APPENDIX E

BIOLOGICAL RESOURCES ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS, DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS, AND THE LA ENTRADA SPECIFIC PLAN IMPACT ANALYSIS TECHNICAL MEMORANDUM FOR THE DELINEATION OF JURISDICTIONAL WATERS

Biological Resources Assessment and CVMSHCP Consistency Analysis

BIOLOGICAL RESOURCES ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

LA ENTRADA SPECIFIC PLAN PROJECT

CITY OF COACHELLA

RIVERSIDE COUNTY, CALIFORNIA

LSA

June 26, 2013

BIOLOGICAL RESOURCES ASSESSMENT AND CVMSHCP CONSISTENCY ANALYSIS

LA ENTRADA SPECIFIC PLAN PROJECT

CITY OF COACHELLA

RIVERSIDE COUNTY, CALIFORNIA

Prepared for

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LSA

June 26, 2013

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

INTRODUCTION 2

METHODS 2
- Biological Resources Assessment 2
- Jurisdictional Delineation 4

RESULTS 4
- Existing Site Conditions 4
- Special-Interest Species 7
- Coachella Valley Multiple Species Habitat Conservation Plan 12
- Potential Jurisdiction Waters and Streambeds 13

IMPACTS AND RECOMMENDATIONS 14
- Special-Interest Plant Communities/California Desert Native Plants Act 14
- Threatened and Endangered Species 14
- Non-Listed Special-Interest Species 14
- Burrowing Owl and Migratory Birds 14
- Potential Jurisdiction Waters and Streambeds 15
- Habitat Fragmentation and Wildlife Movement 15
- Local Policies and Ordinances 16
- Habitat Conservation Plans 16

CUMULATIVE IMPACTS 16

REFERENCES 17

APPENDICES

A: LIST OF SPECIES OBSERVED
B: SPECIAL-INTEREST SPECIES SUMMARY

FIGURES

Figure 1: Regional and Project Location 3
Figure 2: Project Location with CVMSHCP Conservation Areas 5
Figure 3: Soils Map 6
Figure 4: Vegetation, Burrowing Owl Burrow Location, and Photograph Locations Map 8
Figure 5: Site Photographs 9

EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by City of Coachella to prepare a biological resources assessment and to conduct a Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Consistency Analysis for the proposed La Entrada Specific Plan, a comprehensive amendment to and expansion of the previously approved McNaughton Specific Plan, located in the City of Coachella (City), Riverside County (County), California.

The proposed project lies within the CVMSHCP planning area, but does not lie within a specific CVMSHCP Conservation Area. The proposed project will avoid direct and indirect impacts to a Conservation Area located adjacent to the proposed project site because there is no development proposed adjacent to the Conservation Area. This area of the Specific Plan designated as Open Space.

The proposed project site was determined to have potential habitat for two federally/State listed species; the federally listed as endangered Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*) (CVMV), and the federally/State listed as threatened desert tortoise (*Gopherus agassizii*). These are both covered species under the CVMSHCP. The CVMV, through project compliance with the CVMSHCP, does not require further study. While impacts to desert tortoise and its habitat will be covered through participation in the CVMSHCP, the U.S. Fish and Wildlife Service (USFWS) Permit Conditions for the CVMSHCP require that the USFWS be notified 45 days prior to the issuance of a grading permit to allow for the potential salvage of adult tortoises within this notification time period, or that desert tortoise clearance surveys are conducted per USFWS protocol.

In addition, 19 non-listed species are considered to have a high to low probability of occurrence. The project is not anticipated to have significant impacts to the 19 non-listed species, with exception of one species, the burrowing owl (*Athene cunicularia hypugaea*). A pre-construction survey for the burrowing owl is required to avoid potential project impacts to this species.

LSA recommends that removal of vegetation be conducted between September 1 and January 31 (outside the general bird nesting season) to avoid impacts to nesting birds that are protected by the California Fish and Game Code and the Migratory Bird Treaty Act of 1918 (MBTA). If vegetation removal must occur during the nesting season (February 1 through August 31), a pre-construction nesting bird survey by a qualified biologist is recommended prior to vegetation removal.

A jurisdictional delineation found a total of approximately 218.13 acres of California Department of Fish and Wildlife (CDFW) jurisdictional area. Of this total, approximately 10.0 acres are considered CDFW vegetated streambed. Of the 218.13 acres of CDFW jurisdictional area, an additional 6.58 acres of adjoining Desert Dry Wash Woodland would also be considered CDFW jurisdictional vegetation. The jurisdictional delineation made a preliminary determination that no United States Army Corps of Engineers (ACOE) jurisdictional waters are present. An ACOE Approved Determination will be required to verify the preliminary results of ACOE jurisdiction. If the ACOE concurs, then a permit would not be required but the Regional Water Quality Control Board (RWQCB) would likely require a Report of Waste Discharge under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and issue Waste Discharge Requirements. If the ACOE does assert jurisdiction, then an Individual Permit would likely be required and RWQCB regulation would be through Section 401.

INTRODUCTION

LSA has prepared this Biological Resources Assessment report and CVMSHCP consistency report for the proposed La Entrada Specific Plan, a comprehensive amendment to and expansion of the previously approved McNaughton Specific Plan, on behalf of City of Coachella. The proposed project site/study area is located along the western foothills of the Little San Bernardino Mountains on the eastern flank of the Coachella Valley, north of the Salton Sea. More specifically, the study area is located south of Interstate 10 (I-10) and primarily northeast of the Coachella Canal, a branch of the All-American Canal. However, two proposed access routes for the project extend across the Coachella Canal and align with Avenue 50 and Avenue 52 on the west side of the Canal.

The study area consists of approximately 2,200 gross acres, of which approximately 1,612 acres are currently in the City of Coachella and 588 acres are in an unincorporated area of Riverside County but within the City of Coachella's Sphere of Influence (SOI). The study area is depicted on the United States Geological Survey (USGS) *Thermal Canyon* and *Indio, California* 7.5-minute topographic quadrangles in Sections 35 and 36, Township 5 South, Range 8 East; Section 6, Township 6 South, Range 9 East; and Section 1, Township 6 South, Range 8 East (Figure 1).

The proposed project consists of expanding the previously approved 1989 McNaughton Specific Plan area by approximately 588 acres in the City of Coachella SOI, with the intent to develop the area for mixed usage, including residential dwelling units, a mixture of commercial, hotel/hospitality uses, golf course, and other recreational uses.

This report has been prepared for compliance with the California Environmental Quality Act (CEQA), the CVMSHCP, and the federal and State Endangered Species Acts (FESA and CESA, respectively).

METHODS

Biological Resources Assessment

A literature review was conducted to assist in determining the existence or potential occurrence of special-interest plant and animal species on the proposed project site and in the vicinity of the site. A records search of the CDFW Natural Diversity Data Base (NDDB) *Rarefind 3.1.0* (CDFW NDDB 2012), and the California Native Plant Society's (CNPS) *Online Inventory of Rare and Endangered Plants* (CNPS v7-12, August 10, 2012) for the *Thermal Canyon*, *Rockhouse Canyon*, *Cottonwood Basin*, *Indio*, and *Mecca, California,* USGS 7.5-minute quadrangles was conducted on September 13, 2012. Other documents reviewed include:

- Thomas Leslie Corporation (TLC). March 16, 2005. *Results of 2005 Plant and Wildlife Species Surveys Conducted Within a Study Area Located in the City of Coachella, Riverside County, along Avenues 50 and 52.*
- Michael Brandman Associates. November 16, 2006. Administrative Draft Environmental Impact Report for the Lomas Del Sol Specific Plan, Annexation and Development Agreement, City of Coachella, Riverside County, California. Prepared for the City of Coachella Community Development Department.

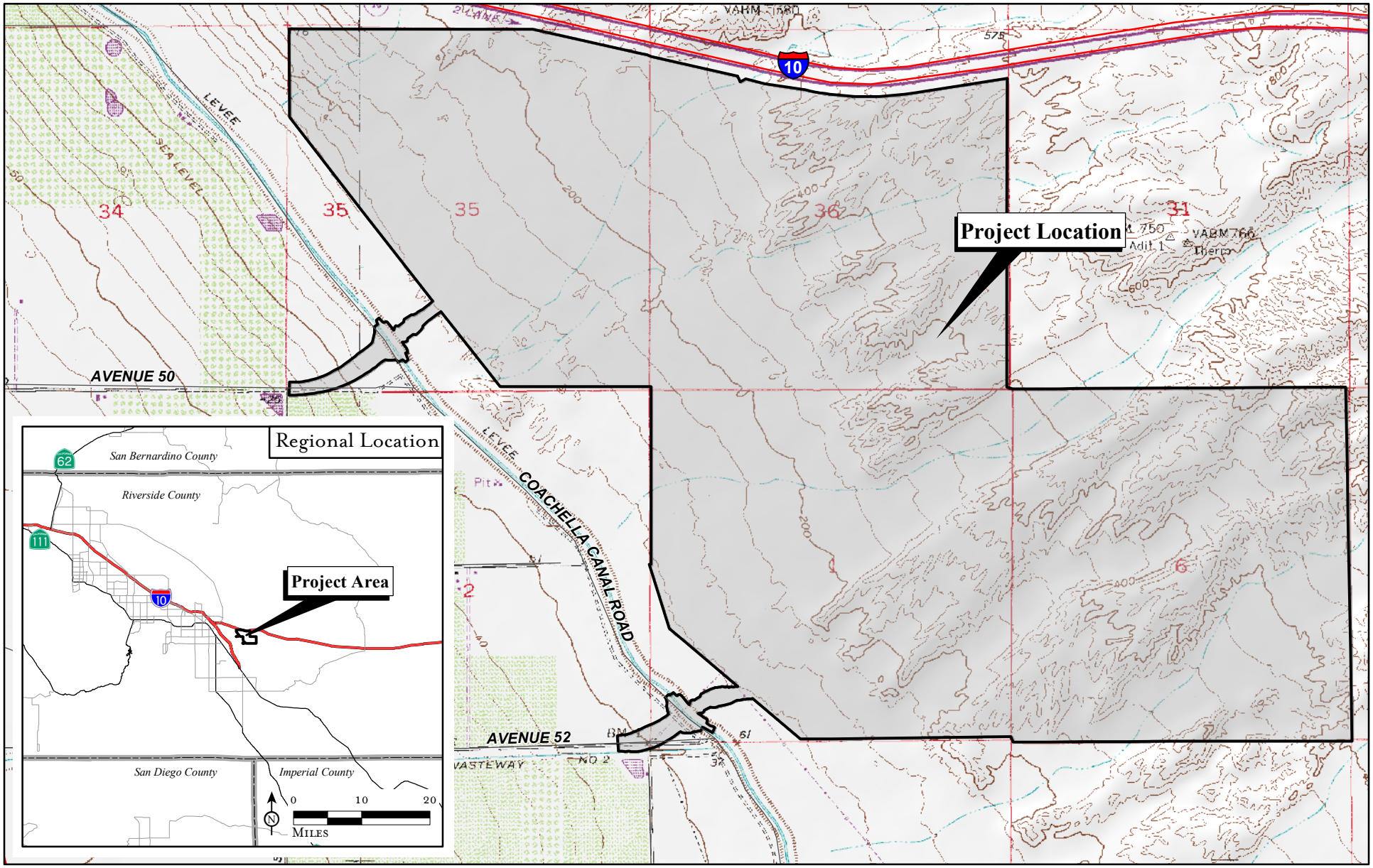

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FIGURE 1

La Entrada Specific Plan
Biological Resources Assessment
Regional and Project Location

SOURCE: USGS 7.5' Quads: Indio and Thermal Canyon (1972), CA; Riverside County, 2011.

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General reconnaissance-level field surveys were conducted on August 13 and 14 and September 5 and 6, 2012, and February 15, 2013, by LSA Biologists Jodi Ross, Denise Woodard, Maria Lum, Claudia Bauer, Tony Greco, and Stefan de Barros. Weather conditions on August 13 and 14 consisted of clear skies, with temperatures ranging from 85 to 114 degrees Fahrenheit, and winds ranging from 7 to 10 miles per hour from the west. Weather conditions on September 5 and 6 consisted of overcast skies, with temperatures ranging from 80 to 105 degrees Fahrenheit, 34 to 48 percent humidity, and winds ranging from 3 to 5 miles per hour from the northwest. Weather conditions on February 15, 2013, were clear with no breeze and a high of 75 degrees Fahrenheit. Notes were taken on general site conditions, and vegetation, and suitability of habitat for various special-interest elements. All plant and animal species observed or otherwise detected during this field survey were noted. A list of plants and animals observed is provided in Appendix A. Appendix B summarizes the special-interest plant and animal species potentially present on the proposed project site.

Jurisdictional Delineation

A jurisdictional delineation was prepared by RBF Consulting (April 2013). The fieldwork for this delineation was conducted on December 3, 2012, and January 9, 17, 22, and 31, 2013. A meeting to discuss field methods was also held on site with Jim Mace, Senior Project Manager, of the ACOE on October 3, 2012. The delineation documents the regulatory authority of the ACOE, RWQCB, and CDFW pursuant to the federal Clean Water Act (CWA), the Porter-Cologne Act, and the California Fish and Game Code.

RESULTS

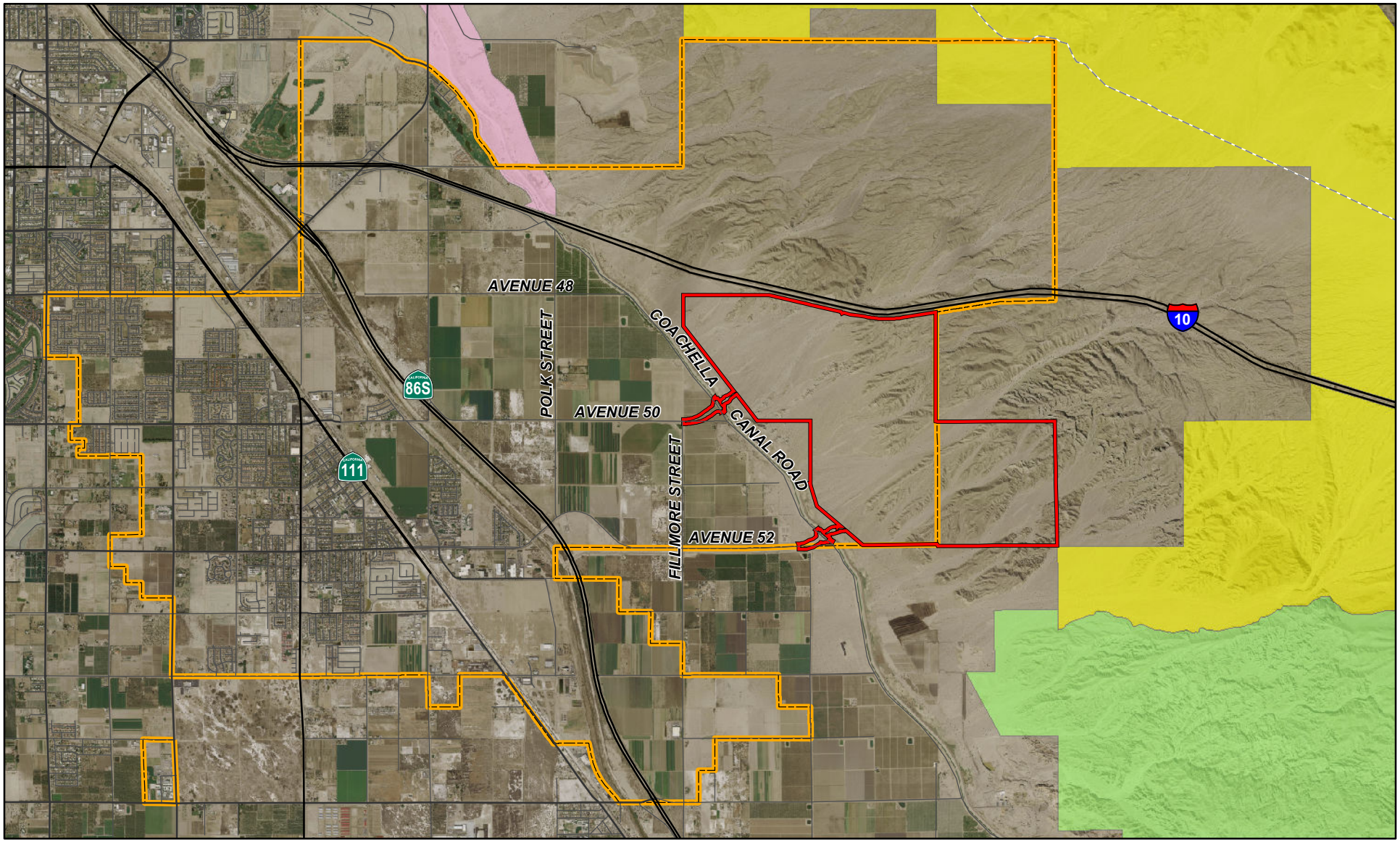
Existing Site Conditions

The study area is situated on private property in the County of Riverside, California. The project lies within the boundary of the CVMSHCP planning area, but is not within any specific CVMSHCP Conservation Area. However, it is in the immediate vicinity of three CVMSHCP Conservation Areas (Figure 2).

The site lies between the relatively flat-lying alluvial floor of the Coachella Valley to the west and bedrock highlands of the Little San Bernardino and Orocopia Mountains to the northeast, east, and southeast. The property includes several southwest-trending ridges of relatively low relief with intervening alluvial drainages that drain into a larger alluvial fan.

Topography and Soils. The site's elevation ranges from about 75 feet to about 775 feet above mean sea level. Surface drainage is generally directed toward the southwest. The soils on site, per the Soil Survey of Western Riverside Area and Coachella Valley Area California (Knecht 1980; NRCS) consist of the following soil types: Badland; Carsitas gravelly sand (0 to 9% slopes); Carsitas cobbly sand (2 to 9% slopes); and Chuckwalla very gravelly sandy clay loam (2 to 5% slopes). Figure 3 shows soil types within the proposed project limits.

Vegetation. The dominant plant communities within the study area are Sonoran creosote bush scrub, Desert Dry Wash Woodland, and Desert Saltbush Scrub (Holland 1986). The Sonoran creosote bush



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N

0 2,900 5,800

FEET

Project Boundary

Coachella City Limits

CVMSHCP Conservation Areas

Desert Tortoise and Linkage Conservation Area

East Indio Hills Conservation Area

Mecca Hills/Orocopia Mountains Conservation Area

SOURCE: AirPhotoUSA, 2008; Coachella Valley Association of Governments, 2004; Riverside County, 2011.

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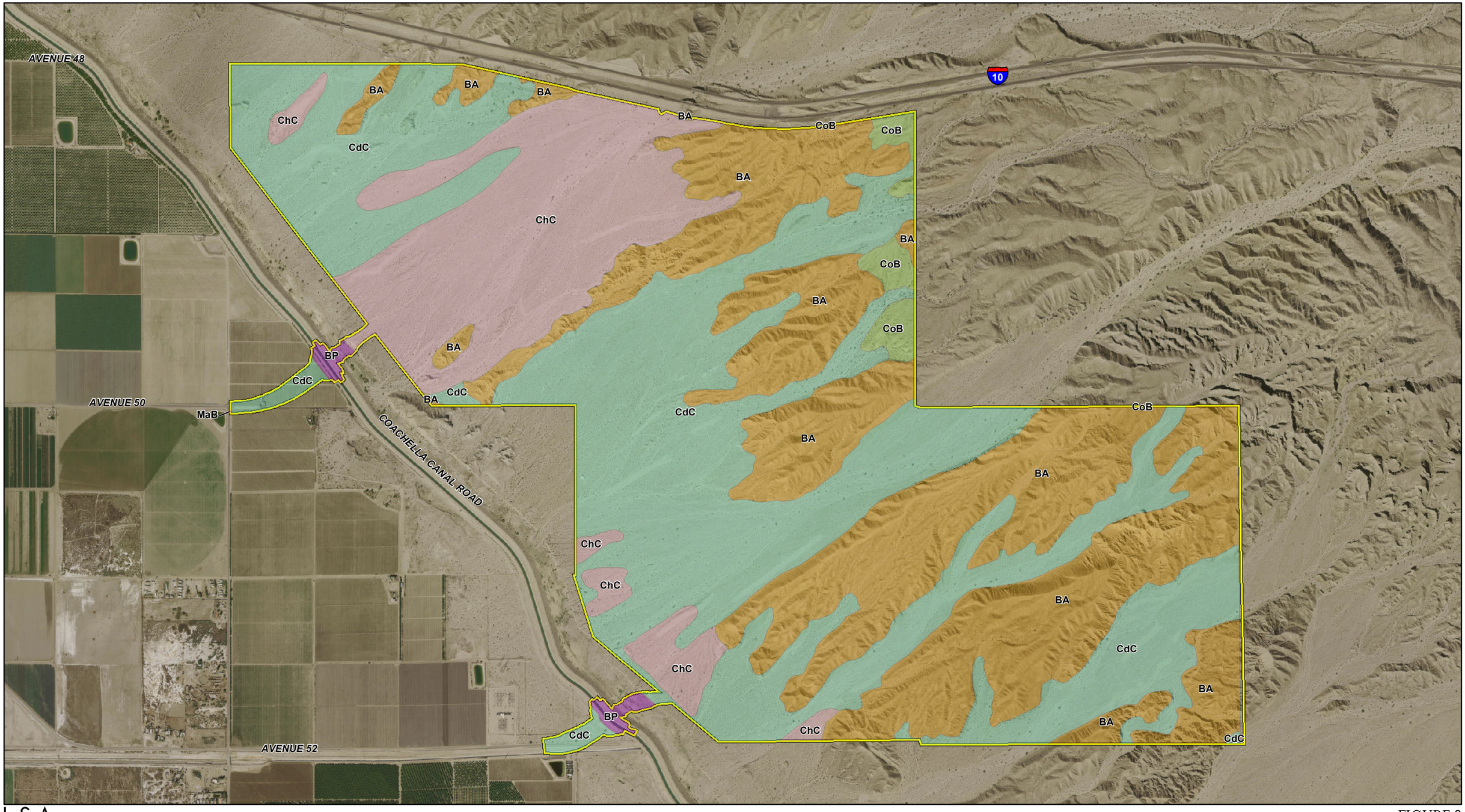
FIGURE 2

La Entrada Specific Plan
Biological Resources Assessment

Project Location with
CVMSHCP Conservation Areas



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0 700 1,400

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Project Boundary

Soil Types*

BA: Badland

CdC: Carsitas Gravelly Sand, 0-9% Slopes

ChC: Carsitas Cobbly Sand, 2-9% Slopes

CoB: Chuckawalla Very Gravelly Sandy Clay Loam, 2-5% Slopes

BP: Borrow Pits

MaB: Myoma Fine Sand, 0-5% Slopes

**No digital Soils data available for the southeastern edge of the site.*

SOURCE: AirPhotoUSA, 2008; Soil Data Mart, 2000.

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FIGURE 3

La Entrada Specific Plan
Biological Resources Assessment

Soil Types

scrub is dominated by creosote (*Larrea tridentate*), white bursage (*Ambrosia dumosa*), common burrobrush (*Ambrosia salsola*), and Schott's dalea (*Psorothamnus schottii*). Desert Dry Wash Woodland habitat is present in the upper reaches of the larger drainages within the study area. Dominant species identified within Desert Dry Wash Woodland habitat include blue palo verde (*Parkinsonia florida*) and smoke tree (*Dalea spinosa*). A small section of Desert Saltbush Scrub exists where the proposed Avenue 50 extension joins with the main project site, just east of the Coachella Canal. This plant community is dominated by saltbush (*Atriplex* sp.), tamarisk (*Tamarix ramosissima*), blue palo verde, Jimson weed (*Datura stramonium*), and common burrobrush. The same Desert Saltbush Scrub habitat also exists where the proposed Avenue 52 extension joins with the main project site, just east of the Coachella Canal. Additionally, areas of highly disturbed creosote bush scrub exist along the proposed access route on Avenue 52, west of the Coachella Canal. Agriculture fields exist west of the Coachella Canal along the proposed Avenue 50 access route. Figure 4 shows vegetation and photograph locations, and Figure 5 shows site photographs.

Wildlife. Common wildlife and/or its sign (e.g., scat, tracks, burrows) observed during the field survey included sidewinder (*Crotalus cerastes cerastes*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert horned lizard (*Phrynosoma platyrhinos calidiarum*), mainland cactus wren (C*ampylorhynchus brunneicapillus anthonyi*), Le Conte's thrasher (*Toxostoma lecontei*), mourning dove (*Zenaida macroura*), and kangaroo rat (*Dipodomys* sp.). A complete list of plant and animal species observed is provided in Appendix A.

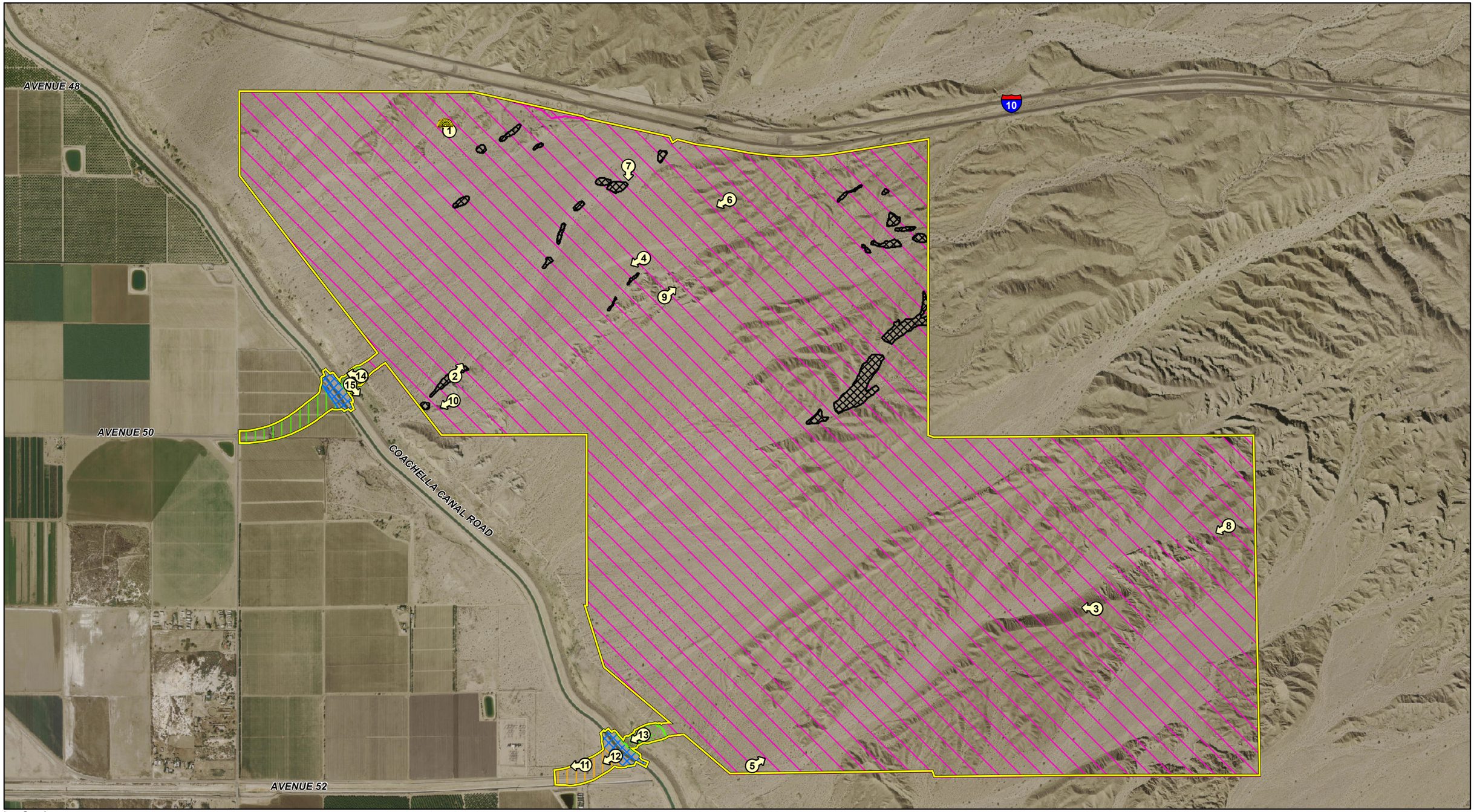
Special-Interest Species

This section discusses special-interest species observed or potentially occurring on the proposed project site. Legal protection for special-interest species varies widely, from the comprehensive protection extended to listed threatened/endangered species, to no legal interest at present. The CDFW, USFWS, local agencies, and special-interest groups such as the CNPS, publish watch lists of declining species. Species on watch lists can be included as part of the sensitive species assessment. Species that are candidates for state and/or federal listing and species on watch lists are included in the special-interest species list.

Inclusion of species described in the special-interest species analysis is based on the following criteria:

- Direct observation of the species or its sign in the study area or immediate vicinity during surveys conducted for this study or reported in previous biological studies;
- Sighting by other qualified observers;
- Record reported by the NDDB, published by CDFW;
- Presence or location of specific species lists provided by private groups (e.g., CNPS); and
- Study area lies within known distribution of a given species and contains appropriate habitat.

The literature review revealed 35 sensitive species with the potential to occur within the area of the proposed project site. Appendix B lists these species with a data summary for each and a determination as to the likelihood of the species occurring on the project site. The following addresses



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Project Boundary

Vegetation Types

Agriculture

Desert Dry Wash Woodland

Desert Salt Bush Scrub

Developed/Disturbed

Disturbed Creosote Bush Scrub

Sonoran Creosote Bush Scrub

Photo Location

Burrowing Owl Burrow Location

SOURCE: AirPhotoUSA, 2008; Coachella Valley Associations of Goverments, 2006; LSA Surveys, 2012 & 2013.

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FIGURE 4

La Entrada Specific Plan
Biological Resources Assessment

Vegetation, Burrowing Owl Burrow Location and Photograph Locations

PHOTOGRAPH 1: *View of small to medium sized mammal burrow with the potential to be used by a burrowing owl.*

PHOTOGRAPH 2: *View facing northeast, showing erosional features left by recent rains.*

PHOTOGRAPH 3: *View facing west, showing a large alluvial wash vegetated by Sonoran creosote bush scrub vegetation.*

PHOTOGRAPH 4: *View facing southwest, showing Sonoran creosote bush scrub vegetation.*

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FIGURE 5A

La Entrada Specific Plan
Biological Resources Assessment

Site Photographs

threatened/endangered species and other special-interest species identified as potentially present on the proposed project site.

Threatened/Endangered Species. Five federally/State listed species were identified as potentially present (Appendix B) in the project vicinity and include the following:

- Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*); federally listed endangered; CVMSHCP covered species.
- Desert tortoise (*Gopherus agassizii*); federally listed threatened and State listed threatened; CVMSHCP covered species.
- Coachella Valley fringe-toed lizard (*Uma inornata*); federally listed threatened and State listed endangered; CVMSHCP covered species.
- Desert pupfish (*Cyprinodon macularius*); federally/State listed endangered; CVMSHCP covered species.
- Yuma clapper rail (*Rallus longirostris yumanensis*); federally listed endangered and State listed threatened; CVMSHCP covered species.

Habitat on the proposed project site is considered unsuitable for Coachella Valley fringe-toed lizard, desert pupfish, and Yuma clapper rail. Habitat on site is considered to be marginally suitable for Coachella Valley milkvetch and moderately suitable for the desert tortoise.

The proposed project is not within federally designated critical habitat for any of the federally/State listed species discussed above.

Non-Listed Special-Interest Species. Of the 30 other non-listed special-interest species identified and discussed in Appendix B, 11 are considered absent based on lack of suitable habitat or because the proposed project site is outside the known range of the species; one species, LeConte's thrasher, was found to be present; three are considered to have a high potential of occurrence; six are considered to have a moderate probability of occurrence; and nine are considered to have a low probability of occurrence.

Eight of the nonlisted special-interest species identified as present or having a potential for occurrence are CVMSHCP Covered Species. Covered species are species for which take authorization has been issued from the USFWS under Endangered Species Act Section 10(a)(1)(B) and CDFW under the California Fish and Game Code Sections 2800–2835. These species include the following:

1. Mecca aster (*Xylorhiza cognate*)
2. Flat-tailed horned lizard (*Phrynosoma mcalli*)
3. Burrowing owl
4. Crissal thrasher (*Toxostoma crissale*)
5. Le Conte's thrasher

6. Southern yellow bat (*Lasiurus xanthinus*)
7. Palm Springs pocket mouse (*Perognathus longimembris bangsi*)
8. Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudis chlorus*)

The project site contains potential habitat for the burrowing owl. Burrowing owls nest on the ground in abandoned burrows of ground squirrels or other animals; in pipes, rock, and debris piles; and in other similar features. Burrowing owl sign, in the form of a burrow with whitewash from a previous season, was found on site. Burrowing owls and their sign were also observed in and adjacent to the proposed project area in a previous survey.

The following 11 species, including 5 plant species and 6 mammal species, have potential for occurrence but are not covered species by the CVMSHCP:

1. Gravel milk-vetch (*Astragalus sabulonum*)
2. Glandular ditaxis (*Ditaxis claryana*)
3. Coves' cassia (*Senna covessii*)
4. Palmer's jackass clover (*Wislizenia refracta* ssp. *palmeri*)
5. Jackass clover (*Wislizenia refracta* ssp. *refracta*)
6. Pallid bat (*Antrozous pallidus*)
7. Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*)
8. Spotted bat (*Euderma maculatum*)
9. Western mastiff bat (*Eumops perotis*)
10. Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
11. American badger (*Taxidea taxus*)

The five plant species identified above have a California Rare Plant Rank of 2, which means they are considered by CNPS to be rare, threatened, or endangered in California but are more common elsewhere. The six mammals, are California Species of Special Concern, which refers to animals with vulnerable or seriously declining populations. The project site provides potential foraging habitat for the bat species but provides low quality habitat for the American badger and San Diego pocket mouse. None of these species were identified during the August and September 2012 field surveys or the February 2013 field survey. In addition, these species were not found in previous studies conducted on the project site.

Burrowing Owl and Migratory Birds. The burrowing owl and other nesting bird species (e.g., Le Conte's thrasher) are protected by California Fish and Game Code Sections 3503, 3503.5, and 3800, and by the international MBTA (16 United States Code [USC] 703-711). These laws make it unlawful to take, possess, or needlessly destroy the nest or eggs of any migratory bird or bird of prey.

Burrowing owl sign, in the form of a burrow with whitewash from a previous season, was found on site. Burrowing owls and their sign were also observed in and adjacent to the proposed project area in a previous survey conducted during breeding season (Thomas Leslie Corporation, March 2005).

Coachella Valley Multiple Species Habitat Conservation Plan

The CVMSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in the Coachella Valley region of Riverside County. The overall goal of the CVMSHCP is to maintain and enhance biological diversity and ecosystem processes within the region while allowing for future economic growth. The CVMSHCP covers 27 sensitive plant and wildlife species ("covered species") as well as 27 natural communities. Covered species include both listed and non-listed species that are adequately conserved by the CVMSHCP. The overall provisions for the plan are subdivided according to specific resource conservation goals that have been organized according to geographic areas defined as Conservation Areas. These areas are identified as Core, Essential, or Other Conserved Habitat for sensitive plant, invertebrate, amphibian, reptile, bird, and mammal species, Essential Ecological Process Areas, and Biological Corridors and Linkages. Each Conservation Area has specific Conservation Objectives that must be satisfied.

The CVMSHCP received final approval on October 1, 2008. The approval of the CVMSHCP and execution of the Implementing Agreement (IA) allows signatories of the IA to issue take authorizations for all species covered by the CVMSHCP, including State and federally listed species as well as other identified covered species and/or their habitats. The City of Coachella is a signatory to the IA. Each participating city or local jurisdiction within the Coachella Valley will impose a development mitigation fee for new development projects within its jurisdiction. With payment of the mitigation fee and compliance with the requirements of the CVMSHCP, full mitigation in compliance with CEQA, the National Environmental Policy Act (NEPA), CESA, and FESA will be granted.

As stated previously, the proposed project lies within the planning boundary of the CVMSHCP area, but is not a part of any specific CVMSHCP Conservation Area. However, the study area is in the vicinity of three such CVMSHCP conservation areas: the Desert Tortoise & Linkage Conservation Area to the north and east of the site; the Mecca Hills/Orocopia Mountains Conservation Area to the southeast of the site; and the East Indio Hills Conservation Area to the northwest of the site. The Mecca Hill/Orocopia Mountains Conservation Area and East Indio Hills Conservation Area are approximately 1 mile from the proposed project. The southeast corner of the project site abuts the Desert Tortoise and Linkage Conservation Area. Previously referenced Figure 2 shows these conservation areas. The proposed project will avoid direct and indirect effects to the Desert Tortoise and Linkage Conservation Area.

The purpose of CVMSHCP Land Use Adjacency Guidelines is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. In this context, "adjacent" means to share a common boundary with any parcel in a designated Conservation Area. Indirect effects include noise, lighting, drainage, intrusion of people, and the introduction of nonnative plants and nonnative predators such as dogs and cats. The southeast corner of the project site abuts the Desert Tortoise and Linkage Conservation Area. However, the proposed project includes open space uses in areas of the project site near this conservation area. Therefore, because this area is proposed as open space and

would not include development adjacent to a designated conservation area, the Land Use Adjacency Guidelines would not be applicable to the proposed project.

Potential Jurisdiction Waters and Streambeds

The ACOE, under Section 404 of the federal CWA, regulates discharges of dredged or fill material into "waters of the United States." These waters include wetlands and non-wetland bodies of water that meet specific criteria, including some dry ephemeral drainages. The ACOE regulates non-wetland waters of the U.S. based on the existence of an "ordinary high water mark" (OHWM). In order to be considered a "jurisdictional wetland" under Section 404, an area must possess hydrophytic vegetation, hydric soils, and wetland hydrology. The CDFW, under Sections 1600 et seq. of the California Fish and Game Code, regulates alterations to lakes, rivers, and streams. A stream is defined by the presence of a channel bed and banks and at least an occasional flow of water. The RWQCB is responsible for the administration of Section 401 of the CWA, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the U.S. The RWQCB may also regulate discharges to "waters of the State," including wetlands, under the California Porter-Cologne Water Quality Control Act.

The project area is situated on an alluvial fan at the base of the Little San Bernardino Mountains in the eastern Coachella Valley. The topography is predominantly an alluvial fan system consisting of braided channels, individual drainage channels, and erosional features. Such features found within the project site are potentially subject to jurisdiction by the ACOE, CDFW, and RWQCB. According to the jurisdictional delineation (RBF Consultants, April 2013), "the active channels delineated throughout the project site consisted of deep alluvial sediment which was comprised mainly of sand and gravel deposits. The active channels mapped during this delineation exhibited clear evidence of significant hydrology such as sediment deposition, shelving, and the destruction of vegetation. The active channels also exhibited large accumulations of drift deposits on the upstream side of the channel, which consisted of both woody debris and rocks of various sizes lodged within channel vegetation. The active channels inventoried during the course of the fieldwork were comprised of single and/or compound channel forms and the above noted observation methods were used to identify their limits."

The jurisdictional delineation found a total of approximately 218.13 acres of CDFW jurisdiction. Of this total, approximately 10.0 acres would be considered CDFW vegetated streambed. Of the 218.13 acres of CDFW jurisdictional area, an additional 6.58 acres of adjoining Desert Dry Wash Woodland would also be considered CDFW jurisdictional vegetation. The delineation also found 211.55 acres within the jurisdiction of the RWQCB. The jurisdictional delineation made a preliminary determination that no ACOE jurisdictional waters are present. The jurisdictional delineation states that "evidence of an OHWM was noted within the boundaries of the project site [and] included the following indicators: a clear, natural line impressed on the bank; changes in the character of soil; shelving; vegetation matted down, bent, or absent; sediment deposition; presence of wrack line; and scour. However, based on the detailed analysis of on-site hydrologic conditions, it was preliminarily determined that the relevant reaches have an insubstantial or speculative effect on the chemical, physical or biological significant nexus to the downstream RPW (Whitewater River); and, therefore to the TNW (Salton Sea). No ACOE jurisdictional wetlands are located onsite."

IMPACTS AND RECOMMENDATIONS

Following is a discussion of impacts and recommendations for avoidance, minimization and mitigation measures per applicable local, State, and federal policy.

Special-Interest Plant Communities/California Desert Native Plants Act

No special-interest plant communities were found to be present on the proposed project site. Thus, there will be no impacts related to special-interest plant communities.

Threatened and Endangered Species

Marginally suitable habitat is present on the proposed project site for the Coachella Valley milkvetch, while moderately good habitat exists for the desert tortoise. Both of these species are covered by the CVMSHCP. Any potential effects to the Coachella Valley milkvetch will be covered through compliance with the CVMSHCP.

Desert tortoise habitat is present on site. While impacts to desert tortoise and habitat will be covered through participation in the CVMSHCP, the USFWS Permit Conditions for the CVMSHCP require that the USFWS be notified 45 days prior to the issuance of a grading permit to allow for the potential salvage of adult tortoises within this notification time period or that desert tortoise clearance surveys are conducted per USFWS protocol.

Non-Listed Special-Interest Species

The 12 special-interest species identified in Appendix B as having a low or moderate probability for occurrence, or found to be present on the proposed project site, have limited population distribution in southern California; development is further reducing their ranges and numbers. These species have no official State or federal protection status, but under CEQA, they require consideration. Special status species covered by the CVMSHCP with potential to occur on the proposed project site include the federal and State listed desert tortoise and federal listed Coachella Valley milkvetch as identified above, as well as non-listed special interest species including the Mecca aster, flat-tailed horned lizard, burrowing owl, Crissal thrasher, LeConte's thrasher, southern yellow bat, Palm Springs pocket mouse, and Palm Springs round-tailed ground squirrel.

Through implementation of the CVMSHCP Reserve System and conservation objectives, all of these species are considered covered through the CVMSHCP and adequately conserved through the Plan's pre-established Conservation Areas and mitigation measures. The other non-listed species not covered by the CVMSHCP occupy the same habitats as the covered species, though their population distribution is not as limited as the listed species. Thus, the project will not have significant impacts to any of these special interest species; however, mitigation may still be required for the burrowing owl, which is discussed in greater detail below.

Burrowing Owl and Migratory Birds

The proposed project site contains potential habitat for the burrowing owl, a species protected under

the MBTA and the California Fish and Game Code. It is also a covered species under the CVMSHCP. Through participation in the CVMSHCP, impacts to the burrowing owl are considered less than significant. However, project impacts to this species may still require mitigation to ensure compliance with the MBTA and the California Fish and Game Code as it applies to the species. Burrowing owls, their nests and eggs are protected from "take" (meaning destruction, pursuit, possession, etc.) under the MBTA of 1918 and under Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Burrowing owls nest on the ground in abandoned burrows of ground squirrels or other animals, in pipes, rock and debris piles, and in other similar features. Activities that cause destruction of active nests, or that cause nest abandonment and subsequent death of eggs or young, may constitute violations of one or both of these laws. In order to comply with these State and federal regulations, a pre-construction survey for the burrowing owl is required on the proposed project site prior to any ground-disturbing activities since suitable habitat exists on site. The direct take of a burrowing owl, or any raptor, must be avoided. If the burrowing owl is found to be present, avoidance measures will be required. In addition, if a burrowing owl is found to be present during the breeding season (February 1 to August 31), no ground disturbance can begin within the occupied area until after the breeding season (i.e., after August 31) and/or until the burrowing owls have completed their nesting activities. Generally, a 300- to 500-foot buffer is required around nesting owls during construction activities. Any relocation efforts must be coordinated with the CDFW and/or USFWS.

In addition, to ensure compliance with California Fish and Game Code and the MBTA, and to avoid potential impacts to other nesting birds, it is recommended that the proposed project site be cleared of vegetation outside the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is recommended prior to vegetation removal. If nesting birds are found, the biologist should prescribe avoidance measures, such as a construction buffer, until the nesting activity is concluded.

Potential Jurisdiction Waters and Streambeds

The jurisdictional delineation found the project would be subject to the regulatory authority of CDFW and RWQCB, but preliminarily determined that there are no jurisdictional ACOE waters. Based on review of the Specific Plan, the project will impact most of the jurisdictional waters and vegetation within the study area. The proposed project is expected to require a CDFW Section 1602 Streambed Alteration Agreement. An Approved Determination, per ACOE Regulatory Guidance Letter 08-02 dated June 26, 2008, will be required to verify the preliminary results of the ACOE jurisdiction. If the ACOE concurs, then a permit would not be required but the RWQCB would likely require a Report of Waste Discharge under the Porter-Cologne Act and issue Waste Discharge Requirements. If the ACOE does assert jurisdiction, then an Individual Permit would likely be required and RWQCB regulation would be through Section 401.

Habitat Fragmentation and Wildlife Movement

Wildlife movement and habitat fragmentation are important issues in assessing impacts to wildlife. Habitat fragmentation occurs when a proposed action results in a single, unified habitat area being divided into two or more areas in such a way that the division isolates the two new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to

another or from one habitat type to another, as in the fragmentation of habitats within and around "checkerboard" residential development. Habitat fragmentation also can occur when a portion of one or more habitats is converted into another habitat, as when annual burning converts scrub habitats to grassland habitats.

The proposed project lies adjacent to and in the vicinity of three CVMSHCP Conservation Areas. All three conservation areas provide biological corridors and linkages between the San Jacinto/Santa Rosa Mountains and the San Bernardino Mountains. The proposed project will not affect these Conservation Areas. While the proposed project is anticipated to have an incremental effect on localized wildlife movement and habitat fragmentation in the region, it is not anticipated to have a significant impact on regional wildlife movement.

Local Policies and Ordinances

The proposed project will not conflict with any local policies or ordinances, due to participation with the CVMSHCP.

Habitat Conservation Plans

The proposed project is within the CVMSHCP plan area, but not within any specific CVMSHCP Conservation Area. It does, however, lie in close proximity to three CVMSHP Conservation Areas. The proposed project will avoid direct impacts to these CVMSHCP Conservation Areas and will not conflict with the CVMSHCP Conservation Objectives. The project will comply with CVMSHCP Section 4.5 Land Use Adjacency Guidelines (see Appendix C) to avoid and minimize indirect effects to adjacent CVMSHCP conserved habitats.

CUMULATIVE IMPACTS

According to Section 15130 of the *CEQA Guidelines*, cumulative impacts refer to incremental effects of an individual project when viewed in connection with the effects of past projects, current projects, and probable future projects. Any current and probable future projects may threaten wildlife in the project area. The CVMSHCP has analyzed cumulative effects within the region of the proposed project under CEQA, NEPA, CESA, and FESA. Through compliance with the CVMSHCP, cumulative project effects will be offset.

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APPENDIX A

LIST OF SPECIES OBSERVED

APPENDIX A

LIST OF SPECIES OBSERVED

The following vascular plant, reptile, bird, and mammal species were observed, heard, or identified by the presence of tracks, scat, or other signs in the study area by LSA biologists during site surveys conducted on August 2, 4, 13, and 14, and September 5, 6, 13, and 19, 2012.

SPECIES OBSERVED

Scientific Name	Common Name
MAGNOLIOPHYTA: MAGNOLIOPSIDA	**DICOT FLOWERING PLANTS**
Asclepiadaceae	**Milkweed Family**
Asclepias albicans	Wax milkweed
Asteraceae	**Aster Family**
Ambrosia dumosa	White bur-sage
Ambrosia salsola	Common Burrobrush
Bebbia juncea	Sweetbush
Encelia farinosa	Brittlebush
Ericameria linearifolia	Narrowleaf goldenbush
Ericameria nauseosa	Rubber rabbitbrush
Gutierrezia californica	California matchweed
Lepidospartum squamatum	Scalebroom
Peucephyllum schottii	Pygmy-cedar
Psathyrotes ramosissima	Velvet turtleback
Boraginaceae	**Borage Family**
Tiquilia palmeri	Palmer's crinklemat
Brassicaceae	**Mustard Family**
Brassica tournefortii (non-native species)	Sahara mustard
Cactaceae	**Cactus Family**
Cylindropuntia acanthocarpa	Buck-horn cholla
Cylindropuntia echinocarpa	Silver cholla
Cylindropuntia parishii	Club cholla
Cylindropuntia ramosissima	Diamond cholla
Ferocactus cylindraceus	California barrel cactus
Mammillaria tetrancistra	Common fishhook cactus
Opuntia basilaris	Beavertail pricklypear
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens	Fourwing saltbush
Atriplex hymenelytra	Desert holly
Atriplex polycarpa	Cattle saltbush
Atriplex sp.	Saltbush

SPECIES OBSERVED

Scientific Name	Common Name
Euphorbiaceae	**Spurge Family**
Chamaesyce albomarginata	Rattlesnake weed
Croton californicus	California croton
Fabaceae	**Legume Family**
Acacia greggii	Catclaw
Parkinsonia florida	Blue palo verde
Psorothamnus emoryi	Dyebush
Psorothamnus schottii	Schott's dalea
Psorothamnus spinosus	Smoketree
Senna armata	Spiny senna
Fouquieriaceae	**Ocotillo Family**
Fouquieria splendens	Ocotillo
Geraniaceae	**Geranium Family**
Erodium texanum	Texas stork's bill
Kramariaceae	**Krameria Family**
Krameria grayi	White rhatany
Lamiaceae	**Mint Family**
Hyptis emoryi	Desert-lavender
Salvia columbariae	Chia
Loasaceae	**Loasa Family**
Petalonyx sp.	Sandpaper plant
Petalonyx thurberi ssp. *thurberi*	Thurber's sandpaper plant
Nyctaginaceae	**Four o'clock Family**
Abronia villosa var. *villosa*	Desert sand verbena
Allionia incarnata	Trailing windmills
Mirabilis laevis	Wishbone bush
Orobanchaceae	**Broom-rape Family**
Orobanche cooperi	Desert broomrape
Plantaginaceae	**Plantain Family**
Plantago ovata	Desert Indianwheat
Poaceae	**Grass family**
Schismus barbatus (non-native species)	Common Mediterranean grass
Polygonaceae	**Buckwheat Family**
Eriogonum inflatum	Desert trumpet
Eriogonum sp.	Perennial buckwheat
Solanaceae	**Potato Family**
Datura wrightii	Sacred thorn-apple
Nicotiana obtusifolia	Desert tobacco
Physalis crassifolia	Yellow nightshade groundcherry
Datura stramonium	Jimson weed
Tamaricaceae	**Tamarisk Family**
Tamarix ramosissima	Tamarisk

SPECIES OBSERVED

Scientific Name	Common Name
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	Creosote bush
REPTILIA	**REPTILES**
Iguanidae	**Iguanid Lizards**
Dipsosaurus dorsalis	Desert Iguana
Phrynosomatidae	**Phrynosomatid Lizards**
Callisaurus draconoides rhodostictus	Zebra-tailed lizard
Phrynosoma platyrhinos	Desert horned lizard
Teiidae	**Whiptails and Relatives**
Aspidoscelis tigris	Western whiptail
Viperdae	**Vipers**
Crotalus cerastes	Sidewinder
AVES	**BIRDS**
Columbidae	**Pigeons and Doves**
Streptopelia decaocto	Eurasian collared dove
Zenaida macroura	Mourning dove
Corvidae	**Crows and Ravens**
Corvus corax	Common raven
Fringillidae	**Finches**
Carpodacus mexicanus	House finch
Laniidae	**Shrikes**
Lanius ludovicianus	Loggerhead shrike
Mimidae	**Mockingbirds and Thrashers**
Toxostoma lecontei	Le Conte's thrasher
Odontophoridae	**New World Quails**
Callipepla gambelii	Gambel's quail
Remizidae	**Penduline Tits and Verdin**
Auriparus flaviceps	Verdin
Strigidae	**Typical Owls**
Athene cunicularia hypugaea	Burrowing owl (sign)
Sylviidae	**Old World Warblers and Gnatcatchers**
Polioptila melanura	Black-tailed gnatcatcher
Troglodytidae	**Wrens**
Campylorhynchus brunneicapillus anthonyi	Mainland cactus wren
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe

SPECIES OBSERVED

Scientific Name	Common Name
MAMMALIA	**MAMMALS**
Heteromyidae	**Pocket Mice and Kangaroo Rats**
Dipodomys sp.	Kangaroo rat
Leporidae	**Rabbits and Hares**
Lepus californicus	Black-tailed jackrabbit
Canidae	**Foxes, Wolves and Dogs**
Canis latrans	Coyote
Vulpes macrotis	Kit fox

Taxonomy and scientific nomenclature of vascular plants conform to Hickman (1993). Common names for each taxa of vascular plants generally conform to Roberts (1998), although Abrams (1923, 1944, 1951) and Abrams and Ferris (1960) are used, particularly when species specific common names are not identified in Roberts (1998).

Taxonomy and nomenclature of animal species are based on the following.

Amphibians and reptiles: Crother, B.I. ed. (2008, Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico. *Herpetological Circular* 37) for species taxonomy and nomenclature; Stebbins, R.C. (2003, A Field Guide to Western Reptiles and Amphibians, third edition, Houghton Mifflin, Boston) for sequence and higher order taxonomy.

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APPENDIX B

SPECIAL-INTEREST SPECIES SUMMARY

APPENDIX B

SPECIAL-INTEREST SPECIES SUMMARY

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Plants				
Abronia villosa var. aurita **Chaparral sand-verbena**	US: – CA: 1B	Sandy areas in chaparral and coastal sage scrub and improbably in desert dunes or other sandy areas, below 5,300 feet elevation. In California, reported from Riverside, San Diego, Imperial, Los Angeles, and Ventura Counties. Believed extirpated from Orange County. Also reported from Arizona and Mexico (Baja California). Plants reported from desert communities are likely misidentified.	Blooms mostly March through August (annual or perennial herb)	**Absent:** Suitable habitat (sandy areas with chaparral) is not present on the proposed project site.
Astragalus bernardinus **San Bernardino milk-vetch**	US: – CA: 1B	Stony washes and dry mesas, often amongst low bushes, 3,000 to 6,700 feet on granite or limestone Joshua tree and pinyon-juniper woods. In California, reported in Riverside and San Bernardino Counties.	Blooms April through June (perennial herb)	**Absent:** Site is outside of suitable elevation habitat range.
Astragalus lentiginosus var. coachellae **Coachella Valley milk-vetch**	US: FE CA: 1B CVMSHCP: C	Sandy areas, typically in coarse sands in active sand fields, adjacent to dunes, along roadsides in dune areas, or along the margins of sandy washes, in Sonoran Desert scrub at 200 to 2,150 feet elevation. Known only from Riverside County in the Coachella Valley between Cabazon and Indio, and in the Chuckwalla Valley northeast of Desert Center.	Blooms February through May (annual or perennial herb)	**Low:** Marginally suitable habitat (sandy wash areas) is present on the proposed project site.
Astragalus preussii var. laxiflorus **Lancaster milk-vetch**	US: – CA: 1B	Alkaline clay flats, gravelly or sandy washes, and along draws in gullied badlands, in chenopod scrub at about 2,300 feet elevation. Known in California only from near Lancaster and Edwards Air Force Base in Los Angeles and Kern Counties and from one location in San Bernardino County. Also occurs in Nevada and Arizona.	March through May (perennial herb)	**Absent:** Site is outside of suitable elevation habitat range.
Astragalus sabulonum **Gravel milk-vetch**	US: – CA: 2	Sandy or gravelly areas in Creosote Bush Scrub between -99 and 656 feet elevation. Known in California in Imperial, Inyo, Riverside, and San Diego Counties.	February through July (annual herb)	**Moderate:** Suitable habitat (sandy and gravelly areas) is present on the proposed project site. Site contains creosote bush scrub habitat.

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Ditaxis claryana **Glandular ditaxis**	US: – CA: 2	Sandy soils in creosote bush scrub of the Sonoran and Mojave deserts at 0 to 1,500 feet elevation. Imperial, Riverside, and San Bernardino Counties, and Arizona and northern Mexico.	October through March (perennial herb)	**Moderate**: Suitable habitat is present on the proposed project site.
Mentzelia tridentata **Creamy blazing star**	US: – CA: 1B	Mojavean desert scrub at 2,300 to 3,800 feet elevation in Imperial, Inyo, Kern, Riverside, San Bernardino, and San Diego Counties.	March through May (annual herb)	**Absent:** Site is outside of suitable elevation habitat range.
Nemacaulis denudata var. gracilis **Slender cottonheads**	US: – CA: 2	Coastal or desert dunes, sandy mesquite hummocks, or similar sandy sites at -160 to 1,300 feet elevation. Known from Imperial, Riverside, San Bernardino, and San Diego Counties in California, and from Arizona and Mexico.	Blooms mostly late March to mid-May (annual herb)	**Absent:** Suitable habitat (desert dunes or sandy mesquite hummocks) is not present on the proposed project site.
Saltugilia latimeri **Latimer's woodland gilia**	US: – CA: 1B	Dry desert slopes of coarse sandy to rocky soils in chaparral and Mojavean desert scrub at 1,300 to 6,200 feet elevation.	Blooms April through June	**Absent:** Site is outside of suitable elevation habitat range.
Senna covesii **Coves' cassia**	US: – CA: 2	Dry, sandy desert washes and slopes in Sonoran desert scrub at 700 to 3,500 feet elevation. In California, known only from Imperial, Riverside, San Bernardino, and San Diego Counties.	Blooms March through June (perennial herb)	**Low:** Marginally suitable habitat is present on the proposed project site.
Wislizenia refracta ssp. *palmeri* **Palmer's jackass clover**	US: – CA: 2	Sandy drainage areas, desert washes, alkali flats, fields, and along roadsides. Most common in Creosote Bush Scrub and Alkali Sink habitat communities. Found in Riverside County in elevations between 0 and 625 feet.	Blooms year-round (annual herb)	**High:** Suitable habitat (sandy drainage areas, desert washes) is present on the proposed project site. Portions of the site lie in creosote bush scrub.
Wislizenia refracta ssp. *refracta* **Jackass clover**	US: – CA: 2	Sandy drainage areas, desert washes, alkali flats, fields, and along roadsides. Most common in Creosote Bush Scrub and Alkali Sink habitat communities. Found in San Bernardino County in elevations between 0 and 2,625 feet	Blooms April through November (annual herb)	**Moderate:** Suitable habitat (sandy drainage areas, desert washes) is present on the proposed project site. Portions of the site lie in creosote bush scrub.
Xylorhiza cognata **Mecca aster**	US: – CA: 1B CVMSHCP: C	Steep slopes of arid canyons in sandstone and clay in Sonoran desert scrub at 70 to 1,300 feet elevation. Known only from Riverside, San Diego, and Imperial Counties, California, principally in the Indio and Mecca hills of Riverside County.	January through June (perennial herb)	**Moderate:** Suitable habitat (steep slopes of arid canyons in sandstone and clay) is present on the proposed project site. Site lies within Mecca Hills area.

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Fish				
Cyprinodon macularius **Desert pupfish**	US: FE CA: SE CVMSHCP: C	Desert backwater areas, springs, streams, and pools. In California, found in the Salton Sea and some of its tributaries (San Felipe Creek, San Sebastian Marsh, and Salt Creek) in Riverside and Imperial Counties.	Year-round	**Absent:** Suitable habitat (backwater areas, springs, streams, pools) is absent from the proposed project site.
Reptiles				
Gopherus agassizii **Desert tortoise**	US: FT CA: ST CVMSHCP: C	Historically found throughout the Mojave and Sonoran Deserts into Arizona, Nevada, and Utah. Occurs throughout the Mojave Desert in scattered populations. Found in creosote bush scrub, saltbush scrub, thornscrub (in Mexico), and Joshua tree woodland. Found in the open desert as well as in oases, riverbanks, washes, dunes, and occasionally rocky slopes.		**Moderate:** Suitable habitat (creosote bush scrub, washes, and rocky slopes) is present on the proposed project site.
Phrynosoma mcalli **Flat-tailed horned lizard**	US: – CA: SSC CVMSHCP: C	Fine sand in desert washes and flats with vegetative cover and ants, generally below 600 feet elevation in Riverside, San Diego, and Imperial Counties.	May be active year-round in mild weather, but peak activity occurs in spring, early summer, and fall	**Low:** Although potentially suitable habitat (desert washes and flats) is present on the proposed project site, according the CVMSHCP NCCP Permit, this species is only known from the CVMSHCP Whitewater Floodplain, East Indio Hills, and Dos Palmas Conservation Areas.
Scaphiopus couchii **Couch's spadefoot**	US: – CA: SSC	Desert and arid regions of grassland, prairie, mesquite, creosote bush, thorn forest, sandy washes. From sea level to 5,900 ft. elevation. In California, this spadefoot occurs in scattered populations east of the Algodones sand dunes in Imperial county, north into San Bernardino County.	Active above ground for breeding during spring and summer rain season	**Absent:** Suitable habitat with seasonal standing water sources is absent from the proposed project site.
Uma inornata **Coachella Valley fringe-toed lizard**	US: FT CA: SE CVMSHCP: C	Fine, loose, windblown sand (dunes), interspersed with hardpan and widely spaced desert shrubs; known only from the Coachella Valley.	April through October (May is peak)	**Absent:** Suitable habitat (fine, loose, windblown sand (dunes)) is absent from the proposed project site.
Birds				
Athene cunicularia hypugaea (burrow sites)	US: – CA: SSC (breeding)	Open country in much of North and South America. Usually occupies ground squirrel burrows in open, dry	Year-round	**High:** Suitable habitat (disturbed habitat and rodent burrows) is

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Burrowing owl	CVMSHCP: C	grasslands, agricultural and range lands, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. They avoid thick, tall vegetation, brush, and trees, but may occur in areas where brush or tree cover is less than 30 percent.		present on the proposed project site.
Gelochelidon nilotica (nesting colony) **Gull-billed tern**	US: – CA: SSC (breeding)	Casual inland; nests and breeds in gravel, sand, or shell beaches, occasionally on grassy portions of islands and salt marshes. Forages over agricultural fields or marshes.	Year-round diurnal activity	**Absent:** Suitable habitat (wetlands and associated salty water bodies) is absent from the proposed project site.
Icteria virens (nesting) **Yellow-breasted chat**	US: – CA: SSC (breeding) CVMSHCP: C	Riparian thickets of willow, brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	Summer in California	**Absent:** Suitable nesting habitat (riparian thickets and woodlands) is absent from the proposed project site**.**
Pyrocephalus rubinus (nesting) **Vermilion flycatcher**	US: – CA: SSC (breeding)	A rare, local, year-long resident along the Colorado River, especially in vicinity of Blythe, Riverside County. Sporadic breeder in desert oases west and north to Morongo Valley and the Mojave Narrows, San Bernardino County. Formerly bred in coastal San Diego County. Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas. Rare fall and winter visitor throughout the lowlands of Southern California from Santa Barbara and Inyo Counties south. Formerly much more common and widespread, but has disappeared entirely from Imperial and Coachella Valleys.	Fall or winter visitor or rare and local breeder	**Absent:** Suitable nesting habitat (riparian thickets and oases) is absent from the proposed project site**.**
Rallus longirostris yumanensis **Yuma clapper rail**	US: FE CA: ST/CFP CVMSHCP: C	Common inland, found primarily in coastal salt marshes, salt and brackish marshes, mangrove swamps, freshwater marshes in southwest. Found along the Colorado River, at Salton Sea, and in the Whitewater River north of the Sea.	Year-round diurnal activity	**Absent:** Suitable habitat (wetlands and associated water bodies) is absent from the proposed project site.

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Rynchops niger (nesting colony) **Black skimmer**	US: – CA: SSC (breeding)	Casual inland; nests and breeds in coastal beach, sandbar, shell bank, island, salt marsh and locally on gravel rooftops. Associates with terns, gulls, plovers.	Year-round diurnal activity	**Absent:** Suitable nesting habitat (wetlands and associated salty water bodies) is absent from the proposed project site.
Toxostoma crissale **Crissal thrasher**	US: – CA: SSC (year round) CVMSHCP: C	Dense thickets of shrubs or low trees in desert riparian and desert wash habitats. Southeastern California to Texas and northern Mexico.	Year-round	**Low:** Suitable habitat (desert wash) is present on the proposed project site**.**
Toxostoma lecontei **Le Conte's thrasher**	US: – CA: SSC CVMSHCP: C	Inhabits sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having a high proportion of saltbush (*Atriplex* spp.) or cholla (cylindrical *Opuntia* spp.), often occurring along small washes or sand dunes. Prefers dense thorny shrubs (most often saltbush or cholla) for nesting. Uncommon and local resident in low desert scrub throughout most of the Mojave Desert, extending up into the southwestern corner of the San Joaquin Valley. Breeding range in California extends from these areas into eastern Mojave, north into the Owens Valley and south into the lower Colorado Desert and eastern Mojave.	Year-round	**Present:** Suitable habitat (small washes in desert scrub) is present on the proposed project site. Species was observed on site during 2013 field surveys.
Mammals				
Antrozous pallidus **Pallid bat**	US: – CA: SSC	Day roosts in caves, crevices, mines and occasionally hollow trees and buildings. Night roosts may be more open sites, such as porches and open buildings. Hibernation sites are probably rock crevices. Grasslands, shrublands, woodlands, and forest in western North America.	Year-round; nocturnal	**Moderate:** Suitable foraging habitat is present on the proposed project site.
Chaetodipus fallax pallidus **Pallid San Diego pocket mouse**	US: – CA: SSC	Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in desert wash, desert scrub, desert succulent scrub, pinyon-juniper woodlands, etc. in desert border areas of Southern California into Mexico.	Nocturnal, active year-round	**Low:** Suitable habitat (desert wash and desert scrub) is present on the proposed project site.
Euderma maculatum **Spotted bat**	US: – CA: SSC	Found in various communities including desert-scrub, pinyon-juniper woodland, ponderosa pine, mixed conifer forest, canyons, cliffs, riparian areas, fields, and open pasture at scattered localities in	Year-round; nocturnal	**Low:** Marginally suitable roosting habitat (cracks, crevices, caves) is absent from the proposed project site.

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
		western North America from southern British Columbia to north-central Mexico. Roosts in cracks, crevices, and caves, usually on exposed cliff faces. Poorly known. Wanders widely and through varied habitats when foraging.		May use the site during foraging activities.
Eumops perotis **Western mastiff bat**	US: – CA: SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging.	Year-round; nocturnal	**Low:** Suitable roosting habitat (cracks, crevices, caves) is absent from the proposed project site. May use the site during foraging activities.
Lasiurus xanthinus **Southern yellow bat**	US: – CA: SSC CVMSHCP: C	Found in desert and riparian areas of the southwest U.S. Individuals roost in the dead fronds of palm trees, and have also been documented roosting in cottonwood trees.	Year-round; nocturnal	**Low.** Suitable roosting habitat is not present on site, but species may forage over site.
Nyctinomops femorosaccus **Pocketed free-tailed bat**	US: – CA: SSC	Usually associated with cliffs, rock outcrops, or slopes. May roost in buildings (including roof tiles) or caves. Occurs from the southwestern United States to central Mexico.	Year-round; nocturnal	**Low.** Suitable roosting habitat is not present on site, but species may forage over site.
Perognathus longimembris bangsii **Palm Springs pocket mouse**	US: – CA: SSC CVMSHCP: C	Primary habitat in the Coachella Valley is dunes and mesquite hummocks associated with honey mesquite (*Prosopis glandulosa* var. *torreyana*) and, to a lesser extent, dunes and hummocks associated with creosote (*Larrea tridentata*) or other vegetation. Its range in the Coachella Valley extends from Joshua Tree National Park southward, west to San Gorgonio Pass, and south to Borrego Springs and the east side of San Felipe Narrows, in Riverside, San Diego, and Imperial Counties. Results of recent morphological and genetic studies indicate that this species also ranges northward at least to Hinkley Valley and Death Valley in San Bernardino County.	Spring through fall	**High:** Suitable habitat exists on proposed project site. Known CNDDB species occurrences reported on site.
Taxidea taxus **American badger**	US: – CA: SSC	Primary habitat requirements seem to be sufficient food and friable soils in relatively open uncultivated ground in grasslands, woodlands, and desert. Widely distributed in North America.	Year-round	**Low:** Suitable habitat with sufficient food sources is present on the proposed project site.

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
Xerospermophilus tereticaudus chlorus **Palm Springs round-tailed ground squirrel**	US: – CA: SSC CVMSHCP: C	Desert succulent scrub, desert wash, desert scrub, alkali scrub; will burrow in man-made levees; prefers open, flat, grassy areas in fine textured, sandy soil. Restricted to Coachella Valley.	February through August (hibernates September through January)	**Low:** Marginally suitable habitat (desert scrub) is present on the proposed project site.

LEGEND	
US: Federal Classifications	
–	No applicable classification
FE	Taxa listed as Endangered.
FT	Taxa listed as Threatened.
CA: State Classifications	
SE	Taxa State-listed as Endangered.
ST	Taxa State-listed as Threatened.
SSC	California Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.
CFP	California Fully Protected. Refers to animals protected from take under Fish and Game Code Sections 3511, 4700, 5050, and 5515.
1B	California Rare Plant Rank 1B: Rare, threatened, or endangered in California and elsewhere.
2	California Rare Plant Rank 2: Rare, threatened, or endangered in California but more common elsewhere.
California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.	
CVMSHCP: Coachella Valley MSHCP Status	
C	Species is adequately conserved under the CVMSHCP.

Delineation of State and Federal Jurisdictional Waters

LA ENTRADA SPECIFIC PLAN

City of Coachella, California

Delineation of
State and Federal Jurisdictional Waters

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April 2013
JN 133278

RBF CONSULTING
A Baker Company

LA ENTRADA SPECIFIC PLAN
CITY OF COACHELLA, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a jurisdictional "waters of the U.S." (including wetlands) and "waters of the State" determination for the above-referenced project.

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April 2013

Abstract

Introduction: At the request of PSAV, LLC, RBF Consulting (RBF) has prepared this Delineation of Jurisdictional Waters for the La Entrada Specific Plan (project), located in the City of Coachella, Riverside County, California.

Methods: The field work for this delineation was conducted on December 3, 2012 and January 9th, 17th, 22nd, 31st of 2013. A meeting to discuss field methods was also held on site with Jim Mace, Senior Project Manager, of the U.S. Army Corps of Engineers (Corps) on October 3, 2012. This delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and California Department of Fish and Wildlife[1] (CDFW) pursuant to the Federal Clean Water Act (CWA), California Porter-Cologne Water Quality Control Act, and California Fish and Game Code[2].

Results: The project site contains a total of 211.55-acres of waters of the State but no waters of the U.S (pending an Approved Jurisdictional Determination from the Corps). Jurisdictional areas consist of desert dry wash/ephemeral streambed (all non-wetland). Placement of fill material or alteration of the streambed within these waters is subject to Regional Board and CDFW jurisdiction and associated regulatory approvals.

This report presents RBF's best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. However, as with any jurisdictional delineation, only the regulatory agencies can make a final determination of jurisdiction. Refer to Sections 1-6 for a complete discussion. Table A-1 identifies the total jurisdiction on site for each of the regulatory agencies.

1 Formerly referred to as the California Department of Fish and Game (CDFG) prior January 1, 2013.

2 The project area was surveyed pursuant to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008); the Practices for Documenting Jurisdiction under Section 404 of the CWA Regional Guidance Letter (Corps 2007); Minimum Standards for Acceptance of Preliminary Wetland Delineations (Corps 2001); Field Guide to Lake and Streambed Alteration Agreements Section 1600-1607 (CDFW 1994); and the Review of Stream Processes and Forms in Dryland Watersheds (CDFW, December 2010).

Table A-1. Total Jurisdictional Area

Relevant Reach/ Active Channel	Corps Non-Jurisdictional Area[3]	CDFW Jurisdiction	
	On-Site Area (Acres)	On-Site Area (Acres)	Adjoining Riparian Vegetation (Acres)
A	8.16	8.16	-
B	53.05	53.05	0.43
C	8.79	8.79	0.49
C1	1.15	1.15	0.58
D	14.1	14.1	3.64
D1	0.34	0.34	0.12
D2	0.19	0.19	0.46
D3	0.01	0.01	-
D4	2.97	2.97	0.86
D5	0.18	0.18	-
D6	0.01	0.01	-
D7	0.03	0.03	-
E	69.19	69.19	-
E1	0.5	0.5	-
E2	0.09	0.09	-
F	24.99	24.99	-
F1	7.43	7.43	-
F2	0.12	0.12	-
F3	2.12	2.12	-
F4	0.65	0.65	-
F5	1.76	1.76	-
G	9.16	9.16	-
G1	0.05	0.05	-
H	6.07	6.07	-
H1	0.12	0.12	-
I	0.19	0.19	-
I1	0.13	0.13	-
TOTAL:	**211.55**	**211.55[4]**	**6.58**

[3] Acreage of Corps waters removed, for reference.
[4] Of the 211.55 acres of CDFW jurisdiction on-site, 10.0-acres of streambed is vegetated with Desert Dry Wash Woodland. Approximately 6.58-acres of additional Desert Dry Wash Woodland (adjoins streambeds) is located on-site.

Table of Contents

1.0 INTRODUCTION AND PURPOSE 1
1.1 Project Introduction 1
1.2 Project Location 1

2.0 SUMMARY OF REGULATIONS 5
2.1 U.S. Army Corps of Engineers 5
2.2 Regional Water Quality Control Board 7
2.3 California Department of Fish and Wildlife 7

3.0 METHODOLOGY 10
3.1 Waters of the U.S. and State Waters 10
3.2 Wetlands 10
3.3 SWANCC Waters 14
3.4 Rapanos Waters 14

4.0 LITERATURE REVIEW 16
4.1 Watershed Review 16
4.2 Hydrology Review 17
4.3 Local Climate 17
4.4 USGS Topographic Quadrangle 19
4.5 Aerial Photograph 21
4.6 Soil Survey 21
4.7 Hydric Soils List of California 26
4.8 National Wetlands Inventory 26
4.9 Flood Zone 26

5.0 SITE CONDITIONS 27
5.1 Vegetation 27
5.2 Hydrology 27
5.3 Soils 28

6.0 FINDINGS 32
6.1 U.S. Army Corps of Engineers Determination 32
6.2 Regional Water Quality Control Board Determination 33
6.3 California Department of Fish and Wildlife Determination 33

6.4 Global Recommendations 33

7.0 REFERENCES 37

LIST OF TABLES

1. Precipitation Summary 18
2. USGS Quad Map Drainage Locations 20
3. Relevant Reach/Active Channel Summary 31
4. On-Site Jurisdictional Summary 34

LIST OF EXHIBITS

1. Regional Vicinity 2
2. Site Vicinity 3
3. Project Site 4
4. Soils Map 25
5a. On-Site Photographs 29
5b. On-Site Photographs 30
6a. Federal Jurisdictional Map 35
6b. State Jurisdictional Map 36

APPENDIX

A. Documentation

LIST OF ACRONYMS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CVSC	Coachella Valley Stormwater Channel
CWA	Clean Water Act
DBH	Diameter at Breast Height
EPA	Environmental Protection Agency
FAC	Facultative Vegetation
FACU	Facultative Upland Vegetation
FACW	Facultative Wetland Vegetation
GPS	Global Positioning System
IP	Individual Permit
Mg/L	Milligrams per liter
MSL	Mean Sea Level
NWP	Nationwide Permit
OBL	Obligate Wetland Vegetation
OHWM	Ordinary High Water Mark
RBF	RBF Consulting
RPW	Relatively Permanent Waters
SAA	Streambed Alteration Agreement
SBBM	San Bernardino Base and Meridian
SWANCC	Solid Water Agency of Northern Cook County
TNW	Traditional Navigable Water
UPL	Obligate Upland Vegetation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WoUS	Waters of the United States

Section 1 Introduction and Purpose

1.1 PROJECT INTRODUCTION

This delineation has been prepared for PSAV, LLC in order to delineate the U.S. Army Corps of Engineers' (Corps), Regional Water Quality Control Board's (Regional Board), and California Department of Fish and Wildlife's (CDFW) jurisdictional authority located within the La Entrada Specific Plan Project (project site).

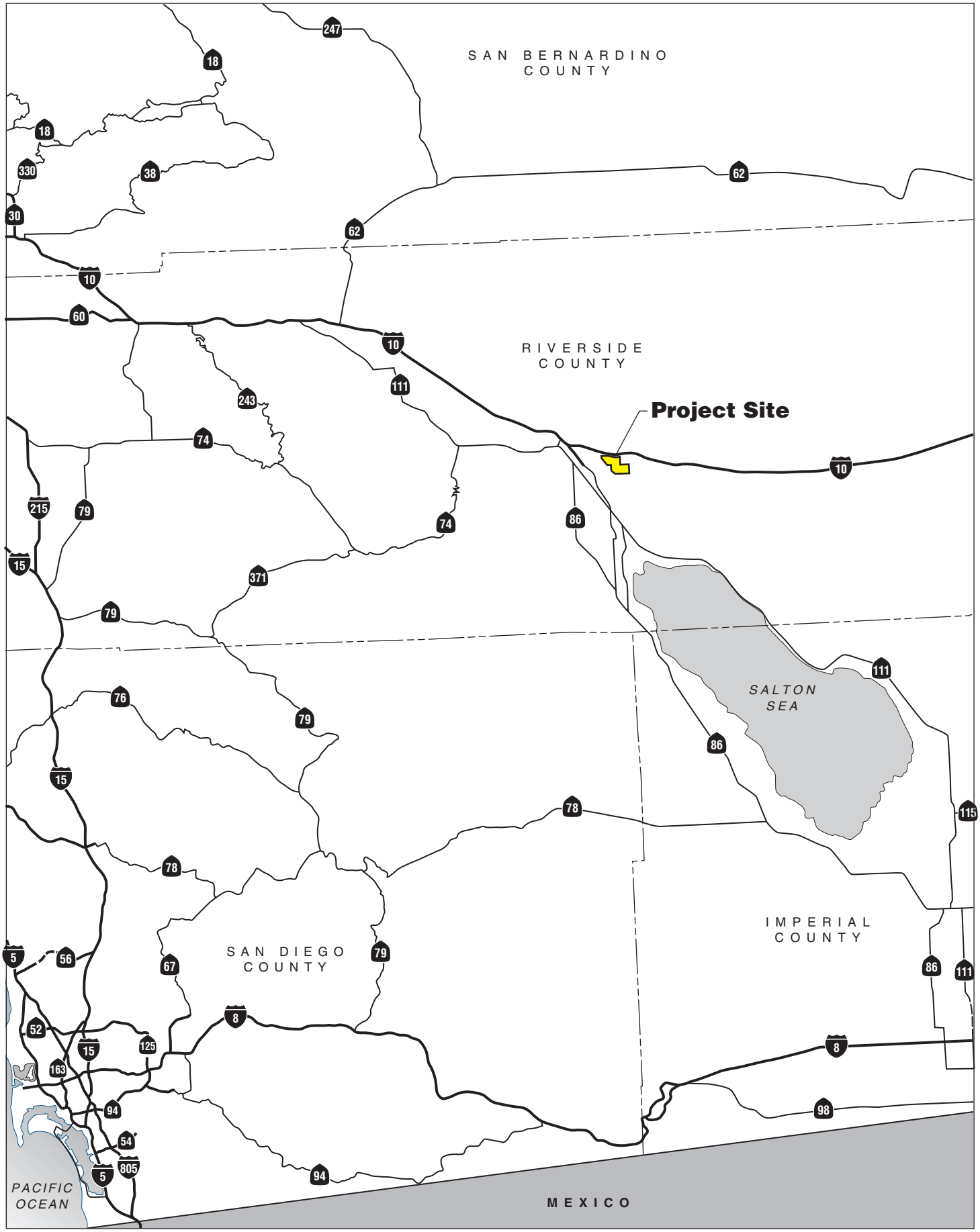
The field work for this delineation was conducted on December 3, 2012 and January 9th, 17th, 22nd, 31st of 2013. A meeting to discuss field methods was also held on site with Jim Mace, Senior Project Manager, of the U.S. Army Corps of Engineers (Corps) on October 3, 2012.

This delineation has been designed to document the authority of the regulatory agencies, explain the methodology undertaken by RBF Consulting (RBF) to document jurisdictional authority, and to support the findings made by RBF within the boundaries of the project site. This report presents our best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies; however, only the regulatory agencies can make a final determination of jurisdictional boundaries.

1.2 PROJECT LOCATION

The proposed project is located along the western foothills of the Little San Bernardino Mountains on the eastern border of the Coachella Valley, north of Salton Sea within Riverside County, California. The study area is located south of Interstate 10 (I-10) and northeast of the Coachella Channel (refer to Exhibit 1, *Regional Vicinity*, and Exhibit 2, *Site Vicinity*).

EXHIBIT 1, *Regional Vicinity*



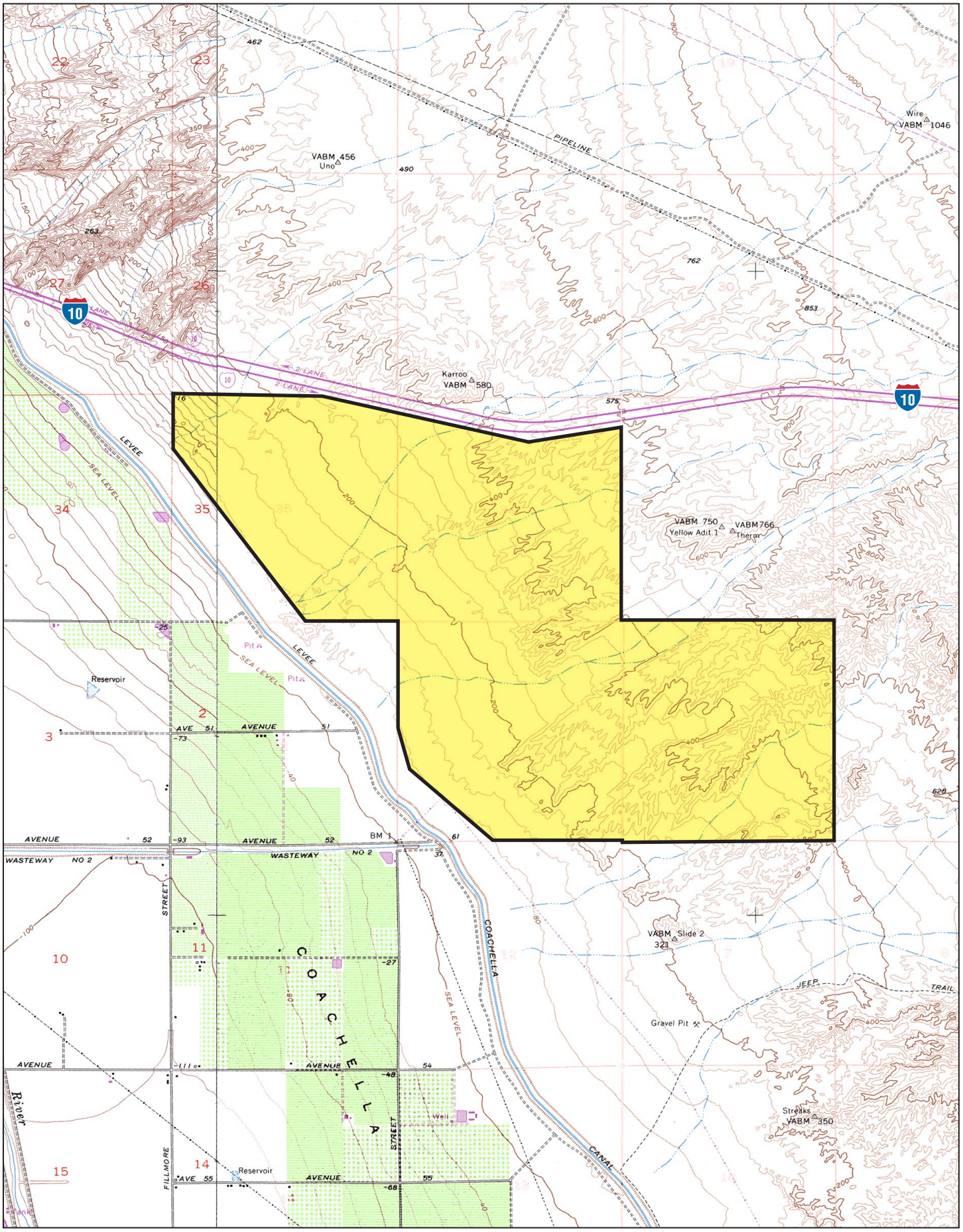
LA ENTRADA SPECIFIC PLAN

Regional Vicinity

1/14/13 JN 133278-18991 MAS

Exhibit 1

EXHIBIT 2, *Site Vicinity*



Source: Indio, California, USGS Quad, 1972, and
Thermal Canyon, California, USGS Quad, 1972.

Project Site

0 3000'

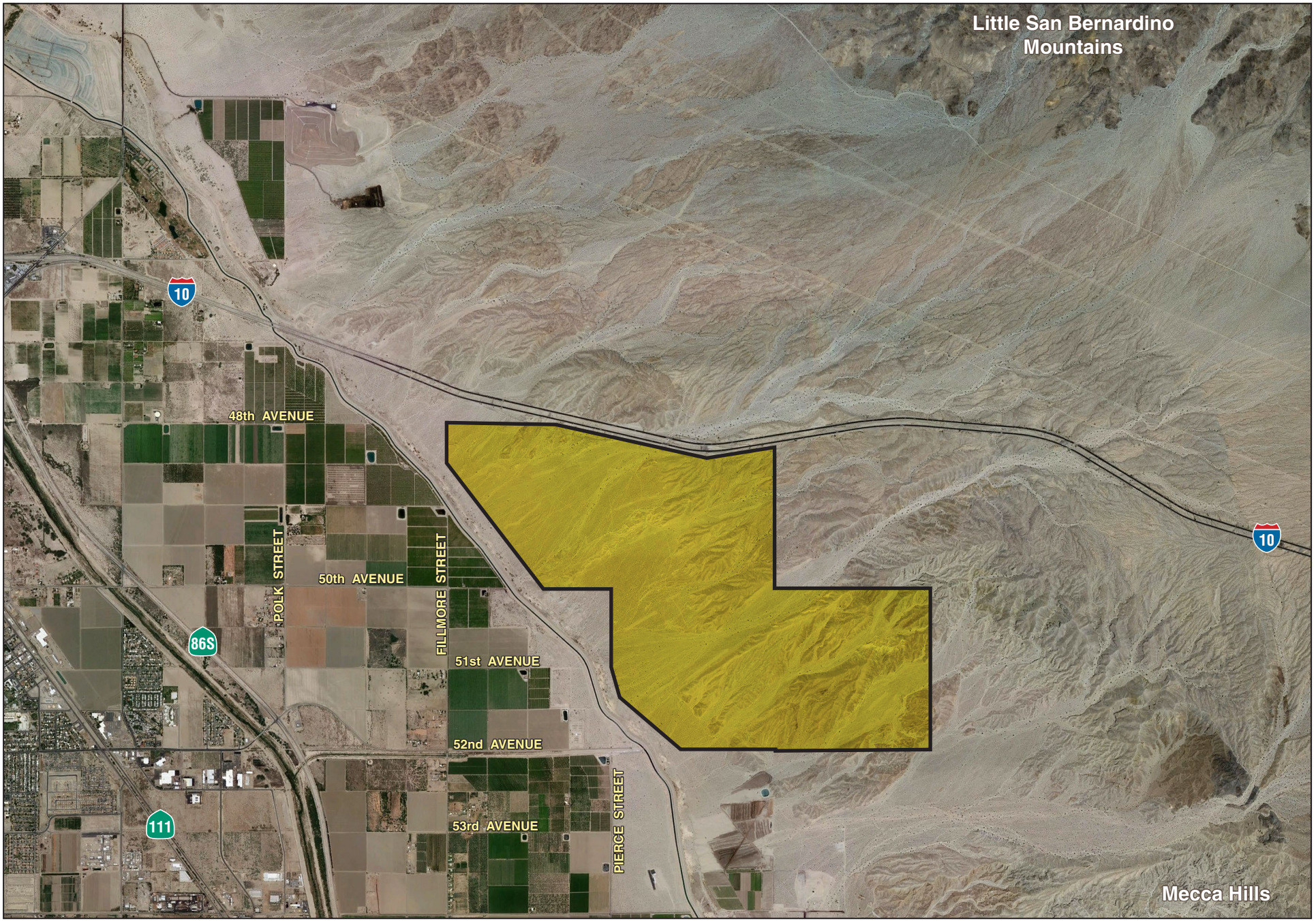
LA ENTRADA SPECIFIC PLAN

Site Vicinity

1/15/13 JN 133278-18991 MAS

Exhibit 2

EXHIBIT 3, *Project Site*



not to scale

LA ENTRADA SPECIFIC PLAN

Project Site

1/15/13 JN 133278-18991 MAS

Exhibit 3

Section 2 Summary of Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of "waters of the U.S.", including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States (WoUS) under Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." The term WoUS is defined as follows[5]:

(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 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 WoUS under the definition;

(5) tributaries of waters identified in paragraphs (1)-(4) mentioned above;

[5] CWA regulations 33 CFR §328.3(a).

(6) the territorial seas; and,

(7) wetlands adjacent to the waters identified in paragraphs (1)-(6) mentioned above.

Wetlands, a subset of jurisdictional waters, are jointly defined by the Corps and EPA as "*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.*"[6] Wetlands generally include swamps, marshes, bogs, and similar areas.

It should be noted that the Corps does not regulate isolated waters and wetlands with no interstate or foreign commerce connection.[7]

The Corps will assert jurisdiction over traditional navigable waters (TNWs) and all wetlands adjacent to TNWs, as well as non-navigable tributaries of TNWs that are relatively permanent waters (RPW) (i.e., the tributaries typically flow year-round or have a continuous flow at least seasonally) and wetlands with a continuous surface connection that directly abut such tributaries; however, the agencies will evaluate jurisdiction over the following features based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:[8]

- Non-navigable tributaries that are not relatively permanent (do not flow typically year-round or have a continuous flow at least seasonally);
- Wetlands adjacent to such tributaries; and,
- Wetlands adjacent to, but that do not directly abut, a relatively permanent non-navigable tributary.

A case-by-case "significant nexus" analysis is conducted to determine whether the waters noted above and their adjacent wetlands are jurisdictional. A "significant nexus" may be found where waters, including adjacent wetlands, affect the chemical, physical, or biological integrity of downstream TNWs. The significant nexus analysis also includes consideration of hydrologic and ecologic factors relative to TNWs. RBF's methodology regarding significant nexus determinations is discussed in Section 3.0.

6 CWA regulations 33 CFR §328.3(b).
7 Solid Waste Agency of Northern Cook County v. United States Corps of Engineers (SWANCC)
8 Rapanos v. United States 547 U.S. 715 (2006) (Rapanos)

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Applicants for a federal license or permit for activities which may discharge to waters of the United States must seek Water Quality Certification from the state or Indian tribe with jurisdiction. [9] Such Certification is based on a finding that the discharge will meet water quality standards and other applicable requirements. In California, Regional Boards issue or deny Certification for discharges within their geographical jurisdiction. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which are defined as numeric and narrative objectives in each Regional Board's Basin Plan. Where applicable, the State Water Resources Control Board has this responsibility for projects affecting waters within multiple Regional Boards. The Regional Board's jurisdiction extends to all waters of the State (includes SWANCC and Rapanos conditions) and to all WoUS, including wetlands.

Additionally, the California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

California Fish and Game Code Sections 1600-1616 establish a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;

(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or

(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

[9] Title 33, United States Code, Section 1341; Clean Water Act Section.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. The Fish and Game's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Any of the below criteria could be applicable in determining what constitutes a stream depending on the potential for the proposed activity to adversely affect fish and other stream-dependent wildlife resources.

(1) The term "stream" can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams based on United States Geological Survey (USGS) maps, and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

(2) Biological components of a stream may include aquatic and riparian vegetation, along with all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system.

(3) As a physical system, a stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed or channel, a bank and/or levee, in-stream features such as logs or snags, and various flood plains depending on the return frequency of the flood event being considered (i.e., 10, 50, or 100 years, etc.).

(4) The lateral extent of a stream can be measured in several ways depending on a particular situation and the type of fish or wildlife resource at risk. The following criteria are presented in order from the most inclusive to the least inclusive:

    (a) The flood plain of a stream can be the broadest measurement of a stream's lateral extent depending on the return frequency of the flood event used. For most flood control purposes, the 100-year flood plain exists for many streams. However, the 100-year flood plain may include significant amounts of upland or urban habitat and therefore may not be appropriate in many cases.

    (b) The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream. In

most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk.

(c) Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark the lateral extent of a stream.

(d) A levee or other artificial stream bank would also be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee.

Section 3 Methodology

The analysis presented in this document is supported by field surveys and verification of the existing conditions conducted on December 3, 2012 and January 9th, 17th, 22nd, 31st of 2013. A meeting to discuss field methods was also held on site with Jim Mace, Senior Project Manager, of the U.S. Army Corps of Engineers (Corps) on October 3, 2012. While in the field data points were obtained with a Garmin 62 Global Positioning System (GPS) Map62 in order to record and identify the active channels using field indicators such as ordinary high water mark (OHWM), picture locations, and drainage features. These data were then transferred via USB port as a .shp file and added to the project's jurisdictional map using ESRI ArcInfo Version 10. Data are also recorded through the use of an Apple iPad using an ArcGIS application. Information collected is instantly synchronized to an enterprise GIS database hosted by RBF.

3.1 WATERS OF THE U.S. AND STATE WATERS

The limits of the Corps' jurisdiction in non-tidal waters extend to the OHWM, which is defined 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.*"[10] An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainages to be jurisdictional waters of the State. The CDFW's jurisdiction extends to the top of bank of the stream/channel or to the limit (outer dripline) of the adjacent riparian vegetation.

3.2 WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps, 2008). This document is one of a series of Regional Supplements to the 1987 Corps Wetland Delineation Manual (Corps Manual). According to the Corps Manual, identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these

[10] CWA regulations 33 CFR §328.3(e).

three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology have been examined using the methodology listed below and documented on Corps' wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

3.2.1 Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH);
- *Sapling/shrub stratum:* Consists of woody plants less than 3 inches in DBH, regardless of height;
- *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.[11] Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that

[11] Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

comprise at least 20% (also known as the "50/20 rule") of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using *The List of Plant Species that Occur in Wetlands* (USFWS, 1988). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- *Obligate Wetland (OBL):* Plants that occur almost always in wetlands under natural conditions, but which may also occur rarely in non-wetlands (e.g., *Spartina alterniflora, Taxodium distichum*);

- *Facultative Wetland (FACW):* Plants that occur usually in wetlands, but also occur in non-wetlands (e.g., *Fraxinus pennsylvanica, Cornus stolonifera*);

- *Facultative (FAC):* Plants with similar likelihood of occurring in both wetlands and non-wetlands (e.g., Gleditsia triacanthos, Smilax rotundifolia);

- *Facultative Upland (FACU):* Plants that occur sometimes in wetlands, but occur more often in non-wetlands (e.g., *Quercus rubra, Potentilla arguta*); and,

- *Obligate Upland (UPL):* Plants that occur rarely in wetlands, but occur almost always in non-wetlands under natural conditions (e.g., *Pinus echinata, Bromus mollis*).

3.2.2 Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizopheres surrounding living roots and the presence of

reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

3.2.3 Soils

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 16-20 inches.[12] The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

[12] According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Hydric soil indicators are present in three groups, which include:

All Soils

"All soils" refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

Sandy Soils

"Sandy soils" refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

Loamy and Clayey Soils

"Loamy and clayey soils" refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

3.3 SWANCC WATERS

The term "isolated waters" is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3-parameter wetland methodology utilized by the Corps.

3.4 RAPANOS WATERS

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands have a significant nexus to a TNW. The flow characteristics and functions of the tributary itself, in combination with the functions performed by any wetlands adjacent to the tributary, determine if these waters/wetlands significantly affect the chemical, physical, and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

(1) The consideration of hydrologic factors including, but not limited to, the following:

- volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
- proximity to the TNW

- size of the watershed average annual rainfall
- average annual winter snow pack

(2) The consideration of ecologic factors including, but not limited to, the following:

- the ability for tributaries to carry pollutants and flood waters to TNWs
- the ability of a tributary to provide aquatic habitat that supports a TNW
- the ability of wetlands to trap and filter pollutants or store flood waters
- maintenance of water quality

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

In the presence of Rapanos drainage conditions, the Regional Board and CDFW take jurisdiction via the OHWM and/or the 3-parameter wetland methodology utilized by the Corps.

Section 4 Literature Review

Review of relevant literature and materials often aids in preliminarily identifying areas that may fall under an agency's jurisdiction. A summary of RBF's literature review is provided below (refer to Section 7.0 for a complete list of references used during the course of this delineation).

4.1 WATERSHED REVIEW

The Salton Sea Watershed is located in the Sonoran desert region in the southeastern corner of California, encompassing one-third of the Colorado River Basin Region (about 8,360 square miles). The Salton Sea is located in a closed desert basin in Riverside and Imperial Counties in southern California, south of Indio and north of El Centro. The basin is more than 200 feet below sea level and has no natural outlet. Although lakes have existed in this basin in the past, the current body of water formed in 1905 when a levee break along the Colorado River caused its flows to enter the basin for about 18 months. Since 1905, the Sea has fluctuated in size with varying inflow, and it today has a surface area of about 365 square miles. The project site is approximately 16.5 miles north of the Salton Sea.

A balance between inflowing water and evaporation sustains the Sea. With no outlet, any salts that are dissolved in the inflow are trapped. Salt concentrations in the Sea are currently about 48,000 milligrams per liter (mg/L), or about 30 percent higher than ocean water. Salinity will continue to rise under current conditions, however, under the recently approved Quantification Settlement Agreement inflow to the Sea will be will be significantly reduced. The reduction in inflow will cause the Sea to shrink and cause salinity to rise faster than it would have without a reduction in inflow.

A gradual increase in salinity and its consequences was recognized soon after the Sea was formed. Various salinity control measures were studied as early as the mid-1950s. Since then, many alternatives have been proposed and analyzed. The current effort by the California Resources Agency is the latest attempt to develop a permanent solution to continued degradation of the environmental values of the Sea.[13]

The Whitewater River is tributary to the Salton Sea and is defined in the Basin Plan as the reach from the headwaters in the San Gorgonio Mountains to (and including) the Whitewater recharge basins near the Indian Avenue crossing in the City of Palm Springs. The reach of the Whitewater River from the Whitewater recharge basins near Indian Avenue to the Coachella Valley Stormwater Channel (CVSC) near Indio is defined as a Wash (Intermittent

[13] http://www.water.ca.gov/saltonsea/

or Ephemeral Stream) in the Basin Plan. The Whitewater River is not listed as an Impaired Waterbody within the Whitewater River Region. Due to the small percentage of the Whitewater River Watershed and the Whitewater River Region in urban land uses, urban runoff constitutes a minor percentage of the total flow in the Whitewater River under storm conditions.[14]

The CVSC is located in the Coachella Valley, within Riverside County, California. The Valley is largely agricultural, utilizing ground water and water from the Colorado River delivered by the Coachella Canal via the All-American Canal, for crop irrigation. CVSC is an engineered extension of the Whitewater River that functions as a conveyance channel for: (a) irrigation return flows, (b) treated wastewater from three permitted municipal wastewater treatment plants, (c) wastewater discharged from one permitted fish farm, and (d) urban and storm water runoff. The channel is approximately 25 miles in length, extending from the City of La Quinta, west of Washington Street, to the north shore of the Salton Sea. The bottom of the channel is unlined, although the walls of the CVSC are concrete-lined in some areas, to facilitate flow and reduce erosion. The proposed amendment would only apply to the last 17 miles of the CVSC where perennial flow exists, beginning in the City of Coachella just west of Dillon Road at the outlet of the Valley Sanitary Waste Water Treatment Facility, and terminating at the northern shore of the Salton Sea.[15]

4.2 HYDROLOGY REVIEW

Prior to visiting the site, RBF examined onsite drainage patterns with FLO-2D®, a two-dimensional flood-routing model. The model is capable of analyzing the combined temporal and spatial variation of unconfined flood waters as well as evaluating the significance of infiltration and precipitation generated runoff. Such analysis is required when working in the desert/arid west environmental and is an additional tool for delineators. FLO-2D simulates a discharge hydrograph with very small time steps on the order of 30 seconds to one minute. The model uses a digital map base to establish a flow domain system of uniform grid elements. Channel flow is simulated using a channel geometry relationships reflective of the natural channel shape. Overbank and return flow discharges are computed to assess floodplain inundation and floodwave attenuation. The model also simulates infiltration losses and conserves volume. This information is utilized to calculate flows that would reach the onsite evacuation outlet after transmission losses and assist with drainage analysis as it relates to jurisdiction and drainage significance.

[14] http://www.waterboards.ca.gov/coloradoriver/boarddecisions/adoptedorders/orders/2008/08_0001ms4_permit

[15] http://www.waterboards.ca.gov/coloradoriver/waterissues/programs/basinplanning/docs/chllavlly/stf_rpt

4.3 LOCAL CLIMATE

The Coachella Valley Basin is located in the Colorado Desert Region. Located in the northern region of the Salton Trough, in Riverside County, it is characterized by warm summer days and mild winters with low average precipitation.

The project site is located in the Arid West, which is known for a significant degree of variability in spatial and temporal rainfall amounts. Rainfall is extremely limited with average annual precipitation rates of 2 to 4". Most rainfall occurs during winter months though high intensity rains can sometimes occur during the mid-summer producing flash floods and severe erosion.

Climate in the Arid West is generally hot and dry with a long summer dry period. Average annual precipitation mostly <15 inches except along the coast. Most precipitation falls as rain. Annual temperature variations in the Coachella Valley are extreme with occasional winter lows in the mid-20s (F) and occasional summer highs in the mid-120s (F). The mean annual temperature is 74(F).[16] On average, the warmest month is July at 107 degrees (F) and the coolest month is December at 44 degrees (F). The maximum average precipitation occurs in February with 0.66 inches.

Rainfall is highly variable in either season, with long dry periods interrupted by occasional short, stormy periods. In summer, convective thunderstorms can be very intense, producing severe flash floods that fill the normally dry washes. The water soon dissipates, although some will remain below the surface.

This is the true low desert, and temperatures are very hot in summer and mild in winter. Summertime daily high temperatures are regularly above 104^{o}F and frequently top 113^{o}F. On the other hand, winter is usually quite pleasant with daily high temperatures averaging around 72^{o}F and nighttime lows around 41^{o}F. Sub-freezing temperatures are not common, although occasional cold outbreaks bring lows in the 23^{o}F range.

Below is a summary of the recorded average precipitation for the project area which has been generally consolidated in 10 year increments beginning in 1904 through December 2012.[17] Total rainfall for each specific year is located in Appendix A, *Documentation.*

Table 1. Precipitation Summary

Years	Begin Date	End Date	Average Precipitation
1904-1910	1/1/1904	12/31/1910	2.87

[16] http://www.cvconservation.org/coachellavalley.html

[17] Weathersource.com, January 19, 2013

1911-1919	1/1/1911	12/31/1919	2.93
1920-1929	1/1/1920	12/31/1929	3.61
1930-1939	1/1/1930	12/31/1939	3.91
1940-1949	1/1/1940	12/31/1949	3.69
1950-1959	1/1/1950	12/31/1959	2.42
1960-1969	1/1/1960	12/31/1969	2.56
1970-1979	1/1/1970	12/31/1979	3.77
1980-1989	1/1/1980	12/31/1989	3.07
1990-1999	1/1/1990	12/31/1999	2.70
2000-2012	1/1/2000	12/31/2012	2.26

4.4 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within a project site.

Most topographic maps are made from aerial photos and, due to errors in photo interpretation, some streams which should be shown as "blue-line" or "dashed blue-line" are not shown. Even the most detailed topographic maps (7.5 minute) do not show all streams. Drainages and wetlands do not need to be labeled on USGS maps in order to be jurisdictional.

The project site is located within Section 35, T5S, R8E Section 36, T5S, R8E, Section 2, T6S, R8E, Section1, T6S, R8E, Section 6, T6S, R9E, East San Bernardino Base Meridian of the USGS *Thermal Canyon, California* quadrangle. On-site topography ranges from approximately 80 to 600 feet above msl, and slopes to the northeast.

Based on current topographic maps, six blue-line streams trend the project site in a northwest direction. These features are nearly equidistant from one another and are distributed throughout the project site. These features originate in the Little San Bernardino Mountains as first order streams from Front Hill, East Double, and West Double Canyons. Several smaller unnamed drainages also traverse the site or coalesce into the features above. The project is bordered by Interstate 10 (I-10) Freeway to the north and the California Canal to the west with agricultural fields beyond. Undeveloped land is abuts the project site to the east and south. Table 2 lists those drainages that were documented during the site visits.

Table 2. USGS Quad Map Drainage Locations (Thermal Canyon, CA)

Relevant Reach/ Active Channel	Latitude/Longitude	Elevation (feet above msl)
A	33°,41' 56.06 N, 116° 07'34.15 W	134
B	33°,41' 36.02 N, 116° 06'50.29 W	211
C	33°,41' 35.52 N, 116° 05'58.09 W	436
C1	33°,41' 43.27 N, 116° 05'44.08 W	526
D	33°,41' 10.77 N, 116° 06'01.98 W	233
D1	33°,41' 28.47 N, 116° 05'45.44 W	486
D2	33°,41' 27.79 N, 116° 05'40.89 W	480
D3	33°,41' 18.20 N, 116° 05'45.60 W	436
D4	33°,41'16.71 N, 116° 05'47.00 W	415
D5	33°,41'13.71 N, 116° 05'47.14 W	424
D6	33°,41'13.12 N, 116° 05'50.03 W	399
D7	33°,41'10.00 N, 116° 05'58.64 W	350
E	33°,40' 57.72 N, 116° 05'47.15 W	336
E1	33°,41' 00.05 N, 116° 05'55.39 W	328
E2	33°,41' 05.63 N, 116° 05'20.01 W	469
F	33°,40' 43.48 N, 116° 05'21.08 W	341
F1	33°,40' 54.63 N, 116° 05'23.76 W	398
F2	33°,40' 58.20 N, 116° 04'57.65 W	500
F3	33°,41' 00.17 N, 116° 04'51.68 W	548
F4	33°,40' 54.72 N, 116° 04'54.07 W	499
F5	33°,40' 54.26 N, 116° 04'49.79 W	515
G	33°,40' 32.31 N, 116° 05'06.34 W	352
G1	33°,40' 41.58 N, 116° 04'58.06 W	401
H	33°,40' 27.73 N, 116° 04'52.01 W	371
H1	33°,40' 21.20 N, 116° 04'48.77 W	362
I	33°,40' 23.06 N, 116° 06'33.63 W	58
I1	33°,41' 16.67 N, 116° 07'25.23 W	54

4.5 AERIAL PHOTOGRAPH

Prior to the field visits, RBF reviewed an aerial photograph, provided by Google Earth Imaging and Eagle Aerial 2012 for the project site. Aerial photographs can be useful during the delineation process, as the photographs often indicate drainages and vegetation (i.e., riparian vegetation) present within the boundaries of the project site.

According to the aerial photograph, the project site is undeveloped and sparsely vegetated. Multiple distributary drainages can be seen throughout the project site trending in a southwest direction across the site. Also observed on the aerial photograph are older fan deposits which are characterized by lag gravel pavements and display a darker desert varnish.

Development in the immediate area of the project site is non-existent. A considerable amount of agricultural land uses can be seen to the west of the project site and more sparsely to the immediate south. The Coachella Channel is visible to the east and the I-10 can be seen bordering the northern boundary of the project site.

Historical aerial photographs, as available, were reviewed on Google Earth. Historical aerial photographs were available between 1996, 2003, 2005, 2006, and 2009-2012. The project site was similar in all years reviewed. No significant changes in drainage location or vegetation types were noted. No ponding was noted on-site during the aerial photograph review.

4.6 SOIL SURVEY

On-site and adjoining soils were researched prior to the field visits using the U.S. Department of Agriculture, Soil Conservation Service, Soil Survey for Coachella Valley Area, California, as well as the USDA/NRCS Custom Soil Resource Report. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color). The following soils were identified on-site pursuant to the review of the noted soils resource reports:

Badland (BA)

Badland soils consist of very steep, excessively drained, severely eroded areas broken by numerous deeply entrenched channels and many steep side drainages that have raw bands, or freshly exposed material. The slightly consolidated sandy alluvium is capped with a very thin mantle of loose sand. Badland produces large amounts of sediment and is nearly barren of vegetation. These soils are found on 50-75 percent slopes, with a parent material of consolidated sandy alluvium. In a typical profile 0 to 60 inches is weathered bedrock. The depth to restrictive feature is 0 to 3 inches to paralithic bedrock. The capacity of the most limiting layer to transmit water (Ksat) is moderately high at 0.20 to 0.57 in/hr. Surface runoff is very rapid and the erosion hazard very high.

Borrow Pits (BP)

Borrow pits are open excavations from which the soils and underlying material have been removed to construct the canal banks and flood protection dikes across alluvial fans on the uphill side of the Coachella Canal. These borrow areas are from 5 to 30 feet deep and 200 to 900 feet wide depending on the amount of material needed for the dikes and canal banks. The average width is approximately 500 feet. Included with the Borrow pits in mapping is the Coachella Canal, maintenance roads, and spoil banks of material excavated from the canal.

Borrow pits are idle or they are used for water conveyance and maintenance or as transient storage basins for floodwater and debris. Sometimes they store the full flow and act as percolation basins in addition to catching the debris. This is especially true when the storm is local in nature. Borrow pits are barren and have no value for farming. They are now natural flood hazard areas.

Carsitas gravelly sand, 0 to 9 percent slopes, (CdC)

The Carsitas series consists of excessively drained soils with parent material consisting of gravelly alluvium derived from granite. These soils are found on alluvial fans, with an elevation for this map unit at 800 feet. Mean annual precipitation is 4 inches. The mean annual air temperature is 72 to 73 degrees F with a frost-free period of 275 to 325 days. In a typical profile 0 to 10 inches and 10 to 60 inches is gravelly sand. A representative profile of the Carsitas gravelly sand 0 to 10 inches olive gray (5Y 4/2) when moist and 10 to 60 inches olive gray (5Y 4/2) when moist; stratified; single grain; loose, nonsticky and nonplastic; few coarse roots and very few fine roots; common fine interstitial pores; slightly effervescent, and moderately alkaline. The depth to the restrictive feature is more than 80 inches and a depth to water table more than 80 inches. This soil drainage class is excessively drained with no flooding and no ponding as identified in the soil survey. The available water capacity is very low (about 3.0 inches). The map unit composition consists of minor components of Riverwash (4%), Carsitas (4%), Myoma (4%), and other unnamed stony or gravelly soils (3%). Small slightly entrenched stream channels become less distinct as the soil of the slope decreases to 1 to 2 percent. According to the soils survey they form an indefinite pattern of braided stream channels, which are very shallow and have coarser debris deposited in them. Runoff is slow and the erosion hazard is moderate.

Carsitas cobbly sand 2 to 9 percent slopes, (ChC)

This gently sloping to moderately sloping soil is located on alluvial fans, valley fill, and remnants of dissected alluvial fans along the east, north and west edges of the Coachella Valley. The soils has a profile similar to the one described as representative of the series, but cobles and some stones cover 1 to 3 percent of the surface. The Carsitas series consists of excessively drained soils with parent material consisting of gravelly alluvium derived from granite. These soils are found on alluvial fans, with an elevation for this map

unit at 800 feet. Mean annual precipitation is 4 inches. The mean annual air temperature is 72 to 73 degrees F with a frost-free period of 300 days.

In a typical profile 0 to 10 inches is cobbly sand and 10 to 60 inches is gravelly sand. A representative profile of the Carsitas gravelly sand 0 to 10 inches olive gray (5Y 4/2) and 10 to 60 inches olive gray (5Y 4/2) when moist; satisfied; single grain; loose, nonsticky and nonplastic; few coarse roots and very few fine roots; common fine interstitial pores; slightly effervescent, and moderately alkaline. The depth to the restrictive feature is more than 80 inches and a depth to water table more than 80 inches. This soil drainage class is excessively drained with no flooding or ponding frequency as identified in the soil survey. The available water capacity is very low (about 3.0 inches). The map unit composition consists of minor components of Riverwash (4%), Carrizo (4%), Chuckawalla (4%), and other unnamed soils (3%). Some small entrenched stream channels form a lacy, shallow braided stream channel that starts where the primary channel is choked with coarse debris and spills out across the soils surface until it concentrates to form a new channel. Runoff is rapid and the erosion hazard is moderate.

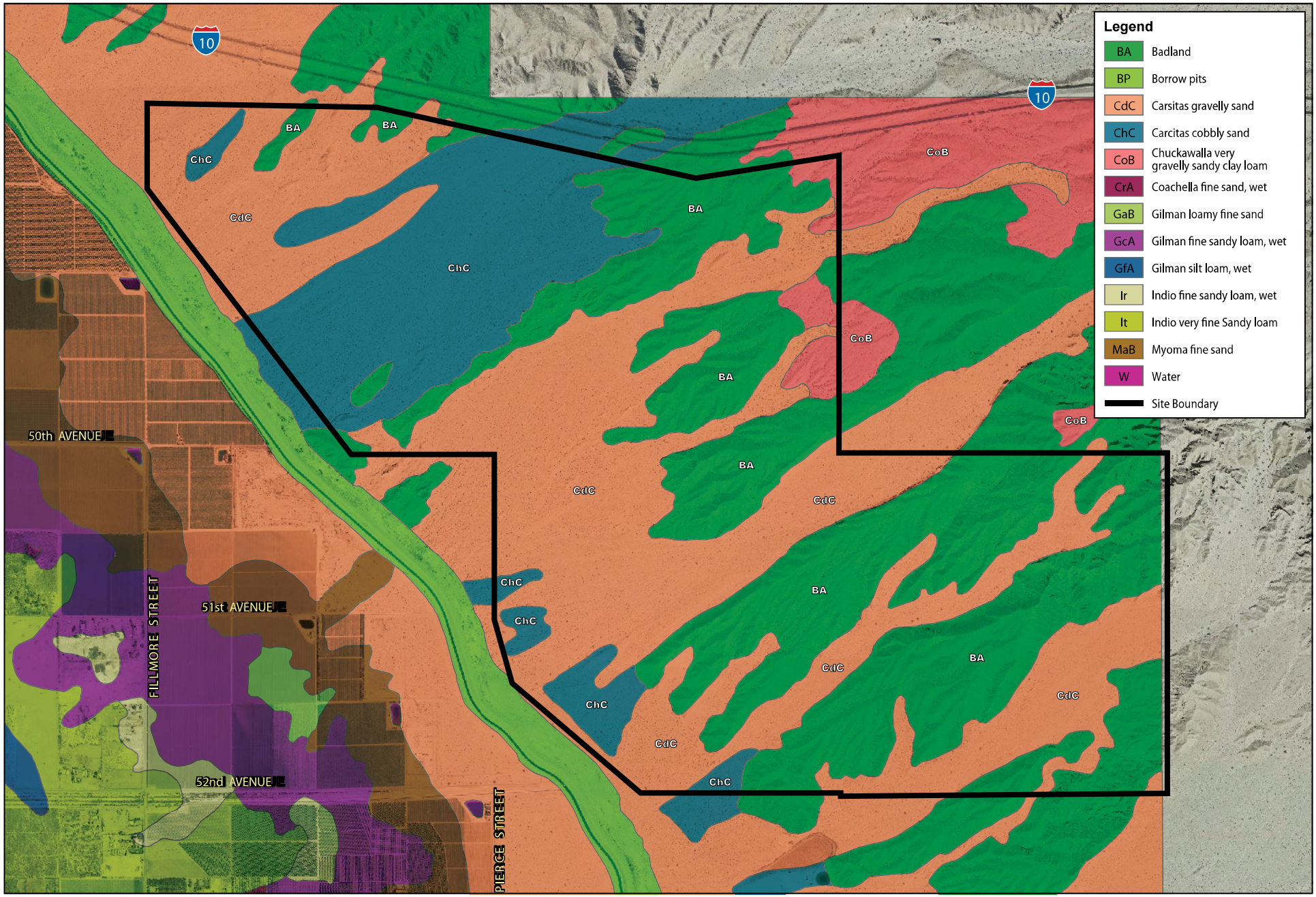
Chuckawalla very gravelly sandy loam, 2 to 5 percent (CoB)

The Chuckawalla series consists of well drained soils that formed in old alluvium. These soils are found on alluvial fans with parent material consisting of gravelly alluvium. These soils are found on alluvial fans, with an elevation for this map unit of 400 to 1,000 feet. Mean annual precipitation is 4 inches. The mean annual air temperature is 72 degrees F with a frost-free period of 270 to 300 days.

Typically, the surface layer is about one-fourth inch of pale brown to very gravelly fine sand. It is covered with a close fitted surface pavement of pebbles and cobbles coated with desert varnish. A representative profile of this soil consists of a desert varnish, approximately 90 percent of the area covered, partially imbedded in the surface, Horizon A2-0 to ¼ inch is dark brown (10YR 4/3) when moist; single grain; loose, nonsticky and nonplastic; very slightly effervescent, and moderately alkaline. Horizon B21t ¼ inch to 3 inches brown (7.5YR 5/4) moist; moderate medium subangular blocky structure. According to the USDA Soils Report a typical profile is further described as being comprised of 0-12 inches very gravelly sandy clay loam, 12 to 25 inches very gravelly fine sandy loam and 25 to 60 inches very gravelly sand. The depth to restrictive feature is more than 80 inches as is the depth to water table. This soil drainage class is well drained with no flooding and no ponding frequency noted in the soil survey. Available water capacity is very low (about 2.1 inches). The map unit composition consists of minor components of Alluvium or Colluvium (10%), Carsitas (3%), and Riverwash (2%).

According to the Soil Survey, the project site has a low potential for hydric soil characteristics (refer to Exhibit 4, *Soils Map*).

EXHIBIT 4, *Soils Map*



Source: NRCS, Bing Maps.

0 2000'

LA ENTRADA SPECIFIC PLAN

Soils Map

1/22/13 JN 133278-18991 MAS

Exhibit 4

4.7 HYDRIC SOILS LIST OF CALIFORNIA

RBF reviewed the Hydric Soils List of California, provided by the Natural Resources Conservation Service, in an effort to verify whether or not on-site soils are considered to be hydric. It should be noted that lists of hydric soils along with soil survey maps are good off-site ancillary tools to assist in wetland determinations, but they are not a substitute for on-site investigations. Three of the on-site soils identified in the previous section are listed Hydric Soils List of California. These soils include Borrow Pits (BP), Carsitas 0 to 9 slopes and Carsitas 2 to 9 percent slopes.

4.8 NATIONAL WETLANDS INVENTORY

RBF reviewed the U.S. Fish and Wildlife Service's National Wetland Inventory maps. Typical wetland features were not noted within the study area; however, other Freshwater wetlands (misc. types) were identified beyond the project limits at the base of the levee for the Coachella Canal. The areas are identified as Palustrine wetland with the general description of farmed wetland, saline seep or other miscellaneous wetland (refer to Appendix A, *Documentation*).

4.9 FLOOD ZONE

RBF searched the Federal Emergency Management Agency website for flood data for the project site. Based on the Flood Insurance Rate Map No. 06065C2300G, the project site is not located within areas subject to flood inundation by the 1% annual chance flood (i.e.100-year flood). Please refer to Appendix A, *Documentation,* for more information.

Section 5 Site Conditions

RBF regulatory specialists Richard Beck, PWS, Chris Johnson, PWS, Tom Millington, and Wesley Salter, PWS, visited the project site from approximately 8:00 a.m. to 4:00 p.m. on December 3, 2012 and January 9th, 17th, 22nd, 31st of 2013 to verify existing conditions and document jurisdictional areas. The temperatures ranged between approximately 58°F and 80°F with clear skies. No limitations were encountered during the site visits. The following general site conditions were documented during the field work.

5.1 VEGETATION

Site conditions were characteristic of the arid west environment and typical of creosote bush scrub habitat. The landscape is comprised predominantly of creosote (*Larrea tridentate*), but includes other plant species of the desert scrub community such as brittlebush (*Encelia farinosa*), desert trumpet (*Eriogonum inflatum*), blue palo verde (*Cercidium floridum*), ocotillo (*Fouquieria splendens*), white bursage (*Ambrosia dumosa*), California croton (*Croton californicus*), desert lavender (*Hyptis emoryi*), burrobrush (*Ambrosia salsola*), sweetbush (*Bebbia juncea*), indigo bush (*Psorothamnus schottii*), smoke tree (*Psorothamnus spinosus*), pencil cholla (*Opuntia ramosissima*), California barrel cactus (*Ferocactus cylindraceus*) and beavertail cactus (*Opuntia basilaris*). The vegetation noted above was distributed throughout the project site. The majority of larger tree species, such as blue palo verde (*Cercidium floridum*) and smoke tree (*Psorothamnus spinosus*) were located within the active channels.

Vegetation within the active channels was very sparse and in some cases absent as a result of the characteristic flood magnitude for these environments which produce short duration, high-intensity rainfall and subsequently substantial runoff. Additionally, upland/terrace locations generally exhibited higher densities of vegetation.

5.2 HYDROLOGY

The active channels delineated throughout the project site consisted of deep alluvial sediment which was comprised mainly of sand and gravel deposits. As a result of the high variability typified by these dry desert wash systems, detailed observations of physical and biological features were inventoried. The active channels mapped during this delineation exhibited clear evidence of significant hydrology such as sediment deposition, shelving, and the destruction of vegetation. The active channels also exhibited large accumulations of drift deposits on the upstream side of the channel, which consisted of both woody debris and rocks of various sizes lodged within channel vegetation. The active channels inventoried during the course of the field work were comprised of single and/or compound channel forms and the above noted observation methods were used to identify their limits.

Generally, the active channels exhibited a very flat (i.e. plane) bed topography which was further supported by the observed high width to depth ratios.

Compound channels, extending from I-10, comprise the majority of the on-site waters. These channels generally included a low-flow drainage that has the ability to meander within the larger watercourse. The low-flow channel frequently shifts locations and is unconfined within the watercourse.

The western and lower elevations of the project site often contained discontinuous channels, ultimately turning into overland flow as they approach the Coachella Channel levee. These areas also displayed evidence of erosional features (e.g., rills) as well as segmented swales.

Single-thread drainages were typically found in the eastern areas of the project site, originating from on-site/local topography. These drainages were typically shorter and narrower than other on-site channels given their smaller drainage areas/lesser velocities.

While many of the active channels exhibited a clear bed throughout their lengths, some channel locations near the base of the project site lacked channel confinement due to transmission losses, evaporation and/or general over land flow (Refer to Exhibit 5a and 5b, *On-Site Photos,* and Exhibit 6a and 6b, *Jurisdictional Maps).*

No surface water was present within the active channels during the site visits.

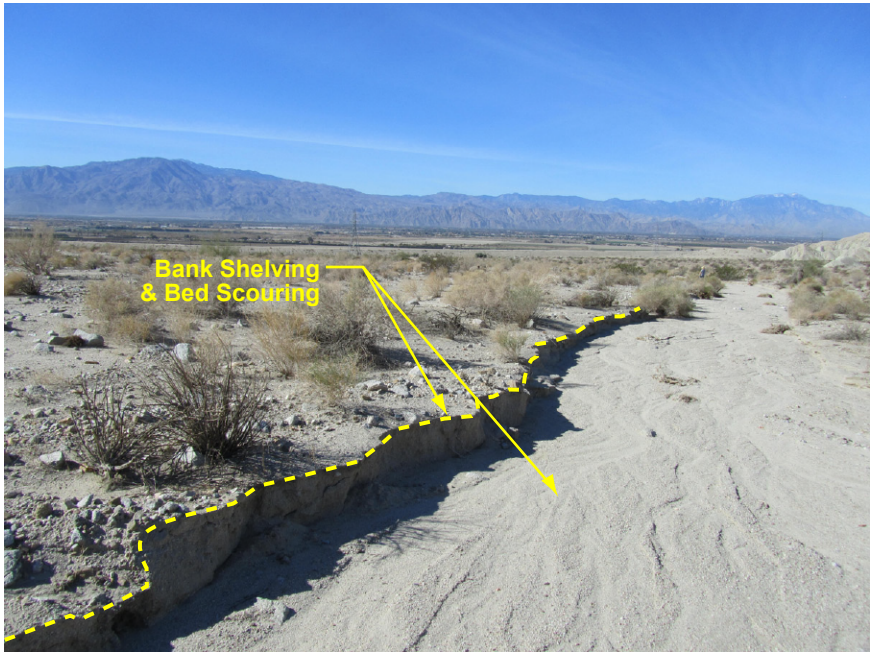
5.3 SOILS

The dominant soils located within the project site consisted of Carsitas gravelly sand, 0 to 9 percent slopes (CdC) and Carsitas cobbly sand, 2 to 9 percent slopes (ChC).

On-site soils were found to be consistent with the soils that were identified during the literature review. Soils were excessively drained and primarily consisted of gravelly sand. The active channels were generally shallow and contained coarser debris depositions. As the slopes decreased towards the base of the project site the channels became less entrenched and distinct when compared to the active channels at higher elevations.

EXHIBIT 5a, *On-Site Photos*

View looking north across the project site noting drift deposits within the active channel.



View looking south across the project site noting cleanly scoured substrate and line impressed bank.

View looking south across the project site noting deposition of bed load within the active channel.

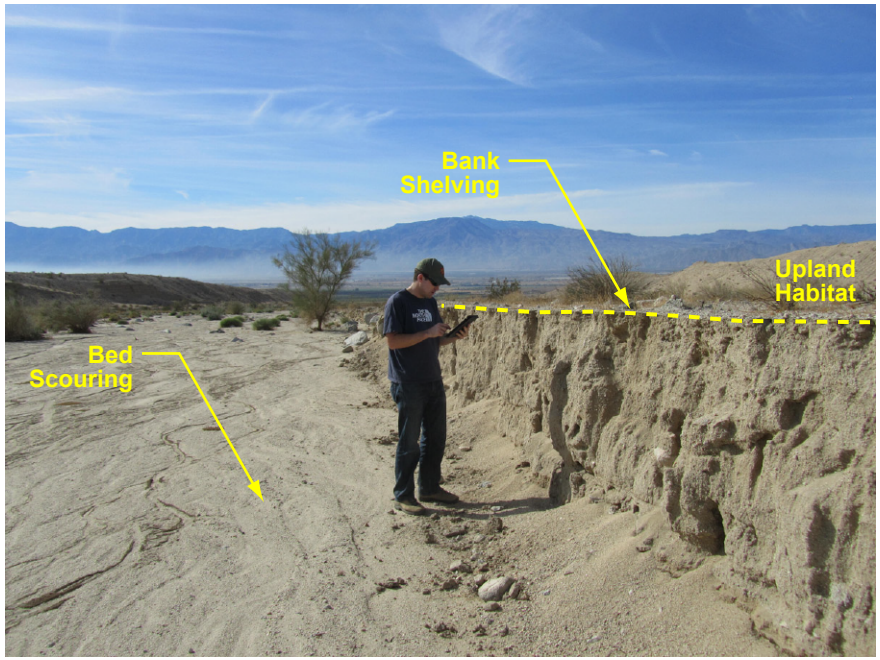
View looking northeast noting typical creosote bush scrub habitat as well as differences in sediment and elevation of the landscape.

LA ENTRADA SPECIFIC PLAN

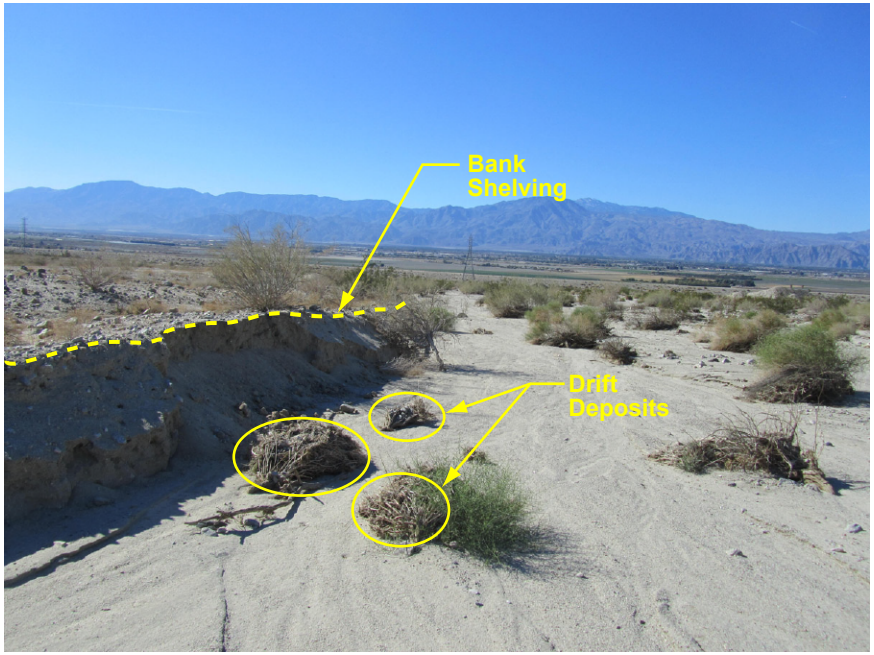
On-Site Photographs

Exhibit 5a

EXHIBIT 5b, *On-Site Photos*

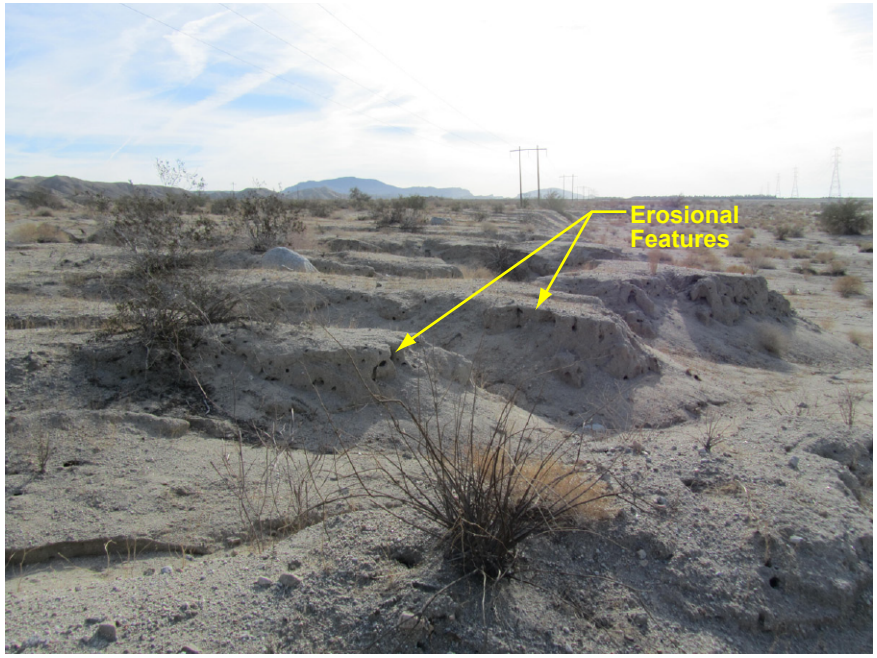


View looking west across the project site noting scour and shelving within the active channel.



View looking west across the project site noting drift deposits and shelving within the active channel.

View looking west of the evacuation channel which conveys flows to the Whitewater River via Wasteway Channel No. 2 during a 50-year flood event.



View looking south along the base of the project site noting non-jurisdictional erosion features.

Table 3. Relevant Reach/Active Channel Summary

Relevant Reach/ Active Channel	On-Site Area (Acres)	Adjoining Riparian Vegetation (Acres)	Length	Approximate Width in Feet (Range)	Average Width in Feet	Location*
A	8.16	-	1,845	55-361	208	33°,41' 56.06 N, 116° 07'34.15 W
B	53.05	0.43	6,024	18-786	402	33°,41' 36.02 N, 116° 06'50.29 W
C	8.79	0.49	3,278	43-245	144	33°,41' 35.52 N, 116° 05'58.09 W
C1	1.15	0.58	972	11-95	53	33°,41' 43.27 N, 116° 05'44.08 W
D	14.1	3.64	4,003	21-445	233	33°,41' 10.77 N, 116° 06'01.98 W
D1	0.34	0.12	808	7-41	24	33°,41' 28.47 N, 116° 05'45.44 W
D2	0.19	0.46	294	8-43	25.5	33°,41' 27.79 N, 116° 05'40.89 W
D3	0.01	-	194	2	2	33°,41' 18.20 N, 116° 05'45.60 W
D4	2.97	0.86	1,567	40-138	89	33°,41'16.71 N, 116° 05'47.00 W
D5	0.18	-	610	4-18	11	33°,41' 13.71 N, 116° 05'47.14 W
D6	0.01	-	202	3	3	33°,41' 13.12 N, 116° 05'50.03 W
D7	0.03	-	294	5	5	33°,41' 10.00 N, 116° 05'58.64 W
E	69.19	-	7,318	3-625	314	33°,40' 57.72 N, 116° 05'47.15 W
E1	0.5	-	793	6-38	22	33°,41' 00.05 N, 116° 05'55.39 W
E2	0.09	-	232	8-21	14.5	33°,41' 05.63 N, 116° 05'20.01 W
F	24.99	-	8,564	8-341	175	33°,40' 43.48 N, 116° 05'21.08 W
F1	7.43	-	3,419	10-178	94	33°,40' 54.63 N, 116° 05'23.76 W
F2	0.12	-	437	6-24	15	33°,40' 58.20 N, 116° 04'57.65 W
F3	2.12	-	2,042	8-68	38	33°,41' 00.17 N, 116° 04'51.68 W
F4	0.65	-	681	7-80	44	33°,40' 54.72 N, 116° 04'54.07 W
F5	1.76	-	1,652	14-69	42	33°,40' 54.26 N, 116° 04'49.79 W
G	9.16	-	4,028	6-245	126	33°,40'32.31 N, 116° 05'06.34 W
G1	0.05	-	214	8-13	11	33°,40' 41.58 N, 116° 04'58.06 W
H	6.07	-	3,070	23-300	162	33°,40' 21.20 N, 116° 04'48.77 W
H1	0.12	-	665	3-12	8	33°,41' 56.06 N, 116° 07'34.15 W
I	0.19	-	149	55	55	33°,40' 23.06 N, 116° 06'33.63 W
I1	0.13	-	158	34	34	33°,41' 16.67 N, 116° 07'25.23 W
TOTAL:	**211.55**[18]	**6.58**[19]	**53,513**	**-**	**-**	**-**

[18] Of the 211.55 acres of CDFW jurisdiction on-site, 10.0-acres of streambed is vegetated with Desert Dry Wash Woodland.

[19] Approximately 6.58-acres of additional Desert Dry Wash Woodland (adjoins streambeds) is located on-site.

Section 6 Findings and Recommendations

This delineation has been prepared for PSAV, LLC, in order to delineate the Corps, Regional Board, and CDFW jurisdictional authority within the project site. This report presents RBF's best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. However, as with any jurisdictional delineation, only the regulatory agencies can make a final determination of jurisdictional boundaries within a project site. Refer to Exhibits 6a and 6b at the end of this section for illustrations of on-site jurisdictional areas.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 Non-Wetland Determination

Evidence of an OHWM was noted within the boundaries of the project site which included the following indicators: a clear, natural line impressed on the bank; changes in the character of soil; shelving; vegetation matted down, bent, or absent; sediment deposition; presence of wrack line; and scour. However, based on the detailed analysis of on-site hydrologic conditions, it was preliminarily determined that the relevant reaches have an insubstantial or speculative effect on the chemical, physical or biological significant nexus to the downstream RPW (Whitewater River); and, therefore to the TNW (Salton Sea).

Prior to leaving the site, and after transmission losses, surface flows from the drainage feature have to flow to the southwestern portion of the property. An evacuation outlet is located in this portion of the property and the outlet serves as the only flood conveyance facility for flows that continue downstream and off-site. The evacuation outlet was constructed with the All American Canal Levee in the 1930's. The outlet is sized for the Standard Project Flood; however, it would take nearly a 50-year storm to produce outlet flows. Once through the outlet, the flows are conveyed through Wasteway Channel No. 2, a channel that discharges into the Whitewater River. The discharge of the Channel to the river is insignificant as the peak flows of the channel do not impact the peak flows of the river.

Based on the proximity to the TNW of 16.5 miles, average annual rainfall of approximately 2.98 inches, and the general flow dynamics discussed throughout this report a significant nexus finding could not be established or supported. Refer to Table 4 for a summary of the active channels identified within the project site which exhibited an OHWM, but were determined to not support a significant nexus finding to the TNW and therefore would not be considered Corp's jurisdictional areas.

6.1.2 Wetland Determination

As previously noted in Section 2.1, an area must exhibit all three wetland parameters described in the Corps Regional Supplement to be considered a jurisdictional wetland. Based on the results of the site visit, no Corps jurisdictional wetlands are located onsite.

6.2 REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

As a result of the lack of Corps jurisdiction, the Regional Board would assume jurisdiction over those surface waters documented during the site visits. Based on the results of the field investigation, a total of approximately 211.55-acre of Regional Board jurisdictional area is located within the project site.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DETERMINATION

Based on the results of the field investigation, a total of approximately 218.13-acre of CDFW jurisdiction is located within the project site. Of the 218.13-acre of CDFW jurisdictional area, approximately 10.0-acres would be considered CDFW vegetated streambed. Of the 218.13-acres of CDFW jurisdictional an additional 6.58-acres of adjoining Desert Dry Wash Woodland would also be considered CDFW jurisdictional vegetation. Refer to Table 4 below for a summary of documented on-site streambeds subject to state jurisdiction.

6.4 GLOBAL RECOMMENDATIONS

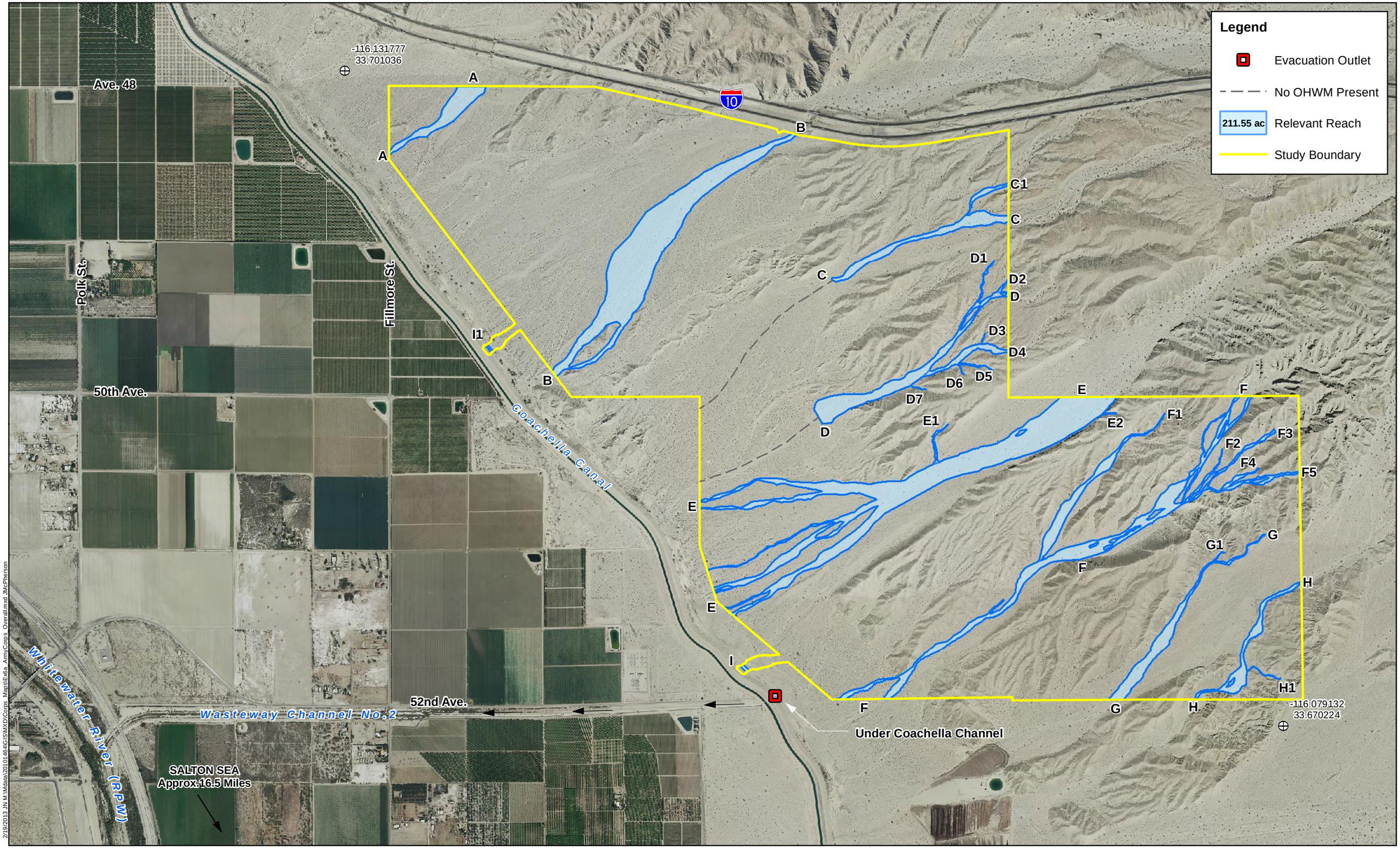
It is highly recommended that the delineation be forwarded to each of the regulatory agencies for their concurrence. The concurrence/receipt would be valid up to five years and would solidify findings noted within this report.

Table 4. On-Site Jurisdictional Summary

Relevant Reach/ Active Channel	Corps of Engineers[20]	Regional Board	CDFW	
	Total On-Site Corps Non-Jurisdictional Area (Non-Wetland)	Jurisdictional Area (Acres)	On-Site Area (Acres)	Adjoining Riparian Vegetation (Acres)
A	8.16	8.16	8.16	-
B	53.05	53.05	53.05	0.43
C	8.79	8.79	8.79	0.49
C1	1.15	1.15	1.15	0.58
D	14.1	14.1	14.1	3.64
D1	0.34	0.34	0.34	0.12
D2	0.19	0.19	0.19	0.46
D3	0.01	0.01	0.01	-
D4	2.97	2.97	2.97	0.86
D5	0.18	0.18	0.18	-
D6	0.01	0.01	0.01	-
D7	0.03	0.03	0.03	-
E	69.19	69.19	69.19	-
E1	0.5	0.5	0.5	-
E2	0.09	0.09	0.09	-
F	24.99	24.99	24.99	-
F1	7.43	7.43	7.43	-
F2	0.12	0.12	0.12	-
F3	2.12	2.12	2.12	-
F4	0.65	0.65	0.65	-
F5	1.76	1.76	1.76	-
G	9.16	9.16	9.16	-
G1	0.05	0.05	0.05	-
H	6.07	6.07	6.07	-
H1	0.12	0.12	0.12	-
I	0.19	0.19	0.19	-
I1	0.13	0.13	0.13	-
Total:	**211.55**	**211.55**	**211.55[21]**	**6.58[22]**

[20] Acreage of Corps jurisdiction removed, for reference (pending Approved Jurisdictional Determination from the Corps).
[21] Of the 211.55 acres of CDFW jurisdiction on-site, 10.0-acres of streambed is vegetated with Desert Dry Wash Woodland.
[22] Approximately 6.58-acres of additional Desert Dry Wash Woodland (adjoins streambeds) is located on-site.

Exhibit 6a, *Federal Jurisdictional Map*



2/19/2013 J:\M:\Mdata\2010\46\4\GIS\MXD\Corps MapsEx6a AmyCorps Overall.mxd JMcPherson

0 750 1,500 3,000 Feet

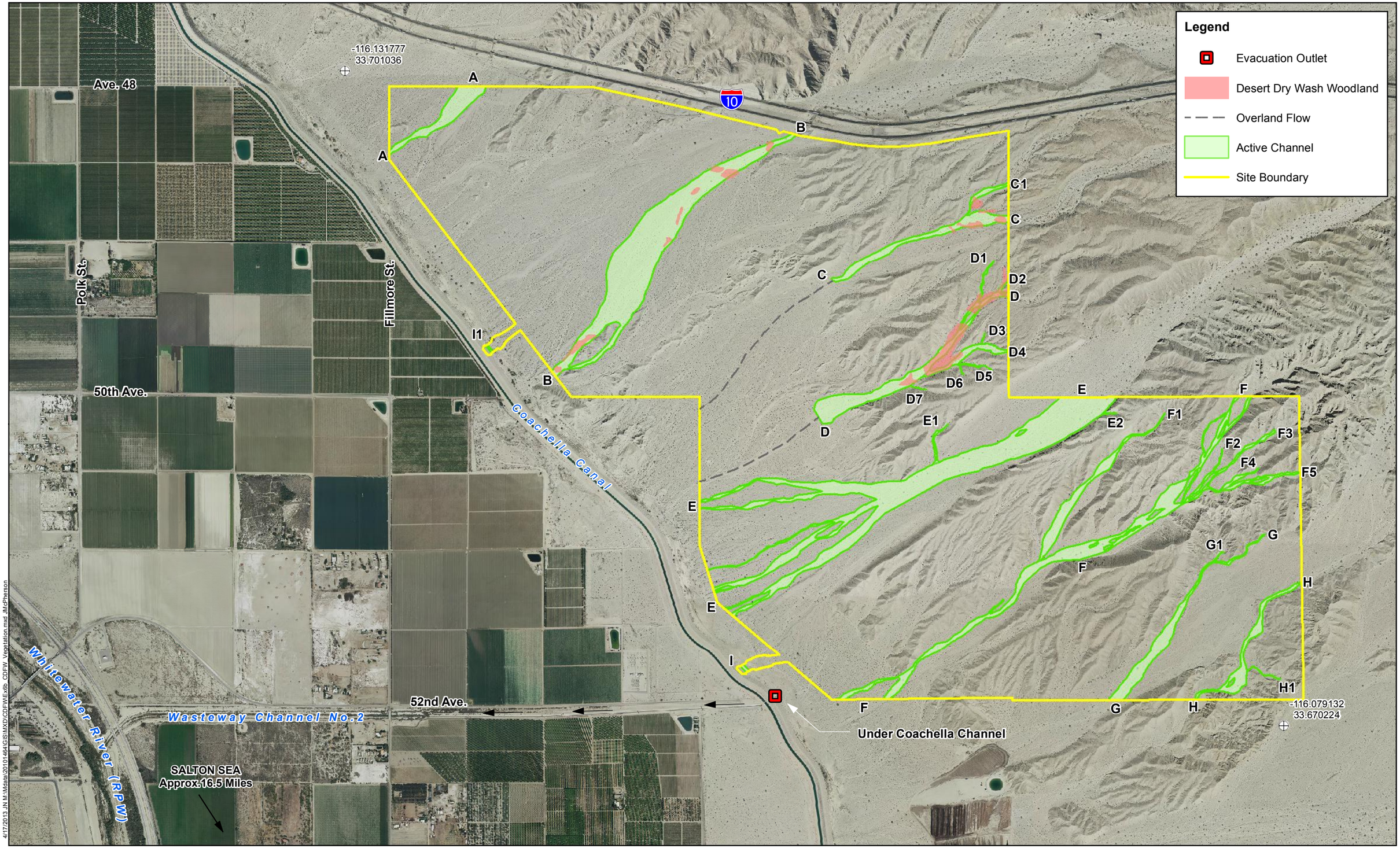
Source: Eagle Aerial Imaging - 2012, Intermap Technologies

LA ENTRADA SPECIFIC PLAN

U.S. Army Corps of Engineers - Jurisdictional Map

Exhibit 6a

Exhibit 6b, *State Jurisdictional Map*



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0 750 1,500 3,000 Feet

Source: Eagle Aerial Imaging - 2012, Intermap Technologies

LA ENTRADA SPECIFIC PLAN

CDFW - Jurisdictional Map

Exhibit 6b

Section 7 References

The following resources were utilized during preparation of this Delineation of State and Federal Jurisdictional Waters:

California Department of Fish and Game, *Field Guide to Lake and Streambed Alteration Agreements Section 1600-1607 California Fish and Game Code*, January 1994

California Department of Fish and Game, *Lake and Streambed Alteration Program*. (http://www.dfg.ca.gov/1600/index.html)

California Department of Fish and Game, *A Review of Stream Processes and Forms in Dryland Watershed,* December 2010

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EPA, *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*, November 2008

Faber, Phyllis M., *Common Riparian Plants of California*, Pickleweed Press 1996

Faber, Phyllis M., *Common Wetland Plants of Coastal California*, Pickleweed Press 1996

Munsell, *Soil Color Charts*, 2009 Year Revised/2009 Production

Natural Resources Conservation Service, *Hydric Soils List of California*, April 2012 (http://soils.usda.gov/use/hydric/)

U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual and Arid West Region (Version 2.0)*, September 2008

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U.S. Army Corps of Engineers, *Practices for Documenting Jurisdiction under Section 404 of the CWA*, Regional Guidance Letter 07-01, June 5, 2007

U.S. Army Corps of Engineers, *Distribution of Ordinary High Water Mark Indicators and their Reliability in Identifying the Limits of "Waters of the United States" in the Arid Southwestern Channels*, February 2006

U.S. Army Corps of Engineers, *Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest*, June 2001

U.S. Army Corps of Engineers, *Los Angeles District Regulatory Program.* (http://www.spl. usace.army.mil/)

U.S. Army Corps of Engineers, *Minimum Standards for Acceptance of Preliminary Wetland Delineations*, November 20, 2001

U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J.S. Wakeley, R. W. Lichvar, and C. V. Nobel. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center, 2008

U.S. Army Corps of Engineers, *Special Public Notice: Map and Drawing Standards for the Los Angeles District Regulatory Division*, September 2010

U.S. Army Corps of Engineers, *The National Wetland Plant List,* October 2012

U.S. Army Corps of Engineers, *Updated Datasheet for the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*, July 2010

U.S. Army Corps of Engineers, *Wetland Delineation Manual*, 1987

U.S. Department of Agriculture, Natural Resources Conservation Service, *Web Soil Survey.* (http://websoilsurvey.nrcs.usda.gov/app/)

U.S. Fish and Wildlife Service, Department of Habitat and Resource Conservation, *Wetland Geodatabase*. (http://wetlandsfws.er.usgs.gov/NWI/index.html)

U.S. Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, *Flood Insurance Rate Map No. 06065C2300G*. August 2008

U.S. Geological Survey, 7.5 Minute Series Topographic Quadrangle, *Thermal Canyon, California*, 1956, photorevsied 1972

Weathersource.com, January 19, 2013

Appendix A *Documentation*

FEMA (FLOOD ZONE DOCUMENTATION)

Riverside County
Unincorporated Areas
060245

10

35 36 31 32 33

DX4838

10

T. 5 S.
T. 6 S.

2 1 6 5 4

Wasteway No.2

11

53RD AVENUE

12 7 8 9

City of
Coachella
060249

54TH AVENUE

14 13 18 17 16

JOINS PANEL 2270

MAP SCALE 1" = 2000'

000 0 2000 4000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2300G

FIRM

FLOOD INSURANCE RATE MAP

RIVERSIDE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 2300 OF 3805

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

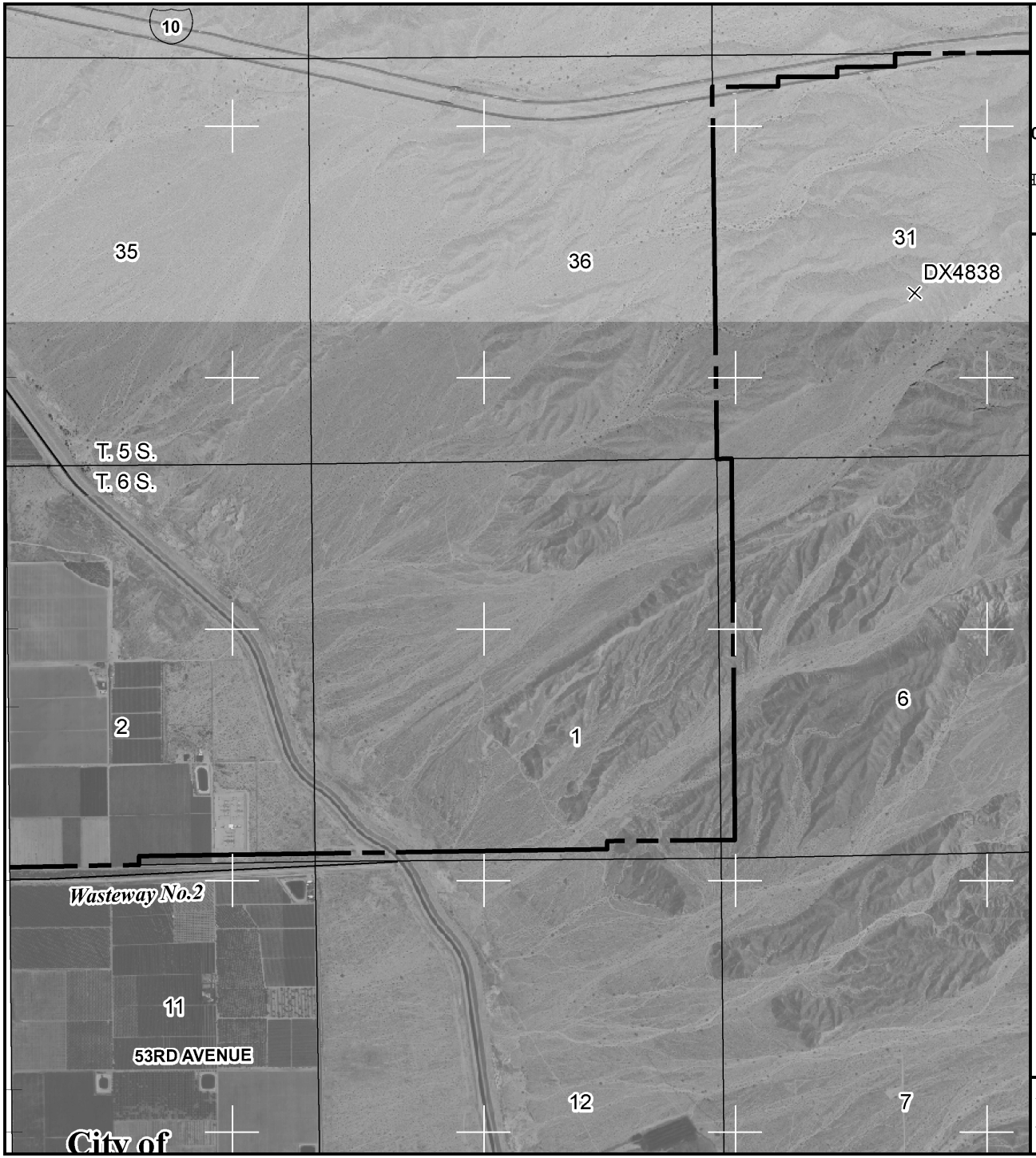
COMMUNITY	NUMBER	PANEL	SUFFIX
COACHELLA, CITY OF	060249	2300	G
RIVERSIDE COUNTY	060245	2300	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06065C2300G

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency



MAP SCALE 1" = 2000'

000 0 2000 4000

FEET

METER

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

NATIONAL WETLANDS INVENTORY (NWI)

U.S. Fish and Wildlife Service
National Wetlands Inventory

La Entrada Specific Plan

Jan 14, 2013

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

Status

- Digital
- Scan
- Non-Digital
- No Data

User Remarks:

National Wetland Survey (USFWS)

USDA SOILS REPORT

United States Department of Agriculture

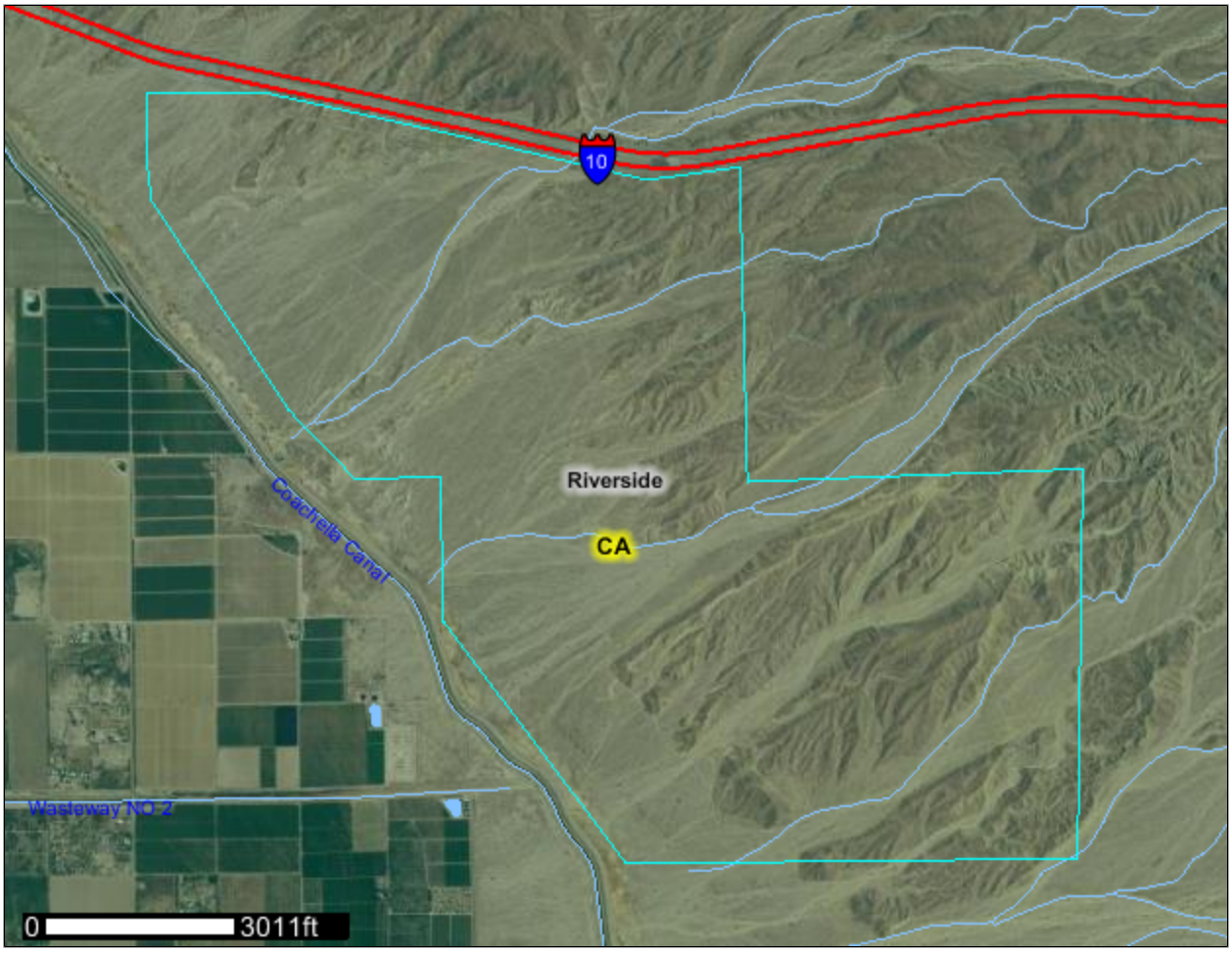
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Riverside County, Coachella Valley Area, California

La Entrada Specific Plan



December 5, 2012

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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Contents

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....7
Soil Map.....8
Legend.....9
Map Unit Legend.....10
Map Unit Descriptions.....10
Riverside County, Coachella Valley Area, California.....12
BA—Badland.....12
BP—Borrow pits.....12
CdC—Carsitas gravelly sand, 0 to 9 percent slopes.....13
ChC—Carsitas cobbly sand, 2 to 9 percent slopes.....14
CoB—Chuckawalla very gravelly sandy clay loam, 2 to 5 percent slopes.....15
References.....17
Glossary.....19

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

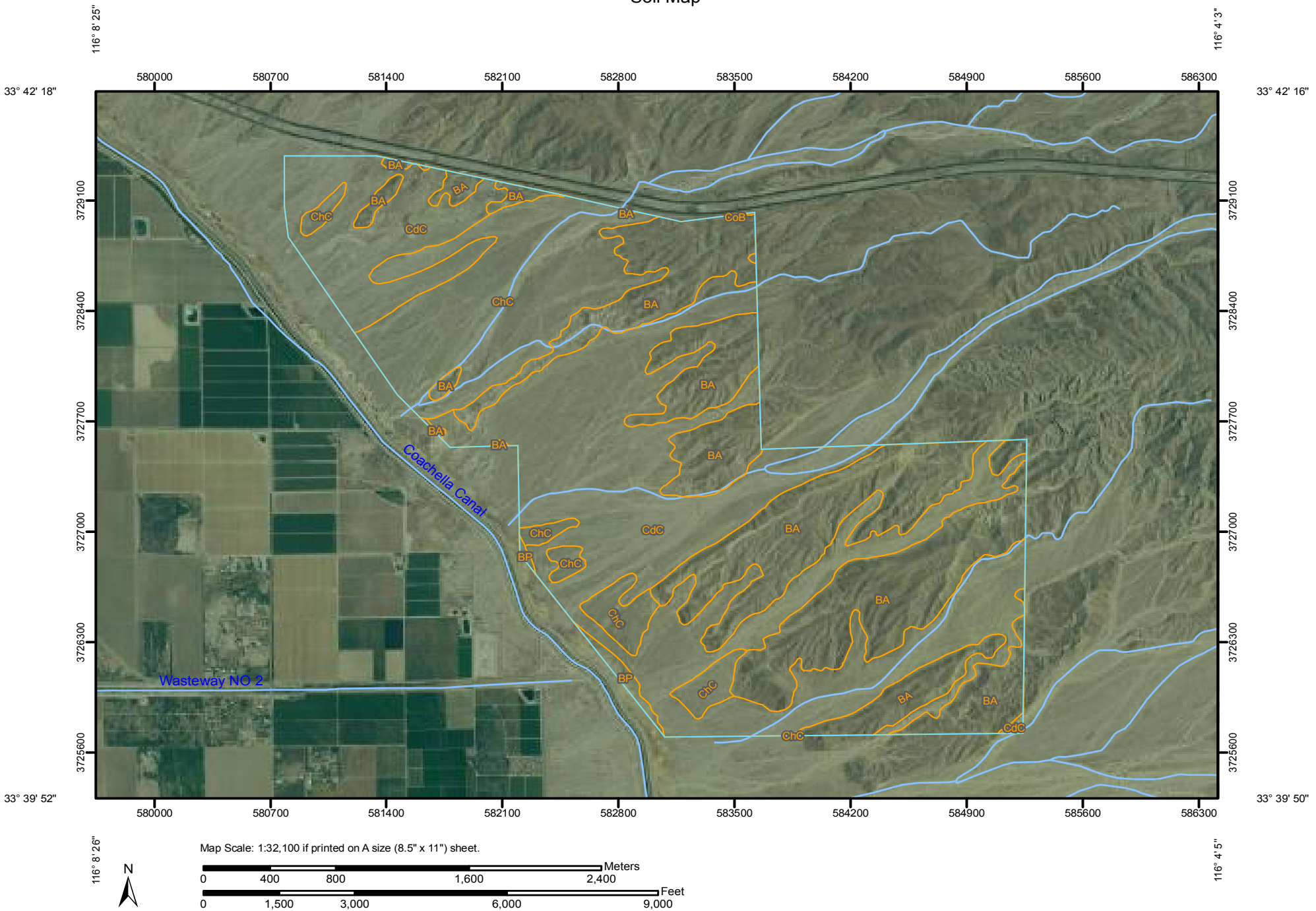
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads

MAP INFORMATION

Map Scale: 1:32,100 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Riverside County, Coachella Valley Area, California
Survey Area Data: Version 5, Jun 1, 2012

Date(s) aerial images were photographed: 5/31/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Riverside County, Coachella Valley Area, California (CA680)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BA	Badland	826.4	36.4%
BP	Borrow pits	12.8	0.6%
CdC	Carsitas gravelly sand, 0 to 9 percent slopes	1,031.4	45.4%
ChC	Carsitas cobbly sand, 2 to 9 percent slopes	400.4	17.6%
CoB	Chuckawalla very gravelly sandy clay loam, 2 to 5 percent slopes	0.7	0.0%
Totals for Area of Interest		**2,271.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that

have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Riverside County, Coachella Valley Area, California

BA—Badland

Map Unit Composition

Badland: 85 percent
Minor components: 15 percent

Description of Badland

Setting

Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Consolidated sandy alluvium

Properties and qualities

Slope: 50 to 75 percent
Depth to restrictive feature: 0 to 3 inches to paralithic bedrock
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 8

Typical profile

0 to 60 inches: Weathered bedrock

Minor Components

Carsitas

Percent of map unit: 10 percent

Riverwash

Percent of map unit: 5 percent

BP—Borrow pits

Map Unit Composition

Borrow pits: 95 percent
Minor components: 5 percent

Description of Borrow Pits

Setting

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 8

Minor Components

Unnamed

Percent of map unit: 5 percent
Landform: Depressions

CdC—Carsitas gravelly sand, 0 to 9 percent slopes

Map Unit Setting

Elevation: 800 feet
Mean annual precipitation: 4 inches
Mean annual air temperature: 72 to 73 degrees F
Frost-free period: 275 to 325 days

Map Unit Composition

Carsitas and similar soils: 85 percent
Minor components: 15 percent

Description of Carsitas

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Gravelly alluvium derived from granite

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Very low (about 3.0 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4s
Land capability (nonirrigated): 7e
Hydrologic Soil Group: A

Typical profile

0 to 10 inches: Gravelly sand
10 to 60 inches: Gravelly sand

Minor Components

Riverwash
Percent of map unit: 4 percent
Landform: Channels

Carsitas
Percent of map unit: 4 percent

Myoma
Percent of map unit: 4 percent

Unnamed, stony or gravelly
Percent of map unit: 3 percent

ChC—Carsitas cobbly sand, 2 to 9 percent slopes

Map Unit Setting
Elevation: 800 feet
Mean annual precipitation: 4 inches
Mean annual air temperature: 72 to 73 degrees F
Frost-free period: 300 days

Map Unit Composition
Carsitas and similar soils: 85 percent
Minor components: 15 percent

Description of Carsitas

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Gravelly alluvium derived from granite

Properties and qualities
Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Very low (about 3.0 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 6s
Land capability (nonirrigated): 7e
Hydrologic Soil Group: A

Typical profile

0 to 10 inches: Cobbly sand
10 to 60 inches: Gravelly sand

Minor Components

Riverwash

Percent of map unit: 4 percent
Landform: Channels

Carrizo

Percent of map unit: 4 percent

Chuckawalla

Percent of map unit: 4 percent

Unnamed

Percent of map unit: 3 percent

CoB—Chuckawalla very gravelly sandy clay loam, 2 to 5 percent slopes

Map Unit Setting

Elevation: 400 to 1,000 feet
Mean annual precipitation: 4 inches
Mean annual air temperature: 72 degrees F
Frost-free period: 270 to 320 days

Map Unit Composition

Chuckawalla and similar soils: 85 percent
Minor components: 15 percent

Description of Chuckawalla

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Gravelly alluvium

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Very low (about 2.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: B

Typical profile

0 to 12 inches: Very gravelly sandy clay loam
12 to 25 inches: Very gravelly fine sandy loam
25 to 60 inches: Very gravelly sand

Minor Components

Alluvium or colluvium

Percent of map unit: 10 percent

Carsitas

Percent of map unit: 3 percent

Riverwash

Percent of map unit: 2 percent

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WEATHERSOURCE REPORT

Year	Begin Date	End Date	Precipitation (Inches)
1904	1/1/1904	12/31/1904	0
1905	1/1/1905	12/31/1905	2
1906	1/1/1906	12/31/1906	6.13
1907	1/1/1907	12/31/1907	2.29
1908	1/1/1908	12/31/1908	1.97
1909	1/1/1909	12/31/1909	4.07
1910	1/1/1910	12/31/1910	0.75
1911	1/1/1911	12/31/1911	2.53
1912	1/1/1912	12/31/1912	2.6
1913	1/1/1913	12/31/1913	1.95
1914	1/1/1914	12/31/1914	2.74
1915	1/1/1915	12/31/1915	4.99
1916	1/1/1916	12/31/1916	5.12
1917	1/1/1917	12/31/1917	2.08
1918	1/1/1918	12/31/1918	1.28
1919	1/1/1919	12/31/1919	3.11
1920	1/1/1920	12/31/1920	6.8
1921	1/1/1921	12/31/1921	6.56
1922	1/1/1922	12/31/1922	1.67
1923	1/1/1923	12/31/1923	0.47
1924	1/1/1924	12/31/1924	0.7
1925	1/1/1925	12/31/1925	
1926	1/1/1926	12/31/1926	6.19
1927	1/1/1927	12/31/1927	7.87
1928	1/1/1928	12/31/1928	0.74
1929	1/1/1929	12/31/1929	1.46
1930	1/1/1930	12/31/1930	3.28
1931	1/1/1931	12/31/1931	4.55
1932	1/1/1932	12/31/1932	3.49
1933	1/1/1933	12/31/1933	0.77
1934	1/1/1934	12/31/1934	0.53
1935	1/1/1935	12/31/1935	3.46
1936	1/1/1936	12/31/1936	6.76
1937	1/1/1937	12/31/1937	1.29
1938	1/1/1938	12/31/1938	4.09
1939	1/1/1939	12/31/1939	10.85
1940	1/1/1940	12/31/1940	4.9
1941	1/1/1941	12/31/1941	8.26
1942	1/1/1942	12/31/1942	1.2
1943	1/1/1943	12/31/1943	8.08
1944	1/1/1944	12/31/1944	2.95
1945	1/1/1945	12/31/1945	5.01
1946	1/1/1946	12/31/1946	1.82
1947	1/1/1947	12/31/1947	0.36

Year	Begin Date	End Date	Precipitation (Inches)
1948	1/1/1948	12/31/1948	1.97
1949	1/1/1949	12/31/1949	2.33
1950	1/1/1950	12/31/1950	0.74
1951	1/1/1951	12/31/1951	3.17
1952	1/1/1952	12/31/1952	6.46
1953	1/1/1953	12/31/1953	0.8
1954	1/1/1954	12/31/1954	2.68
1955	1/1/1955	12/31/1955	1.79
1956	1/1/1956	12/31/1956	0.41
1957	1/1/1957	12/31/1957	2.5
1958	1/1/1958	12/31/1958	2.98
1959	1/1/1959	12/31/1959	2.66
1960	1/1/1960	12/31/1960	1.3
1961	1/1/1961	12/31/1961	1.35
1962	1/1/1962	12/31/1962	0.83
1963	1/1/1963	12/31/1963	4.74
1964	1/1/1964	12/31/1964	1.72
1965	1/1/1965	12/31/1965	5.86
1966	1/1/1966	12/31/1966	2.08
1967	1/1/1967	12/31/1967	3.34
1968	1/1/1968	12/31/1968	1.74
1969	1/1/1969	12/31/1969	2.63
1970	1/1/1970	12/31/1970	4.71
1971	1/1/1971	12/31/1971	0.4
1972	1/1/1972	12/31/1972	1.12
1973	1/1/1973	12/31/1973	1.11
1974	1/1/1974	12/31/1974	3.62
1975	1/1/1975	12/31/1975	0.93
1976	1/1/1976	12/31/1976	7.25
1977	1/1/1977	12/31/1977	5.85
1978	1/1/1978	12/31/1978	7.4
1979	1/1/1979	12/31/1979	5.31
1980	1/1/1980	12/31/1980	6.7
1981	1/1/1981	12/31/1981	4.31
1982	1/1/1982	12/31/1982	1.53
1983	1/1/1983	12/31/1983	
1984	1/1/1984	12/31/1984	
1985	1/1/1985	12/31/1985	1.78
1986	1/1/1986	12/31/1986	3.51
1987	1/1/1987	12/31/1987	2.36
1988	1/1/1988	12/31/1988	2.98
1989	1/1/1989	12/31/1989	1.42
1990	1/1/1990	12/31/1990	0.35
1991	1/1/1991	12/31/1991	4.43

Year	Begin Date	End Date	Precipitation (Inches)
1992	1/1/1992	12/31/1992	3.48
1993	1/1/1993	12/31/1993	6.41
1994	1/1/1994	12/31/1994	1.57
1995	1/1/1995	12/31/1995	4.38
1996	1/1/1996	12/31/1996	1.19
1997	1/1/1997	12/31/1997	1.39
1998	1/1/1998	12/31/1998	0
1999	1/1/1999	12/31/1999	1.11
2000	1/1/2000	12/31/2000	0.59
2001	1/1/2001	12/31/2001	1.04
2002	1/1/2002	12/31/2002	0.98
2003	1/1/2003	12/31/2003	3.32
2004	1/1/2004	12/31/2004	2.87
2005	1/1/2005	12/31/2005	4.65
2006	1/1/2006	12/31/2006	0
2007	1/1/2007	12/31/2007	
2008	1/1/2008	12/31/2008	0.9
2009	1/1/2009	12/31/2009	1.12
2010	1/1/2010	12/31/2010	7.37
2011	1/1/2011	12/31/2011	1.23
2012	1/1/2012	12/31/2012	0.8

La Entrada Specific Plan Impact Analysis Technical Memorandum for the Delineation of Jurisdictional Waters

April 2013 JN 133278

PSAV, LLC
5055 W. Patrick Lane, Suite 101
Las Vegas, NV 89118

SUBJECT: La Entrada Specific Plan Impact Analysis Technical Memorandum

Dear Mr. Manly:

This memorandum has been prepared for PSAV, LLC to supplement RBF Consulting's Delineation of Jurisdictional Water, updated April 2013. The purpose of this memorandum is to define jurisdictional impacts and relevant mitigation measures associated with the proposed project.

Project Location

The proposed project is located along the western foothills of the Little San Bernardino Mountains on the eastern border of the Coachella Valley, north of Salton Sea within Riverside County, California. The study area is located south of Interstate 10 (I-10) and northeast of the Coachella Channel (refer to Exhibit 1, *Regional Vicinity* and Exhibit 2, *Site Vicinity* at the end of this memorandum).

Project Description

The project site is located in an area of the Coachella Valley that is dominated by vacant, undeveloped properties or properties currently being used for agricultural purposes. The areas north and east of the project site are occupied by the Interstate 10 and vacant land along the base of the Mecca Hills and the Little San Bernardino Mountains further north (refer to Exhibit 3, *Project Site*). The southwestern edge of the project site abuts the Coachella Canal, which separates the project area from the more urbanized portion of the City of Coachella. Adjacent properties to the west and south are comprised of relatively flat lands that are either vacant or used for agricultural purposes and include scattered single-family residential dwellings. Coachella's downtown area and business district are located approximately three miles west of the project site.

The project proposes a master planned residential community on 2,200 acres within the City of Coachella and its approved Sphere of Influence. The plan proposes the following land uses:

- A mix of approximately 7,800 residential units (on approximately 982 acres);
- 135 acres of Mixed Use (High Density Residential, Commercial, Public Facilities, and other Non-Residential uses);
- 69.8 acres of Schools, including three elementary and one middle school;
- 343.8 acres of Parks/Recreation uses;
- Multi-purpose trails;
- 112.2 acres of circulation uses (including on-site interchange grading); and
- 556.9 acres of Open Space.

The site consists of approximately 2,200 gross acres, of which approximately 1,612 acres are presently in the City of Coachella and 588 acres are presently in unincorporated Riverside County.

The La Entrada Specific Plan is a comprehensive amendment to, and expansion of, the approved McNaughton Plan. The plan provides a framework to provide design guidance, development regulations, and implementation measures for the build-out of the Specific Plan area over the next 20 years, through 2032.

Jurisdictional Summary and Impacts

Table 1 provides a summary of jurisdictional area and proposed impacts identified within the project study area. The project site contains a total of 211.55-acre of waters of the State and no waters of the U.S (pending an Approved Jurisdictional Determination from the Corps). Refer to Exhibits 4A and 4B for illustrations of on-site jurisdiction. Corps jurisdiction is absent since the on-site drainages lack a significant nexus to the Salton Sea. Surface waters not anticipated to fall under the Corps' jurisdiction have been identified in acres, for reference. Jurisdictional areas consist of desert dry wash/ephemeral streambed (all non-wetlands). Placement of fill material or alteration of the streambed within these waters is subject to Regional Board and CDFW jurisdiction and approvals.

The proposed impacts have been identified pursuant to the most current site plan for the project. As a Project Design Feature, earthen drainages are proposed to convey water and provide habitat upon post project. Jurisdictional drainages that are located in the future earthen channels are considered to have a temporary impact, primarily associated with access and recountouring. Existing jurisdictional areas that would be impacted by development (i.e., areas converted to uplands due to the grading of pads, streets, etc.) are considered a permanent impact.

Table 1.
Jurisdictional Summary and Impacts

Relevant Reach/ Active Channel	Corps of Engineers[1]	Regional Board	CDFW	
	Total On-Site Corps Non-Jurisdictional Area (Non-Wetland)	Jurisdictional Area (Acres)	On-Site Area (Acres)	Adjoining Riparian Vegetation (Acres)
A	8.16	8.16	8.16	-
B	53.05	53.05	53.05	0.43
C	8.79	8.79	8.79	0.49
C1	1.15	1.15	1.15	0.58
D	14.1	14.1	14.1	3.64
D1	0.34	0.34	0.34	0.12
D2	0.19	0.19	0.19	0.46
D3	0.01	0.01	0.01	-
D4	2.97	2.97	2.97	0.86
D5	0.18	0.18	0.18	-
D6	0.01	0.01	0.01	-
D7	0.03	0.03	0.03	-
E	69.19	69.19	69.19	-
E1	0.5	0.5	0.5	-
E2	0.09	0.09	0.09	-
F	24.99	24.99	24.99	-
F1	7.43	7.43	7.43	-
F2	0.12	0.12	0.12	-
F3	2.12	2.12	2.12	-
F4	0.65	0.65	0.65	-
F5	1.76	1.76	1.76	-
G	9.16	9.16	9.16	-
G1	0.05	0.05	0.05	-
H	6.07	6.07	6.07	-
H1	0.12	0.12	0.12	-
I	0.19	0.19	0.19	-
I1	0.13	0.13	0.13	-
Total:	**211.55**	**211.55**	**211.55[2]**	**6.58[3]**

[1] Acreage of Corps jurisdiction removed, for reference (pending Approved Jurisdictional Determination from the Corps).
[2] Of the 211.55 acres of CDFW jurisdiction on-site, 10.0-acres of streambed is vegetated with Desert Dry Wash Woodland.
[3] Approximately 6.58-acres of additional Desert Dry Wash Woodland (adjoins streambeds) is located on-site.

U.S. Army Corps of Engineers Determination

Evidence of an Ordinary High Water Mark (OHWM) was noted within the boundaries of the project site, which included the following indicators: a clear, natural line impressed on the bank; changes in the character of soil; shelving; vegetation matted down, bent, or absent; sediment deposition; presence of wrack line; and scour. However, based on the detailed analysis of on-site hydrologic conditions, it was preliminarily determined that the relevant reaches have an insubstantial or speculative effect on the chemical, physical or biological significant nexus to the Whitewater River; and, therefore to the Salton Sea.

Prior to leaving the site, and after transmission losses, any remaining surface flows from the relevant reach/active channels have to flow to the southwestern portion of the property. An evacuation outlet is located in this portion of the property and the outlet serves as the only flood conveyance facility for flows that continue downstream and off-site. The evacuation outlet was constructed with the All American Canal Levee in the 1930's. The outlet is sized for the Standard Project Flood; however, it would take nearly a 50-year storm to produce outlet flows. Once through the outlet, the flows are conveyed through Wasteway Channel No. 2, a channel that discharges into the Whitewater River. The discharge of the Wasteway Channel to the river is insignificant as the peak flows of the channel do not impact the peak flows of the river.

Based on the proximity to the Salton Sea (16.5 miles), average annual rainfall of approximately 2.98 inches and the general flow dynamics, a significant nexus finding could not be established. No Corps jurisdictional waters/wetlands were noted on-site.

Regional Water Quality Control Board Determination

The Regional Board would assume jurisdiction over the surface waters documented during the site visits. Based on the results of the field investigation, a total of approximately 211.55-acre of Regional Board jurisdictional area is located within the project site. Based on the most current design plans, approximately 191.60-acres of jurisdictional area would be impacted (123.49-acre permanent, 68.11-acre temporary) by the proposed project. Refer to Exhibit 5, *Jurisdictional Impact Map*.

California Department of Fish and Wildlife Determination

Based on the results of the field investigation, a total of approximately 218.13-acre of CDFW jurisdiction is located within the project site. Of the 218.13-acre of CDFW jurisdictional area, approximately 10.0-acres would be considered CDFW vegetated streambed. Of the 218.13-acres of CDFW jurisdiction an additional 6.58-acres of adjoining Desert Dry Wash Woodland would also be considered CDFW jurisdictional vegetation. Based on the most current design plans, approximately 191.60-acres of jurisdictional area would be impacted (123.49-acre permanent, 68.11-acre temporary) by the proposed project.

Regulatory Compliance and Permitting Process

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The following is a summary of the various permits, agreements, and/or certifications required before construction activities may take place within the jurisdictional areas.

U.S. Army Corps of Engineers

The Corps regulates discharges of dredged or fill materials into Waters of the US (WoUS) and wetlands pursuant to Section 404 of the CWA. Observations of an OHWM were documented during the site visits; however, the active channels are not anticipated to support a significant nexus to the Salton Sea and therefore would not qualify as Corps jurisdictional area. No CWA 404 permit is anticipated for the proposed project based on the site conditions.

Regional Water Quality Control Board

The Regional Board regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The applicant will be required to submit a Report of Waste Discharge (ROWD) to the Colorado River Basin Regional Board pursuant to the California Water Code in order to obtain Waste Discharge Requirements (WDRs) for impacts associated with the proposed project. The Regional Board regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The Regional Board's jurisdiction extends to all waters of the State (including SWANCC and Rapanos conditions) and to all WoUS (including wetlands).

Although there is no Corps jurisdiction onsite, a Report of Waste Discharge (ROWD) from the Regional Board will be required prior to construction within the Regional Board jurisdiction. The Regional Board also requires that CEQA compliance be obtained prior to obtaining the ROWD.

All dischargers regulated under waste discharge requirements must pay an annual fee. The Regional Board has within 30 days of receipt of the application form and any supplemental documents to notify the applicant whether the application is complete. If the application is incomplete, the Regional Board representative will send the applicant a detailed list of discharge specific information necessary to complete the application process. The completion date of the application is normally the date when all required information,

including the fee, is received by the Regional Board. The annual fee is determined by the Regional Board based on an evaluation of proposed discharge.

California Department of Fish and Wildlife

The CDFW regulates impacts to rivers, streams, and lakes under the California Fish and Game Code. A CDFW 1602 Agreement would be required prior to commencement of any construction activities within jurisdictional areas

Upon a formal notification, the CDFW will determine whether the notification package (application) is complete. The CDFW will make this determination within 30 calendar days of receiving the notification package if the application is for a regular agreement (i.e., an agreement for a term of five years or less); however, the 30-day time period does not apply to notifications for long-term agreements (i.e., agreements for a term greater than five years). Once the notification package is deemed complete, CDFW will process a Draft Agreement as described below.

If a SAA is required, the CDFW may require an on-site inspection and a draft agreement. The draft agreement will include measures to protect fish and wildlife resources while conducting the project. For regular agreements, the CDFW will submit a draft agreement to the applicant within 60 calendar days after the notification is deemed complete. The 60-day time period does not apply to notifications for long-term agreements, since these are often large or complex projects.

The applicant then has 30 calendar days to notify CDFW whether the measures in the draft agreement are acceptable. After CDFW receives the signed draft agreement, it will make it final by signing it. The CDFW Application fee associated with the notification package varies and is dependent upon the total cost of the project and type of agreement (i.e., Regular or Long-Term).

Mitigation Measure 1

Prior to the initiation of any construction-related activities, the Applicant shall submit a detailed restoration program and restoration site plans for RWQCB and CDFW approval. The Habitat Mitigation and Monitoring Plan shall contain the following items:

- ***Responsibilities and qualifications of the personnel to implement and supervise the plan.*** The responsibilities of the Applicant, Specialists, and Maintenance Personnel that would supervise and implement the plan shall be specified.

- ***Site preparation and planting implementation.*** Site preparation shall include: (1) protection of existing native species; (2) trash and weed removal; (3) native species

salvage and reuse (i.e., duff); (4) soil treatments (i.e., imprinting, decompacting); (5) temporary irrigation installation (if required); (6) erosion-control measures; (7) seed mix application; and (8) container species planting.

- ***Schedule.*** A schedule shall be developed which includes planting in late fall and early winter, between October 1 and January 30.

- ***Maintenance plan/guidelines.*** The Maintenance Plan shall include: (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance (if required); (5) maintenance training; and (6) replacement planting.

- ***Monitoring Plan.*** The Monitoring Plan shall include: (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) performance criteria, as approved by the above-listed resource agencies; (4) monthly reports for the first year and reports every other month thereafter; and (5) annual reports, which shall be submitted to the resource agencies on a yearly basis, for five years. The Applicant shall monitor and maintain the project site for five years to ensure successful establishment of habitat within the restored and created areas.

- ***Long-term preservation.*** Long-term preservation of the site shall also be outlined in the conceptual Mitigation Plan to ensure the mitigation site is not impacted by future development.