Coachella Valley milk-vetch, respectively. The proposed project would impact occupied habitat for both species, with a portion of the impacts occurring on lands within the CVMSHCP and a portion of the impacts occurring on Tribal lands (outside of the CVMSHCP Plan Area). Refer to Chapter 4 for full project impact details. The project is a Covered Activity under the CVMSHCP and Tribal HCP. Under the CVMSHCP, take authorization is provided through demonstration of consistency with the CVMSHCP; thus, implementation of the applicable measures in Section 4.4 of the CVMSHCP would be required. Consistency with the CVMSHCP provides take authorization in the form of a streamlined Biological Opinion. Other than implementation of the measures in Section 4.4 of the CVMSHCP, no other compensation would be required by the CVMSHCP. In addition, measure **M-18** would be implemented in the unlikely event that a federal listed species that wasn't previously detected is found during preconstruction activities.

For proposed impacts on Tribal lands, a Section 7 Consultation separate from that conducted through the demonstration of compliance with the CVMSHCP would be necessary. As indicated in Sections 4.2.1.4 and 4.3.1.4 of this document, the proposed project would mitigate impacts to these two species on the Tribe's land at a minimum of a 1:1 ratio, which is consistent with the Tribe's requirements. However, additional mitigation may be required under FESA. Final compensatory mitigation required under FESA will be determined through Section 7 consultation with USFWS.

Critical habitat is absent from the BSA. A current species list from USFWS was generated on December 9, 2014 (Appendix C).

5.2. Migratory Bird Treaty Act

There are many species of native birds and raptors that are expected to occur within the BSA. Most of these species lack special status, but all are protected under the MBTA. Measures **M-11** through **M-14** (Appendix G) ensure compliance with the MBTA. No further action is necessary.

5.3. California Endangered Species Act Consultation Summary

A single state-listed species, the state endangered CVFTL is present within the BSA. The proposed project would impact occupied habitat for this species, with a portion of the impacts occurring on lands within the CVMSHCP and a portion of the impacts occurring on Tribal lands (outside of the CVMSHCP Plan Area). Refer to Chapter 4 for full project impact details. The project is a Covered Activity under the CVMSHCP and Tribal HCP. Under the CVMSHCP, take authorization is provided through demonstration of consistency with the CVMSHCP; thus, implementation of the applicable measures in Section 4.4 of the CVMSHCP would be required. Other than implementation of the measures in Section 4.4 of the CVMSHCP, no other compensation would be required by the CVMSHCP. In addition, measure **M-18** would be implemented in the unlikely event that a state listed species that wasn't previously detected is found during preconstruction activities.

For proposed impacts on Tribal lands, an Incidental Take Permit (ITP), administered by CDFW and separate from that conducted through the demonstration of compliance with the CVMSHCP would be necessary. As indicated in Section 4.3.1.4 of this document, the proposed project would mitigate impacts to this species on the Tribe's land at a minimum of a 1:1 ratio, which is consistent with the Tribe's requirements. Additional compensation is not expected but would be determined during the 2080.1 Consultation. No consultation with CDFW has been performed to date. CVMSHCP consistency review coordination will commence once Caltrans and the City have approved the NES and the necessary documents are provided to CDFW through the consistency review process.

5.4. California Fish & Game Code (Sections 3503, 3503.5, 3505. 3800, and 3801.6)

Many species of native birds that are expected to occur within the BSA. Most lack special status, but all are protected under the California Fish & Game code. Compliance with this code to protect native birds is provided through Measures **M-11** through **M-14** (Appendix G). No further action is necessary.

5.5. Wetlands and Other Waters Coordination Summary

Project-related impacts totaling 0.21 acre of permanent impacts and 5.77 acres of temporary impacts on non-wetland WoUS would require permitting under Section 404 of the CWA. The proposed project qualifies for the use of Nationwide Permit (NWP) 14, because permanent impacts are less than 0.5 acre and do not involve jurisdictional wetlands. Permanent impacts on WoUS would also trigger the need for a Section 401 Water Quality Certification, typically issued

by the RWQCB. However, as portions of the proposed project impacts would occur on Tribal land, regulatory authority to issue a 401 Water Quality Certification would be administered by the EPA. Acquisition of these permits would ensure compliance with CWA Sections 401and 404 and Executive Order 11990. A Streambed Alteration Agreement, as regulated by Section 1602 of the California Fish and Game Code, would be required for 1.49 acres of permanent impacts and 10.18 acres of temporary impacts on CDFW unvegetated streambed. Coordination with USACE, EPA, or CDFW has not occurred to date.

5.6. Invasive Species (Executive Order 13112)

Measures **M-1** and **M-6** through **M-8** provided in Appendix G would ensure compliance with federal Executive Order 13112. No further action is necessary.

5.7. Tribal HCP Permitting

A Conditional Use Permit granted by the Tribe will be necessary for the construction of the proposed project, a Covered Activity located within the Fluvial Sand Transport Process Area and Section 6 Target Acquisition Area of the Valley Floor Planning Area.

A meeting took place on May 30, 2012 with the City of Palm Springs, the Tribe, and the consultant to discuss the proposed target species for which focused surveys would be required for the project. It was determined at this meeting that the target species discussed herein would meet the applicable survey requirements for a Covered Activity per the Tribal HCP.

A meeting took place on December 4, 2013 with the City of Palm Springs, the Tribe, Caltrans, and the consultant to address the Conditional Use Permit and the Tribal HCP requirements. As stated on page 4-99 of the Tribal HCP, “Covered Projects within the Fluvial Sand Transport Process Area would be exempt from the payment of the THCP Mitigation Fee.” Hence, the portion of the proposed project that occurs within the Target Acquisition Area but within the existing ROW is fully covered and requires no fee payment. In addition, any proposed impacts to lands within the Tribal HCP’s *100% Take Authorized* area (refer to Figure 2-2 in Section 2.1.3.2 of this document) would not require a fee payment.

For any proposed impacts outside of existing ROW within the Tribal HCP *Target Acquisition Area* would require a fee payment of $2731/acre of impact. This fee payment would provide consistency with the Tribal HCP and meet the needs for the Conditional Use Permit.

Pre-application coordination will commence once Caltrans and the City have approved the NES and the necessary documents are provided to the Tribe.

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Appendix A Project Photographs

Appendix A. Project Photos

	Photo 1 Date: May 24, 2012 Description: View of SP-01 (refer to Figure 4-1b for location).
	Photo 2 Date: May 24, 2012 Description: View of SP-02 in Drainage 1 (refer to Figure 4-1a for location).

	Photo 3 Date: May 24, 2012 Description: View of Freshwater Grassland in Drainage 1, facing southeast (refer to Figure 4-1a for photo location).
	Photo 4 Date: May 24, 2012 Description: View facing north of low flow channel and active floodplain of Whitewater River north of Vista Chino (refer to Figure 4-1a for location).

	Photo 5 Date: May 24, 2012 Description: View facing south of low flow channel and active floodplain of Whitewater River south of Vista Chino facing north (refer to Figure 4-1a for location).
	Photo 6 Date: May 24, 2012 Description: Representative photograph of the Desert Dry Wash Scrub. View facing south of low flow channel and active floodplain of Whitewater River north of Vista Chino (refer to Figure 4-1b for location).

	Photo 7 Date: May 24, 2012 Description: View facing south of low flow channel and active floodplain of Whitewater River south of Vista Chino facing north (refer to Figure 4-1b for location).
	Photo 8 Date: May 24, 2012 Description: View facing northwest of low flow channel and active floodplain of Whitewater River north of Vista Chino (refer to Figure 4-1b for location).

	Photo 9 Date: May 24, 2012 Description: View facing southeast of low flow channel and active floodplain of Whitewater River south of Vista Chino (refer to Figure 4-1b for location).
	Photo 10 Date: May 24, 2012 Description: North facing view of Basin 1 (refer to Figure 4-1a for location. Note the stressed ruderal nature of the *Polypogon monspeliensis* and ruderal vegetation.

	Photo 11 Date: May 24, 2012 Description: Eastward view of Basin 1 and SP-0 3 (refer to Figure 4-1a for location).
	Photo 12 Date: April 25, 2012 Description: Representative photograph of the Sonoran Creosote Bush Scrub/Active Sand Dunes habitat.

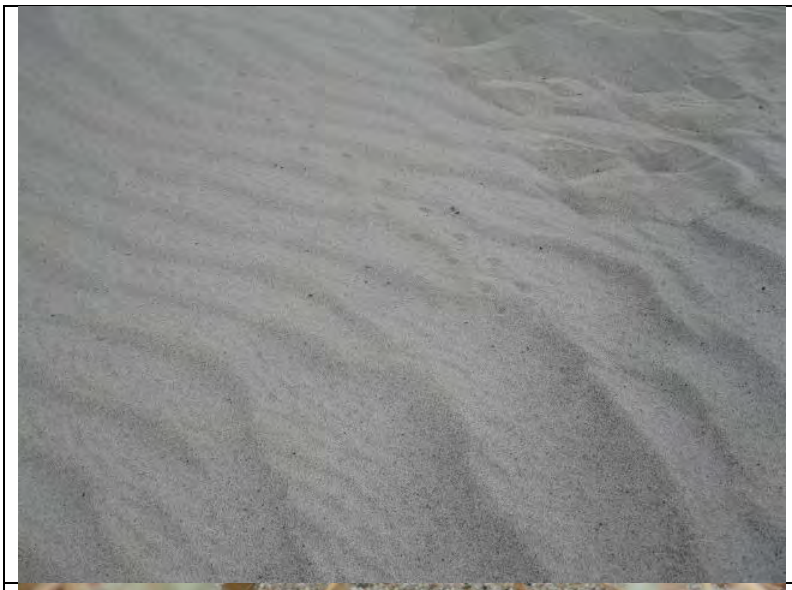	Photo 13 Date: April 25, 2012 Description: Representative photograph sands within the Whitewater River.
	Photo 14 Date: April 25, 2012 Notes: This Coachella Valley Fringe-toed Lizard (federally threatened and state endangered) was observed within the BSA.

	Photo 15 Date: April 23, 2012 Notes: This Coachella Valley Milk-vetch (federally endangered) was observed within the BSA.

Appendix B Likelihood of Occurrence for Special-Status Plants, Special-Status Animals, and Depleted Natural Communities

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
PLANTS				
Chaparral Sand Verbena (*Abronia villosa* var. *villosa*)	-/-/1B.1	Annual herb found in sandy soils within chaparral, coastal scrub and desert dunes between 245-5,250 feet elevation. Blooming period is from January through September. Known threats include non-native plants, alteration of fire regimes, flood control activities, ORV use and development.	HP	Suitable habitat is present within sandy soils and active sand dunes present within the Whitewater River. This species was not detected during the rare plant focused survey and is not considered to be present within the BSA. No further constraint is present.
Pygmy Lotus (*Acmispon haydonii*)	-/-/1B.3	Perennial herb found in rocky habitat within pinyon and juniper woodland and Sonoran desert scrub between 1,705-3,935 feet elevation. Blooming period is from January through June. Known threats include non-native plants and ORV use.	HA	The BSA occurs well outside of this species' known elevation range. This species was not detected during the rare plant focused survey and is not expected to occur. No further constraint is present.
Inyo Onion (*Allium atrorubens* var. *cristatum*)	-/-/4.3	A perennial bulbiferous herb. Occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland. Found at elevations ranging from 3,937 to 8,399 and blooms between April and June.	HA	The BSA occurs outside of the species geographic and elevation range. No suitable habitat is present. This species is not expected to occur and no further constraint is present.
Wright's Beebush (*Aloysia wrightii*)	-/-/4.3	A perennial evergreen shrub found in rocky (often carbonate) areas of Joshua tree woodland and pinyon-juniper woodland. Occurs at elevations of 2,953 to 5,429 feet. Blooming period is from April through October.	HA	The BSA occurs outside of the species geographic and elevation range. No suitable habitat is present. This species is not expected to occur and no further constraint is present.
Singlewhorl Burrobrush (*Ambrosia monogyra*)	-/-/2.2	Perennial shrub found in sandy soils within chaparral and Sonoran desert scrub between 32-1,640 feet elevation. Blooming period is from August through November.	HP	Suitable habitat is present within Sonoran creosote bush scrub within the BSA. This shrub species was not detected during the rare plant focused survey and is not expected to occur. No further constraint is present.

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Deep Canyon Snapdragon (*Antirrhinum cyathiferum*)	-/-/2.3	Annual herb found in rocky Sonoran desert scrub below 2,625 feet elevation. Blooming period is from February through April. Known in CA only from the Deep Canyon area southwest of Indio, CA.	HA	Although Sonoran creosote bush scrub is present, soils are too sandy for the species to persist. This species was not detected during the rare plant focused survey and is not expected to occur. No further constraint is present.
San Bernardino Milk-vetch (*Astragalus bernardinus*)	-/-/1B.2	Perennial herb found in Joshua tree woodland and pinyon and juniper woodland between 2,950-6,560 feet elevation. Often found associated with granitic or carbonate soils. Blooming period from April-June. Known threats include mining, development, grazing and recreational activities.	HA	No suitable habitat is present within the BSA and the project occurs well below the species' known elevation range. This species is not expected to occur. No further constraint is present.
Borrego Milkvetch (*Astragalus lentiginosus* var. *borreganus*)	-/-/4.3	An annual herb that occurs in Mojavean and Sonoran desert scrub. Found within sandy soils. Blooming period is from February through May. Occurs at elevations ranging from 984 to 1,050 feet.	HP	Although suitable habitat is present within the Sonoran creosote bush scrub, this species was absent during the 2012 focused survey.
Coachella Valley Milk-vetch (*Astragalus lentiginosus var. coachellae*)	E/-/1B.2	Annual to perennial herb found in desert dunes and sandy Sonoran desert scrub between 130-2,150 feet elevation. Blooming period is from February through May. Known threats include urbanization, ORV use, road widening, non-native plants, flood control activities and wind energy development.	P	This species was found within the BSA during the 2012 rare plant focused survey. Suitable habitat is present within the Sonoran creosote bush scrub/active sand dunes.
Lancaster Milk-vetch (*Astragalus preussii* var. *laxiflorus*)	-/-/1B.1	Perennial herb found in chenopod scrub. Blooming period is from March through May. Extremely rare plant known from the Lancaster and Edwards Air Force Base areas.	HA	No suitable habitat is present for this species. In addition, this species was not detected during the rare plant focused survey. No further constraint is present.
Triple-ribbed Milk-vetch	E/-/1B.2	Perennial herb found in sandy or gravelly soils within Joshua tree	HA	Although there is suitable habitat within sandy soils in the

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
(*Astragalus tricarinatus*)		woodland and Sonoran desert scrub between 1,476-3,905 feet in elevation. Known from fewer than 20 occurrences. Known threats include pipeline maintenance and OHV vehicle use.		Sonoran creosote bush scrub area, the project site occurs well outside of the species' known elevation range. In addition, this species was not detected during the 2012 rare plant focused survey. No further constraint is present.
Parish's brittlescale (*Atriplex parishii*)	-/-/1B.1	Annual herb found in alkaline habitats within chenopod scrub, playas and vernal pool habitat between 80-6,230 feet in elevation. Blooming period is from June through October. Known threats include development, agriculture, land conversion and grazing.	HA	No suitable alkaline conditions are present within the BSA. This species is not expected to occur. No further constraint is present.
California ayenia (*Ayenia compacta*)	-/-/2.3	Perennial herb found in rocky soils within Mojavean and Sonoran desert scrub between 490-3,590 feet elevation. Blooms from March through April.	HA	No suitable rocky soils are present within the study area. In addition, this species was not detected during the rare plant focused survey.
Johnston's rock-cress (*Boechera johnstonii*)	-/-/1B.2	Perennial herb found in chaparral and lower montane coniferous forest between 4,430-7,050 feet elevation. Often found on eroded clay soils. Blooming period is from February through June. Known only from the southern San Jacinto Mountains. Known threats include recreational and residential development in Garner Valley, grazing, trampling, and vegetation management. *Boechera hirshbergiae* is treated as a synonym.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This is not expected to occur. No further constraint is present.
San Jacinto Mariposa Lily (*Calochortus palmeri* var. *munzii*)	-/-/1B.2	Perennial bulbiferous herb found in chaparral and lower montane coniferous forest and meadows and seeps between 3,935-7,215 feet in elevation. Blooming period is from May through July. Known from only a few	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This is not expected to occur. No further constraint is

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
		occurrences in the San Jacinto Mountains. Known threats include grazing, road maintenance, hydrological modifications, non-native plants, and recreational activities.		present.
Plummer's Mariposa Lily (*Calochortus plummerae*)	-/-/1B.2	This perennial bulbiferous herb can be found on rocky and sandy areas with granitic or alluvial material in coastal sage scrub, chaparral, and valley and foothill grasslands between 295-5,280 feet in elevation. Blooming period is from May through July. Species is tolerant of some disturbances, especially fire.	HA	No suitable habitat is present within the BSA, This species is not expected to occur. No further constraint is present.
Western Sedge (*Carex occidentalis*)	-/-/2.3	Perennial rhizomatous herb found in lower montane coniferous forest and meadows and seeps between 5,395-10,280 feet in elevation. Blooming period is from June through August. In CA, only known from the San Bernardino, San Jacinto and White Mountains.	HA	No suitable habitat is present and the project site occurs outside of the species, geographical and elevation range. This species is not expected to occur. No further constraint is present.
San Bernardino Mountains Owl's-clover (*Castilleja lasiorhyncha*)	-/-/1B.2	Occurs along moist edges of springs and seeps in association with clay soils. Occurs at higher elevations from 4, 265 to 7,841 feet. Blooming period is from May through August.	HA	The BSA occurs outside of the species geographical and elevation range. This species is not expected to occur, No further constraint is present.
Payson's Jewel-flower (*Caulanthus simulans*)	-/-/4.2	Annual herb found in sandy or granitic soils within chaparral and coastal sage scrub habitats between 2,950-7,215 feet elevation. Blooming period is from February through June. Known threats include proposed reservoir construction, urbanization, non-native plants, grazing and road construction.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Parish's Chaenactis (*Chaenactis parishii*)	-/-/1B.3	Perennial herb found in rocky chaparral between 4,265-8,200 feet elevation. Blooming period is from May through July.	HA	No suitable habitat is present and the project site occurs well outside of the species' elevation range. This species

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
				is not expected to occur. No further constraint is present.
Abram's Spurge (*Chamaesyce abramsiana*)	-/-/2.2	Annual herb found in sandy soils within Mojavean and Sonoran desert scrub below 3,000 feet in elevation. Blooming period is from September through November. Known threats include non-native plants.	HP	Potentially suitable habitat is present within Sonoran creosote bush scrub within the BSA. The closest record of the species is in Indio, approximately 18 miles to the southeast. This species was confirmed absent from the BSA t
Arizona Spurge (*Chamaesyce arizonica*)	-/-/2.3	Perennial herb found in Sonoran desert scrub between 164-985 feet in elevation. Blooming period is from March through April.	HP	Potentially suitable habitat is present within the BSA. This species was confirmed to be absent during the 2012 focused rare plant survey.
Flat-seeded Spurge (*Chamaesyce platysperma*)	-/-/1B.2	Annual herb found in desert dunes and sandy desert scrub between 213-984 feet in elevation. Blooming period is from February through September. Last CA collection is from 1987.	HP	Suitable habitat is present within the BSA. There is a low potential for this species to occur based on its rarity within the region. This species was confirmed to be absent during the 2012 focused rare plant survey.
Peninsular Spineflower (*Chorizanthe leptotheca*)	-/-/4.2	Annual herb found on alluvial fans within chaparral, coastal sage scrub, and lower montane coniferous forests. Blooming period is from May through August. Occurs at elevations from 984 feet to 6,234 feet. Threats include development and introduction of nonnative grasses.	HA	Although soils on the project site may be suitable, The BSA lacks suitable vegetation communities for this species. This species is not expected to occur and no further constraint is present.
Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)	-/-/1B.1	Annual herb found on dry sandy soils on slopes and flats within coastal sage scrub and chaparral between 825-3,660 feet in elevation. Blooming period is from April through June.	HA	No suitable habitat is present within the BSA. The BSA occurs outside of the species' known elevation range. This species is not expected to occur. No further constraint is present.

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Long-spined Spineflower (*Chorizanthe polygonoides* var. *longispina*)	-/-/1B.2	Annual herb found in chaparral, coastal sage scrub, meadows and seeps, valley and foothill grasslands and vernal pools between 100-5,020 feet in elevation. Often found in association with clay soils, Blooming period is from April through July. Known threats include development, non-native grasses, OHV use, grazing and recreational activities.	HA	No suitable habitat or soils are present within the BSA. This species is not expected to occur. No further constraint is present.
White-bracted Spineflower (*Chorizanthe xanti* var. *leucotheca*)	-/-/1B.2	Annual herb found in pinyon-juniper woodland, Mojavean desert scrub, and alluvial coastal sage scrub between 984-3,937 feet in elevation. Blooming period is from April through June.	HA	No suitable habitat is present within the BSA. The BSA occurs outside of the species' known elevation range. This species is not expected to occur. No further constraint is present.
Ribbed Cryptantha (*Cryptantha costata*)	-/-/4.3	Annual herb found in desert dunes, Mojavean desert scrub and Sonoran desert scrub in sandy soils. Found from 196 feet below sea level to 1,640 feet above msl. Blooming period is from February to May.	HP	Suitable habitat is present within the Sonoran creosote bush scrub and desert dunes. This species was confirmed to be absent during the 2012 focused rare plant survey. This species has a low potential to occur.
Winged Cryptantha (*Cryptantha holoptera*)	-/-/4.3	Annual herb found in Mojavean desert scrub and Sonoran desert scrub. Found from 328 to 5,545 feet above msl. Blooming period is in March and April.	HP	Suitable habitat is present within the Sonoran creosote bush scrub. This species was confirmed to be absent during the 2012 focused rare plant survey. This species has a low potential to occur.
Pointed Dodder (*Cuscuta californica* var. *apiculata*)	-/-/3	Annual parasitic vine found in sandy Mojavean and Sonoran desert scrub below 1,640 feet in elevation. Blooming period is from February through August.	HP	Suitable habitat is present within the Sonoran creosote bush scrub and this species has been found within the region. This species was confirmed to be absent during the 2012 focused rare plant

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
				survey. This species has a low potential to occur.
Mojave Tarplant (*Deinandra mohavensis*)	-/E/1B.3	Annual herb found in mesic chaparral, coastal scrub and riparian scrub between 2,100-5,445 feet in elevation. Previously believed to be extinct in CA. Rediscovered in 1994. Blooming period is from July through October. Microclimate includes sandy washes, seeps, and grassy swales in eroded granitic landscapes. Known threats include development, grazing, hydrological alterations, recreational activities, road maintenance and ORV use.	HA	The project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Cuyamaca larkspur (*Delphinium hesperium* ssp. *cuyamacae*)	-/R/1B.2	Perennial herb found in mesic lower montane coniferous forest, meadows and seeps and vernal pools between 4,000-5,350 feet in elevation. Blooming period is from May through July. Known threats include development, grazing, and recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species would not occur. This species is not expected to occur. No further constraint is present.
Glandular ditaxis (*Ditaxis claryana*)	-/-/2.2	Perennial herb found in sandy Mojavean and Sonoran desert scrub below 1,525 feet in elevation. Blooming period is from October through March.	HP	Suitable habitat is present in BSA within Sonoran creosote bush scrub. There is a low potential for this species to occur within the BSA. This species was confirmed to be absent during the 2012 focused rare plant survey.
California Ditaxis (*Ditaxis serrata* var. *californica*)	-/-/3.2	Perennial herb found in Sonoran desert scrub between 98-3,280 feet in elevation. Blooming period is from March through December. Known from fewer than 20 locations within San Diego, Riverside and San Bernardino Counties. Known threats include OHV use.	HP	Suitable habitat is present in BSA within Sonoran creosote bush scrub. There is a low potential for this species to occur within the BSA. This species was confirmed to be absent during the 2012 focused rare plant survey.

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Southern California Rock Draba (*Draba saxosa*)	-/-/1B.3	Perennial herb found in rocky alpine boulder fields, subalpine coniferous forest and upper montane coniferous forest between 8,000-11,810 feet in elevation. Blooming period is from June through September. Known from only the San Jacinto and Santa Rosa Mountains. Known threats include recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Booth's Evening-primrose (*Eremothera boothii ssp. boothii*)	-/-/2.3	Annual herb found in Joshua tree woodland and pinyon and juniper woodland between 2,700-7,200 feet in elevation. Blooming period is from April through September. Known threats include mining activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Harwood's Eriastrum (*Eriastrum harwoodii*)	-/-/1B.2	Annual herb found in desert dunes between 410-3,000 feet in elevation. Blooming period is from March through June. Known threats include mining, non-native plants, solar energy development, grazing and trampling, and OHV use.	HP	Suitable habitat present within active sand dune areas of the BSA. This species has a low potential to occur based on the location of the project site relative to the species regional distribution. This species was confirmed to be absent during the 2012 focused rare plant survey.
Parish's daisy (*Erigeron parishii*)	T/-/1B.1	A perennial herb found in in Mojeavan desert scrub and pinyon-juniper woodlands, restricted to soils derived from carbonite. Found at elevations ranging from 2,625 to 6,562 feet. Threatened by carbonate mining, vehicles, road construction, and residential development.	HA	No suitable habitat is present within the BSA and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Vanishing Wild Buckwheat (*Eriogonum evanidum*)	-/-/1B.1	Annual herb found in sandy soils within chaparral, cismontane woodland, lower montane coniferous forest, and pinyon and juniper woodland between 3,609-7,300 feet in elevation.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
		Blooming period is from July through October.		expected to occur. No further constraint is present.
Cliff Spurge (*Euphorbia misera*)	-/-/2.2	Perennial shrub found in rocky coastal bluff scrub, coastal scrub and Mojavean desert scrub below 1,640 feet in elevation. Blooming period is from December through August. Known threats include development.	HA	No suitable habitat is present within the BSA. In addition, BSA lacks rocky soils. This species is not expected to occur. No further constraint is present.
San Jacinto Mountains Bedstraw (*Galium angustifolium* ssp. *jacinticum*)	-/-/1B.3	Perennial herb found in lower montane coniferous forest between 4,430-6,890 feet in elevation. Blooming period is from June through August. Known from fewer than 10 occurrences. Known threats include vegetation management, foot traffic, non-native plants, recreational activities, and road maintenance.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Slender Bedstraw (*Galium angustifolium* ssp. *gracillimum*)	-/-/4.2	A perennial herb found in granitic/rocky Joshua tree woodland and Sonoran desert scrub. Blooms from April to June and occurs at elevations ranging from 427 to 5,085 feet.	HA	Although Sonoran creosote bush scrub is present, soils in the BSA are inappropriate for this species to persist. In addition the species was not found during the 2012 focused survey. This species is not expected to occur and no further constraint is present.
Alvin Meadow Bedstraw (*Galium californicum* ssp. *primum*)	-/-/1B.2	Perennial herb found in sandy soils within chaparral and yellow pine forest between 4,430-5,575 feet in elevation. Blooming period is from May through June.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Shaggy-haired Alumroot (*Heuchera hirsutissima*)	-/-/1B.3	Perennial rhizomatous herb found in rocky or granitic areas within subalpine coniferous forest and upper montane coniferous forest between 4,985-11,480 feet in elevation. Blooming period from May through July.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
				constraint is present.
Beautiful Hulsea (*Hulsea vestita* ssp. *callicarpha*)	-/-/4.2	A perennial herb found in chaparral and lower montane coniferous forests from 3,002 to 10,007 feet. Blooming period is from May through October.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Parish's Alumroot (*Heuchera parishii*)	-/-/1B.3	Perennial rhizomatous herb found in rocky or carbonate soils within lower montane coniferous forests, subalpine coniferous forests, upper montane coniferous forests and alpine boulder and rock fields between 4,920-12,470 feet in elevation. Blooming period is from June through August.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
California satintail (*Imperata brevifolia*)	-/-/2.1	Perennial rhizomatous grass found in mesic areas within chaparral, coastal sage scrub, creosote bush scrub, desert scrub, and riparian scrub below 1,640 feet in elevation. Blooming period is from September through May. Known threats include development and agriculture.	HP	Suitable habitat is present within the BSA. This species was confirmed to be absent during the 2012 rare plant focused survey and is not expected to occur. No further constraint is present.
Tahquitz Ivesia (*Ivesia callida*)	-/R/1B.3	Perennial herb found in rocky or granitic areas within upper montane coniferous forest between 7,905-8,035 feet in elevation. Blooming period is from July through September. Known from only two occurrences within the San Jacinto Wilderness Area.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)	-/-/4.2	A perennial rhizomatous herb found on coastal dunes, meadows and seeps, marshes and swamps. Occurs from the coast to areas up to 2,953 feet elevation.	HA	No suitable habitat is present within the BSA. This species is not expected to occur and no further constraint is present.
Coulter's Goldfields	-/-/1B.1	Annual herb found in coastal salt marshes and swamps, playas and	HA	No suitable habitat is present for this species within the BSA.

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(*Lasthenia glabrata ssp. coulteri*)		vernal pools below 4,000 feet in elevation. Blooming period is from February through June. Seriously threatened by agricultural development, recreational use and drought.		The BSA lacks the hydrological conditions required by this species. In addition, the species was not detected during the 2012 rare plant focused survey. No further constraint is present.
Lemon Lily (*Lilium parryi*)	-/-/1B.2	Perennial bulbiferous herb found in upper and lower montane coniferous forest, riparian forest, and meadows and seeps between 3,660-8,235 feet in elevation. Blooming period is from July through August. Known threats include horticultural collection, water diversion, recreational activities, and grazing.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species would not occur. This species is not expected to occur. No further constraint is present.
Parish's Meadowfoam (*Limnanthes alba* ssp. *parishii*)	-/E/1B.2	Annual herb found in vernally mesic areas within lower montane coniferous forest, meadows and seeps, and vernal pools between 1,970-6,560 feet in elevation. Blooming period is from April through June. Known threats include hydrology alteration, grazing, and recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
San Jacinto Linanthus (*Linanthus jaegeri)*	-/-/1B.2	Perennial herb found in rocky or granitic soils within subalpine coniferous forest and upper montane coniferous forest between 7,200-10,005 feet in elevation. Blooming period is from July through September. Known threats include recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Little San Bernardino Mtns. Linanthus (*Linanthus maculatus*)	-/-/1B.2	Annual herb found in sandy areas within desert dunes, Joshua tree woodland, Mojavean and Sonoran desert scrub between 640-6,805 feet in elevation. Blooming period is from March through May. Known threats include development, OHV use, refuse dumping, and alteration of hydrology.	HP	Suitable habitat is present within the BSA (i.e., sandy areas in Sonoran creosote bush scrub). This species has a low potential of occurrence based on surrounding land uses and disturbances, and was confirmed to be absent

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				during the 2012 rare plant focused survey.
White Bog Adder's-mouth (*Malaxis monophyllos var. brachypoda*)	-/-/2B.1	A pseudobulb that occurs in swamps and bogs. Species blooms from June to August. The species occurs at higher elevations from 7,218 to 8,999 feet.	HA	BSA occurs well outside of species known geographic/elevation range and no suitable habitat is present. This species would not occur and no further constraint is present.
California Marina (*Marina orcuttii* var. *orcuttii*)	-/-/1B.3	Perennial herb found in rocky chaparral, pinyon and juniper woodland, and Sonoran desert scrub between 3,445-3,805 feet in elevation. Blooming period is from May through October. Known in CA from two locations within Deep Canyon southwest of Indio, CA. Known threats include recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' elevation range. This species is not expected to occur. No further constraint is present.
Spear-leaf Matelea (*Matelea parvifolia*)	-/-/2.3	Perennial herb found in rocky Mojavean and Sonoran desert scrub between 1,445-3,590 feet in elevation. Blooming period is from March through May. Known threats include recreational activities.	HA	The BSA lacks the rocky landscape associated with this species. In addition, the project site occurs outside of this species' known elevation range. This species is not expected to occur. No further constraint is present.
Broad-nerved Hump Moss (*Meesia uliginosa*)	-/-/2.2	Moss found in damp areas within bogs and fens, meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest between 4,265-9,200 feet in elevation. Blooming period is known to occur in October. Known threats include alteration of hydrology and grazing.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Spiny-hair Blazing Star (*Mentzelia tricuspis*)	-/-/2.1	Annual herb found in sandy, gravelly slopes and washes within Mojavean desert scrub between 490-4,200 feet in elevation. Blooming period is from march through May. Known from fewer	HA	Suitable habitat is absent from the project site. This species is not expected to occur. No further constraint is present.

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
		than 20 extant occurrences. Known threats include renewable energy development.		
Palomar Monkeyflower (*Mimulus diffusus*)	-/-/4.3	An annual herb found in chaparral and lower montane coniferous forests with sandy or gravelly soils. Occurs at 3,675 to 6,004 feet and blooms from April to June.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Hall's Monardella (*Monardella macrantha* ssp. *hallii*)	-/-/1B.3	Perennial rhizomatous herb found in broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest and valley and foothill grasslands between 2,395-7.200 feet in elevation. Blooming period is from June through August. Known threats include road maintenance and recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
San Felipe Monardella (*Monardella nana* ssp. *leptosiphon*)	-/-/1B.2	Perennial rhizomatous herb found in chaparral and lower montane coniferous forest between 3,935-6,085 feet in elevation. Blooming period from June through July. Known mostly from the Hot Springs Mountains. located south-southwest of Indio, CA.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
Slender Cottonheads (*Nemacaulis denudata* var. *gracilis*)	-/-/2.2	Annual herb found in coastal dunes, desert dunes, and Sonoran desert scrub between 165-1,310 feet in elevation. Blooming period is from March through May. Known threats include urbanization.	HP	Suitable habitat is present within the BSA within Sonoran creosote bush scrub/ active sand dune habitat. This species has a low potential to occur based on surrounding site disturbances. This species was confirmed to be absent during the 2012 rare plant focused survey.
Slender Nemacladus	-/-/4.3	An annual herb found in chaparral and valley and foothill grasslands with	HA	Suitable habitat is absent from the project site. This species is

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(*Nemacladus gracilis*)		sandy or gravelly soils. Occurs at 394 to 6,234 feet and blooms from March to May		not expected to occur. No further constraint is present.
California Beardtongue (*Penstemon californicus*)	-/-/1B.2	Perennial herb found within sandy areas of chaparral, lower montane coniferous forest, and pinyon and juniper woodlands between 3,840-7,545 feet in elevation. Blooming period is from May through August. Known in CA from fewer than 20 occurrences. Known threats include development, foot traffic, grazing, trampling, vegetation management and OHV use.	HA	No suitable habitat is present and the project site occurs well outside of the species' geographical and elevation range. This species is not expected to occur. No further constraint is present.
San Jacinto Beardtongue (*Penstemon clevelandii* var. *connatus*)	-/-/4.3	A perennial herb found in rocky areas of chaparral, pinyon-juniper woodland, and Sonoran desert scrub. Found at elevations ranging from 1,312 to 4,921 feet. Blooming period from March to May.	HA	Although suitable habitat is present within the Sonoran creosote bush scrub, soils in the BSA are unsuitable for the species. In addition, the BSA occurs outside of the species known elevation range, thus this species is not expected to occur. No constraint is present.
Desert Beardtongue (*Penstemon pseudospectabilis* ssp. *pseudospectabilis*)	-/-/2.2	Perennial herb found in sandy or rocky washes within Mojavean or Sonoran desert scrub between 260-6,350 feet in elevation. Blooming period is from January through May. Known threats include wind and solar energy development and OHV use.	HP	Potentially suitable habitat is present within the Sonoran creosote bush scrub. The species has a low potential to occur within the BSA. This species was confirmed to be absent during the 2012 rare plant focused survey.
Golden-rayed Pentachaeta (*Pentachaeta aurea* ssp. *aurea*)	-/-/4.2	An annual herb found in a variety of habitats (chaparral, cismontane woodland, coasta scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grasslands). Blooming period is from March to July. Occurs at elevations from 262 to 6,070 feet.	HA	No suitable habitat is present within the BSA. This species is not expected to occur and no further constraint is present.

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Cliff Cinquefoil (*Potentilla rimicola*)	-/-/2.3	Perennial herb found in rocky or granitic subalpine coniferous forest and upper montane coniferous forest between 7,870-9,200 feet in elevation. Blooming period is between July through September. Known in CA from five occurrences within the San Jacinto Mountains. Known threats include recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Deep Canyon Snapdragon (*Pseudorontium cyathiferum*)	-/-/2.3	Annual herb found in rocky Sonoran desert scrub below 2,625 ft. elevation. Blooming period is from February through April. Known in CA only from the Deep Canyon area southwest of Indio, CA.	HA	The BSA lacks suitable rocky areas for species. This species has a very limited known global distribution and is not expected to occur. No further constraint is present.
Latimer's Woodland-gilia (*Saltugilia latimeri*)	-/-/1B.2	Annual herb found in rocky or sandy soils and washes within chaparral, Mojavean desert scrub and pinyon and juniper woodland. Known in CA from fewer than 20 records.	HA	Although soils in the BSA are suitable, the project site lacks the appropriate vegetation community for this species. This species is not expected to occur. No further constraint is present.
Southern Mountains Skullcap (*Scutellaria bolanderi* ssp. *austromontana*)	-/-/1B.2	Perennial rhizomatous herb found in mesic areas within cismontane woodland, lower montane coniferous forest, and chaparral between 1,394 to 6,562 feet in elevation. Blooming period is from June to August. Known threats include grazing and recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Desert Spike-moss (*Selaginella eremophila*)	-/-/2.2	Perennial rhizomatous herb found in chaparral and gravelly or rocky Sonoran desert scrub between 655-2,950 feet in elevation. Blooming period is from May through July. Known in CA from fewer than 20 occurrences.	HA	The BSA lacks suitable soils for species and occurs below the known elevation range. This species is not expected to occur. No further constraint is present.
Cove's Cassia	-/-/2.2	Perennial herb found in sandy Sonoran desert scrub between 1,000-	HA	Although suitable habitat may be present within the Sonoran

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(*Senna covesii*)		3,510 feet in elevation. Blooming period is from March through June. Known threats include OHV use.		creosote bush scrub, the project site occurs well outside of the species elevation range. In addition, this species was not observed during the 2012 rare plant focused survey. This species is not expected to occur. No further constraint is present.
Chickweed Oxytheca (*Sidotheca caryophylloides*)	-/-/4.3	An annual herb occur within lower montane coniferous forests at elevations from 3,655 to 8,530 feet	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
White-margined Oxytheca (*Sidotheca emarginata*)	-/-/1B.3	Annual herb found in chaparral, lower montane coniferous forest and pinyon and juniper woodland between 3,935-8,200 feet in elevation. Blooming period is from February through August. Known threats include development, grazing, trampling and recreational activities.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Purple Stemodia (*Stemodia durantifolia*)	-/-/2.1	Perennial herb found in mesic sandy Sonoran desert scrub between 590-985 feet in elevation. Blooming period is from January through December. Known threats include development.	HA	Although Sonoran creosote bush scrub habitat is located within the Whitewater River; continued mesic conditions required by this species do not occur within the Sonoran creosote bush scrub located within the BSA. This species is not expected to occur. No further constraint is considered to be present.
Laguna Mountains jewelflower (*Streptanthus bernardinus*)	-/-/4.3	An inconspicuous annual occurring within lower montane coniferous forests. Found at elevations from 2,198 to 8,202 feet. Blooming period is	HA	There is no suitable habitat within the BSA and the project site occurs well outside of species elevation range. This

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		from May to August.		species is not expected to occur and no further constraint is present.
Southern Jewel-flower (*Streptanthus campestris*)	-/-/1B.3	Perennial herb found in chaparral, lower montane coniferous forest, and pinyon juniper woodland between 2,953 to 7,546 feet in elevation. Blooming period is from April through July.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Lemmon's Syntrichopappus (*Syntrichopappus lemmonii*)	-/-/4.3	An annual herb found in chaparral, Joshua tree woodland and pinyon-juniper woodlands within sandy or gravelly soils. Found at elevations ranging from 1,640 to 6,004 feet and blooms from April to June.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
San Bernardino Aster (*Symphyotrichum defoliatum*)	-/-/1B.2	Found in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland. Also near ditches and stream springs. Blooms from July to November at elevations from 6 to 6700 ft.	HP	Suitable habitat is limited to a small amount of freshwater grassland adjacent to the Whitewater River, which was heavily vegetated with dense grasses. As a result, this species has a low potential to occur within the BSA. Additionally, this species was confirmed to be absent during the 2012 rare plant focused survey. No further constraint is considered to be present.
Sonoran Maiden Fern (*Thelypteris puberula* var. *sonorensis*)	-/-/2.2	Perennial rhizomatous herb found in meadows and seeps along streams between 164-2,001 feet in elevation. Blooming period is from January to September. Known threats include recreational activities.	HP	Suitable habitat is limited to a small amount of freshwater grassland adjacent to the Whitewater River, which was heavily vegetated with dense grasses. As a result, this species has a low potential to occur within the BSA. Additionally, this species was

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				confirmed to be absent during the 2012 rare plant focused survey. No further constraint is considered to be present.
Rigid Fringepod (*Thysanocarpus rigidus*)	-/-/1B.2	Annual herb found in dry rocky slopes within pinyon and juniper woodlands between 1,970-7,215 feet in elevation. Blooming period is from February through April. Known from fewer than 10 occurrences in CA. Known threats include development and non-native plants.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Hidden Lake Bluecurls (*Trichostema austromontanum* ssp. *compactum*)	T/-/1B.1	Annual herb that occurs in upper montane coniferous forest along lake margins at elevations from 7,874 to 8,793 feet. Regionally occurs in the San Jacinto Mountains.	HA	No suitable habitat is present and the project site occurs well outside of the species geographical and elevation range. This species is not expected to occur. No further constraint is present.
Mecca-aster (*Xylorhiza cognata*)	-/-/1B.2	Perennial herb found in Sonoran desert scrub between 65-1,312 feet in elevation. Blooming period is from January through June. Mostly known from the Indio and Mecca Hills. Known threats include recreational activities and OHV use.	HP	Suitable habitat is present within Sonoran creosote bush scrub. This species has a low potential to occur and was confirmed to be absent during the 2012 rare plant focused survey. No further constraint is considered to be present.
WILDLIFE				
Invertebrates				
Casey's June Beetle (*Dinacoma caseyi*)	E/-/-	Only known distribution is within the southern portion of Palm Springs, CA in the Palm Canyon Wash. Species is associated with Sonoran desert habitats with scattered broad-leaved macrophyll shrubs and an open canopy. Also associated with Carsitas gravelly sand series soil and alluvial fans. Individuals emerge from	HP	The nearest known location is approximately 3 miles south of the BSA in Palm Canyon Wash. This species has a limited distribution to Palm Canyon Wash and its closely adjacent tributaries. Although "potentially suitable habitat" appears present, the species

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		underground burrows between late March and early June, with peak abundance occurring near April and May. Critical habitat is present within Palm Canyon Wash.		is not expected based on current USFWS data (USFWS 2011).
Coachella Giant Sand Treader Cricket (*Macrobaenetes valgum*)	-/-/-	Strongly associated with wind-blown, un-stabilized, active sand dunes. The species has been found to be most abundant in the western portion of Coachella Valley, west of Palm Dr. to Snow Creek Rd, however, additional suitable habitat occurs within the Whitewater River Floodplain Preserve and within the Simone dunes of the Coachella Valley Preserve. Species is nocturnal with peak activity occurring in the spring months.	HP	Suitable habitat is present within the Sonoran creosote bush scrub/active dunes and desert dry wash scrub within the BSA. There is a moderate potential for this species to occur.
Coachella Valley Jerusalem Cricket (*Stenopelmatus cahuilaensis*)	-/-/-	Occurs in sandy to somewhat gravelly-sandy soils. Known from the Snow Creek area and from the remnant dune habitat near Palm Springs Airport. Also known from east of Whitewater Canyon and Thousand Palms area. Strong affiliation with cool, moist conditions.	HP	Suitable habitat is present within sandy soils associated with the Sonoran creosote bush scrub, Sonoran creosote bush scrub/active sand dunes, and desert dry wash scrub in the BSA. The Palm Springs airport is approximately .75 miles to the south-southwest thus this species has been known to occur in the general vicinity. There is a moderate potential for this species to occur.
Fish				
Desert Pupfish (*Cyprinodon macularius*)	E/E/-	Inhabits isolated desert springs and desert salt marshes. Tolerant of high temperature, low dissolved oxygen, and high salinity. Spawning season is from April through October when water temperature exceeds 68ºF. Current distribution is confined to San Felipe	HA	No suitable habitat is present within the BSA. This species would not occur.

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		Cr., Salt Cr., some shoreline pools of the Salton Sea, and some of the irrigation drains that are tributary to the Salton Sea.		
Amphibians				
Large-blotched Salamander (*Ensatina klauberi*)	-/SSC/-	Found in the Peninsular Ranges and San Bernardino Mountains. Inhabits moist shaded evergreen and deciduous forests and oak woodlands.	HA	No suitable habitat is present within the BSA. This species would not occur. No further constraint is present.
California Red-legged Frog (*Rana draytonii*)	T/SSC/-	Inhabits undisturbed pools of streams, marshes, and ponds up to approximately 4,920 ft. elevation. Known to move up to a mile through adjacent riparian habitat under wet conditions such as rainfall. Adults feed on terrestrial insects, and snails, and a wide variety of aquatic prey. It prefers stream banks and shorelines with extensive vegetation, and is vulnerable to the introduction of exotic competitors such as bullfrogs, crayfish, and non-native fish.	HA	No suitable habitat is present within the BSA. This species would not occur.
Sierra Madre Yellow-legged Frog (*Rana muscosa*)	E/CE,SSC/-	Inhabits varied lakes and streams, but avoids the smallest streams. Shows a tendency toward open stream and lakeshores that slope gently for the first 2 to 3 inches of depth. Rarely found far from water, though data on movements and ability to recolonize sites are lacking. Disjunct southern California population persists as remnants in small streams in the San Gabriel, San Bernardino, and San Jacinto mountains. Species historical elevation range was approximately 1,200-7,500 ft. elevation with remaining populations located at the upper end of that range.	HA	No suitable habitat is present within the BSA. The small amount of freshwater grassland is not sufficient to support this species. This species is not expected to occur or constrain the project.

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Reptiles				
California Legless Lizard (*Anniella pulchra pulchra*)	-/SSC/-	Habitat is primarily areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland, and open, well-shaded terraces in mature riparian natural communities. Leaf litter is commonly present. Soil disturbances such as agriculture and mining, as well as requirements for soil moisture and relatively cool microclimates limit distribution, and account in part for local declines and extirpations (Jennings and Hayes 1994). Occurs from near sea level to 5,906 feet.	HA	Project site occurs outside of species geographical range, and no suitable habitat is present; thus species would not be expected to occur. No further constraint is present.
Orangethroat Whiptail (*Aspidoscelis hyperythra*)	-/SSC/-	Most California populations occur on or adjacent to floodplains or the terraces of streams, in or by open sage scrub and chaparral communities. The presence of perennial shrubs appears to be important, with the most strongly associated species being California Buckwheat (*Eriogonum fasciculatum*), Chamise (*Adenostoma fasciculatum*), White Sage (*Salvia apiana*), and Black Sage (*S. mellifera*). Termites are reported to constitute 57 - 95% of the diet, and foraging microsites are primarily under shrubs in leaf litter (Brattstrom 2000).	HA	Project site occurs outside of species geographical range, and no suitable habitat is present; thus species would not be expected to occur. No further constraint is present.
Southern Rubber Boa (*Charina umbratica*)	-/T/-	Known to occur within the San Bernardino and San Jacinto Mountains within montane forest habitat. Often found along streams and wet meadows. Requires moist, loose soil for burrowing.	HA	Project site occurs outside of species geographical range, and no suitable habitat is present; thus species would not be expected to occur. No further constraint is present.
Red-diamond Rattlesnake	-/SSC/-	Inhabits chaparral, woodlands, grasslands, and desert areas. Prefers	HA	No suitable habitat or sufficient hiding places under rocks and

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(*Crotalus ruber*)		areas with boulders and rock outcrops in areas of heavy brush. Occurs as far north as the Puente Hills in Los Angeles, CA. and as far south as Loreto, Baja California, Mexico.		boulders are present within the BSA. This species is not expected to occur due to lack of sufficient cover and resources.
California Mountain Kingsnake (San Bernardino population) (*Lampropeltis zonata parvirubra*)	-/SSC/-	Mountain riparian with an abundance of downed wood and snags. Generally above 4,000 ft. Rare at lower elevation in riparian corridors tied to montane areas.	HA	No suitable habit is present within the BSA. This species is not expected to occur. No further constraint is present.
Two-striped Garter Snake (*Thamnophis hammondii*)	-/SSC/-	It is often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. They will also inhabit large riverbeds if riparian vegetation is available, and even occur in artificial impoundments if both aquatic vegetation and suitable prey items (small amphibians and fish) are present (Jennings and Hayes 1994).	HA	No suitable habit is present within the BSA. This species is not expected to occur. No further constraint is present.
Desert Tortoise (*Gopherus agassizii*)	T/T/-	Terrestrial tortoise that inhabits burrows on sandy flats, rocky foothills, alluvial fans, canyons, washes and other open areas throughout the Mojave and Sonoran deserts below 3,500 ft. in elevation. Species is most active from March through June and from September through October. Populations north and west of the Colorado River are listed as federally threatened. Known to be absent within the Coachella Valley west of the Salton Sea. Additionally, known to be present in the northern, eastern and western rims of the Coachella Valley within the foothills of the Little San Bernardino Mtns., the Painted and Whitewater Hills and the San Jacinto	HA	No suitable habit is present within the BSA and no potential desert tortoise burrows were observed during fieldwork. This species is not expected to occur.

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		and northern Santa Rosa Mtns.		
Coast Horned Lizard (*Phrynosoma blainvillii*)	-/SSC/-	Found coastally from northern Baja, CA to the San Francisco Bay area. Inland it is found from Baja CA to the Shasta area. Inhabits a wide range of habitats below 8,000 ft. elevation including grasslands, coniferous forest, woodlands, chaparral and scrub. Commonly found within open sandy areas in close proximity to Harvester ants.	HA	Potentially suitable habitat is present within sandy soils within the BSA. However, this species occurs on the coastal side of the mountains and would not occur based on its geographic range. This species is not expected to occur.
Flat-tailed Horned Lizard (*Phrynosoma mcallii*)	-/SSC/-	Inhabits areas of fine sand within desert washes and flats with vegetation cover and ants below 600 ft. elevation within Riverside, San Diego and Imperial Counties.	HP	Potentially suitable habitat is present within sandy soils within the BSA.
Coachella Valley Fringe-toed Lizard (*Uma inornata*)	T/E/-	Restricted to large areas of wind-blown dunes of the Coachella Valley. Historically known to occur from Cabazon at the northwestern extent of the range to Thermal at the southeastern extent. Species is primarily active from April through October with chief breeding months occurring from late April through August.	P	Suitable habitat is present within sandy dune areas the Whitewater River and a single individual was observed in the BSA during the focused survey (see Figure 4-4).
Birds				
Cooper's Hawk (*Accipiter cooperii*)	-/WL/-	In CA, breeds primarily in woodland habitats including riparian, oak woodland, walnut woodland, Eucalyptus stands, and occasionally in dense, abandoned or otherwise undisturbed orchards. Forages in a wide variety of open to semi-open vegetation including residential developments. Winter range includes Mexico and Central America but is a fairly common winter resident in CA.	Breeding: HP Migrants/Foraging: HP	Potential breeding habitat is present in the ornamental plantings and potential foraging habitat is present throughout the BSA.

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Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)	-/WL/-	Inhabits open oak woodlands, chaparral, and coastal scrub below 9,800 ft. elevation. Forages on the ground by walking and hopping under shrubs or dense grasses, rather than open area.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Golden Eagle (*Aquila chrysaetos*)	-/CFP/-	Forages in grassland, open savannah, and desert scrub. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially ground squirrels (*Spermophilus* sp.) and rabbits, but will occasionally take larger prey, such as Mule Deer (*Odocoileus hemionus*) fawns. It is very sensitive to human disturbance, especially near nest sites.	Breeding: HA Migrants/Foraging: HP	Species could potentially occur only as a winter migrant and could potentially forage in the BSA. There is no suitable nesting habitat within the BSA.
Burrowing Owl (*Athene cunicularia*)	-/SSC /-	Inhabits open, dry grasslands, prairie; desert floor, and open scrub. Commonly found in areas altered by man, including flood control channels and basins, abandoned or open fields, agricultural and livestock areas, and road cuts. In CA, commonly uses ground squirrels burrows. Also known to utilize piles of broken concrete, old pipes, and other abandoned structures for burrows.	P	There were two individuals observed occupying the BSA during the focused surveys. In addition, there is suitable habitat for breeding and foraging in the BSA.
Black Swift (*Cypseloides niger*)	-/ SSC/-	This species has a very large range throughout western North America where it occurs from Alaska to Costa Rica. Inhabits CA as a summer resident occurring from April through October, with most nesting typically occurring from June to August. This species is known to inhabit montane environments, however, it has been observed in foothills and lowlands.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Southwestern Willow	E/E/-	Summer resident with a highly	HA	No suitable habitat is present

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Flycatcher (*Empidonax traillii extimus*)		restricted distribution in southern CA. Inhabits extensive riparian forests, wet meadows, and lower montane riparian habitats along rivers and streams. Primarily occurs below 4,000 ft. elevation. Winters in southern Mexico and Central America.		within the BSA. This species is not expected to occur.
Prairie Falcon (*Falco mexicanus*)	-/WL/-	Year round CA species. Nests on cliffs and rocky outcrops. Forages in open and arid valleys and agricultural fields. Known from throughout the desert and interior portions of southern CA.	Breeding: HA Foraging: HP	There is no potential nesting habitat within the BSA, however the BSA does provide suitable foraging habitat for the species during migration or winter.
Bald Eagle (*Haliaeetus leucocephalus*)	D/E, CFP/-	Primarily in or near seacoasts, rivers, swamps, and large lakes. Eats mainly fish and carrion, and formerly nested locally along the coast of southern California. This species is a localized winter resident and rare migrant, with only very rare breeding efforts in coastal southern California (e.g., Lake Skinner, Riverside County).	Breeding: HA Migrants/Foraging: HP	Species could potentially occur only as a winter migrant and could potentially forage in the BSA. There is no suitable nesting habitat within the BSA.
Loggerhead Shrike (*Lanius ludovicianus*)	-/SSC/-	Year round CA species. Occurs in association with open fields with scattered trees, woodlands and scrub.	HP	This species has a low potential to forage within the BSA and nest within ornamentals in the area.
Black-tailed Gnatcatcher (*Polioptila melanura*)	-/-/-	Year round CA species. Nests in wooded desert wash habitat containing mesquite, palo verde, ironwood and *Acacia*. Absent from areas with *Tamarisk.* Inhabits desert scrub habitat in winter months.	HA	No suitable habitat is present within the BSA. Sonoran creosote bush scrub is very sparsely vegetated and would not provide suitable foraging for dispersing individuals.
Purple Martin (*Progne subis*)	-/SSC/-	Summer resident in southern CA. Known to occur in open agricultural areas, towns and marsh edges. Nesting habitat consists of mature sycamore and pines within oak and coniferous woodlands.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.

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Vermilion Flycatcher (*Pyrocephalus rubinus*)	-/SSC/-	Fall or winter resident or rare and local breeder. Inhabits cottonwood, willow, and mesquite woodlands and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other mesic areas.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Yellow Warbler (*Dendroica petechia*)	-/SSC/-	Nests in the upper story of riparian habitats in southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of habitats at that time.	HA	No suitable riparian habitat is present for nesting or foraging. This species is not expected to occur, No further constraint is present.
Crissal Thrasher (*Toxostoma crissale*)	-/SSC/-	Year round resident. Inhabits dense thickets of shrubs or low trees in desert riparian and wash habitat. Known from southeastern CA to TX and northern Mexico.	HP	Potentially suitable habitat is low quality due presence of scattered shrubs in the BSA.
Le Conte's Thrasher (*Toxostoma lecontei*)	-/SSC/-	Year round resident. Inhabits sparsely vegetated flats, dunes, washes, alluvial fans or gently rolling hills with a high cover of *Atriplex* or *Opuntia*.	HA	Although sand dunes and desert wash are present within BSA, vegetation cover is not appropriate for species. In addition, this species was not observed during any survey work. This species is not expected to occur.
Least Bell's Vireo (*Vireo bellii pusillus*)	E/E/-	Summer resident in southern CA. Inhabits open to semi open riparian areas and river bottoms below 2,000 ft. elevation. Prefers densely vegetated areas for nesting.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Mammals				
Pallid Bat (*Antrozous pallidus*)	-/CSC/-	Occurs throughout southern California. From coast to mixed conifer forest; grasslands, shrublands, woodlands, & forest; most common in open, dry habitats w/ rocky areas for roosting; yearlong resident in most of range. The species is not thought to migrate,	HP	Several large athel trees are located along the eastern levee of the Whitewater River, which could potentially serve as roost trees. There is a low potential for the species to roost within the BSA and

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
		so maternity colonies and winter roosts are expected to occur in vicinity of each other; roost sites are rock crevices, old buildings, bridges, caves, mines, and hollow trees.		forage over the Whitewater River.
Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)	-/SSC/-	Inhabits sandy areas supporting herbaceous vegetation such as sage scrub, chaparral, desert washes, desert succulent scrub, pinyon-juniper woodlands and annual grasslands below 6,000 ft. elevation. Usually in association with rocky areas and/or coarse gravel.	HP	Low potential to occur in desert dry wash scrub. The BSA lacks course gravel or rocky areas.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	-/CT/-	Species can be found in a variety of habitats throughout the state where appropriate roosting habitat exists. Primarily roosts in caves and cavern-like spaces; also include in abandoned buildings, mines, culverts, box-like spaces in bridges and other structures, and large hollows in trees. Very sensitive to human disturbances.	HA	There are no suitable roosts within the BSA. This species is not expected to occur. No further constraint is present.
Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*)	-/SSC/-	Inhabits transitional Mojavean desert areas from the slopes of the San Bernardino Mtns. to the edge of the Colorado Desert and south to the Mexico border. Prefers chaparral but will occur in open sandy areas of other habitats.	HP	Suitable habitat is present within the BSA. There is a low potential for this species to occur.
San Bernardino Flying Squirrel (*Glaucomys sabrinus californicus*)	-/CSC/-	Occurs in woodlands dominated by black oak or white fir between 5,200 – 8,500 feet in the San Bernardino and San Jacinto ranges.	HA	The BSA occurs well outside of the species geographic and elevation range. This species is not expected to occur. No further constraint is present.
Western Yellow Bat (*Lasiurus xanthinus*)	-/SSC/-	Found within valley and foothill desert areas, desert riparian areas, washes, and palm oases, Roosts in trees, particularly palms. Forages over water and among trees.	Roosting: HP Foraging: HP	Several large athel trees are located along the eastern levee of the Whitewater River, which could potentially serve as roost trees. Although

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
				several ornamental Mexican fan palms are located in the western portion of the BSA, these palms are not expected to provide substantial roost potential due to their manicured nature (free of dried fronds). There is a low potential for the species to roost within the BSA and forage over the Whitewater River.
Colorado Valley Woodrat (*Neotoma albigula venusta*)	-/-/-	Occurs in low lying desert areas in southeastern CA. Known to be closely associated with mesquite and *Opuntia*.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
San Diego Desert Woodrat (*Neotoma lepida intermedia*)	-/SSC/-	Occurs in coastal sage scrub and chaparral. Most commonly associated with rocky outcrops, rocky cliffs and slopes. Found in coastal southern CA from San Diego to San Luis Obispo Counties.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)	-/SSC/-	Rare with limited range in southern CA. Occurs mostly in arid southeastern deserts regions of Riverside County which constitutes the western periphery of their range. Found in pinyon-juniper and Joshua tree woodlands, desert scrub, desert succulent scrub, desert riparian areas, desert washes, alkali desert scrub, and palm oases. Roosts in high rock crevices in cliffs; must drop from roost to gain flight speed. Forages primarily on moths, especially over water.	Roosting: HA Foraging: HP	There are no suitable areas to roost within the BSA. There is a low potential for the species to forage over the Whitewater River. This species is not expected to constrain the project.
Big Free-tailed Bat (*Nyctinomops macrotis*)	-/SSC/-	Rare in CA. Known from AZ, NM and TX. CA records are from urban areas in San Diego County and vagrants found in winter and fall. Prefers rugged, rocky terrain below 8,000 ft.	HA	No suitable habitat is present within the BSA. Due to the species rarity in California and lack of suitable habitat, this species is not expected to

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
		elevation.		forage in the BSA either.
Nelson's Bighorn Sheep (*Ovis canadensis nelsoni*)	-/-/-	Occurs in open, rocky, steep areas with available water and herbaceous foliage. Widely distributed from the White Mtns. in Mono County to the Chocolate Mtns. in Imperial County.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Peninsular Bighorn Sheep (*Ovis canadensis nelsoni DPS*)	E/T,CFP/-	Occurs on open desert slopes below 4,000 ft. elevation from San Gorgonio Pass south into Mexico. Prefers steep walled canyons and ridges bisected by sandy or rocky washes near available water.	HA	No suitable habitat is present within the BSA. This species is not expected to occur.
Palm Springs Pocket Mouse (*Perognathus longimembris bangsi*)	-/SSC/-	Limited information available. Species found in sandy habitats on the desert floor from as far north as Joshua Tree N.P., west to the San Gorgonio Pass and south to Borrego Springs and the east side of San Felipe Narrows. Known from Riverside, San Diego and Imperial Counties.	HP	Potentially suitable habitat within sandy soils of the Whitewater River floodplain.
Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)	-/SSC/-	Limited information available. Known records indicate that this species inhabits areas of open ground, with fine sandy soils (for burrowing) but is also found on gravel washes and on gravelly soils within scrub and woodlands. Species not known to prefer sites with a high rock cover.	HP	The Whitewater River and associated habitat provide suitable sandy soils and cover for this species.
Coachella Valley Round-tailed Ground Squirrel (*Xerospermophilus tereticaudus chlorus*)	-/SSC/-	Species restricted to the Coachella Valley. Occurs in desert succulent scrub, desert scrub, desert wash and alkaline scrub habitat. Prefers open, flat, grassy areas with fine textured sandy soil.	P	Palm Springs Round-tailed ground squirrel was detected in the northeastern portion of the BSA during focused surveys conducted in 2012. Additionally, this species was detected south of the ESA on the western bank of the Whitewater River during the 2012 focused survey.

COMMON/SCIENTIFIC NAME	Status[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
NATURAL COMMUNITIES				
Desert Fan Palm Oasis Woodland	CNDDB	Mesic areas dominated by CA fan palm (*Washingtonia robusta*). Additional species include date palms, cottonwood and arrow-weed.	HA	No desert fan palm habitat present.
Mesquite Bosque	CNDDB	Desert community dominated by mesquite (*Prosopis* sp.). Additional species include *Acacia*, cottonwood and California fan palm.	HA	No mesquite bosque habitat present.
Southern Riparian Forest	CNDDB	Forest community dominated by sycamore, cottonwood, and willows.	HA	No southern riparian forest habitat present.

[a] Status Codes

Federal

E = Federally listed; Endangered

PE = Proposed Endangered

T = Federally listed; Threatened

FC = Federal Candidate for Listing

FSC = Federal Species of Concern

D = Delisted

State

E = State listed; Endangered

CE = Candidate Endangered

T = State listed; ThreatenedCT= Candidate Threatened

R = Rare (Native Plant Protection Act)

SSC = California Species of Special Concern

CFP = California Fully Protected Species

WL = Watch List

CNPS Rare Plant Rank (CRPR)

1A = Plants presumed extinct in California

1B = Plants rare, threatened, or endangered in California and elsewhere

2 = Plants rare, threatened, or endangered in California, but more common elsewhere

3 = Plants about which we need more information

4 = Limited distribution (Watch List)

CNPS CRPR Threat Codes

0.1 = Seriously endangered in California

0.2 = Fairly endangered in California

0.3 = Not very endangered in California

[b]Habitat Presence/Absence Codes

P= The species is present and was observed during survey efforts.

HP=Habitat is or may be present within Project footprint. The species may potentially be present. Focused survey is warranted.

HPB=Habitat is or may be present within 200 ft study area (BSA). The species may potentially be present. Focused survey is warranted.

HA= No habitat present and no further work needed.

Gray Highlight= No potential to occur in the BSA.

Appendix C USFWS Species List

United States Department of the Interior

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

Consultation Tracking Number: 08ECAR00-2015-SLI-0098 December 09, 2014
Project Name: Vista Chino Low Water Crossing Bridge Replacement

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Vista Chino Low Water Crossing Bridge Replacement

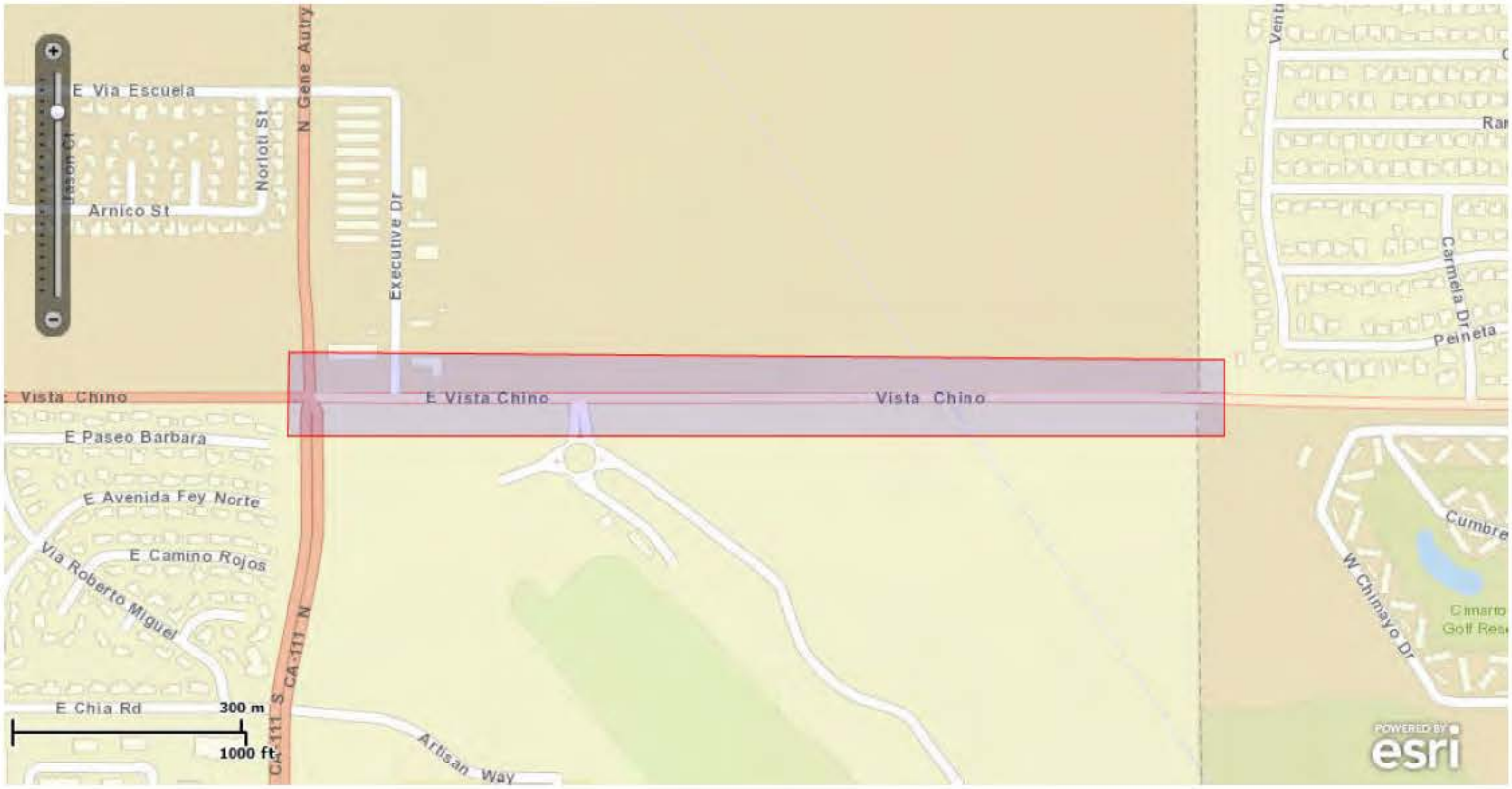
Official Species List

Provided by:

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

Consultation Tracking Number: 08ECAR00-2015-SLI-0098
Project Type: Transportation
Project Description: The City of Palm Springs is proposing to replace the existing low water crossing along Vista Chino at the Whitewater River with a newly constructed bridge. The project is located in the City of Palm Springs, County of Riverside, California. The new bridge would replace the existing roadway, which is currently a low water crossing. The purpose of the proposed project is to improve traffic circulation and emergency access within Palm Springs and Cathedral City during flood events

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-116.5060945 33.8454539, -116.4928765 33.8453648, -116.4928765 33.8444737, -116.5061159 33.8444737, -116.5060945 33.8454539)))

Project Counties: Riverside, CA

Endangered Species Act Species List

There are a total of 8 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	**Status**	**Has Critical Habitat**	**Condition(s)**
Mountain Yellow-Legged frog *(Rana muscosa)* Population: southern California DPS	Endangered	Final designated	
Birds			
Least Bell's vireo *(Vireo bellii pusillus)* Population: Entire	Endangered	Final designated	
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Entire	Endangered	Final designated	
Flowering Plants			
Coachella Valley milk-vetch *(Astragalus lentiginosus var. coachellae)*	Endangered	Final designated	
Insects			
Casey's June Beetle *(Dinacoma caseyi)* Population: Entire	Endangered	Final designated	

Mammals			
Peninsular bighorn sheep *(Ovis canadensis nelsoni)* Population: Peninsular CA pop.	Endangered	Final designated	
Reptiles			
Coachella Valley Fringe-Toed lizard *(Uma inornata)* Population: Entire	Threatened	Final designated	
Desert tortoise *(Gopherus agassizii)* Population: U.S.A., except in Sonoran Desert	Threatened	Final designated	

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Appendix DJurisdictional Delineation Report

JURISDICTIONAL DELINEATION REPORT

VISTA CHINO LOW WATER CROSSING BRIDGE REPLACEMENT
CITY OF PALM SPRINGS, RIVERSIDE COUNTY, CALIFORNIA
FEDERAL PROJECT NO. BR-NBIL(513)

PREPARED FOR:

City of Palm Springs
3200 East Tahquitz Canyon Way
Palm Springs, CA 92262
Contact: Savat Khamphou
760-323-8253 x8744

PREPARED BY:

ICF International
3550 Vine Street, Suite 100
Riverside, CA 92507
Contact: Zackry West
951-683-2356

December 2014

ICF International. 2014. Jurisdictional Delineation Report for the Vista Chino Low Water Crossing Bridge Replacement, City of Palm Springs, Riverside County, California. December. (ICF 107.12) Riverside, CA. Prepared for City of Palm Springs, Palm Springs, CA.

Contents

Tables and Figures

Acronyms and Abbreviations

AMSL	above mean sea level
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
City	City of Palm Springs
CWA	Clean Water Act
EPA	Environmental Protection Agency
FAC	facultative
FACW	facultative wetland
GPS	global positioning system
HU	Hydrologic Unit
ICF	ICF International
JD	Jurisdictional Determination
NHD	National Hydrography Dataset
NI	no indicator
NO	no occurrence
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	status of obligate
OHWM	Ordinary High Water Mark
PIA	project impact area
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Vista Chino Bridge Project
RCP	reinforced concrete pipe
RGL	Regulatory Guidance Letter
RPWs	relatively permanent waters
RWQCB	Regional Water Quality Control Board
SSURGO	Soil Survey Geographic
SWANCC	Solid Waste Agency of Northern Cook County
SWRCB	State Water Resources Control Board
TNWs	Traditional navigable waters
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	United States Geologic Survey
WoS	waters of the State
WoUS	waters of the United States

Chapter 1
Introduction

On May 24, 2012, ICF International (ICF) conducted a routine-level delineation of jurisdictional waters and wetlands within a portion of the Whitewater River for the City of Palm Springs, as part of the federal and state regulatory permitting process for construction activities to be conducted for the Vista Chino Bridge Project (project). The purpose of the proposed project is to improve traffic circulation and emergency access within the City of Palm Springs and Cathedral City during flood events.

The purpose of this delineation was to identify the extent of federal and state jurisdiction within and adjacent to the project site to support the resource-agency permitting process under Sections 401 and 404 of the Clean Water Act (CWA), Section 13260 of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and Section 1602 of the California Fish and Game Code.

Section 404 of the CWA covers waters of the United States (WoUS) as well as federal wetlands and is regulated by the U.S. Army Corps of Engineers (USACE). Under Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB) and the U.S. Environmental Protection Agency (EPA) regulate at the state level all activities that are regulated at the federal level by the USACE. The RWQCB/State Water Resources Control Board (SWRCB) may also regulate activities affecting non-federal waters and wetlands (e.g., isolated features) under the Porter-Cologne Act. Section 1600 of the California Fish and Game Code is regulated by the California Department of Fish and Wildlife (CDFW) and covers aquatic features, which may include lakes or streambeds with a defined bed and bank, plus any adjacent riparian vegetation. If a proposed project may affect waters or wetlands, the project site must be evaluated to determine the presence of jurisdictional waters. Permits for the proposed activity must be sought from each applicable resource agency. Details regarding each of these resource agencies, their regulatory authority, jurisdiction, permits, and regulatory process are provided in Chapter 2, "Regulatory Background."

The information and results presented herein document the investigation, best professional judgment, and conclusions of ICF. It is correct and complete to the best of our knowledge. However, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

1.1 Project Description and Site History

The City of Palm Springs (City), in coordination with the California Department of Transportation (Caltrans), is proposing to replace the existing low water crossing along Vista Chino at the Whitewater River with a newly constructed bridge, within the City of Palm Springs, Riverside County, California. The new bridge would replace the existing roadway, which is currently a low water crossing. The purpose of the proposed project is to improve traffic circulation and emergency access within Palm Spring and Cathedral City during flood events.

The winter storms of December 29 and 30, 2004 and January 10 and 11, 2005 caused the complete closure of Vista Chino at the Whitewater River, resulting in severe disruption of traffic circulation into and out of the City. Additional road closures occurred in July 20 and 22 and August 8 and 11,

2008 due to flooding. The project would provide an all-weather crossing for Vista Chino across the Whitewater River to allow uninterrupted access into and out of Palm Springs when flooding and debris flows occur. The flooding at the Whitewater River causes the closure of this and two other at-grade crossing (Gene Autry Trail and Indian Canyon Drive) in the City. The project would therefore improve traffic circulation and emergency access within Palm Springs and Cathedral City during flood events.

The new bridge structure would be approximately 94 feet wide consisting of a 76-foot wide roadway with four 12-foot wide lanes separated by a 10-foot wide median, nine-foot wide bike lanes, and six-foot wide sidewalks along either side. The proposed bridge span would be approximately 2,310 feet along the existing Vista Chino crossing at the Whitewater River between an existing concrete lined flood control levee on the west bank and the east bank, consisting of a buried concrete slope cutoff wall. The proposed bridge structure would either be precast concrete girder or cast-in-place concrete box girder supported on multiple-column bents. The bridge cross-section would be consistent with the City's cross-section for a major thoroughfare which is the current classification of Vista Chino in the City's Circulation Element of the General Plan. The new hardscape with roadway and bridge improvements would be approximately 100 feet from the intersection of Clubhouse View Drive to 450 feet east of the east levee. In addition, there would be striping and signage work beyond the hardscape limit from Gene Autry Trail to Carmela Drive. The total project limits would be approximately 4,950 feet. The proposed project would also require the relocation of other utilities located within the roadway right-of-way, including several billboards.

Temporary construction easements (TCEs) would be potentially located on the parcels located along both sides of Vista Chino to the east and west of the Whitewater River. TCEs would be located along the existing Southern California Edison (SCE) easement located south of the proposed bridge structure and at eastern end of the project limits, to accommodate for the relocation of several existing power poles. In addition TCEs from the following assessor parcels would likely be needed to accommodate the new bridge: north of Vista Chino: 677040031, 677030031, 677030030, 677183018, 677183020, 677183026, 677183039, 677183040; south of Vista Chino: 677250059, 677250057, 677250065, 677250025, 675040004, 675370016, 675370017, and 675370018. Three existing billboards located north of Vista Chino would likely lose visibility as a result of the new bridge and would likely be relocated or raised as part of the project. TCE and permanent easement on Indian Lands need to be processed through the Bureau of Indian Affairs (BIA). A construction staging area would also be potentially located north of the roadway in the Whitewater River, east of Executive Drive (Assessor Parcel Number 67740030). The disposal site for the proposed project, if needed, would be selected by the contractor. Any environmental clearances related to the disposal site would be obtained by the contractor prior to construction.

The proposed project is included in the 2013 cost-constrained Federal Transportation Improvement Program (FTIP) which was adopted by SCAG on September 19, 2012 and found to be conforming by the Federal Highway Administration (FHWA) in December 2012 as project ID RIV090405. The project as proposed is consistent with the 2013 FTIP description.

1.2 Project Location

The proposed project is located on East Vista Chino at the Whitewater River crossing between North Gene Autry Trail and Carmela Drive (Figures 1 and 2; Appendix A). The study area is mapped within

Sections 5 and 6, Township 4 South, Range 5 East of the Palm Springs United States Geologic Survey (USGS) 7.5-minute topographic quadrangle map and Sections 5–8, Township 4 South, Range 5 East of the Cathedral City USGS 7.5-minute topographic quadrangle map (Figure 2).

Chapter 2
Regulatory Background

The following sections summarize the regulations imposed on each type of jurisdictional feature potentially present within the project area.

2.1 U.S. Army Corps of Engineers Regulated Activities

Pursuant to Section 404 of the CWA, the USACE regulates the discharge (temporary or permanent) of dredged or fill material into WoUS, including wetlands. A discharge of fill material includes, but is not limited to, grading, placing riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material into WoUS. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

2.1.1 Waters of the United States

WoUS, as defined in Code of Federal Regulations (CFR) title 33, section 328.3, includes the following.

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

  (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

  (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

  (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in paragraphs (1) through (4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section.

(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for

> the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.
>
> Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

The limit of USACE jurisdiction, excluding wetlands and tidal waters, is delineated using the Ordinary High Water Mark (OHWM), defined in CFR 328.3(e) as:

> …that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed 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.

2.1.2 Wetlands

Normally, three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology) (Environmental Laboratory 1987).

2.1.3 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers

In 1986, in an attempt to clarify the reach of its jurisdiction, USACE stated that Section 404(a) extends to intrastate waters that:

> …(a) are or would be used as habitat by birds protected by migratory bird treaties, or (b) are or would be used as habitat by other migratory birds which cross state lines, or (c) are or would be used as habitat for endangered species, or (d) used to irrigate crops sold in interstate commerce." (51 Federal Register 41217).

As a result of the 2001 *Solid Waste Agency of Northern Cook County (SWANCC)* case, the U.S. Supreme Court held that USACE may not rely on the Migratory Bird Rule to establish a significant nexus to interstate or foreign commerce. Although no formal guidance was issued by USACE interpreting the extent to which the *SWANCC* decision would limit jurisdictional determinations, in practice, USACE considers intrastate waters as WoUS where there is an appropriate connection to a navigable water or other clear interstate commerce connection. Therefore, WoUS, including jurisdictional wetlands, must show connectivity with (be tributary to) a navigable WoUS to be subject to the USACE under Section 404 of the CWA.

2.1.4 Rapanos v. United States and Carabell v. United States Army Corps of Engineers

In 2006, the U.S. Supreme Court issued an opinion regarding the extent of USACE jurisdiction over certain waters under Section 404 of the CWA. The *Rapanos-Carabell* consolidated decisions addressed the question of jurisdiction over attenuated tributaries to WoUS, as well as wetlands adjacent to those tributaries.

On June 5, 2007, the USACE and the EPA issued guidance related to the *Rapanos* decision. The guidance identifies those waters over which the agencies (USACE and EPA) will assert jurisdiction categorically and on a case-by-case basis. To summarize, USACE will continue to assert jurisdiction over the following features.

- Traditional navigable waters (TNWs) and their adjacent wetlands.
- Non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally [i.e., typically 3 months]) and wetlands that directly abut such tributaries (i.e., not separated by uplands, berm, dike, or similar feature).

For non-RPWs, the agencies will determine whether a "significant nexus" exists with a TNW using the data found in an Approved Jurisdictional Determination (JD) Form. The purpose of the significant nexus evaluation is to determine whether the existing functions of a tributary affect the chemical, physical, and/or biological integrity of a downstream TNW. Tributary characteristics that are considered when evaluating whether a significant nexus exists include volume, duration, and frequency of flow; proximity to a TNW; and hydrologic and ecologic functions performed by the tributary and all of its adjacent wetlands. Based on that information, the agencies may assert jurisdiction over the following features.

- Non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally.
- Wetlands adjacent to such tributaries.
- Wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary.

The agencies will typically not assert jurisdiction over the following features.

- Swales or erosional features (e.g., gullies and small washes characterized by low volume and infrequent or short-duration flow).
- Ditches (including roadside ditches) excavated wholly in uplands and draining only uplands that do not carry a relatively permanent flow of water.

2.1.4.1 Approved Jurisdictional Determinations

An Approved JD is an official USACE jurisdictional determination, is valid for five years, can be used and relied upon in a CWA citizen's lawsuit if its legitimacy is challenged (except under extraordinary circumstances), and can be immediately appealed (33 CFR 331). Approved JDs are documented in accordance with Regulatory Guidance Letter (RGL) No. 07-01 and require the use of the Approved JD Form. Approved JDs are evaluated by the USACE and EPA.

Under the *Rapanos* guidance, an Approved JD is required for determinations for all "isolated" waters or wetlands, and is subject to review by the USACE and EPA.

2.1.4.2 Preliminary Jurisdictional Determinations

The USACE issued RGL No. 08-02 on June 26, 2008, allowing the USACE to issue Preliminary JDs for a project. A Preliminary JD is a non-binding written indication that there may be WoUS, including wetlands, on a project site and identifies the approximate location of these features. Preliminary JDs are used when a landowner, permit applicant, or other affected party elects to voluntarily waive or

set aside questions regarding CWA jurisdiction over a particular site, usually in the interest of allowing the landowner to move ahead expeditiously to obtain Section 404 authorization where the party determines that it is in his or her best interest to do so. A Preliminary JD is not an official determination regarding the jurisdictional status of potentially jurisdictional features and has no bearing on Approved JDs. A Preliminary JD cannot be used to confirm the absence of jurisdictional waters or wetlands, is advisory in nature, and cannot be appealed. It is considered "preliminary" because a recipient can later request an Approved JD if one is necessary or appropriate.

A Preliminary JD is documented using the Preliminary Jurisdictional Determination Form. For purposes of impact calculations, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a Preliminary JD treats all waters and wetlands that would be affected in any way, except by the permitted activity, as if they are jurisdictional. Although a Preliminary JD may be chosen by the applicant, the district engineer reserves the right to use an Approved JD where warranted.

2.1.4.3 2011 Draft Clean Water Act Guidance

On April 27, 2011, the USACE and EPA issued draft guidance for determining jurisdiction under the CWA (USACE 2011). The guidance supersedes the previous guidance from 2003 regarding *SWANCC* (68 Federal Register 1991–1995) and 2007 *Rapanos* guidance. This document reiterated the guidance issued under the *Rapanos* decision, asserting that the following waters are protected by the CWA.

- Traditional navigable waters.
- Interstate waters.
- Wetlands adjacent to either traditional navigable waters or interstate waters.
- Non-navigable tributaries to traditional navigable waters that are relatively permanent (meaning they contain water at least seasonally).
- Wetlands that directly abut relatively permanent waters.

The guidance further clarifies the criteria for defining TNWs, primarily consistent with previous guidance. In addition, a significant nexus evaluation is required for the "other waters" category of the regulations (see item 3 in Section 2.1.1, "Waters of the United States," above). The guidance divides these waters into two categories—those that are physically proximate to other jurisdictional waters and those that are not, and discusses how each category should be evaluated.

Finally, the guidance reiterated that certain aquatic areas are generally not considered WoUS.

- Wet areas that are not tributaries or open waters and do not meet the agencies' regulatory definition of "wetlands."
- Waters excluded from coverage under the CWA by existing regulations.
- Waters that lack a "significant nexus" where one is required for a water to be protected by the CWA.
- Artificially irrigated areas that would revert to upland should irrigation cease.
- Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.

- Artificial reflecting pools or swimming pools created by excavating and/or diking dry land.
- Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons.
- Water-filled depressions created incidental to construction activity.
- Groundwater drained through subsurface drainage systems.
- Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands.

2.2 State Regulated Activities

2.2.1 Section 401 of the Clean Water Act

A federal permit or license cannot be issued that may result in a discharge to WoUS unless certification under Section 401 of the CWA is granted or waived by the EPA, state, or tribe where the discharge would originate (EPA 2010). Within the proposed project area, the ability to grant, grant with conditions, deny, or waive certification falls to three separate parties: the RWQCB or SWRCB, and the EPA.

Pursuant to Section 401 of the CWA:

> …any applicant for a federal permit for activities that involve a discharge to waters of the United States shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act.

Therefore, before USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification or waiver, as applicable. Under Section 401 of the CWA, all activities that are regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be WoUS and, similar to WoUS, are typically delineated at the OHWM.

However, if waters are determined not to be WoUS, they may still be subject to state jurisdiction based on the Porter-Cologne Act.

2.2.2 Porter-Cologne Water Quality Control Act

The state also regulates activities that would involve "discharging waste, or proposing to discharge waste, within any region that could affect waters of the state" (California Water Code 13260[a]), pursuant to provisions of the Porter-Cologne Act. Waters of the State (WoS) are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050 [e]). Such waters may include waters not subject to regulation under Section 404 (i.e., isolated features). These waters may include isolated vernal pools, isolated wetlands, or other aquatic habitats not normally subject to federal regulation under Section 404 of the CWA.

2.2.3 State Water Resources Control Board/Regional Water Quality Control Boards

In California, the SWRCB and nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the Porter-Cologne Act. The SWRCB is responsible for setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each semi-autonomous RWQCB sets water quality standards, issues Section 401 certifications and waste discharge requirements, and takes enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, the SWRCB becomes the regulating agency and issues project permits.

2.3 California Department of Fish and Wildlife Regulated Activities

Pursuant to Sections 1600–1616 of the California Fish and Game Code, CDFW regulates any activity that will substantially divert or obstruct the natural flow—or substantially change or use any material from the bed, channel, or bank—of any river, stream, or lake. CDFW also regulates any activity that will deposit or dispose of debris, wastewater, or other material containing crumbled, flaked, or ground pavement that may pass into any river, stream, or lake. The applicant must notify CDFW prior to such activities and obtain a Lake or Streambed Alteration Agreement.

2.3.1 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of: (1) definable bed and banks, and (2) existing fish or wildlife resources. Furthermore, CDFW jurisdiction often extends to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that support hydrologic functions within the riparian system. CDFW jurisdiction typically does not include features without a discernible bed and bank, such as swales, vernal pools, or wet meadows.

2.3.2 California Fish and Game Code Section 1602

The California Fish and Game Code mandates that:

> …it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.

Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional.

Water features such as vernal pools and other seasonal swales—where the defined bed and bank are absent, and the feature is not contiguous or closely adjacent to other jurisdictional features—are generally not asserted to fall within state jurisdiction under Section 1602. CDFW generally does not assert jurisdiction over human-made water bodies unless they are located where such natural features were previously located or (importantly) where they are contiguous with existing or prior natural jurisdictional areas.

Chapter 3
Methodology

3.1 Project Research

Prior to the field visit, a 200-foot-scale (one inch = 200 feet) aerial photograph of the study area was obtained and compared with USGS 7.5-minute topographic quadrangles to identify drainage features within the study area as indicated by vegetation types, topographic changes, or visible drainage patterns. The National Hydrography Dataset (NHD) data for the study area (USGS 2010) and the National Wetlands Inventory (NWI) (USFWS 2010) were referenced to identify any mapped features such as streams and wetlands. Finally, the study area was carefully reviewed in Google Earth (Google Earth 2012) in various scales, and potentially jurisdictional features were marked on field maps.

In addition, the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database (USDA/NRCS 2012) was reviewed to identify the soil series that occur in the study area.

3.2 Field Investigation

ICF senior regulatory specialists Zackry West and Lexi Kessans conducted the jurisdictional waters and wetland delineation on May 24, 2012. The JD study area (study area) was defined originally as the proposed project impact area (PIA) and a 200-foot buffer (Figures 8a and 8b; Appendix A), including approximately 1,500 linear feet of the Whitewater River. The proposed PIA has been revised; therefore, the study area buffer is lesser than 200 feet in some areas but still encapsulates the PIA . The study area was surveyed on foot, and jurisdictional limits were recorded using a Trimble Yuma global positioning system (GPS) unit with a Geneq SX Blue II receiver, providing sub-meter accuracy.

ICF conducted a routine level delineation of the mainline Whitewater River for a separate project in December 2011 and January 2012, for which portions delineated the mainline Whitewater River within the study area. This data was referenced in the field using sub-meter accuracy GPS units, and it was verified in the field that the indicators and conditions from which the OHWM was previously determined remained valid and correct during the May 24, 2012 study area visit.

Common plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the *Jepson Manual: Higher Plants of California,* 2nd edition (Baldwin et al. 2012).

3.2.1 U.S. Army Corps of Engineers Jurisdiction

Potential WoUS and wetlands were delineated using methods established in the *Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE

2008b), and 2007 and 2008 *Rapanos* Guidance (USACE and EPA 2008).[1] Non-wetland waters were delineated based on the presence of OHWM indicators, and an OHWM data sheet was recorded for each feature and is attached as Appendix B. At each evaluation area, several parameters were considered to determine whether the sample point was within a wetland. Three criteria normally must be fulfilled in order to classify an area as a jurisdictional USACE wetland: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below.

- **Hydrophytic Vegetation:** The hydrophytic vegetation criterion is satisfied at a location if greater than 50 percent of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (Environmental Laboratory 1987). An OBL indicator status refers to plants that have a 99 percent probability of occurring in wetlands under natural conditions. A FACW indicator status refers to plants that usually occur in wetlands (67–99 percent probability) but are occasionally found elsewhere. A FAC indicator status refers to plants that are equally likely to occur in wetlands or elsewhere (estimated probability 34–66 percent for each). An NI (no indicator) status designates that insufficient information was available to determine an indicator status. An NO (no occurrence) status indicates that the species does not occur in the region. When a plant with an NO status is found within a region, it usually indicates that the plant is ornamental. The wetland indicator status used for this report follows the *Draft-Final National Wetland Plant List* (USACE/EPA 2012).
- **Hydric Soils:** The definition of a hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA/NRCS 1994). This determination is made based on various field indicators detailed in the *Arid West Supplement* and the *Field Indicators of Hydric Soils in the United States (Version 7.0)* (USDA/NRCS 2010).
- **Wetland Hydrology:** Wetland hydrology is determined using indicators of inundation or saturation (flooding, ponding, or tidally influenced) detailed in the *Wetland Delineation Manual* and the *Arid West Supplement*.

3.2.2 State Jurisdiction

Evaluation of state jurisdiction followed guidance from Section 401 of the CWA and typically follows the same jurisdictional areas as USACE.

3.2.3 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank. Evaluation of potentially jurisdictional areas followed the guidance of relevant CDFW materials and standard practices by CDFW personnel. Briefly, CDFW jurisdiction was delineated by measuring outer width and length boundaries of potentially jurisdictional areas, consisting of the greater of either the top of bank measurement or the extent of associated riparian or wetland vegetation.

[1] On June 5, 2007, the USACE and EPA issued guidance related to the *Rapanos-Carabell* consolidated decisions to address the question of jurisdiction over attenuated tributaries to WoUS, as well as wetlands adjacent to those tributaries. On December 2, 2008, the USACE and EPA issued guidance that incorporated revisions to the June 5, 2007, memorandum. The *Rapanos-Carabell* decision is discussed in further detail in Section 2.1.4 above.

Chapter 4
Environmental Setting

This chapter describes the topography, land use, hydrology, vegetation characteristics, and soils associated with the study area.

4.1 Topography

The study area is within the limits of the Coachella Valley, a gentle sloping, low-elevation valley situated in the westernmost extent of the Sonoran Desert. The Coachella Valley is located within eastern Riverside County, approximately 50 miles east of the City of Riverside. The Whitewater River follows a gentle slope from northwest to southeast, with the headwaters forming in the San Bernardino Mountains and terminating at the Salton Sea.

The Coachella Valley is roughly bounded by the San Bernardino Mountains to the north, the Little San Bernardino Mountains to the northeast, the San Jacinto Mountains to the west, and the Santa Rosa Mountains to the south. Elevation within the study area ranges from approximately 420 feet above mean sea level (AMSL) to approximately 460 feet above AMSL. Local topography includes a channelized low-gradient ephemeral river system designed to carry occasional high-intensity seasonal storm flows.

4.2 Land Use

The study area consists primarily of an existing roadway that is bordered to the east and west by urban development; to the south by the Whitewater River channel and a maintained golf course; and to the north by the Whitewater River channel and undeveloped lands located within the Agua Caliente Band of Cahuilla Indians Reservation.

4.3 Hydrology

4.3.1 Precipitation

The regional climate is characterized by hot, dry summer months and moderately cold winters. Seasonal rainfall occurs predominantly in the winter months (December to March) and to a lesser extent during the summer monsoonal season (July to August). The following precipitation data for Palm Springs, California (Table 4-1), were used for this analysis (WRCC 2012).

Table 4-1. Average Annual Rainfall Data Summary for Palm Springs, California (in inches)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Total Oct–Jul
Average	0.29	0.42	1.01	1.13	1.00	0.58	0.18	0.05	0.05	0.20	5.49

Source: Western Regional Climate Center: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6635. Accessed: June2012.

4.3.2 Hydrologic Unit

The study area is located within the Whitewater River Hydrologic Unit (HU), which is included in the Colorado River Hydrologic Region. The Whitewater River HU ultimately terminates in the Salton Sea.

4.4 Vegetation

4.4.1 Sonoran Creosote Bush Scrub

This community was observed on the terraces surrounding the Whitewater River and consists primarily of shrubs approximately 1.5 to 10 feet tall that are widely spaced with bare ground or few annuals in between. The dominant plant species in the Sonoran Creosote Bush Scrub community within the study area were creosote bush (*Larrea tridentata*), white bur-sage (*Ambrosia dumosa*), burrobush (*A. salsola* var. *salsola*), sweetbush (*Bebbia juncea* var. *aspera*), and Palmer's tiquilia (*Tiquilia palmeri*).

4.4.2 Sonoran Creosote Bush Scrub/Active Sand Dunes

This community was observed above the active floodplain of the Whitewater River and is characterized by Sonoran Creosote Bush Scrub with barren areas consisting of actively moving sand and/or dune sand accumulations that are stabilized or partially stabilized with species in the Sonoran Creosote Bush Scrub community, along with a few scattered low annual herbs. The dominant plant species were creosote bush and white bur-sage.

4.4.3 Desert Dry Wash Scrub

This community was observed within the active floodplain of the Whitewater River and consists of scattered shrubs and annuals within the study area. The dominant plants within this community are desert twinbugs (*Dicoria canescens*) and fan-leaved tiquilia (*Tiquilia plicata*).

4.4.4 Freshwater Grassland (Wetland)

This community was observed within the OHWM associated with Drainage 1 within the study area. Several herbaceous/emergent species were observed growing within Drainage 1, including Mexican sprangletop (*Leptochloa fusca* ssp. *uninervia*), tall flatsedge (*Cyperus eragrostis*), Dallis grass (*Paspalum dilatatum*), horseweed (*Erigeron canadensis*), and prickly lettuce (*Lactuca serriola*).

4.4.5 Disturbed

This community was observed above the active floodplain along the western portion of the Whitewater River and includes the banks of Drainage 1. Disturbed areas typically lack natural topography because they are often in areas that have been manipulated by activities such as clearing

or grading, such that the disturbances discourage growth of native vegetation. The dominant species in these areas typically consist of ruderal species, which are often tolerant of frequent disturbances or soil compaction, and are typically nonnative or weedy in nature. Within the study area, the vegetation found within the disturbed areas consisted of redstem filaree (*Erodium cicutarium*), Bermuda grass (*Cynodon dactlyon*), Sahara mustard (*Brassica tournefortii*), and four-wing saltbush (*Atriplex canescens*).

4.4.6 Ornamental

There are a number of trees and shrubs within the study area that have been planted as ornamentals, such as Mexican fan palm (*Washingtonia robusta*), African sumac (*Searsia lancea*), common oleander (*Nerium oleander*), athel (*Tamarix aphylla*), and olive (*Olea europaea*). These ornamental plants are not associated with any particular native vegetation community. In addition, a row of honey mesquite (*Prosopis glandulosa* var. *torreyana*) has been planted as ornamentals within the northeastern quadrant of the study area.

4.4.7 Developed

Developed lands exist within the study area in the form of the active roadway associated with Vista Chino, the existing levee facilities associated with the Whitewater River, commercial development within the northwestern quadrant of the study area, graded pads and compacted dirt roadways apparently associated with the Escena development within the southwestern quadrant of the study area, residential housing along the eastern portion of the study area, and several named roadways.

4.5 Soils

NRCS has mapped the soil series listed below as occurring within the study area (Figure 6; Appendix A). The mapping is based on SSURGO database (USDA/NRCS 2012) research as well as geographic features, such as riverwash.

- Carsitas cobbly sand, 2 to 9 percent slopes
- Carsitas gravelly sand, 0 to 9 percent slopes
- Carsitas fine sand, 0 to 5 percent slopes

The main channel of the Whitewater River is composed primarily of Riverwash (included on the National List of Hydric Soils; USDA/NRCS 2011), which consists of recently deposited alluvium. Riverwash is prone to frequent flood and often carries recent sediment deposits and rocks from upstream. The banks and floodplain of the Whitewater River are composed of the Carsitas series (Figure 6).

4.5.1 Carsitas

The Carsitas series consists of excessively drained, moderately deep soils that formed in alluvium. This series is found on alluvial fans, moderately steep valley fills, and dissected remnants of alluvial fans at elevations of about 220 feet below mean sea level to 800 feet AMSL. The typical soil texture is gravelly sand or gravelly coarse sand (with rapid permeability). Carsitas soils have a moderate extent and are found in southeastern California and possibly Arizona, Nevada, and New Mexico.

Chapter 5
Jurisdictional Delineation Results

This chapter describes the delineated features and expected jurisdictional status within the study area. This report documents existing conditions within the study area. An impacts analysis is not included as a part of this report.

The information and results included herein document the investigation, best professional judgment, and conclusions of ICF. It is correct and complete to the best of our knowledge. However, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

Figures 8a and 8b depict the results of the jurisdictional delineation (Appendix A). Ordinary High Water Mark Datasheets are provided in Appendix B, Wetland Determination Data Forms are provided in Appendix C, study area photographs are provided in Appendix D, and a Preliminary Jurisdictional Determination Form is included in Appendix E.

5.1 Delineated Feature Descriptions

Three features were observed and documented within the JD study area (Figures 8a and 8b). All potential features within the study area were delineated with the understanding that a request for a Preliminary JD would be submitted for the project. As such, all features are considered USACE jurisdictional WoUS and subject to RWQCB/EPA jurisdiction. In addition, all features identified were determined to be subject to CDFW jurisdiction.

A single swale was observed within the northwestern quadrant of the study area (Figures 8a and 8b). No OHWM indicators, bed and bank feature, or riparian vegetation were observed in association with this swale.

5.1.1 Whitewater River

The Whitewater River at the existing Vista Chino crossing supports an ephemeral flow regime, consisting primarily of infrequent storm events and watershed runoff.

Within this area, the OHWM was identified by a change in vegetation species and cover, the presence of bed and bank, a change in average sediment texture, sediment sorting, the presence of drift and debris, benches, and a break in bank slope (OHWM-1; Appendix B). The OHWM ranged in width from 33 to 1,327 feet. One small area contained species with an indicator status of FAC, FACW, and OBL; however, this area did not meet the criteria for predominance of hydrophytic vegetation and is believed to be supported by a spring condition, as no wetland hydrology indicators were observed. This area did not meet the three-parameter definition of a jurisdictional wetland (SP-01; Appendix C).

USACE and RWQCB/EPA jurisdictional areas associated with the Whitewater River within the study area totaled approximately 21.70 acres (1,534 linear feet) of non-wetland WoUS/WoS. CDFW jurisdiction totaled approximately 42.31 acre (1,534 linear feet) of unvegetated streambed. No jurisdictional wetlands or CDFW riparian vegetation was observed within this portion of the study

area. The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with the Whitewater River is shown on Figures 8a and 8b.

5.1.2 Drainage 1

Drainage 1 is a small tributary channel to the mainline Whitewater River, located within the overall greater Whitewater River floodplain, as defined by the existing levee facilities. Drainage 1 enters the Whitewater River floodplain via a 78-inch diameter reinforced concrete pipe (RCP) culvert under Vista Chino, and appears to convey flows from the municipal stormdrain system.

Within this area, the OHWM was identified by a change in vegetation species and cover, the presence of bed and bank, the presence of drift and debris, and a break in bank slope (OHWM-2; Appendix B). The average OHWM for Drainage 1 measured 25 feet in width. In addition, portions of Drainage 1 met the three-parameter criteria for jurisdictional wetlands (SP-02; Appendix C). The wetlands consisted of emergent freshwater grassland and, for the purpose of this delineation, were extended to the greatest extent of vegetated areas within Drainage 1, as this area was located completely within the associated wetted perimeter and comprised a consistent species composition. Thus, it was assumed that the extent of the vegetated area within Drainage 1 meets the conditions of a three-parameter wetland.

USACE and RWQCB/EPA jurisdictional areas associated with the Whitewater River within the study area totaled approximately 0.14 acre (436 linear feet) of non-wetland WoUS/WoS and 0.13 acre (346 linear feet) of wetland WoUS/WoS.

For the purpose of this delineation, CDFW unvegetated streambed associated with Drainage 1 is represented within the area (acreage) reported for the Whitewater River, as this area is within the overall top-of-bank measurement for the Whitewater River, as defined by the existing levee facilities. Approximately 0.10 acre (346 linear feet) of CDFW herbaceous vegetated streambed (riparian) was observed within this portion of the study area.

The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with Drainage 1 is shown on Figures 8a and 8b.

5.1.3 Basin 1

Basin 1 is a constructed linear basin feature located south of Vista Chino and west of the Whitewater River. Basin 1 appears to have been constructed as a portion of the surrounding development associated with the Escena Golf Club.

Within this area, the OHWM was identified by a change in vegetation species and cover, the presence of bed and bank, and a break in bank slope (OHWM-3; Appendix B). The OHWM ranged in width from 42 to 94 feet. This area contained an existing geotextile fabric approximately 0.5 to 1 inch below the soil surface, which prevented digging below this depth. The basin bottom was vegetated with rabbitfoot grass (*Polypogon monspeliensis*), which appeared extremely stressed, as mature specimens were 3 inches or less in height and were dead at the time of the May 24, 2012, field visit. The remainder of the basin was vegetated with ruderal species, and the presence of a sprinkler system suggested that this area is, or was at one time, irrigated. This area did not meet the three-parameter definition of a jurisdictional wetland (SP-03; Appendix C) and, due to the stressed and ruderal nature of the vegetation, is not considered as CDFW riparian.

USACE and RWQCB/EPA jurisdictional areas associated with Basin 1 within the study area totaled approximately 0.28 acre (239 linear feet) of non-wetland WoUS/WoS. CDFW jurisdiction totaled approximately 0.43 acre (239 linear feet) of unvegetated streambed. No jurisdictional wetlands or CDFW riparian vegetation was observed within this portion of the study area. The extent of USACE, RWQCB/EPA, and CDFW jurisdiction associated with Basin 1 is shown on Figures 8a and 8b.

5.2 Delineation Results Summary

Within the entire project study area, three features potentially subject to the jurisdiction of the USACE, RWQCB/EPA, and CDFW were delineated. One feature, Drainage 1, met the three-parameter criteria for USACE jurisdictional wetlands at the time that this delineation was conducted. All USACE jurisdictional features are subject to RWQCB/EPA jurisdiction.

Within the entire project study area, three features subject to CDFW jurisdiction were delineated and one feature, Drainage 1, supported herbaceous wetland (riparian) habitat at the time that this delineation was conducted.

Table 5-1. Jurisdictional Delineation Summary

Feature	Non-Wetland WoUS/RWQCB/ EPA (acres)	Wetland WoUS/RWQCB/ EPA (acres)	WoUS/RWQCB/EPA Linear Feet	CDFW Streambed (acres)	CDFW Riparian (acres)	CDFW Linear Feet
Whitewater River	21.70	0.00	1,534	42.31	0.00	1,534
Drainage 1	0.14	0.13	436	0.00*	0.10	436
Basin 1	0.28	0.00	239	0.43	0.00	239
Total	**22.12**	**0.13**	**2,209**	**42.74**	**0.10**	**2,209**

*CDFW streambed acreage associated with Drainage 1 is included within that reported for the Whitewater River, as explained in Section 5.1.2, "Drainage 1," above.

5.3 List of Delineators and Report Preparers/ Reviewer

Lexi Kessans, Senior Regulatory Specialist—Delineator/Report Reviewer

Zackry West, Senior Regulatory Specialist/Biologist—Delineator/Report Preparer

Daniel Cardoza, Regulatory Specialist—Report Preparer

Jenna Kilfoyle—GIS Specialist

Chapter 6
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Appendix A

Jurisdictional Delineation Maps

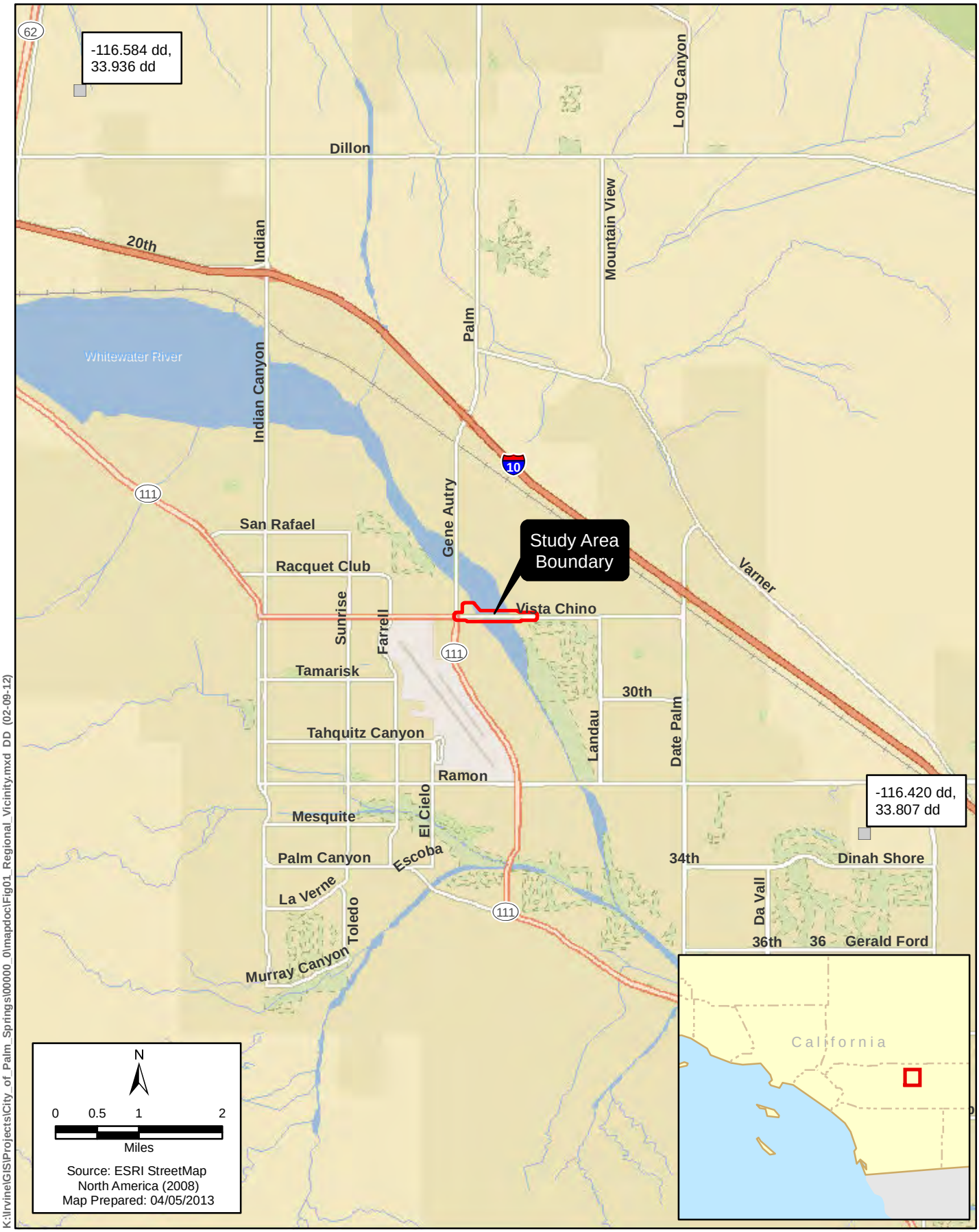

Figure 1
Regional Vicinity Map
Vista Chino Low Water Crossing Bridge Replacement

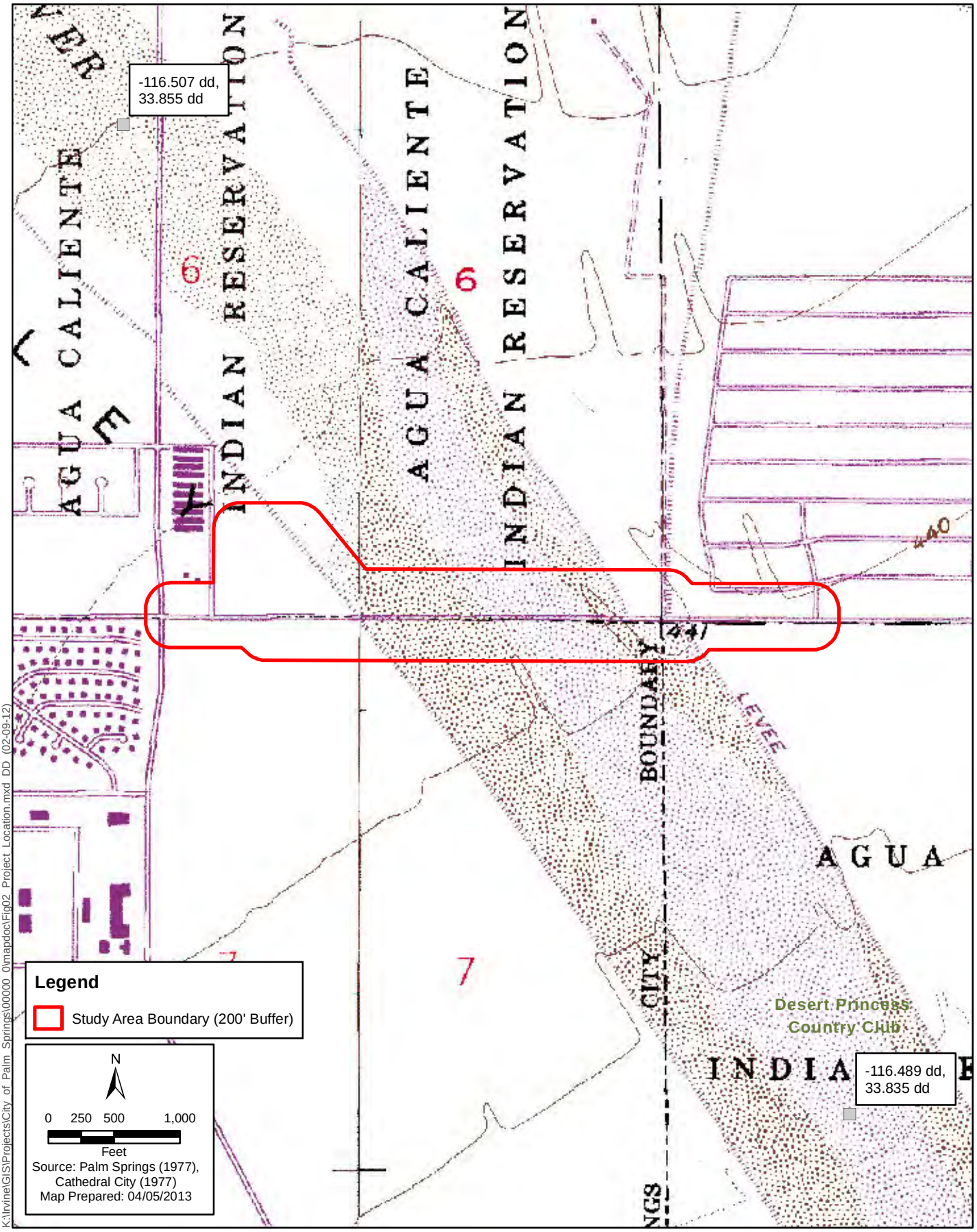

Figure 2
Project Location Map
Vista Chino Low Water Crossing Bridge Replacement

Figure 3
NHD Map
Vista Chino Low Water Crossing Bridge Replacement

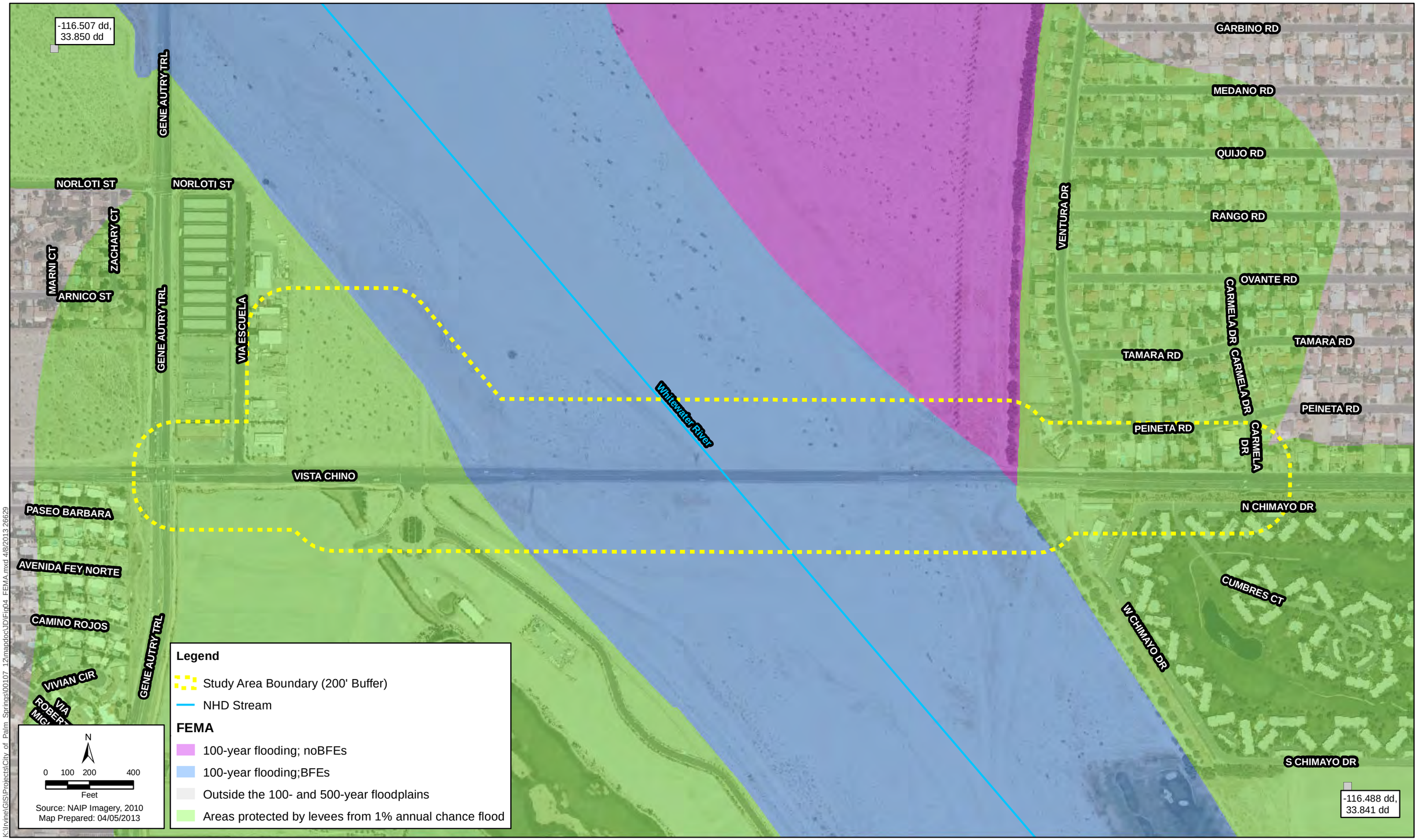

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Figure 4
FEMA 100-year Floodplain Map
Vista Chino Low Water Crossing Bridge Replacement

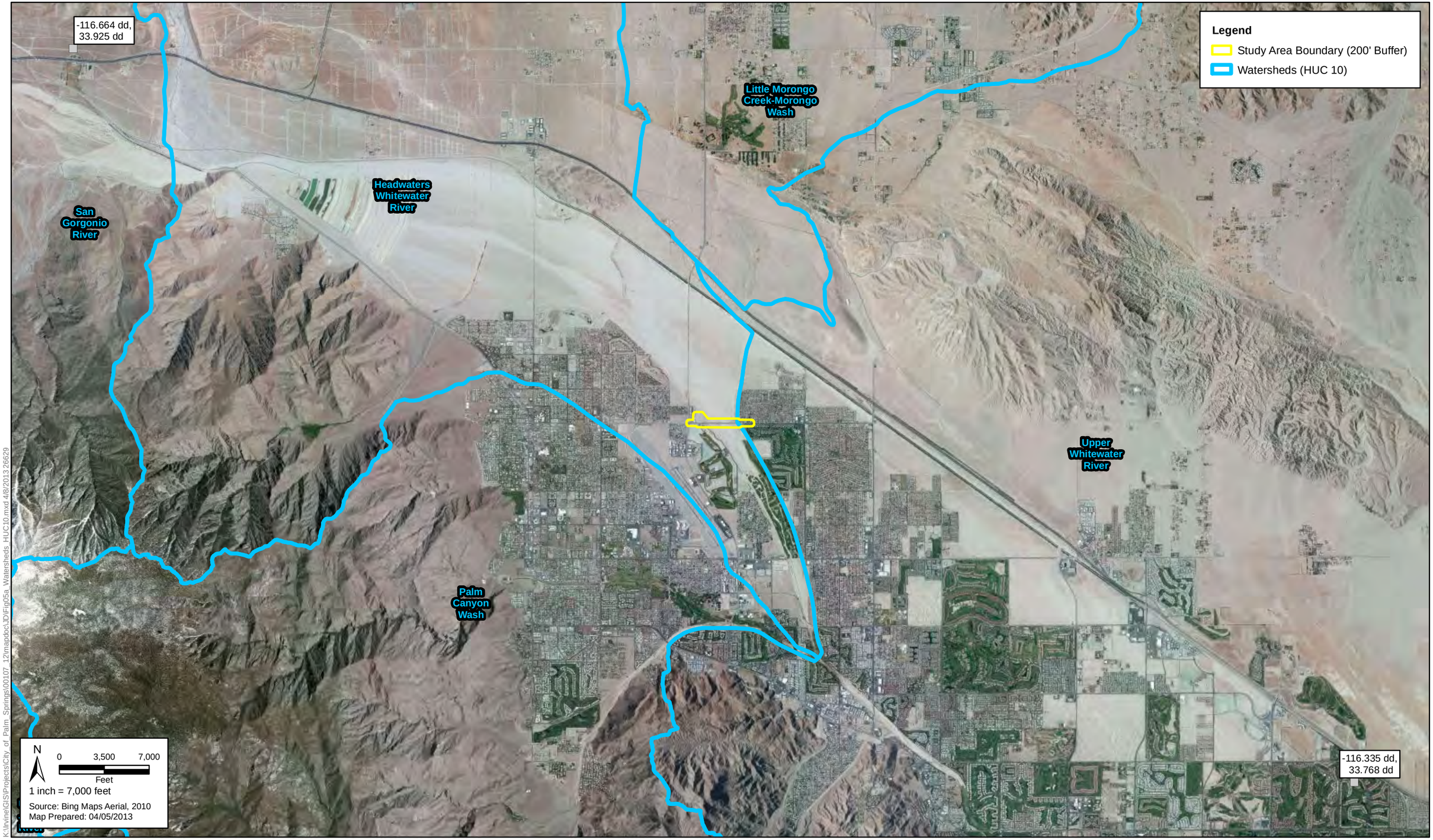

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Figure 5a
Watersheds - HUC 10
Vista Chino Low Water Crossing Bridge Replacement

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Figure 5b
Watersheds - HUC 8
Vista Chino Low Water Crossing Bridge Replacement

Figure 6
NRCS Soils Survey Map
Vista Chino Low Water Crossing Bridge Replacement

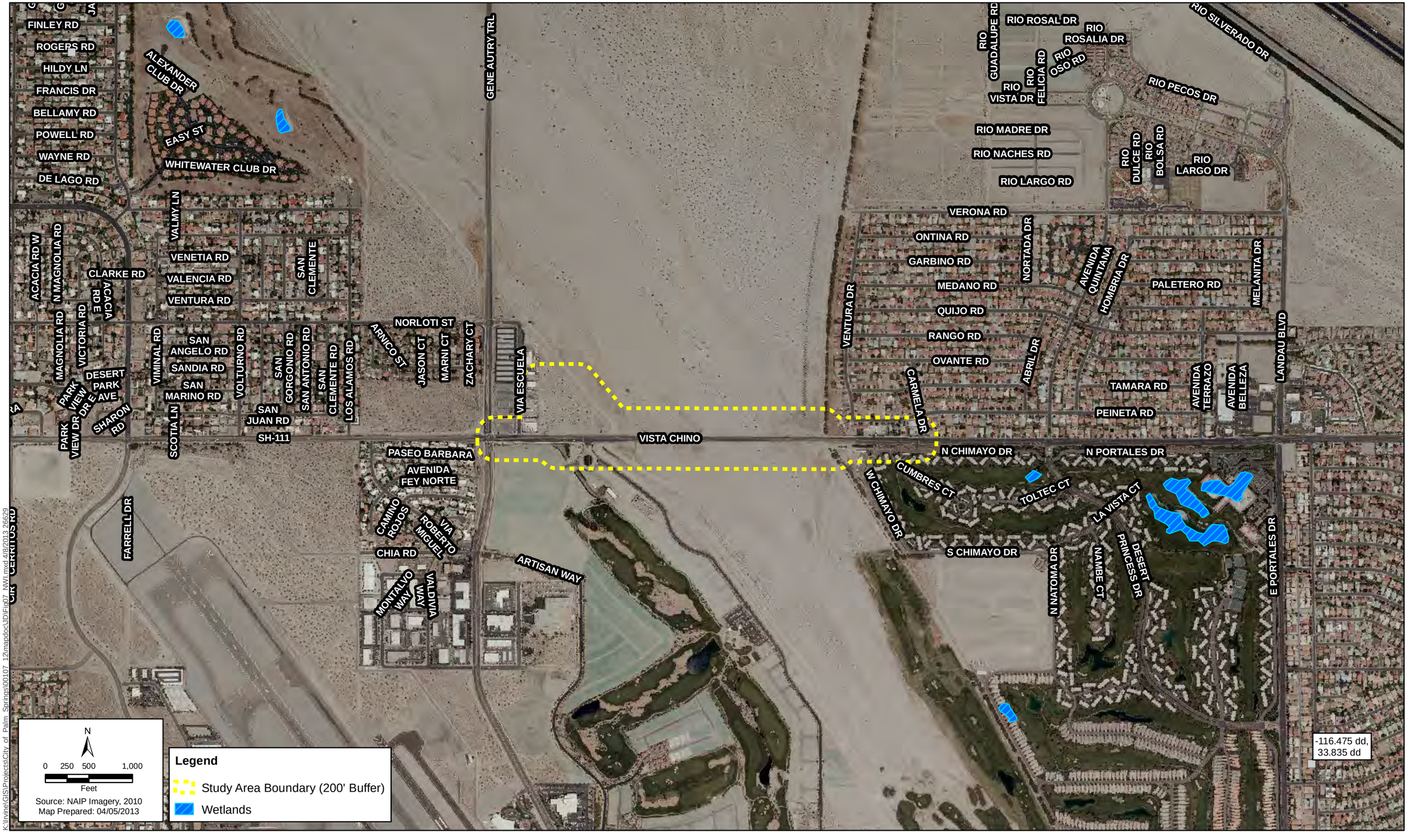

Figure 7
National Wetlands Inventory Map
Vista Chino Low Water Crossing Bridge Replacement

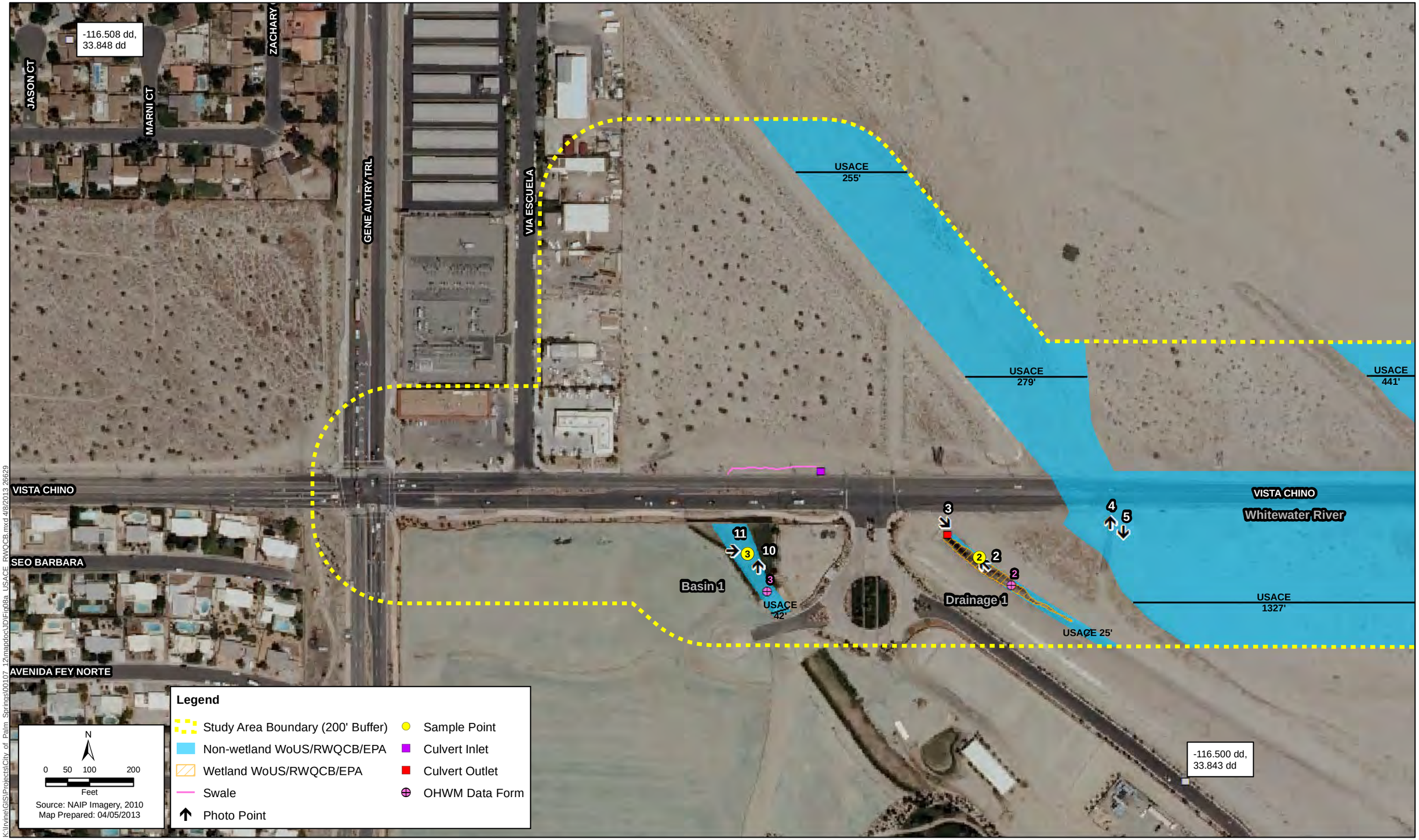

Figure 8a
USACE/RWQCB/EPA Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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Figure 8a
USACE/RWQCB/EPA Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

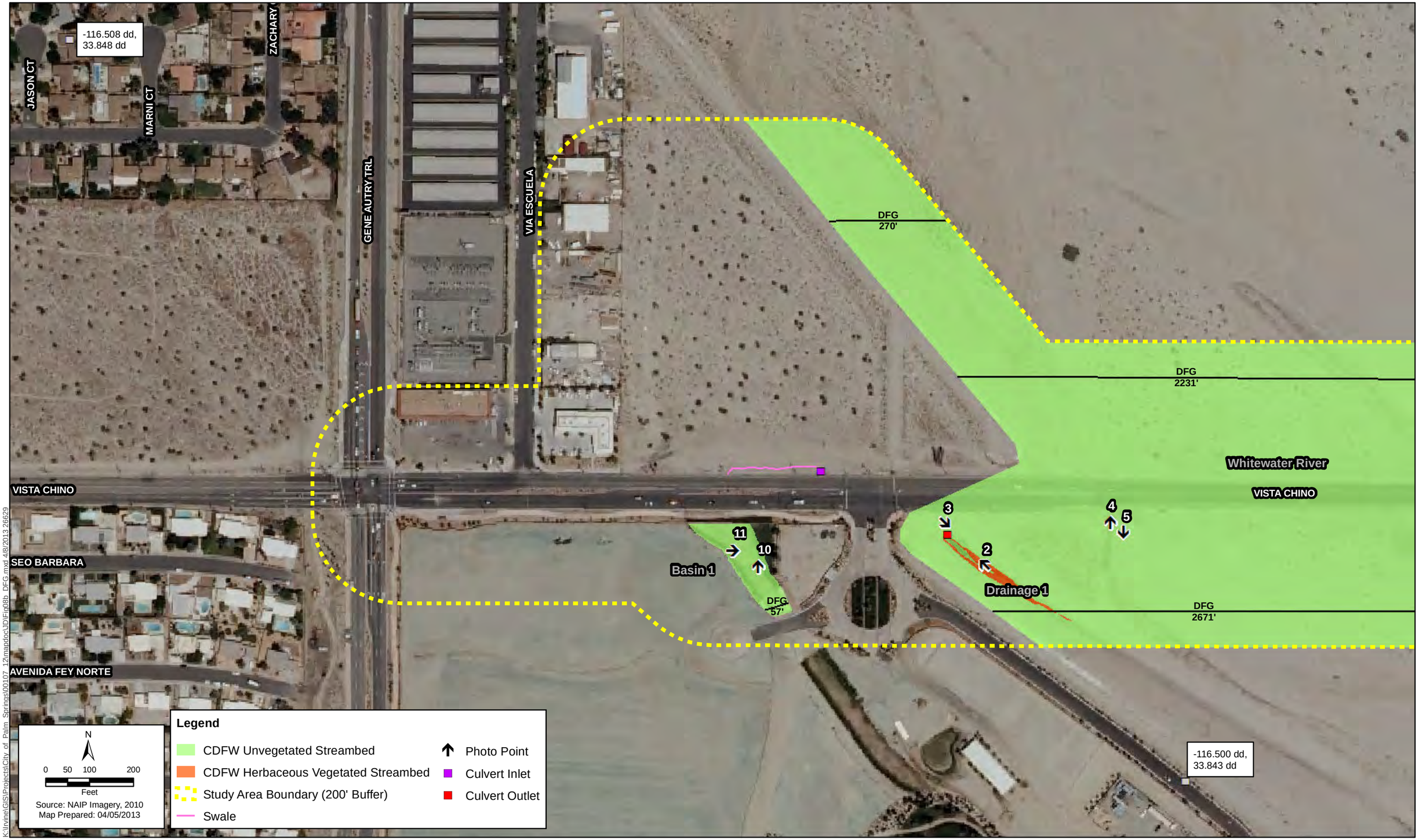

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Figure 8b
CDFW Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

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Figure 8b
CDFW Jurisdictional Delineation Results
Vista Chino Low Water Crossing Bridge Replacement

Appendix B

Ordinary High Water Mark Data Sheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vista Chino Bridge
Project Number:
Stream: Whitewater River
Investigator(s): L Kessens, Z West

Date: 5/24/12 **Time:** 11:20
Town: Palm Springs **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Downstream of Vista Chino

Projection: **Datum:**
Coordinates:

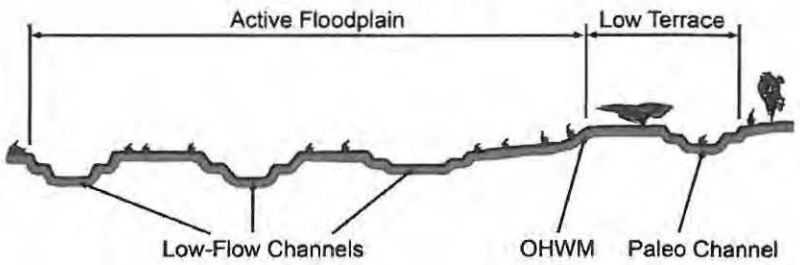
Potential anthropogenic influences on the channel system: The study area includes the at-grade crossing of Vista Chino across the Whitewater River, which appears to be causing headcutting immediately downstream of the crossing.

Brief site description: Ephemeral reach of the Whitewater River confined by existing levees.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2010
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☒ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

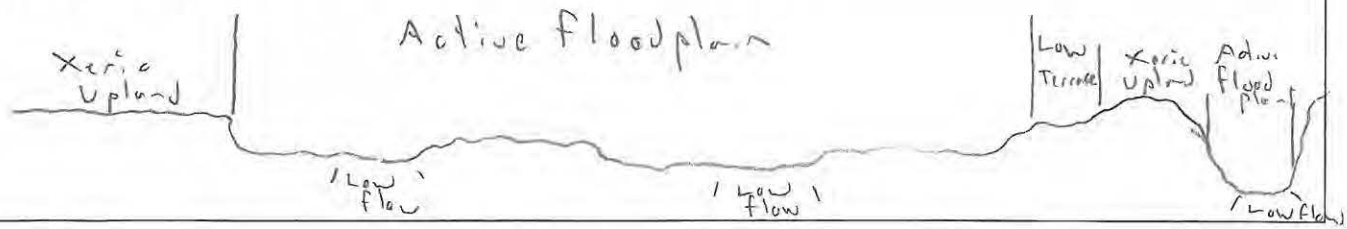


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: Vista Chan **Cross section ID:** OHWM-1 **Date:** 5/24/12 **Time:** 11:20

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☒ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☒ Other: Sediment sorting
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Course silt to medium sand

Total veg cover: 10 % Tree: ____ % Shrub: 3 % Herb: 7 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Sediment sorting
- ☒ Other: Destruction of terrestrial vegetation
- ☐ Other: _____

Comments:

Project ID: Vista Ch. **Cross section ID:** GHWM-1 **Date:** 5/24/12 **Time:** 11:20

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Coarse Sand

Total veg cover: 20 % Tree: ____ % Shrub: 15 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Sediment sorting
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Very fine - fine silt

Total veg cover: 25 % Tree: ____ % Shrub: 20 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vista Chino Bridge
Project Number:
Stream: OHWM-2
Investigator(s): L Kessans, Z West

Date: 5/24/12 **Time:** 12:35
Town: Palm Springs **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Western edge of Whitewater River floodplain

Projection: **Datum:**
Coordinates:

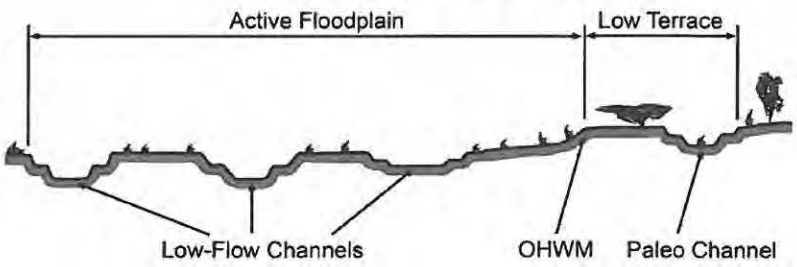
Potential anthropogenic influences on the channel system: Channel appears to convey flows from municipal storm drain system.

Brief site description: Channel tributary to mainline Whitewater River

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2010
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☒ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

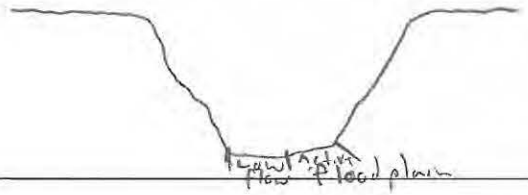


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☒ GPS
   - ☐ Digitized on computer
   - ☐ Other:

Project ID: Vista Chino **Cross section ID:** OHWM-2 **Date:** 5/24/12 **Time:** 12:35

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☒ Other: Presence of bed and bank
- ☒ Other: Presence of drift and debris

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Vegetated and inundated - unable to view sediment texture

Total veg cover: 90 % Tree: ____ % Shrub: ____ % Herb: 90 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Change in vegetation cover and species
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: Vista Chino **Cross section ID:** OHWM-2 **Date:** 5/24/12 **Time:** 12:35

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Vegetated - unable to view sediment texture

Total veg cover: 95 % Tree: ____% Shrub: ____% Herb: 95 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: change in vegetation cover and species
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Vista Chino bridge
Project Number:
Stream: OHWM-3
Investigator(s): L Kessoms, Z West

Date: 5/24/12 **Time:** 13:25
Town: Palm Springs **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: South of Vista Chino West of whitewater River, Levee

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system: The area appears to have been constructed. Geotextile fabric is located approximately 0.5 inch below soil surface Area appears to be irrigated.

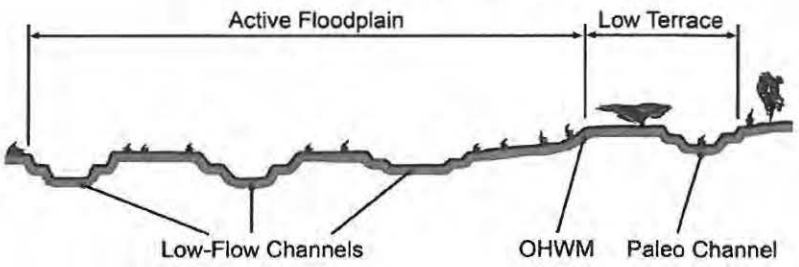
Brief site description: Constructed linear basin.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2010
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☒ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

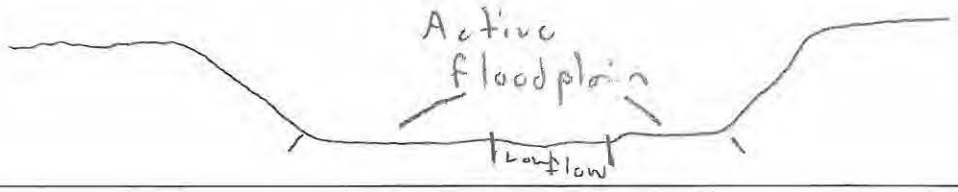


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: Vistaching **Cross section ID:** OHWM-3 **Date:** 5/24/12 **Time:** 13:25

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Destruction of terrestrial vegetation
- ☐ Other: _____
- ☐ Other: _____

Comments:

Project ID: Violin Run **Cross section ID:** OHWM-3 **Date:** 5/24/12 **Time:** 13:25

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Fine silt

Total veg cover: 30 % Tree: ____ % Shrub: ____ % Herb: 30 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☒ Mudcracks (very weak)
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Appendix C

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vista Chino Bridge City/County: Palm Springs/Riv. Co Sampling Date: 5/24/12

Applicant/Owner: City of Palm Springs State: CA Sampling Point: SP-1

Investigator(s): Z Unit, L Kessans Section, Township, Range:

Landform (hillslope, terrace, etc.): Dune formation Local relief (concave, convex, none): convex Slope (%): 0

Subregion (LRR): D Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (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 X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present? N/A	Yes ____ No ____	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30)			
1. Prosopis glandulosa	15	Y	NI
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 10)			
1. Baccharis salicifolia	2	Y	FAC
2. Baccharis emoryi	2	Y	FACW
3. Washingtonia robusta	2	Y	NI
4. Hymenoclea salsola	1	Y	NI
5.			
= Total Cover			
Herb Stratum (Plot size: ____)			
1. Bromus madritensis	30	Y	NI
2. Hordeum murinum	5	N	FACU
3. Conyza canadensis	1	N	FACU
4. Polypogon monspeliensis	7	N	FACW
5. Cynanchum tutle-albums	10	Y	NI
6. Scirpus sp.	5	N	OBL
7. Schismus barbatus	10	Y	NI
8.			
= Total Cover			
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
= Total Cover			

% Bare Ground in Herb Stratum 32 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	9	x 2 =	18
FAC species	2	x 3 =	6
FACU species	6	x 4 =	24
UPL species	68	x 5 =	340
Column Totals:	90 (A)		393 (B)

Prevalence Index = B/A = 4.36

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: SP-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]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[3]:

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

[3]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 X

Remarks:

Soil pit not conducted as other two indicators did not meet. Partially stabilized sand dune.

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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vista Chino Bridge City/County: Palm Springs/Riv Co Sampling Date: 5/24/12

Applicant/Owner: City of Palm Springs State: CA Sampling Point: SP-2

Investigator(s): Z. West, L. Lessons Section, Township, Range:

Landform (hillslope, terrace, etc.): storm drain channel/bottom/in-channel bar Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): D Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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 X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 5')			
1. Paspalum dilatatum	40	Y	FAC
2. Leptochloa uninerva	25	Y	FACW
3. Cyperus eragrostis	15	N	FACW
4. Conyza canadensis	2	N	FACU
5. Lactuca serriola	3	N	FACU
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 46	x 1 = 46
FACW species 40	x 2 = 80
FAC species ____	x 3 = ____
FACU species 5	x 4 = 20
UPL species ____	x 5 = ____
Column Totals: 85 (A)	____ (B)

Prevalence Index = B/A = 1.65

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: SP-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	2.5Y 3/1		7.5YR 3/4	2	CS	M	med sand	Redox extremely faint

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X 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[3]:

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

[3]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 X No ___

Remarks:

Hydric per hydrogen sulfide odor & Section 5 2 Arid West manual meets definition of vegetated sand & gravel bar

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)
- X 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)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- X 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 X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Vista Chino Basin City/County: Palm Springs / Riv Co. Sampling Date: 05/24/12

Applicant/Owner: City of Palm Springs State: CA Sampling Point: SP-3

Investigator(s): Z. West & L. Kessans Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Basin bottom Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): D Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Geotextile restrictive layer at depth of 1". Feature appears to be man made + maintained. Vegetation extremely small & stressed for species (polypogon monospeliensis) >2 sprinkler heads in basin near toe of slope & >2 sprinkler heads at top of bank

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5')			
1. Polypogon Monospeliensis	85	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 85	x 2 = 170
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
Polypogon Monospeliensis averages 3" at maturity. Restrictive layer appears to be creating enough artificial hydrology for long enough to allow extremely small & stressed polypogon to establish. Vegetation was dead & erect at time of survey.

SOIL

Sampling Point: SP-3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	25 Y 3/2	100	—	—	—	—	Loamy med. sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]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[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Geotextile

Depth (inches): 1"

Hydric Soil Present? Yes ____ No X

Remarks:

Restrictive layer prevented pit beyond 1".

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**)
- X 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 X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Faint surface cracks

Appendix D

Study Area Photographs

Photograph #	1
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing West
Comment	View of SP-01.

Photograph #	2
Photo Date	05/24/2012
Location	Drainage 1
Direction	Facing Northwest
Comment	View of SP-02.

Photograph #	3
Photo Date	05/24/2012
Location	Drainage 1
Direction	Facing Southeast
Comment	Overview of extent of wetland area located within Drainage 1.

Photograph #	4
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing North
Comment	View of low flow channel and active floodplain north of Vista Chino.

Photograph #	5
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing South
Comment	View of low flow channel and active floodplain south of Vista Chino.

Photograph #	6
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing North
Comment	View of low flow channel and active floodplain north of Vista Chino.

Photograph #	7
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing South
Comment	View of low flow channel and active floodplain south of Vista Chino.

Photograph #	8
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing Northwest
Comment	View of low flow channel and active floodplain north of Vista Chino.

Photograph #	9
Photo Date	05/24/2012
Location	Whitewater River
Direction	Facing Southeast
Comment	View of low flow channel and active floodplain south of Vista Chino.

Photograph #	10
Photo Date	05/24/2012
Location	Basin 1
Direction	Facing North
Comment	View of linear basin. Note the stressed ruderal nature of the *Polypogon monspeliensis* and ruderal vegetation.

Photograph #	11
Photo Date	05/24/2012
Location	Basin 1
Direction	Facing East
Comment	View of location of SP-03. Note that existing geotextile fabric located approximately 1 inch below soil surface prevented further digging.

Appendix E

Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

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

District Office: Los Angeles District | File/ORM #: | PJD Date:

State: CA | City/County: Palm Springs/Riverside County

Nearest Waterbody: Whitewater River

Location: TRS, LatLong or UTM: Upstream Limit 33.846657°N, -116.501716°W
Downstream Limit 33.843979°N, -116.496154°W

Name/ Address of Person Requesting PJD:
Savat Khamphou
City of Palm Springs
3200 East Tahquitz Canyon Way
Palm Springs, CA 92262

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

Non-Wetland Waters: 2,209 linear ft | 130 width | 22.12 acres | Stream Flow: Ephemeral

Wetlands: 0.13 acre(s) | Cowardin Class: Riverine

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

☐ Office (Desk) Determination
☐ Field Determination: | Date of Field Trip:

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

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☑ USGS NHD data.
  - ☑ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: Cathedral City, Palm Springs
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: http://soils.usda.gov/survey/geography/ssurgo/
- ☑ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html
- ☐ State/Local wetland inventory map(s):
- ☑ FEMA/FIRM maps: https://msc.fema.gov/webapp/wcs/stores/servlet/Fe
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): NAIP Imagery 2010
  ☑ Other (Name & Date): Site Photographs 5/24/12
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

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

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

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

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

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

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

Appendix A - Sites

District Office: Los Angeles District | File/ORM #: | PJD Date:

State: CA | City/County: Palm Springs/Riverside County | Person Requestinq PJD: Savat Khamphou

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
1	33.844912	-116.496756	Riverine	21.70	Non-Section 10 wetland
2	33.844165	-116.500609	Riverine	0.14	Non-Section 10 non-wetlanc
2	33.844584	-116.501349	Riverine	0.13	Non-Section 10 wetland
3	33.844538	-116.502941	Riverine	0.28	Non-Section 10 non-wetlanc
			Riverine		Non-Section 10 non-wetlanc
			Riverine		Non-Section 10 non-wetlanc

Notes:

Appendix E Plant Species Observed

Appendix E. Plant Species Observed

Scientific Name	Common Name	Special Status
GYMNOSPERMS		
Pinaceae - Pine family		
Pinus halepensis	Aleppo Pine	
EUDICOTS		
Anacardiaceae - Sumac Or Cashew family		
* *Searsia lancea*	African sumac	
Apocynaceae - Dogbane family		
Carissa macrocarpa	Natal Plum	
* *Nerium oleander*	Common oleander	
Asteraceae - Sunflower family		
Ambrosia dumosa	White bur-sage	
Ambrosia salsola var. salsola	Burrobrush	
Baccharis salicifolia ssp. salicifolia	Mule fat	
Bebbia juncea var. aspera	Sweetbush	
Dicoria canescens	Desert twinbugs	
Encelia actoni	Acton encelia	
Encelia frutescens	Button brittlebush	
Erigeron canadensis	Horseweed	
* *Lactuca serriola*	Prickly lettuce	
Palafoxia arida	Desert palafox	
Pseudognaphalium sp.	Cudweed	
* *Sonchus asper ssp. asper*	Prickly sow thistle	
Boraginaceae - Borage family		
Pectocarya linearis ssp. ferocula	Narrow-toothed pectocarya	
Phacelia sp.	Phacelia	
Tiquilia palmeri	Palmer's tiquilia	
Tiquilia plicata	Fan-leaved tiquilia	
Brassicaceae - Mustard family		
Brassica tournefortii	Sahara mustard	
Chenopodiaceae - Goosefoot family		
Atriplex canescens	Four-wing saltbush	
* *Chenopodium murale*	Nettleleaf goosefoot	
Cucurbitaceae - Gourd family		
Brandegea bigelovii	Desert starvine	
Euphorbiaceae - Spurge family		

Scientific Name	Common Name	Special Status
Chamaesyce sp.	Sandmat	
Croton californicus	California croton	
Fabaceae - Legume family		
Acmispon strigosus	Strigose bird's-foot trefoil	
Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	FE, CRPR 1B.2
* *Melilotus indicus*	Sourclover	
* *Parkinsonia aculeata*	Mexican palo verde	
Prosopis glandulosa var. torreyana	Honey mesquite	
Psorothamnus emoryi	Dyebush	
Psorothamnus schottii	Indigo-bush	
Geraniaceae - Geranium family		
* *Erodium cicutarium*	Redstem filaree	
Lamiaceae - Mint family		
Rosmarinus officinalis	Rosemary	
Nyctaginaceae - Four O'clock family		
Bougainvillea spectabilis	Bougainvillea	
Oleaceae - Olive family		
Fraxinus sp.	Ash	
* *Olea europaea*	Olive	
Onagraceae - Evening Primrose family		
Eulobus californicus	California suncup	
* *Oenothera laciniata*	Cutleaf evening primrose	
Oenothera sp.	Evening primrose	
Polemoniaceae - Phlox family		
Eriastrum sp.	Woollystar	
Solanaceae - Nightshade family		
Datura wrightii	Sacred thorn-apple	
Tamaricaceae - Tamarisk family		
* *Tamarix ramosissima*	Saltcedar	
Zygophyllaceae - Caltrop family		
Larrea tridentata	Creosote bush	
MONOCOTS		
Cyperaceae - Sedge family		
Cyperus eragrostis	Tall flatsedge	
Poaceae - Grass family		
* *Achnatherum hymenoides*	Indian ricegrass	
* *Bromus tectorum*	Cheat grass, downy chess	

Scientific Name	Common Name	Special Status
* *Cynodon dactylon*	Bermuda grass	
* *Hordeum murinum*	Wall barley	
Leptochloa fusca ssp. uninervia	Mexican sprangletop	
* *Panicum miliaceum ssp. miliaceum*	Broom corn millet	
* *Paspalum dilatatum*	Dallis grass	
* *Pennisetum setaceum*	Crimson fountain grass	
* *Polypogon monspeliensis*	Annual beard grass, rabbitfoot grass	
* *Schismus barbatus*	Common mediterranean grass	
Typhaceae - Cattail family		
Typha domingensis	Southern cattail	

Legend

*= Non-native or invasive species

Special Status:

Federal:
FE = Endangered
FT = Threatened

State:
SE = Endangered
ST =Threatened

CRPR – California Rare Plant Rank
1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

Threat Ranks
.1 - Seriously endangered in California
.2 – Fairly endangered in California

Appendix F Wildlife Species Detected

Appendix F. Wildlife Species Detected

Scientific Name	Common Name	Special Status
INVERTEBRATES		
Insects		
**Apis mellifera*	Honey Bee	
VERTEBRATES		
Reptiles		
Dipsosaurus dorsalis	Desert Iguana	
Callisaurus draconoides	Zebratail Lizard	
Uma inornata	Coachella Valley Fringe-toed Lizard	FT, SE
Aspidoscelis tigris	Western Whiptail	
Masticophis flagellum	Coachwhip	
Crotalus cerastes	Sidewinder Rattlesnake	
Birds		
Anas platyrhynchos	Mallard	
Ardea herodias	Great Blue Heron	
Accipiter cooperii	Cooper's Hawk	
Falco sparverius	American Kestrel	
Charadrius vociferus	Killdeer	
Numenius americanus	Long-billed Curlew	
Hydroprogne caspia	Caspian Tern	
**Columba livia*	Rock Pigeon	
Zenaida macroura	Mourning Dove	
Geococcyx californianus	Greater Roadrunner	
Athene cunicularia	Burrowing Owl	SSC
Archilochus alexandri	Black-chinned Hummingbird	
Calypte anna	Anna's Hummingbird	
Calypte costae	Costa's Hummingbird	
Sayornis nigricans	Black Phoebe	
Sayornis saya	Say's Phoebe	
Tyrannus verticalis	Western Kingbird	
Corvus corax	Common Raven	

Scientific Name	Common Name	Special Status
Auriparus flaviceps	Verdin	
Mimus polyglottos	Northern Mockingbird	
**Sturnus vulgaris*	European Starling	
Carpodacus mexicanus	House Finch	
**Passer domesticus*	House Sparrow	
Mammals		
Sylvilagus audubonii	Desert Cottontail	
Lepus californicus	Black-tailed Jackrabbit	
Spermophilus beecheyi	California Ground Squirrel	
Spermophilus tereticaudus chlorus	Coachella Valley Round-tailed Ground Squirrel	SSC
Canis latrans	Coyote	

Legend

*= Non-native or invasive species

Special Status:

Federal:
FE = Endangered
FT = Threatened

State:
SE = Endangered
ST =Threatened
SSC = California Species of Special Concern

Appendix G Measures

The following minimization and avoidance measures, as well as compensatory measures, are presented throughout this report. Unless otherwise noted, the measures shown are avoidance and/or minimization measures.

M-1 Regular Watering for Dust Control. Active construction areas will be watered regularly to control dust and minimize impacts on adjacent vegetation. Within land subject to the Tribal HCP, if at any time, significant amounts of dust or material are determined by the Tribe to be affecting conserved habitat, then corrective measures would be taken immediately. If dust control watering extends for a period of 12 months or more within land subject to the Tribal HCP, the monitoring biologist will report to the Tribe any observation that watering activities are encouraging encroachment by non-native species. The Tribe will determine appropriate corrective measures to be implemented as necessary to protect conserved habitat.

M-2 Firefighting Equipment and Preparation. Appropriate firefighting equipment (e.g., extinguishers, shovels, water truck) will be available on the project site during all phases of project construction to help minimize the chance of construction-related wildfires, along with personnel trained in the use of such equipment. Shields, protective mats, and/or other fire preventative methods will be used during grinding, welding, and other spark-inducing activities. Smoking will be prohibited within and adjacent to flammable vegetation.

M-3 Environmental Training for All Construction Personnel. An employee education program will be developed. A qualified biologist will conduct an environmental awareness training for all project personnel (including temporary, contractors, and subcontractors) prior to staging or grading activities. Any new project personnel that begin work after this initial training session shall receive the environmental awareness training within two weeks of working on the proposed project. Project personnel will be advised of the potential impact to the listed species and the potential penalties associated with take of such species. The training will include a description of the special-status species that would potentially occur, their ecology and sensitivity to human activities, the legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and the project measures that are being implemented to reduce the impacts to these species and promote continued successful occupation once construction is completed, and the access routes and project site boundaries within which the project activities must be accomplished. In addition, the education program will include color photographs of the listed species and will also be shown to all employees. Photographs will also be posted in the contractor and resident engineer office, where they will

remain through the duration of construction activities. The contractor, resident engineer, and USFWS-approved biological monitor will be responsible for ensuring all employees are aware of the listed species.

M-4 Presence of a Biological Monitor during Construction Activities. A biological monitor that has been approved by the USFWS and is permitted to handle CVFTL and collect CVMV seeds will be present during construction activities for the duration of the proposed project to ensure that all practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside of the project limits. Special attention will be provided to ensure that the Environmentally Sensitive Area (ESA) (in **M-5**, below) exclusion fencing is installed correctly and maintained daily (this includes repairing fencing and removing sand build up to exclude reptiles from entering the project area). Additionally, ongoing monitoring and reporting will occur for the duration of construction activities to ensure implementation of BMPs.

M-5 Installation of ESA Fencing. Construction limits will be demarcated using ESA exclusion fencing, which will be installed by construction personnel under supervision of a biological monitor that has been approved by the USFWS. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the project footprint and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to complete the proposed project and will be specified in the construction plans. The ESA exclusion fencing will be reviewed daily by the biological monitor this includes repairing fencing and removing sand build up to exclude reptiles from entering the project area (as indicated in **M-4**) until the completion of all construction activities, or at a regular interval as determined in coordination with USFWS and CDFW. Construction personnel will be instructed that their activities are restricted to construction areas. Within land subject to the Tribal HCP, if proposed project impacts encroach beyond the approved project footprint, designated staging areas, and routes of travel, such impacts will be compensated at a 5:1 ratio within one year of the unauthorized disturbance. Any restoration mandated by the Tribe for infringements outside of the approved project footprint will require a restoration plan, to be approved by the Tribe.

M-6 Removal of Exotic Plant Species. Any exotic species that are removed during construction will be properly handled to prevent sprouting or regrowth. In addition, plant species included on Cal-IPC's California Invasive Plant Inventory and in Table 3-2 (Prohibited Invasive Ornamental Plants) of the Tribal HCP will be prohibited from inclusion in proposed project plantings.

M-7 Clean Construction Equipment of Mud and Debris. Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. Cleaning of equipment will occur at least 300 feet from ESA fencing in a designated area.

M-8 Guidance on Removal and Disposal of Vegetation. Trucks carrying loads of vegetation that will be removed from the project site will be covered and disposed of in accordance with applicable laws and regulations.

M-9 Best Management Practices for Erosion Control and Water Pollution. Applicable BMPs will be implemented. These may include but are not limited to:

- Water pollution and erosion control plans will be developed and implemented in accordance with RWQCB requirements.
- Equipment storage, fueling, and staging areas will be located at sites with minimal risks of direct drainage into surface waters and to minimize impacts on Tribal HCP Covered Species and their habitat. Project-related spills of hazardous materials will be reported to appropriate entities, including but not limited to the City and/or RWQCB, and will be cleaned up immediately and contaminated soils removed to approved disposal areas.
- To reduce attraction of ravens and crows or other predatory wildlife, which may eat CVTFL, the construction area will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed raven-proof containers and promptly removed from the site(s).
- No pets of firearms will be permitted inside the construction boundaries or other associated work areas.
- Lands within the LOD that are not developed or need to remain above grade will be returned to natural topography.

M-10 Night Lighting. Within land subject to the Tribal HCP, lighting will be placed, shielded, and directed away from conserved habitat to avoid impacts on Covered Species (Tribal HCP Section 4.9.3.1).

M-11 Take Avoidance Burrowing Owl Survey. To determine if burrowing owl are occupying the project limits or adjacent areas prior to construction, a take avoidance survey following CDFW protocol (2012b) will be conducted no less than 14 days prior to initiating ground disturbance activities. In addition, any time lapses between project activities would trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance. The survey will be conducted from civil twilight to 10 a.m.

or two hours before sunset until evening civil twilight within areas providing suitable habitat for burrowing owl. The survey will include the proposed project limits and a 300-foot buffer if performed between February 15 and August 31 (nesting season) and a 100-foot buffer if conducted outside of the nesting season. If burrowing owls are present within 300 feet of project activities during the breeding season or within 100 feet of project activities outside of the nesting season, Measure **M-13** or **M-14** will be implemented, as applicable.

M-12 Avoidance of Burrowing Owl during the Nesting Season. If burrowing owl are found during pre-construction take avoidance surveys (**M-12**) during the nesting season, the burrowing owl will be fully avoided by establishing an appropriate buffer in coordination with CDFW (minimum of 300 feet), where feasible.

M-13 Passive Relocation of Burrowing Owl. If burrowing owls are found during pre-construction take avoidance surveys outside of the nesting season, passive relocation by a qualified ornithologist will be conducted once it has been confirmed that pairing activities have not begun. Passive relocation efforts will be conducted in coordination with the Tribe (if on land subject to the Tribal HCP) and CDFW (such as the use of one-way doors). If the burrowing owl is found to be paired and exhibiting potential nesting behavior, construction disturbance will not occur within 300 feet of the active burrow(s) until it is confirmed by the ornithologist that the pair is not nesting and that young are not present, or if present are independently foraging.

M-14 Preconstruction Nesting Bird Survey. Construction work will be initiated outside of the migratory bird breeding season (March 1 through August 31) and the CVFTL active season (approximately March through October), to the greatest extent feasible. If work cannot be conducted outside of the migratory bird nesting season, a preconstruction survey for migratory nesting birds will occur within three days prior to construction activities by an experienced ornithologist. The survey will occur within all suitable nesting habitat within the project impact area and a 300-foot buffer. If nesting birds are found, a minimum 50-foot avoidance area will be established around the nest until a qualified ornithologist has determined that young have fledged or nesting activities have ceased. The size of the avoidance area will be determined by a qualified biologist, and will range from 50 feet for non-special status species up 300 feet for raptors.

M-15 Preconstruction Bat Survey. To prevent impacts on daytime bat roosts and maternity roosts, a qualified biologist will be retained to conduct bat and bat roosting site surveys prior to commencement of mature tree removal activities. This pre-construction survey will be conducted at any mature tree proposed for removal and within 100 feet of the disturbance limits. If roosting

sites or bats are not found, a report confirming their absence will be sent to the CDFW, and no further mitigation will be required.

If the pre-construction survey finds bats to be roosting, and tree removal is scheduled to occur between October 1 and March 30 (outside of the maternity season of April 1 through September 30), the bats will be evicted by the following methods. Eviction of bats will be conducted using bat exclusion techniques, developed by Bat Conservation International (BCI) and in consultation with CDFW. These techniques allow the bats to exit the roosting site but prevent re-occupation of the site. Where applicable for tree roosts, the following two-step cutting process would occur: Surrounding branches that do not house bats at the time that the eviction would occur would be removed as step one. This would alter the condition of the roost tree, causing bats to abandon the roost. The tree can then be fully removed as step two. A visual inspection of the roost tree would be required prior to removal to verify that all bats have been successfully excluded. This work will be completed by a bat exclusion professional.

If the pre-construction survey finds bats to be roosting and tree removal is scheduled to occur during the maternity season (April 1 through September 30), a qualified biologist will monitor the roost to determine if the roost site is a maternal roost. This may be determined by either visual inspection of the roost for bat pups, if possible, or monitoring the roost after the adults leave for the night to listen for bat pups. If the roost is determined to not be a maternal roost, then the bats will be evicted as described above. If the roost is determined to be a maternal roost, eviction of a maternal roost cannot occur during the nursery season, as bat pups cannot leave the roost until they have reached maturity. In this case, a 250-foot-wide buffer zone (or an alternative width, as determined in consultation with CDFW) will be established around the roosting site, within which no construction-related impacts will occur until the bat pups are mature enough to permanently leave the roost.

M-16 Coachella Milk-vetch Seed Collection. Prior to construction activities, a biological monitor that has been approved by the USFWS, will collect CVMV seeds from within the proposed project's impact area. Seed collection will occur when the seed is past soft dough and prior to being naturally dispersed. The top four inches of soil surrounding the identified plants will be collected and placed in plastic bags. This seed and soil will be distributed immediately following collection to locations pre-determined by USFWS and Caltrans. As CVMV flowering times range from February to May, a reference population will be checked for seed set prior to seed collection.

M-17 Pre-construction Exclusion Survey. A pre-construction survey for CVFTL will be performed by a qualified biologist(s) that has been approved by the USFWS concurrently during

placement of the ESA exclusion fencing. The purpose of this survey is to find any special-status reptiles (e.g., CVFTL, FTHL) that may occur and relocate them outside the project area. The personnel conducting the survey must be authorized to handle the range of reptiles found such that the individual reptiles can be placed on the non-project side of the ESA exclusion fencing. As mentioned above, the ESA exclusionary fencing will be checked regularly by the biological monitor and maintained daily by construction personnel to ensure that the fence remains intact throughout construction. If there is a breech in the ESA fencing, the biological monitor will search for CVFTL and other reptiles that may have entered into the construction area and remove individuals onto the non-project side of the ESA exclusion fencing and repair the ESA exclusion fencing immediately so that individuals do not re-enter the construction area.

M-18 If a federal and/or state listed species is found within the BSA during any of the proposed pre-construction surveys that was not previously detected within the BSA, the USFWS and/or CDFW (as appropriate based on species) will be notified immediately and project-related construction activities will not begin within an appropriate buffer determined through coordination with these agencies, until appropriate measures have been determined.