Perris Valley Storm Drain Channel Trail – Stage 2 *NES*

Natural Environment Study

Including Focused Studies for Special-Status Species and a Delineation of Federal and State Jurisdictional Water Resources
City of Perris

From Nuevo Road to the South Perris Metrolink Station

DISTRICT 8-Riverside County

FPN: ATPSBIL-5198 (019)

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STATE OF CALIFORNIA
Department of Transportation
And City of Perris

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Summary

This document analyzes impacts to biological resources for the proposed Perris Valley Storm Drain Channel Trail – Phase 2 Project (proposed Project) is located in the City of Perris, Riverside County, California. The purpose of the proposed Project is to extend the existing Phase 1 segment of the trail from Nuevo Road to the South Perris Metrolink Station. The proposed Project will offer recreational trail opportunities that do not currently exist in the Project area. The trail and bikeway network in Perris will provide residents and the greater region with a network of pedestrian and bicycle facilities that connect to commercial and employment areas, transit hubs, parks, schools and other key destinations in Perris and the region.

The Biological Study Area (BSA) evaluated in this report consists of all areas proposed for physical improvements and construction access, along with a 50-foot buffer to either side of the Project Impact Area (PIA). The BSA includes an existing access road along the western levee of the PVSD Channel north of where the PVSD Channel confluences with the San Jacinto River, and the northwestern levee of the San Jacinto River south of the PVSD/River confluence; surrounding undeveloped lands; agricultural areas; a small sliver of a single rural residential property; a crossing of San Jacinto Avenue; a crossing beneath the existing I-215; and a small sliver of the South Perris Metrolink Station parking area. Topography within the BSA is generally flat, gently sloping from the north toward the southwest. Elevations within the BSA range from approximately 1,410 feet above mean sea level (amsl) in the southwestern portion to approximately 1,425 feet amsl in the north. Nearly the entirety of the BSA is located within the Riverside County Flood Control District (RCFCD) right-of-way (ROW), as the trail follows the PVSD Channel, which is an RCFCD-owned facility.

The BSA is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The portion of the PVSD Channel from north of Nuevo Road to I-215 (approximately 19,000 linear feet) is designated as Public/Quasi-Public (PQP) Lands per the MSHCP, and so portions of the BSA are located within PQP Lands. The uppermost portion of the trail alignment (approximately 7,500 linear feet) is not located within the MSHCP Criteria Area. However, the southern portion of the alignment (approximately 7,700 linear feet) is located within Criteria Cells associated with Subunit 4 (San Jacinto River Lower) of the Mead Valley Area Plan. A small portion of the BSA (approximately 1,100 linear feet) extends through the southwest corner of Cell Group G (Cell 3069). Nearly the remainder of the alignment (approximately 6,500 linear feet) is located within portions of Criteria Cells 3173, 3174, 3276, and 3277. However, the proposed Project is considered a Covered Activity as a trail project, pursuant to Volume I, Section 7.4.2 of the MSHCP (MSHCP Figure 7-4) and is not subject to the MSHCP Reserve Assembly requirements. The southernmost portion (approximately 730 linear feet) of the BSA at Case Road extends through an existing MSHCP Conservation Easement held by the Regional Conservation Authority (RCA). The Easement mostly occurs on the western side of the San Jacinto River, but also extends across the river overlapping with the RCFCD ROW.

The BSA is located within the Narrow Endemic Plant Species Survey Area (NEPSSA) and the Criteria Area Plant Species Survey Area (CAPSSA). Portions of the BSA are also located within the Burrowing Owl Survey Area and Mammal Survey Area, but it is not located within the Amphibian Survey Area. Within the designated Survey Areas, the MSHCP requires habitat assessments, and focused surveys within areas of suitable

habitat. As demonstrated in this document, the proposed Project will be consistent with the biological requirements of the MSHCP; specifically, pertaining to the Project's relationship to the reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

The entirety of the BSA, including the PIA, is in a disturbed and agricultural condition and has been subject to high levels of continuous human disturbance for decades, in the form of flood control operations and maintenance, roadway maintenance, agricultural operations, and unauthorized off-highway vehicle use. The BSA contains six different land cover types including agriculture, developed, disturbed, disturbed alkali meadow, emergent wetland and unvegetated streambed.

The Project will not impact any special-status plants. Impacts to special-status animals will be limited to the minimal loss of foraging habitat for special-status birds and bats. However, none of these impacts are considered biologically important considering the relatively low level of sensitivity of the species, the disturbed nature of the impact footprint, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Burrowing owls (*Athene cunicularia*) were detected during focused surveys within and adjacent to the BSA, but outside of the PIA. The Project will not impact occupied burrows based on the survey results; however, measures are included in this report to ensure that construction activities will not harm burrowing owls.

The BSA contains areas mapped by the U.S. Fish and Wildlife Service (USFWS) as Critical Habitat for the spreading navarretia (*Navarretia fossalis*), thread-leaved brodiaea (*Brodiaea filifolia*), and San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*). However, the BSA does not contain Primary Constituent Elements (PCEs) for these species, and so the Project will not result in adverse modification of Critical Habitat for these species.

The BSA contains jurisdictional waters, including waters of the United States subject to the jurisdiction of U.S. Army Corps of Engineers (Corps) and the Regional Water Quality Control Board (Regional Board), and waters of the State subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW). Corps and Regional Board jurisdiction within the BSA totals approximately, of which approximately 0.07 acre consists of jurisdictional wetlands. CDFW jurisdiction within the BSA totals approximately 8.49 acres, of which approximately 0.58 acre consists of vegetated riparian habitat. The proposed Project has been designed to avoid all impacts to jurisdictional waters.

Chapter 1 – Introduction

The proposed Perris Valley Storm Drain Channel Trail – Phase 2 Project (proposed Project) is located in the City of Perris, Riverside County, California [Figure 1 – Project Location Map] and is depicted on the USGS Perris, California quadrangle map, at Township 4 South and 5 South, Range 3 West [Figure 2 – Biological Study Area Map]. The Biological Study Area (BSA) encompasses approximately 44.75 acres, starting at Nuevo Road at the north and extending south along the Perris Valley Storm Drain (PVSD) Channel and the San Jacinto River before turning southeast and terminating at the South Perris Metrolink Station.

Project History

The purpose of the proposed Project is to extend the existing Phase 1 segment of the trail from Nuevo Road to the South Perris Metrolink Station. The proposed Project will offer recreational trail opportunities that do not currently exist in the Project area. The City of Perris seeks to provide safe and convenient pedestrian access and non-motorized facilities through this Project between residential neighborhoods, parks, open space and schools that service those neighborhoods to address the city's active transportation needs. Currently there is a need to provide bike and pedestrian facilities to provide better access and encourage walking and biking to school. The trail and bikeway network in Perris will provide residents and the greater region with a network of pedestrian and bicycle facilities that connect to commercial and employment areas, transit hubs, parks, schools and other key destinations in Perris and the region.

Project Description

The proposed 3.1-mile multi-use trail will replace an approximately 20-foot wide existing decomposed granite and dirt maintenance road along the Perris Valley Storm Drain (PVSD) Channel within a new 10-foot wide asphalt pathway for bicycling and a five-foot wide decomposed granite pathway for pedestrian use. A six by eight-inch concrete mow curb will separate the trail from the adjacent channel slope. The mow curb will be notched every 10 feet for drainage and would be set two inches above the slope grade and one inch above the trail. Landscaping and fencing are proposed at the street crossing intersection with San Jacinto Avenue and will consist of native, drought resistant vegetation along with a drip irrigation system. Removable bollards will be installed at the public right-of-way (ROW) to limit access to the trail for bicycle and pedestrian uses only. When access to the trail area is required by Riverside County Flood Control and Water Conservation District (RCFCD), the bollards could be removed as needed to allow maintenance vehicle access. Appropriate easements and permits will be retained with RCFCD and the California Department of Transportation (Caltrans) to allow the trail within land owned by these agencies. No lighting will be installed along the trail. All construction staging will occur within the Project Impact Area (PIA). All proposed Project-related impacts discussed herein are considered permanent.

In addition to the trail construction, the Project will also need to construct six crossings over area drainages and roadways The Project will require the need to construct: 1) a slab-bridge crossing the existing Metz Channel, 2) a slab-bridge crossing the RCFCD Channel south of the Interstate 215 (I-215) freeway (referred to as the G- Street

Channel), 3) an at grade crossing at San Jacinto Avenue, 4) an underpass below the I-215 freeway, 5) a bridge across the San Jacinto River south of where the PVSD/River confluence, and 6) a slab-bridge crossing an unnamed drainage adjacent to the South Perris Metrolink Station. Safety improvements include installation of signalized crossings and signage at San Jacinto Avenue. The Project will also construct ADA ramps to current standards and interpretive signage to educate trail users.

Chapter 2 – Study Methods

Regulatory Requirements

State of California Endangered Species Act

The California Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally

listed plant and animal species, the property owner and agency are required to consult with the U.S. Fish and Wildlife Service (USFWS). Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the CESA require that the state lead agency consult with the California Department of Fish and Wildlife (CDFW) on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

Western Riverside Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive habitat conservation/planning program for Western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats.

Through agreements with the USFWS and CDFW, the MSHCP designates 146 special-status animal and plant species as Covered Species, of which the majority have no project-specific survey/conservation requirements. The MSHCP provides mitigation for project-specific impacts to these species for projects that are compliant/consistent with MSHCP requirements.

The Covered Species that are not yet adequately conserved have additional requirements in order for these species to ultimately be considered “adequately conserved”. A number of these species have survey requirements based on a project’s

occurrence within a designated MSHCP survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species (MSHCP *Volume I, Section 6.1.3*), as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species (MSHCP *Volume I, Section 6.3.2*), as identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animals species (burrowing owl, mammals, amphibians), as identified by survey areas (MSHCP *Volume I, Section 6.3.2*); and species associated with riparian/riverine areas and vernal pool habitats, i.e., least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), western yellow-billed cuckoo (*Coccyzus americanus*), and three species of listed fairy shrimp (MSHCP *Volume I, Section 6.1.2*). An additional 28 species (MSHCP *Volume I*, *Table 9.3*) not yet adequately conserved have species-specific objectives for the species to become adequately conserved. However, these species do not have project-specific survey requirements.

The goal of the MSHCP is to have a total Conservation Area in excess of 500,000 acres, including approximately 347,000 acres on existing Public/Quasi-Public (PQP) Lands, and approximately 153,000 acres of Additional Reserve Lands targeted within the MSHCP Criteria Area. The MSHCP is divided into 16 separate Area Plans, each with its own conservation goals and objectives. Within each Area Plan, the Criteria Area is divided into Subunits, and further divided into Criteria Cells and Cell Groups (a group of criteria cells). Each Cell Group and ungrouped, independent Cell has designated "criteria" for the purpose of targeting additional conservation lands for acquisition. Projects located within the Criteria Area are subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process to determine if lands are targeted for inclusion in the MSHCP Reserve. In addition, all Projects located within the Criteria Area are subject to the Joint Project Review (JPR) process, where the Project is reviewed by the Regional Conservation Authority (RCA) to determine overall compliance/consistency with the biological requirements of the MSHCP.

National Environmental Policy Act

The Project would receive federal funding and would require an encroachment permit from Caltrans for the undercrossing with the I-215 freeway; however, the Project would not be located within federal lands or federal infrastructure. The Project would be subject to regulation under the National Environmental Policy Act because it is receiving federal aid.

California Environmental Quality Act

CEQA Guidelines Section 15380

The California Environmentally Quality Act (CEQA) requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

Special-Status Plants, Wildlife and Vegetation Communities Evaluated Under NEPA and CEQA

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. This term is employed in this document but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal Candidate Species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California SSC are designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State Candidate for listing as Endangered
- SCT State Candidate for listing as Threatened
- SFP State Fully Protected
- SP State Protected
- SSC State Species of Special Concern

California Native Plant Society

The California Native Plant Society (CNPS) is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 2-1.

Table 2-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

CNPS Rank	Comments
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	**Comments**
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.

.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) is a treaty with Canada, Mexico and Japan that makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code (Sec 3500) also prohibits the destruction of any nest, egg, or nestling.)

Executive Order 13112 – Invasive Species

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

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

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Jurisdictional Waters

Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(2) All interstate waters including interstate wetlands;
(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect 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 shell fish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
(4) All impoundments of waters otherwise defined as waters of the United States under the definition;
(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;
(6) The territorial seas;
(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.
(8) Waters of the United States do not include prior converted cropland.[1] *Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as 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.

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to

[1] The term “prior converted cropland” is defined in the Corps’ Regulatory Guidance Letter 90-7 (dated September 26, 1990) as “wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season….”

guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands[2]);

- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

On January 9, 2001 and June 5, 2007 the Supreme Court of the United States issued two rulings *(Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al [SWANCC]. and Rapanos v. United States and Carabell v. United States [Rapanos], respectively). The first case reiterated that "isolated" waters (those with no interstate commerce connection) are not subject to federal jurisdiction under Section 404 of the Clean Water Act. The second case determined (in a plurality vote) that a water must have a nexus with a "traditionally navigable water (an undefined term) to be subject to federal jurisdiction under Section 404 of the Clean Water Act. Applicants who believe they have waters that would be exempt from federal jurisdiction pursuant to these two rulings must go through a formal process with the Corps* ***and*** *EPA to obtain concurrence.*

Regional Water Quality Control Board

Section 401 of the Clean Water Act requires any applicant for a Section 404 permit to obtain certification from the State that the discharge (and the operation of the facility being constructed) will comply with the applicable effluent limitation and water quality standards. In California, this 401 certification is obtained from the Regional Water Quality Control Board (Regional Board). The Corps, by law, cannot issue a Section 404 permit until a 401 certification is issued or waived.

When a project impacts non-federal waters in addition to federal waters, the Regional Board will issue a single 401 Certification for the entire project that includes water quality certification for all waters of the State impacted as part of the project.

[2] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW also defines a stream as “a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators.”

It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

Studies Required

In order to adequately identify biological resources in accordance with the requirements of CEQA, biological data consisting of four main components was assembled:

- Delineation of aquatic resources (including any potential wetlands and riparian habitat) subject to the jurisdiction of the Corps, Regional Board, and CDFW;
- Performance of vegetation mapping;
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of FESA, NEPA, CESA, CEQA, and the MSHCP; and
- Performance of focused surveys for special-status plants, focused protocol surveys for the burrowing owl, focused surveys for special-status small mammals, an evaluation of state and federal waters, and an evaluation of MSHCP Riparian/Riverine resources.

Literature Search

The following information was reviewed for use in determining the resources for which studies would be required:

- A Species List was obtained by accessing the USFWS Information for Planning and Consultation (IPaC; 2019) tool [attached as Appendix C];

- California Natural Diversity Data Base (CNDDB; 2019) for the El Casco, Lakeview, Lake Elsinore, Perris, Riverside East, Romoland, Steele Peak,

Sunnymead, and Winchester, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (quads);

- CNPS On-line Inventory (CNPS; 2019) for the El Casco, Lakeview, Lake Elsinore, Perris, Riverside East, Romoland, Steele Peak, Sunnymead, and Winchester, California quads;

- Federally proposed and/or designated Critical Habitat mapping (USFWS; 2019);

- Federally proposed and/or designated Essential Fish Habitat (EFH) mapping (NOAA Fisheries; 2019); and

- Western Riverside County MSHCP.

Special-Status Plant Species and Habitats Evaluated for the Project

A literature search was conducted to obtain a list of special-status plants with the potential to occur within the BSA. The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS online inventory (2019) and the MSHCP.

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the BSA were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) identify the potential for any special status plants that may occur within the BSA; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the BSA, if applicable.

The BSA is located within NEPSSA 3 and CAPSSA 3. Pursuant to the MSHCP, the following target species must be evaluated through habitat assessments and focused surveys (if suitable habitat is present):

- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)
- Parish's brittlescale (*Atriplex parishii*)
- Davidson's saltscale (*Atriplex davidsonii*)
- Thread-leaved brodiaea (*Brodiaea filifolia*)
- Round-leaved filaree (*California macrophylla*)
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)
- Little mousetail (*Myosurus minimus* ssp. *apis*)
- Mud nama (*Nama stenocarpum*)

Special-Status Wildlife Species Evaluated for the Project

A literature search was conducted to obtain a list of special status wildlife species with the potential to occur within the BSA. The CNDDB was consulted to determine well-known occurrences of special-status wildlife in the region. The MSHCP was also reviewed to determine the specific wildlife Survey Areas that coincide with the BSA.

The BSA is located within the following MSHCP Survey Areas:

- Burrowing Owl (*Athene cunicularia*) Survey Area
- Small Mammal Survey Area
- Criteria Area Species Survey Area

Field Survey Methods

Personnel and Survey Dates

Table 2-2 provides a summary list of survey dates, survey types, and personnel.

Table 2-2. Summary of Surveys for the Biological Study Area.

Survey Type	Survey Dates	Personnel
General Biological Survey and Vegetation Mapping	3/9/18 4/18/19	DM, JS
Jurisdictional Delineation	5/24/18 4/18/19 5/14/19	DM, ZW, JS
MSHCP Riparian/Riverine Resources Evaluation	5/24/18 4/18/19 5/14/19	DM, ZW, JS
Focused Narrow Endemic Plant Surveys	3/9/18 5/10/18 6/14/18 2/28/19 3/11/19 4/18/19 5/14/19 5/30/19	DM, JS
Focused Breeding Season Burrowing Owl Surveys	3/9/18 5/10/18 5/23/18 6/14/18 7/5/18 8/21/18 8/29/18 8/30/18	DM, JA, SC, JS
Focused Small Mammal Trapping	9/5/18 through 9/10/18	MR

DM = David Moskovitz, Senior Biologist/Regulatory Specialist JAS = Jeff Ahrens, Senior Biologist
JS = Jillian Stephens, Biologist MR = Mikael Romich, Senior Biologist SC = Stephanie Cashin, Biologist
ZW = Zack West, Senior Biologist/Regulatory Specialist

General Surveys

During the general biological and reconnaissance survey within the BSA, birds were detected incidentally by direct observation and/or by vocalizations, with identifications recorded in field notes.

Mammals were identified and detected incidentally by direct observations and/or by the presence of diagnostic sign (i.e., tracks, burrows, scat, etc.).

Reptiles and amphibians were identified incidentally during surveys. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

Vegetation Mapping

Vegetation communities within the BSA were mapped according to the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). These vegetation communities were named based on the dominant plant species present. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph. A vegetation map is included as Figure 3 – Vegetation Map. Representative site photographs are included as Figure 10 – Site Photographs.

Botanical Surveys

Biologists David Moskovitz, Jillian Stephens, and Zack West visited the BSA on multiple dates in both 2018 and 2019 to conduct general botanical surveys and focused surveys for special-status plants, including March 9, May 10 and June 14, 2018, and February 28, March 11, April 14, and May 14 and 30, 2019. Surveys were conducted in accordance with accepted botanical survey guidelines (CDFW 2009, CNPS 2001, USFWS 2000). As applicable, surveys were conducted at appropriate times based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the BSA. Monitoring of rare plant populations within the San Jacinto River floodplain took place to track phenology and ensure that target species were detectable at the time of the focused surveys. Focused surveys were conducted by following meandering transects within target areas of potentially suitable habitat. All plant species encountered during the field surveys were identified and recorded following the above-referenced guidelines adopted by CNPS (2010) and CDFW by Nelson (1984). A complete list of the plant species observed is provided in Appendix A – Floral Compendium. Scientific nomenclature follows the Jepson Manual, 2nd Edition (Jepson Manual; Baldwin et Al. 2012) and common names used in this report follow the Jepson Manual and Munz (1974).

Wildlife Resources

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire BSA by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visit. A complete list of wildlife species observed within the BSA is provided in Appendix

B – Faunal Compendium. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFW 2016), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6th Edition, Collins and Taggert (2009) for amphibians and reptiles, and the American Ornithologists' Union Checklist 7th Edition (2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general surveys, habitat assessments, and/or focused surveys for special-status animals are included below.

Burrowing Owl

The greater majority of the BSA is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). Focused surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The guidelines stipulate that four focused survey visits should be conducted between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all suitable burrows. The focused burrow survey was conducted on March 9, 2018. Focused burrowing owl surveys were conducted on March 9, May 10 and 23, June 14, July 7, and August 21, 29, and 30, 2018. As recommended by the survey guidelines, the survey visits were conducted from one hour prior to sunrise to two hours after sunrise. Weather conditions during the surveys were conducive to a high level of bird activity.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat, which include the disturbed, agriculture, disturbed alkali meadow, and unvegetated streambed habitats. Transects were spaced between 7 m and 20 m apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 100 m along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Table 2-3 summarizes the focused burrowing owl survey visits. The results of the burrowing owl surveys are documented in Chapter 4 of this report.

Table 2-3. Summary of Burrowing Owl Surveys

Survey Date	Biologist	Start/End Time	Start/End Temperature (^{O}F)	Start/End Wind Speed (mph)	Cloud Cover
3/9/18	DM	0630/0915	48/58	0-1/0-2	Clear
5/10/18	DM	0645/0930	59/66	0-2/0-2	Partly Cloudy
5/23/18	JA	0600/0930	57/62	0-2/0-1	Partly Cloudy
6/14/18	DM	0625/0915	65/73	1-3/0-2	Partly Cloudy
7/5/18	SC	0610/0930	64/74	0-2/0-2	Clear
8/21/18	JA	0600/1010	65/80	0-2/1-2	Clear
8/29/18	JA	0605/0955	58/79	1-3/0-2	Partly Cloudy
8/30/18	JA	0600/0910	61/78	2-3/1-3	Clear

DM = David Moskovitz, Senior Biologist/Regulatory Specialist JAS = Jeff Ahrens, Senior Biologist
SC = Stephanie Cashin, Biologist

Small Mammals

Biologist Mikael Romich conducted a focused trapping survey for special-status small mammal species, focusing on Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), as the BSA is located within the MSHCP Mammal Survey Area, focusing on this species. In order to determine the presence/absence of special-status small mammals within the BSA, focused trapping occurred at 3 general trapping areas with a total of 150 traps at approximately 10-meter spacing between traps (Figure 5 – Small Mammal Trapping Survey Map). The trapping was conducted beginning September 5 and ending September 10, 2018 for 5 consecutive nights of trapping (or 750 total trap nights). Each captured animal was identified to the species level. Mixed birdseed was used as bait. Traps were set and baited during the early evening and were systematically checked at dawn. Weather conditions were considered excellent for small mammal surface activity, with overnight temperature lows at 57 degrees Fahrenheit (F) and daily highs at 113 degrees F. Table 2-4 summarizes the dates and conditions during the survey.

Table 2-4. Summary of Field Conditions During Small Mammal Trapping

Date (2018)	Recorded Weather Conditions
September 5-6	Low temp: 59 F, light winds, clear skies, no precipitation.
September 6-7	Low temp: 59 F, light winds, clear skies, no precipitation.
September 7-8	Low temp: 61 F, light winds, clear skies, no precipitation.
September 8-9	Low temp: 59 F, light winds, clear skies, no precipitation.
September 9-10	Low temp: 57 F, light winds, clear skies, no precipitation.

Jurisdictional Delineation

A jurisdictional delineation was conducted to address areas subject to Corps jurisdiction pursuant to Section 404 of the CWA, Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the CWC, and CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code on May 24, 2018, and April 18 and May 14, 2019. Prior to beginning the field delineation, color aerial photographs and USGS topographic maps were reviewed to determine the locations of potential areas of Corps/Regional Board/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils, and hydrology.

Potential wetland habitats within the BSA were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[3] (Wetland Manual) and the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement* (Arid West Supplement)[4]. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 *Field Guide to*

[3] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[4] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States[5] in conjunction with the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*.[6] While in the field the limits of the OHWM, wetlands, and CDFW jurisdiction were recorded using a handheld Global Positioning Satellite (GPS) unit, providing sub-meter accuracy, and/or copies of the aerial photography. Other data were recorded onto the appropriate datasheets. The results of the jurisdictional delineation are depicted on Figures 6A and 6B.

MSHCP Riparian/Riverine Areas and Vernal Pools

The BSA was evaluated for riparian/riverine areas and vernal pool/seasonal pool habitat. *Volume I, Section 6.1.2* of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the MSHCP Plan Area. The purpose is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the effect of those projects on riparian/riverine areas and vernal pools must be addressed.

The MSHCP defines riparian/riverine areas as *lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*

The MSHCP defines vernal pools as *seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and/or vegetation during the drier portion of the growing season.*

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

Agency Coordination and Professional Contacts

A species list was obtained using the USFWS IPaC tool, in January 2018 and updated on December 23, 2019; a list of special-status plant and wildlife species documented within the vicinity of the BSA was generated by accessing the CNDDB (CDFW 2019); and a list of special-status plant and species documented within the vicinity of the BSA was generated by accessing the CNPS On-line Inventory (CNPS 2019).

[5] Lichvar, R. W., and S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf).

[6] Curtis, Katherine E. and Robert Lichevar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory.

The Project team attended a meeting with the USFWS, CDFW, and the Regional Conservation Authority (RCA) on August 16, 2018 at the RCA offices to discuss strategies for Project design and MSHCP compliance.

Limitations That May Influence Results

Field studies reported for the proposed Project were initially conducted to analyze the RCFCD San Jacinto River Master Drainage Plan Stage 3 Project (MDP 3). The majority of the BSA for the proposed Project falls within the areas studied for the MDP3. Portions of the results of field efforts presented herein have been documented outside of, but are immediately adjacent to, the BSA; therefore, those results are considered relevant to the BSA for the purpose of this report. Those results depicted outside of the BSA are entirely within public right-of-way, or are on properties where express permission has been given by the property owners to document biological resources and present the results of field efforts.

Chapter 3 – Results: Environmental Setting

Description of the Existing Biological and Physical Conditions

Description of the Existing Biological and Physical Conditions Within the Biological Study Area

The BSA consists of all areas proposed for physical improvements and construction access, along with a 50-foot buffer. This BSA was developed to capture all potential areas of Project impacts, considering that all Project construction activities will be restricted to occur within the PIA.

Physical Conditions

The BSA includes an existing access road along the western levee of the PVSD Channel north of where the PVSD Channel confluences with the San Jacinto River, and the northwestern levee of the San Jacinto River south of the PVSD/River confluence; surrounding undeveloped lands; agricultural areas; a small sliver of a single rural residential property; a crossing of San Jacinto Avenue; a crossing beneath the existing I-215; and a small sliver of the South Perris Metrolink Station parking area. Topography within the BSA is generally flat, gently sloping from the north toward the southwest. Elevations within the BSA range from approximately 1,410 feet above mean sea level (amsl) in the southwestern portion to approximately 1,425 feet amsl in the north.

The entirety of the BSA is in a disturbed and agricultural condition and has been subject to high levels of continuous human disturbance for decades, in the form of flood control operations and maintenance, roadway maintenance, agricultural operations, and unauthorized off-highway vehicle use.

The Natural Resource Conservation Service (NRCS) identifies the following soil types (series) and landforms as occurring (currently or historically) within the BSA [Figure 7 – Soils Map]: Domino fine sandy loam, saline-alkaline; Domino silt loam, saline-alkaline; Domino silt loam, strongly saline-alkaline; Water; Willows silty clay; Willows silty clay, saline-alkaline; and Willows silty clay, deep, strongly saline-alkaline.

Biological Conditions in the Study Area

Land Cover Types (Vegetation Communities)

During vegetation mapping of the BSA, six different land cover types were identified. Table 3-1 provides a summary of land cover types and the corresponding acreage. Detailed descriptions of each land cover type follow the table. A Vegetation Map is attached as Figure 5. Photographs depicting the various land cover types and land uses are attached as Figure 10.

Table 3-1. Summary of Land Cover Types for the Biological Study Area

Land Cover Type	Area of BSA (acres)
Agriculture	10.77
Developed	0.22
Disturbed	25.48
Disturbed Alkali Meadow	0.51
Emergent Wetland	0.07
Unvegetated Streambed	7.69
Total	**44.75**

Agriculture

Agricultural areas within the BSA consist of row crop production fields.

Developed

Developed areas within the BSA consist of the existing San Jacinto Avenue and South Perris Metrolink Station parking lot. These areas are paved and are subject to ongoing maintenance.

Disturbed

Disturbed areas within the BSA consist of the existing PVSD Channel and San Jacinto River levees, the existing RCFCD access road, and surrounding undeveloped lands that have been subject to decades-long disturbance, such as vegetation clearing, mowing, and grazing.

Disturbed Alkali Meadow

Disturbed alkali meadow within the BSA is located along the upper banks of the San Jacinto River at the location of the proposed span crossing and is dominated by salt grass (*Distichlis spicata*) and alkali-mallow (*Malvella leprosa*), as well as non-native species including Madrid brome (*Bromus madritensis*) and wall barley (*Hordeum murinum*).

Emergent Wetland

Emergent wetland within the BSA occurs within the San Jacinto River channel at the location of the proposed span crossing and is dominated by herbaceous wetland species such as California loosestrife (*Lythrum californicum*), tall flat sedge (*Cyperus eragrostis*), and hairy water-clover (*Marsilea vestita*).

Unvegetated Streambed

Unvegetated streambed within the BSA is located within the PVSD Channel, San Jacinto River, and their tributary channels, and primarily consists of bare earthen streambed absent of vegetation, with the exception of a few small areas consisting of less than ten

percent cover of alkali-mallow, knotweed (*Polygonum aviculare*), and bromes (*Bromus* spp.).

Habitat Connectivity

The BSA currently consists of open, primarily undeveloped land, with the exception of the existing San Jacinto Avenue in the northern portion and a small sliver of the existing South Perris Metrolink Station at the southwestern terminus.

The proposed Project is not expected to pose a constraint to habitat connectivity, as it will consist of an at-grade multi-use trail. The multi-use trail may include split-rail fencing in certain areas and will not substantially alter the existing topography within the BSA.

Relationship of the BSA to the MSHCP

Nearly the entirety of the BSA is located within RCFCD ROW, as the trail follows the PVSD Channel, which is an RCFCD-owned facility. The portion of the PVSD Channel from north of Nuevo Road to I-215 (approximately 19,000 linear feet) is also designated as PQP Lands per the MSHCP, and so portions of the BSA are located within PQP Lands. The uppermost portion of the trail alignment (approximately 7,500 linear feet) is not located within the MSHCP Criteria Area. However, the southern portion of the alignment (approximately 7,700 linear feet) is located within Criteria Cells associated with Subunit 4 (San Jacinto River Lower) of the Mead Valley Area Plan. A small portion of the BSA (approximately 1,100 linear feet) extends through the southwest corner of Cell Group G (Cell 3069). Nearly the remainder of the alignment (approximately 6,500 linear feet) is located within portions of Criteria Cells 3173, 3174, 3276, and 3277 [Figure 8A – MSHCP Overlay Map]. However, the proposed Project is considered a Covered Activity as a trail project, pursuant to Volume I, Section 7.4.2 of the MSHCP (MSHCP Figure 7-4) and is not subject to the MSHCP Reserve Assembly requirements. The southernmost portion (approximately 730 linear feet) of the BSA at Case Road extends through an existing MSHCP Conservation Easement held by the RCA. The Easement mostly occurs on the western side of the San Jacinto River, but also extends across the river overlapping with the RCFCD ROW.

The BSA is located within the NEPSSA 3 and CAPSSA 3. Portions of the BSA are located within the Burrowing Owl Survey Area and Mammal Survey Area, but it is not located within the Amphibian Survey Area [Figure 8B – MSHCP Survey Areas]. Within the designated Survey Areas, the MSHCP requires habitat assessments, and focused surveys within areas of suitable habitat.

Regional Species and Habitats and Natural Communities of Concern

Special-Status Vegetation Communities (Habitats)

A review of the CNDDB (2019) identified the following four special-status habitats as occurring within the vicinity of the BSA: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, and Southern Sycamore Alder Riparian Woodland. None of these vegetation communities are present within the BSA; however, riparian habitats are also generally treated as special-status in California due to their regional decline over the past several decades. Approximately 0.51 acre of riparian vegetation consisting of disturbed alkali meadow is present along

the upper banks of the San Jacinto River at the proposed span crossing location, and approximately 0.07 acre of emergent wetland is present within the San Jacinto River channel at the proposed span crossing location near the southwestern terminus of the proposed Project [Figure 5 – Vegetation Map].

Special-Status Plants and Wildlife

Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the BSA, 2) any other special-status plants and wildlife that are known to occur within the vicinity of the BSA, or for which potentially suitable habitat occurs within the BSA, and 3) any species with specific survey and/or conservation requirements under the MSHCP. Table 3-2 provides a list of special-status plants evaluated for the Project BSA through general biological surveys, habitat assessments, and focused surveys.

Table 3-2. Special-Status Plants Evaluated for the BSA

Status

Federal
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate

State
SE – State Endangered
ST – State Threatened

CNPS
Rank 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.
Rank 2A – Plants presumed extirpated in California, but common elsewhere.
Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 – Plants about which more information is needed (a review list).
Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Code extension
.1 – Seriously endangered in California (over 80% occurrences threatened)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Habitat
HP – Habitat Present
HA – Habitat Absent

Occurrence
- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur onsite based on suitable habitat, however its presence/absence could not be confirmed.
- Present – The species was detected onsite incidentally or through focused surveys.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
California Orcutt grass *Orcuttia californica*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Vernal pools	HA	Does not occur on site due to a lack of suitable habitat.
California screw moss *Tortula californica*	Federal: None State: None CNPS: Rank 1B.2	Sandy soil in chenopod scrub, and valley and foothill grassland.	HA.	Does not occur on site due to a lack of suitable habitat.
Chaparral ragwort *Senecio aphanactis*	Federal: None State: None CNPS: Rank 2B.2 MSHCP: None	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	HA	Does not occur on site due to a lack of suitable habitat.
Chaparral sand-verbena *Abronia villosa var. aurita*	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Coulter's goldfields *Lasthenia glabrata ssp. coulteri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Playas, vernal pools, marshes and swamps (coastal salt).	HP	Confirmed absent during focused surveys.
Coulter's matilija poppy *Romneya coulteri*	Federal: None State: None CNPS: Rank 4.2 MSHCP: MSHCP	Often in burns in chaparral and coastal scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Davidson's saltscale *Atriplex serenana var. davidsonii*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Alkaline soils in coastal sage scrub, coastal bluff scrub.	HP	Confirmed absent during focused surveys.
Intermediate mariposa-lily *Calochortus weedii var. intermedius*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland.	HA	Does not occur on site due to a lack of suitable habitat.
Jaeger's (bush) milk-vetch *Astragalus pachypus* var. *jaegeri*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	HA	Does not occur on site due to a lack of suitable habitat.
Little mousetail *Myosurus minimus ssp. apus*	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	HP	Confirmed absent during focused surveys.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	HP	Confirmed absent during focused surveys.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Many-stemmed dudleya *Dudleya multicaulis*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	HP	Confirmed absent during focused surveys.
Marsh sandwort *Arenaria paludicola*	Federal: FE State: SE CNPS: Rank 1B.1	Marshes and swamps.	HP	Confirmed absent during focused surveys.
Mud nama *Nama stenocarpa*	Federal: None State: None CNPS: Rank 2B.2 MSHCP(d)	Marshes and swamps.	HP	Confirmed absent during focused surveys.
Munz's onion *Allium munzii*	Federal: FE State: ST CNPS: Rank 1B.1 MSHCP(b)	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands	HP	Confirmed absent during focused surveys.
Nevin's barberry *Berberis nevinii*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(d)	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Palmer's grapplinghook *Harpagonella palmeri*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	HP	Confirmed absent during focused surveys.
Paniculate tarplant *Deinandra paniculata*	Federal: None State: None CNPS: Rank 4.2	Usually in vernally mesic, sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pools.	HP	Confirmed absent during focused surveys.
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Chenopod scrub, playas, vernal pools.	HP	Confirmed absent during focused surveys.
Parry's spineflower *Chorizanthe parryi var. parryi*	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Payson's jewelflower *Caulanthus simulans*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Sandy or granitic soils in chaparral and coastal scrub.	HA	Does not occur on site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Peninsular spineflower *Chorizanthe leptotheca*	Federal: None State: None CNPS: Rank 4.2	Granitic soils within chaparral, cismontane woodland, and coastal sage scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Plummer's mariposa lily *Calochortus plummerae*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	HA	Does not occur on site due to a lack of suitable habitat.
Robinson's pepper grass *Lepidium virginicum var. robinsonii*	Federal: None State: None CNPS: Rank 4.3	Openings in chaparral and coastal sage scrub.	HA	Does not occur on site due to a lack of suitable habitat.
Salt Marsh bird's beak *Chloropyron maritimum* ssp. *maritimum*	Federal: FE State: SE CNPS: Rank 1B.2	Coastal dunes, coastal salt marshes and swamps.	HA	Does not occur on site due to a lack of suitable habitat.
Salt Spring checkerbloom *Sidalcea neomexicana*	Federal: None State: None CNPS: Rank 2B.2	Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	HA	Does not occur within the BSA due to lack of suitable habitat.
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	HP	Confirmed absent during focused surveys.
San Diego ambrosia *Ambrosia pumila*	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	HP	Confirmed absent during focused surveys.
San Jacinto Valley crownscale *Atriplex coronata var. notatior*	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	HP	Confirmed absent during focused surveys.
Slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	HA	Does not occur on site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Small-flowered morning-glory *Convolvulus simulans*	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay and serpentine soils on openings in chaparral, coastal scrub, and valley and foothill grassland.	HP	Confirmed absent during focused surveys.
Small-flowered microseris *Microseris douglasii* ssp. *platycarpa*	Federal: None State: None CNPS: Rank 4.2	Clay soils in coastal scrub, cismontane woodland, valley and foothill grassland, and vernal pools.	HP	Confirmed absent during focused surveys.
Smooth tarplant *Centromadia pungens* ssp. *laevis*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	HP	Confirmed absent during focused surveys.
Southern California black walnut *Juglans californica*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces.	HA	Does not occur on site due to a lack of suitable habitat.
Spreading navarretia *Navarretia fossalis*	Federal: FT State: None CNPS: Rank 1B.1 MSHCP(b)	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	HP	Confirmed absent during focused surveys.
Thread-leaved brodiaea *Brodiaea filifolia*	Federal: FT State: SE CNPS: Rank 1B.1 MSHCP(d)	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, and vernal pools.	HP	Confirmed absent during focused surveys.
Vernal barley *Hordeum intercedens*	Federal: None State: None CNPS: Rank 3.2 MSHCP	Coastal scrub, coastal dunes, valley and foothill grassland, and vernal pools.	HP	Confirmed absent during focused surveys.
Woven-spored lichen *Texosporium sancti-jacobi*	Federal: None State: None CNPS: Rank 3	On soil, small mammal pellets, dead twigs, and on *Selaginella* spp. in chaparral (openings).	HA	Does not occur on site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Wright's trichocoronis *Trichocoronis wrightii var. wrightii*	Federal: None State: None CNPS: Rank 2B.1 MSHCP(b)	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	HP	Confirmed absent during focused surveys.

Table 3-3. Special Status Animals Evaluated for the BSA

Status

Federal
FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FC – Federal Candidate
BGEPA– Bald and Golden Eagle Protection Act

State
SE – State Endangered
ST – State Threatened
SC– State Candidate
CFP – California Fully-Protected Species
SSC – Species of Special Concern

Western Bat Working Group (WBWG)
H – High Priority
LM – Low-Medium Priority
M – Medium Priority
MH – Medium-High Priority

Habitat Status
HP – Habitat Present
FP – Foraging Habitat Present; however, Nesting Habitat Absent
HA – Habitat Absent

Occurrence
- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Absent – The species is absent from the site, either because the site lacks suitable habitat for the species, the site is located outside of the known range of the species, or focused surveys has confirmed the absence of the species.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur onsite based on suitable habitat, however its presence/absence could not be confirmed.
- Present – The species was detected onsite incidentally or through focused surveys.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Invertebrates				
Crotch bumble bee *Bombus crotchii*	Federal: None State: None	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Quino checkerspot butterfly *Euphydryas editha quino*	Federal: FE State: None MSHCP	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include *Plantago erecta* and *Castilleja exserta*. Adults occur on sparsely vegetated rounded hilltops and ridgelines, and are known to disperse through disturbed habitats to reach suitable nectar plants.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Riverside fairy shrimp *Streptocephalus woottoni*	Federal: FE State: None MSHCP(a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Vernal pool fairy shrimp *Branchinecta lynchi*	Federal: FT State: None MSHCP(a)	Seasonal vernal pools	HA	Does not occur within the BSA due to a lack of suitable habitat.
Amphibians and Reptiles				
California glossy snake *Arizona elegans occidentalis*	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Coast horned lizard *Phrynosoma blainvillii*	Federal: None State: SSC MSHCP	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Coast patch-nosed snake *Salvadora hexalepis virgultea*	Federal: None State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Coastal whiptail *Aspidoscelis tigris stejnegeri (multiscutatus)*	Federal: SSC State: None MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	HA	Does not occur within the BSA due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Orange-throated whiptail *Aspidoscelis hyperythra*	Federal: None State: None MSHCP	Coastal sage scrub, chaparral, non-native grassland, oak woodland, and juniper woodland.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Red-diamond rattlesnake *Crotalus ruber*	Federal: None State: SSC MSHCP	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	HA	Does not occur within the BSA due to a lack of suitable habitat.
San Diego banded gecko *Coleonyx variegatus abbotti*	Federal: None State: SSC MSHCP	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Southern California legless lizard *Anniella stebbinsi*	Federal: None State: SSC	Broadleaved upland forest, chaparral, coastal dunes, coastal scrub; found in a broader range of habitats that any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans,	HA	Does not occur within the BSA due to a lack of suitable habitat.
Western pond turtle *Emys marmorata*	Federal: None State: SSC MSHCP	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Western spadefoot *Spea hammondii*	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Birds				
Bald eagle (nesting & wintering) *Haliaeetus leucocephalus*	Federal: Delisted State: SE, FP MSHCP	Primarily in or near seacoasts, perennial rivers, swamps, and large lakes. Perching sites consist of large trees or snags with	HA	Not expected to occur due to the absence of open water habitats and large trees within the BSA.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
		heavy limbs or broken tops.		
Burrowing owl (burrow sites & some wintering sites) *Athene cunicularia*	Federal: None State: SSC MSHCP(c)	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	HP	Confirmed present.
California black rail *Laterallus jamaicensis coturniculus*	Federal: None State: ST, CFP	Occurs in large tracts of marshes, swamps, and wet meadows with a high density of sedges and aquatic grass species used for nesting substrate.	HA	Does not occur, as the emergent wetland within the BSA does not represent the dense cat-tail, sedge, and cord grass marsh habitats required by this species.
Coastal cactus wren (San Diego & Orange County only) *Campylorhynchus brunneicapillus sandiegensis*	Federal: None State: SSC MSHCP	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Coastal California gnatcatcher *Polioptila californica*	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Golden eagle (nesting & wintering) *Aquila chrysaetos*	Federal: None State: WL, FP MSHCP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	FP	Low potential to forage within the BSA.
Least Bell's vireo (nesting) *Vireo bellii pusillus*	Federal: FE State: SE MSHCP(a)	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	HA	Does not occur within the BSA due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Loggerhead shrike (nesting) *Lanius ludovicianus*	Federal: None State: SSC MSHCP	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	FP	Confirmed foraging within the BSA.
Long-eared owl (nesting) *Asio otus*	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Northern harrier (nesting) *Circus cyaneus*	Federal: None State: SSC MSHCP	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	FP	Moderate potential to forage within the BSA.
Southwestern California rufous-crowned sparrow *Aimophila ruficeps canescens*	Federal: None State: SSC MSHCP	Coastal sage scrub and dry woodland habitats.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: None State: Candidate Endangered MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	HA	Does not occur. Large contiguous stands of marsh habitat are absent from the BSA.
Western snowy plover (nesting) *Charadrius alexandrinus nivosus*	Federal: FT, BCC State: SSC	Sandy or gravelly beaches along the coast, estuarine salt ponds, alkali lakes, and at the Salton Sea.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: FT State: SE MSHCP(a)	Dense, wide riparian woodlands with well-developed understories.	HA	Does not occur within the BSA due to a lack of suitable habitat.
White-tailed kite (nesting) *Elanus leucurus*	Federal: None State: FP MSHCP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	FP	Confirmed present foraging within the BSA.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Willow flycatcher (nesting) *Empidonax traillii*	Federal: None State: SE	Breeds in moist, shrubby areas, often with standing or running water. Winters in shrubby clearings and early successional growth.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Yellow warbler (nesting) *Setophaga petechia*	Federal: None State: SSC MSHCP	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Yellow-breasted chat (nesting) *Icteria virens*	Federal: None State: SSC MSHCP	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Yellow-headed blackbird (nesting) *Xanthocephalus xanthocephalus*	Federal: None State: SSC	Breed and roost in freshwater wetlands with dense, emergent vegetation such as cattails. Often forage in fields, typically wintering in large, open agricultural areas.	FP	Low potential to forage within the BSA.
Mammals				
American badger *Taxidea taxus*	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	HA	Low potential to forage within the BSA.
Dulzura pocket mouse *Chaetodipus californicus femoralis*	Federal: None State: SSC	Coastal scrub, grassland, and chaparral, especially at grass-chaparral edges	HA	HA. Confirmed absent during trapping efforts.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	Federal: None State: SSC MSHCP(c)	Fine, sandy soils in coastal sage scrub and grasslands.	HA	HA. Confirmed absent during trapping efforts.
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	Federal: None State: SSC MSHCP	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	HA	Confirmed absent during trapping efforts.

Species Name	Status	Habitat Requirements	Habitat Status	Potential for Occurrence
Pocketed free-tailed bat *Nyctinomops femorosaccus*	Federal: None State: SSC WBWG: M	Rocky areas with high cliffs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	FP	Moderate potential to forage within the BSA.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Federal: None State: SSC MSHCP	Coastal sage scrub, desert scrub, native grassland, and chaparral with low density.	HA	Does not occur within the BSA due to a lack of suitable habitat.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: SSC MSHCP	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	HA	Does not occur within the BSA due to a lack of suitable habitat.
Southern grasshopper mouse *Onychomys torridus ramona*	Federal: None State: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	HA	Does not occur within the BSA due to a lack of suitable habitat.
San Bernardino kangaroo rat *Dipodomys merriami parvus*	Federal: FE State: SC MSHCP(c)	Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.	HA	Confirmed absent during trapping efforts.
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	HA	Confirmed absent during trapping efforts.
Western mastiff bat *Eumops perotis californicus*	Federal: None State: SSC WBWG: H	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	FP	Moderate potential to forage within the BSA.
Western yellow bat *Lasiurus xanthinus*	Federal: None State: SSC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	FP	Moderate potential to forage within the BSA.

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

DISCUSSION OF DISTURBED ALKALI MEADOW

Survey Results

Approximately 0.51 acre of riparian vegetation consisting of a disturbed alkali meadow is present along the upper banks of the San Jacinto River at the proposed bridge crossing location in the southwestern portion of the BSA (Figure 5 – Vegetation Map, Figure 6A – Corps/Regional Board Jurisdictional Resources and Impacts, and Figure 6B – CDFW Jurisdictional Resources and Impacts).

Project Impacts

The proposed Project would not result in impacts to the 0.51 acres of disturbed alkali meadow, as the proposed crossing over the San Jacinto River has been designed as a span bridge, spanning from outside of the upper banks. All construction activities would occur from outside of the upper banks of the San Jacinto River, within disturbed habitat, and not the mapped alkali meadow.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for disturbed alkali meadow, because no impact will occur.

Cumulative Impacts

The proposed Project would not contribute to cumulative impacts to alkali meadow habitats, because no impact will occur.

DISCUSSION OF EMERGENT WETLAND

Survey Results

A small patch (0.07 acre) of emergent wetland is located within the San Jacinto River channel at the proposed span bridge crossing location in the southwestern portion of the BSA (Figure 5 – Vegetation Map, Figure 6A – Corps/Regional Board Jurisdictional Resources and Impacts, and Figure 6B – CDFW Jurisdictional Resources and Impacts).

Project Impacts

The proposed Project would not result in impacts to the 0.07 acres of emergent wetland, as the proposed crossing over the San Jacinto River has been designed as a span bridge, spanning from outside of the upper banks. All construction activities would occur from outside of the upper banks of the San Jacinto River, within disturbed habitat, and not emergent wetlands.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for emergent wetland, because no impact will occur.

Cumulative Impacts

The proposed Project would not contribute to cumulative impacts to emergent wetland habitats, because no impact will occur.

Discussion of State and Federal Waters

Survey Results

Corps jurisdiction within the BSA totals approximately 0.70 acre (Figure 6A – Corps/Regional Board Jurisdictional Resources & Impacts), of which approximately 0.07 acre consists of jurisdictional wetlands. Corps jurisdiction is summarized in Table 4-1.

Regional Board jurisdiction at the BSA mirrors Corps jurisdiction and totals approximately 0.70 acre, of which approximately 0.07 acre consists of jurisdictional wetlands. Regional Board jurisdiction is summarized in Table 4-1.

CDFW jurisdiction at the BSA approximately 8.49 acres (Figure 6B – CDFW Jurisdictional Resources & Impacts), of which approximately 0.58 acre consists of vegetated riparian habitat (Table 4-1).

Table 4-1. Jurisdictional Delineation Summary

		Corps/Regional Board			CDFW			
Drainage Feature	**Resource Type**	**Wetland (acres)**	**Non-wetland Waters (acres)**	**Total (acres)**	**Riparian (acres)**	**Unvegetated Streambed (acres)**	**Total (acres)**	**Length (linear feet)**
Perris Valley Storm Drain	Intermittent	0.00	0.00	0.00	0.00	7.18	7.18	8,573
San Jacinto River	Intermittent	0.07	0.33	0.40	0.58	0.43	1.01	639
Metz Channel	Ephemeral	0.00	0.20	0.20	0.00	0.20	0.20	123
G Street Channel	Ephemeral	0.00	0.03	0.03	0.00	0.03	0.03	44
RCFCD Channel	Ephemeral	0.00	0.04	0.04	0.00	0.04	0.04	99
Unnamed Ephemeral Drainage	Ephemeral	0.00	0.03	0.03	0.00	0.03	0.03	180
TOTAL		**0.07**	**0.63**	**0.70**	**0.58**	**7.91**	**8.49**	**9,658**

Project Impacts

Although the proposed Project alignment intersects with the Metz Channel, G-Street Channel, an unnamed ephemeral drainage, and the San Jacinto River, each of these crossings have been designed to fully span the extent of Corps, Regional Board, and CDFW jurisdiction. In addition, the portion of the trail alignment to be constructed under the I-215 bridge will be located outside of the jurisdictional limits of the San Jacinto River channel between the outside bridge pier and abutments. Therefore, impacts to Corps, Regional Board, and CDFW jurisdiction would not occur as a result of the proposed Project, as the Project will not result in a discharge of materials into a water of the U.S. (Corps and Regional Board), and will not modify the bed, bank, or channel of a CDFW stream.

Avoidance and Minimization Efforts/Compensatory Mitigation

The trail alignment is designed to avoid impacts to jurisdictional waters by constructing bridge crossings that will span jurisdictional waters without any impacts to Corps, Regional Board, and CDFW jurisdiction. Therefore, compensatory mitigation would not be required.

Cumulative Impacts

The proposed Project would not contribute to cumulative impacts to Corps, Regional Board, and CDFW jurisdiction, because the trail alignment is designed to avoid impacts to jurisdictional waters by constructing bridge crossings that will span jurisdictional waters without creating any impacts.

Discussion of MSHCP Riparian/Riverine Resources

Survey Results

MSHCP Riparian/Riverine Resources in the BSA total approximately 8.49 acres and mirror CDFW jurisdiction (Figure 6B – CDFW Jurisdictional Resources & Impacts), inclusive of approximately 0.58 acre of vegetated riparian habitat, consisting of 0.51 acre of disturbed alkali meadow and 0.07 acre of emergent wetland.

No vernal pools, other pool or depression habitats, or fairy shrimp habitat are present within the BSA.

Project Impacts

Although the proposed Project alignment intersects with MSHCP Riparian/Riverine Resources located within the Metz Channel, G-Street Channel, an unnamed ephemeral drainage, and the San Jacinto River, each of these crossings have been designed to fully span these resources. Therefore, the Project would not result in a loss of function associated with MSHCP Riparian/Riverine Resources. A Determination of Biologically Equivalent or Superior Preservation (DBESP) would not be required pursuant to the MSHCP.

Avoidance and Minimization Efforts/Compensatory Mitigation

The trail alignment is designed to avoid the loss of functions associated with MSHCP riparian/riverine resources by constructing bridge crossings that will span the San Jacinto River and other lateral channels. Therefore, compensatory mitigation would not be required.

Cumulative Impacts

The proposed Project would not contribute to cumulative impacts to MSHCP Riparian/Riverine Resources, because the trail alignment is designed to avoid the loss of riparian/riverine functions by constructing bridge crossings that will span riparian/riverine areas without creating any impacts.

Discussion of Critical Habitat

Survey Results

The BSA is located within USFWS-mapped Critical Habitat for spreading navarretia (*Navarretia fossalis*; 15.15 acres), San Jacinto Valley crownscale (*Atriplex coronata var. notatior*;15.53 acres), and thread-leaved brodiaea (*Brodiaea filifolia*; 6.15 acres) [Figure 9 – USFWS Critical Habitat Map]. The Primary Constituent Elements (PCEs) identified for each species are described as follows:

PCEs for spreading navarretia

1) Clay soils that retain water for sufficient periods of time to support vernal pool, alkali grassland, alkali playa, or alkali sink habitat;
2) Periods of inundation with water during winter and spring that are sufficient to support vernal pool, alkali grassland, alkali playa, or alkali sink habitats;
3) Watershed areas surrounding vernal pools, alkali grasslands, alkali playas, or alkali sinks that provide the hydrology to support these habitats; and
4) Vernal pools, alkali grasslands, alkali playas, and alkali sinks at elevations between sea level and 4,250 feet on flat to gently sloping terrain.

The Project will not impact PCEs for spreading navarretia. Although the PIA is generally mapped as containing soils associated with vernal pools, alkali grassland, alkali playa, and alkali sink habitat (i.e. Domino and Willows soils), the PIA does not contain these habitats. Furthermore, the PIA does not contain features that exhibit hydrology with the potential to support spreading navarretia. As is discussed throughout this document, the majority of the PIA consists of an existing dirt access road that does not contain depression features with the potential to support the species.

PCEs for thread-leaved brodiaea

Habitats that provide space for growth and persistence of thread-leaved brodiaea include areas:

1) with combinations of appropriate elevation and clay or clay-associated soils, on mesas or low to moderate slopes that support open native or annual grasslands within open coastal sage scrub or coastal sage scrub-chaparral communities;

2) in floodplains or in association with vernal pool or playa complexes that support various grassland, scrub, or riparian herb communities;
3) on soils derived from olivine basalt lava flows on mesas and slopes that support vernal pools within grassland, oak woodland, or savannah communities; or
4) on sandy loam soils derived from basalt and granodiorite parent material with deposits of cobbles and boulders supporting intermittent seeps, and open marsh communities.

The Project will not impact PCEs for thread-leaved brodiaea. Although the PIA is generally mapped as containing soils with a clay component (i.e. Domino and Willows soils), the PIA does not contain habitat types that are generally associated with thread-leaved brodiaea, including populations of thread-leaved brodiaea known from the vicinity of the Project. Furthermore, the PIA does not contain soils derived from olivine basalt flows, or in general from basalt and granodiorite parent material and in association with habitats as described above.

PCEs for San Jacinto Valley crownscale

1) Wetland habitat, including floodplains and vernal pools:
   a) Associated with native vegetation communities, alkali playa, alkali scrub, and alkali grasslands; and
   b) Characterized by seasonal inundation or localized flooding, including infrequent large-scale flood events with low nutrient loads; and
2) Slow draining alkali soils, including the Willows, Domino, Traver, Waukena, and Chino soils series with:
   a) Low permeability;
   b) Low nutrient availability; and
   c) Seasonal ponding and evaporation.

The Project will not impact PCEs for San Jacinto Valley crownscale. The PIA does not contain any wetland habitats subject to seasonal inundation or localized flooding, including vernal pools and floodplain habitats (alkali playa, alkali scrub, and alkali grasslands with a potential to support the crownscale. Although the PIA is generally mapped as containing Domino and Willows soils, the PIA contains either highly modified substrates, i.e. the compacted dirt access road that comprises the majority of the PIA, regularly tilled agricultural areas, other disturbed areas, and developed areas. As such, the modified soils within the PIA are not expected to support the crownscale, or provide opportunities for the recovery of the crownscale.

Project Impacts

The proposed Project would impact areas mapped by the USFWS as Critical Habitat for spreading navarretia (2.97 acres), thread-leaved brodiaea (1.31 acres), and San Jacinto Valley crownscale (2.09 acres). However, as discussed above these areas do not exhibit PCEs for the species, and as such the Project would not result in an adverse modification of Critical Habitat for spreading navarretia, thread-leaved brodiaea, and San Jacinto Valley crownscale.

Avoidance and Minimization Efforts/Compensatory Mitigation

No compensatory mitigation would be required for impacts to mapped Critical Habitat areas because the areas do not exhibit PCEs for spreading navarretia, thread-leaved

brodiaea, and San Jacinto Valley crownscale, and as such the Project will not result in an adverse modification of Critical Habitat for these species. In addition, since the proposed trail alignment will utilize the existing dirt access road for nearly all of its length, the Project has been designed to avoid areas mapped as Critical Habitat that may otherwise exhibit PCEs for these species.

Cumulative Impacts

The proposed Project would not contribute to cumulative impacts to areas mapped as Critical Habitat, as the Project alignment does not exhibit PCEs for spreading navarretia, thread-leaved brodiaea, and San Jacinto Valley crownscale, and therefore the Project would not result in an adverse modification of Critical Habitat for these species.

Discussion of Special Status Plant Species

Survey results

No special-status plants were detected within the BSA, and therefore the PIA. GLA reviewed locations of special-status plants known from past biological surveys conducted along the San Jacinto River and the PVSD Channel, including surveys previously conducted by GLA. Special-status plants known from the general vicinity of the BSA include San Jacinto Valley crownscale (FE, CNPS 1B.1), thread-leaved brodiaea (FT, SE, CNPS 1B.1), spreading navarretia (FT, CNPS 1B.1), smooth tarplant (CNPS 1B.1), and Coulter's goldfields (CNPS 1B.1).

Project Impacts

The proposed Project would not result in direct impacts to special-status plant species, because no special-status plants were detected within the BSA, and therefore the PIA.

Avoidance and Minimization Efforts/Compensatory Mitigation

The Project alignment has been designed to avoid direct impacts to special-status plants by positioning the alignment almost entirely within existing dirt roads that do not support special-status plants. Downstream of I-215, a known population of the San Jacinto Valley crownscale occurs on the eastern side of the San Jacinto River between I-215 and Case Road. The alignment will primarily be located on the western side of the river in order the avoid the crownscale population, and then will cross the San Jacinto River south of the population.

The following measures are recommended to minimize potential indirect impacts to special-status plants known to be in the vicinity of the PIA:

- All ground disturbing activities related to the proposed Project will be limited to the PIA, including construction access and staging. The boundary of the PIA will be demarcated with temporary orange construction fencing where the alignment is located near sensitive areas. The fencing will be installed under the direction of a qualified biologist, and the fencing will be maintained and periodically monitored in place until ground disturbing activities are completed.

- Signage will be installed along the trail alignment to educate trail users about rare plants associated with the San Jacinto River floodplain.

Cumulative Impacts

Since the Project will not impact special-status plants, then it will not contribute to cumulative impacts to special-status plant species.

Special Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) specific survey and/or conservation requirements under the MSHCP.

DISCUSSION OF BURROWING OWL

Survey Results

Burrowing owls (*Athene cunicularia*; SSC) were detected occupying burrows within the BSA (and within a 500-foot buffer area of the PIA) during the 2018 focused breeding season surveys, but outside of the PIA. One natal burrow supporting a breeding owl pair was detected approximately 300 feet east of the BSA on the opposite side of the PVSD Channel from the trail alignment, adjacent to an access road atop the eastern bank of the PVSD Channel. Burrowing owls associated with this family group were observed at additional satellite burrows, including two located within the BSA, but outside of the PIA (Figure 4 – Burrowing Owl Location Map).

Project Impacts

Based on the focused surveys the Project would not impact occupied burrows (including natal burrows), because all of the occupied burrows detected during the surveys were located outside of the PIA. The Project would impact potential foraging habitat for burrowing owls; however, the extent of foraging use within the PIA is limited foraging since the majority of the alignment consists of the compacted dirt access road and agricultural areas that are regularly disturbed. As such, the loss of minimal, low quality foraging habitat would not represent a biologically important impact to the burrowing owl.

Although the Project would not impact occupied burrows based on existing survey data, there is some potential for burrows within the PIA in the future that could become occupied by burrowing owls. A measure is identified below to avoid direct harm to burrowing owls during construction activities. However, since the majority of the PIA contains the existing access road, the potential for burrows would be limited to the berms separating the road from the PVSD Channel, portions of the PIA that include the agricultural fields, and where the PIA would cross the San Jacinto River. Furthermore, given the active use of the road and tilling of the adjacent agricultural lands, burrowing owls are not expected to nest within the PIA or the broader BSA.

In addition, given the proximity of burrowing owls detected adjacent to the PIA and the suitability of habitat within the PIA, the Project would have the potential to indirectly impact burrowing owls due to construction noise if owls are present at the time of

construction, particularly if breeding owls are present. A second measure is identified below to minimize indirect impacts to burrowing owls. With the implementation of both measures the Project will avoid direct impacts to burrowing owls and minimize indirect impacts, as prescribed by the MSHCP.

Avoidance and Minimization Efforts/Compensatory Mitigation

Through the implementation of the following measures, as prescribed by the MSHCP, the Project would avoid direct impacts and minimize indirect impacts to burrowing owls:

- A pre-construction burrowing owl survey will be conducted no more than 30 days prior to ground-disturbing activities (e.g., vegetation clearing, equipment staging, grading, etc.) associated with the Project to ensure that no owls are occupying burrows within or immediately adjacent to the PIA in the days or weeks preceding the ground-disturbing activities. If burrowing owls are present prior to the initiation of ground-disturbing activities, the Project proponent will notify the Regional Conservation Authority (RCA) and the Wildlife Agencies (USFWS and CDFW) and will coordinate regarding the potential need for owl relocation and/or biological monitoring.

- If burrowing owls are detected within or adjacent to the PIA during the pre-construction survey, then through coordination with the RCA and Wildlife Agencies the Project proponent will prepare a Burrowing Owl Protection and Relocation Plan. The purpose of the Plan will be to avoid direct harm to burrowing owls and to minimize indirect impacts to owls during construction. As applicable, the Plan will address procedures for relocating burrowing owls from the PIA and to monitor burrowing owls adjacent to the PIA during construction. The Plan will be provided to the RCA and the Wildlife Agencies for review and approval.

If the species is not found during the pre-construction survey, no further action is required.

Cumulative Impacts

The Project would not contribute to cumulative effects for burrowing owls on a biologically important level, since the Project would not result in direct harm to burrowing owls, and as noted above the loss of disturbed foraging habitat would be minimal. Furthermore, the burrowing owl is covered by the MSHCP, and through implementation of the measures described above, the Project would be consistent with the MSHCP requirements for burrowing owls.

DISCUSSION OF LOGGERHEAD SHRIKE

Survey Results

Loggerhead shrike (*Lanius ludovicianus*; SSC) was observed foraging within the BSA; however, this species is not expected to nest within the BSA, as only a single Peruvian pepper tree (*Schinus molle*) and blue elderberry (*Sambucus nigra*) are present within the BSA (but not within the PIA) and are situated within a rural residential setting, subject to ongoing human disturbance.

Project Impacts

The proposed Project would impact approximately 8.46 acres of suitable foraging habitat for the loggerhead shrike, which includes the existing dirt road and all other undeveloped areas within the PIA (e.g. agricultural areas and vegetation associated with the San Jacinto River). This would not represent a biologically important impact to the species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Furthermore, since the proposed trail will consist of asphalt and decomposed granite pathways, the trail surface will provide similar attractants as the existing dirt road for thermoregulating animals, and so similar functionality is expected for foraging opportunities. However, daytime usage by wildlife may be affected by public use. Regardless, this species is covered by the MSHCP, which through the Reserve Assembly, has adequately conserved habitat for this species on a regional level.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for loggerhead shrike beyond participation in the MSHCP.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the loggerhead shrike would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF WHITE-TAILED KITE

Survey Results

White-tailed kite (*Elanus leucurus*; CFP) was observed foraging within the BSA; however, this species is not expected to nest within the BSA, as only a single Peruvian pepper tree and blue elderberry are present within the BSA (but not within the PIA), are short in stature, and are situated within a rural residential setting, subject to ongoing human disturbance.

Project Impacts

The proposed Project would impact approximately 8.46 acres of suitable foraging habitat for the white-tailed kite, which includes the existing dirt road and all other undeveloped areas within the PIA (e.g. agricultural areas and vegetation associated with the San Jacinto River). This would not represent a biologically important impact to the species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Furthermore, since the proposed trail will consist of asphalt and decomposed granite pathways, the trail surface will provide similar attractants as the existing dirt road for thermoregulating animals, and so

similar functionality is expected for foraging opportunities. However, daytime usage by wildlife may be affected by public use. Regardless, this species is covered by the MSHCP, which through the Reserve Assembly, has adequately conserved habitat for this species on a regional level.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for the white-tailed kite beyond participation in the MSHCP.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the white-tailed kite would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF GOLDEN EAGLE

Survey Results

The BSA contains very low quality, marginally suitable foraging habitat for the golden eagle (*Aquila chrysaetos*; CFP); large cliffs and rock faces required for nesting by this species are not present within the BSA.

Project Impacts

The proposed Project would impact approximately 8.46 acres of suitable foraging habitat for the golden eagle, which includes the existing dirt road and all other undeveloped areas within the PIA (e.g. agricultural areas and vegetation associated with the San Jacinto River). This would not represent a biologically important impact to the species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Furthermore, since the proposed trail will consist of asphalt and decomposed granite pathways, the trail surface will provide similar attractants as the existing dirt road for thermoregulating animals, and so similar functionality is expected for foraging opportunities. However, daytime usage by wildlife may be affected by public use. Regardless, this species is covered by the MSHCP, which through the Reserve Assembly, has adequately conserved habitat for this species on a regional level.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for the golden eagle beyond participation in the MSHCP.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the golden eagle would not contribute to cumulative effects on a biologically important level

considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF NORTHERN HARRIER

Survey Results

There is potential for the northern harrier (*Circus cyaneus*; SSC) to forage within the BSA; however, this species is not expected to nest within the BSA, as the disturbed alkali meadow and emergent wetland present along the upper banks and within the channel of the San Jacinto River occur as narrow strips and would not afford the protection from nest predation that the northern harrier requires by nesting within large, open marshlands.

Project Impacts

The proposed Project would impact approximately 8.46 acres of suitable foraging habitat for the northern harrier, which includes the existing dirt road and all other undeveloped areas within the PIA (e.g. agricultural areas and vegetation associated with the San Jacinto River). This would not represent a biologically important impact to the species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Furthermore, since the proposed trail will consist of asphalt and decomposed granite pathways, the trail surface will provide similar attractants as the existing dirt road for thermoregulating animals, and so similar functionality is expected for foraging opportunities. However, daytime usage by wildlife may be affected by public use. Regardless, this species is covered by the MSHCP, which through the Reserve Assembly, has adequately conserved habitat for this species on a regional level.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for the northern harrier beyond participation in the MSHCP.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the northern harrier would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF YELLOW-HEADED BLACKBIRD

Survey Results

There is potential for the yellow-headed blackbird (*Xanthocephalus xanthocephalus*; SSC) to forage within the BSA; however, this species is not expected to nest within the BSA, as the open marshlands required for colonial nesting are absent from the BSA.

Project Impacts

The proposed Project would impact approximately 8.46 acres of suitable foraging habitat for the yellow-headed blackbird, which includes the existing dirt road and all other undeveloped areas within the PIA (e.g. agricultural areas and vegetation associated with the San Jacinto River). However, unlike the shrike and raptors discussed above, the foraging habitat would be limited primarily to the vegetation portions of the PIA. This would not represent a biologically important impact to the species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. Furthermore, since the proposed trail will consist of asphalt and decomposed granite pathways, the trail surface will provide similar attractants as the existing dirt road for thermoregulating animals, and so similar functionality is expected for foraging opportunities. However, daytime usage by wildlife may be affected by public use.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance and minimization efforts or compensatory mitigation would be required for the yellow-headed blackbird.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the yellow-headed blackbird would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF POCKETED FREE-TAILED BAT

Survey Results

There is limited potential for the pocketed free-tailed bat (*Nyctinomops femorosaccus*; SSC) to forage within the BSA; however, rocky areas with high cliffs are required for roosting by this species, which is not present within the BSA. Therefore, the pocketed free-tailed bat would not roost within the BSA. Foraging would be limited to insects originating from vegetated areas within the BSA, with some potential for insects to rest on the dirt road.

Project Impacts

The proposed Project would impact approximately 8.46 acres of potential suitable foraging habitat for the pocketed free-tailed bat, with the relatively greater potential in adjacent agricultural and ruderal vegetation areas supporting insects. The potential for foraging within the dirt road is limited to insects that could rest on the road. These impacts would not represent a biologically important impact to this species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. As is similarly discussed above in the

analysis for bird foraging impacts, the proposed trail alignment may provide similar attractants for bat prey, particularly in areas with proposed landscaping along the trail.

Avoidance and Minimization Efforts/Compensatory Mitigation

Impacts have been minimized to the maximum extent practicable. No compensatory mitigation would be required for the pocketed free-tailed bat because the impacts are not biologically important for the reasons stated above.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the pocketed free-tailed bat would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF WESTERN MASTIFF BAT

Survey Results

There is limited potential for the western mastiff bat (*Eumops perotis californicus*; SSC) to forage within the BSA; however, cliff faces, large structures, and large trees are required for roosting by this species, which are not present within the BSA. Therefore, the western mastiff bat would not roost within the BSA. Foraging would be limited to insects originating from vegetated areas within the BSA, with some potential for insects to rest on the dirt road.

Project Impacts

The proposed Project would impact approximately 8.46 acres of potential suitable foraging habitat for the western mastiff bat, with the relatively greater potential in adjacent agricultural and ruderal vegetation areas supporting insects. The potential for foraging within the dirt road is limited to insects that could rest on the road. These impacts would not represent a biologically important impact to this species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. As is similarly discussed above in the analysis for bird foraging impacts, the proposed trail alignment may provide similar attractants for bat prey, particularly in areas with proposed landscaping along the trail.

Avoidance and Minimization Efforts/Compensatory Mitigation

Impacts have been minimized to the maximum extent practicable. No compensatory mitigation would be required for the western mastiff bat because the impacts are not biologically important for the reasons stated above.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the western mastiff bat would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

DISCUSSION OF WESTERN YELLOW BAT

Survey Results

There is limited potential for the western yellow bat (*Lasiurus xanthinus*; SSC) to forage within the BSA; however, cliff faces, large structures and large trees required for roosting by this species are not present within the BSA. Therefore, the western yellow bat would not roost within the BSA. Foraging would be limited to insects originating from vegetated areas within the BSA, with some potential for insects to rest on the dirt road.

Project Impacts

The proposed Project would impact approximately 8.46 acres of potential suitable foraging habitat for the western yellow bat, with the relatively greater potential in adjacent agricultural and ruderal vegetation areas supporting insects. The potential for foraging within the dirt road is limited to insects that could rest on the road. These impacts would not represent a biologically important impact to this species on a local or regional level, considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly surrounded by large tracts of similar undeveloped suitable foraging habitat. As is similarly discussed above in the analysis for bird foraging impacts, the proposed trail alignment may provide similar attractants for bat prey, particularly in areas with proposed landscaping along the trail.

Avoidance and Minimization Efforts/Compensatory Mitigation

Impacts have been minimized to the maximum extent practicable. No compensatory mitigation would be required for the western yellow bat because the impacts are not biologically important for the reasons stated above.

Cumulative Impacts

Proposed Project impacts to approximately 8.46 acres of suitable foraging habitat for the western yellow bat would not contribute to cumulative effects on a biologically important level considering the relatively low level of sensitivity of the species, the disturbed nature of the PIA, and that the BSA is nearly entirely surrounded by large tracts of similar undeveloped suitable foraging habitat.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

A species list was obtained using the USFWS IPaC tool, dated December 23, 2019; however, no additional coordination with the USFWS has occurred to date. The proposed Project would impact areas designated as Critical Habitat for spreading navarretia (2.97 acres), thread-leaved brodiaea (1.31 acres), and San Jacinto Valley crownscale (2.09 acres). However, these areas do not exhibit PCEs for the species, and as such the Project will not result in an adverse modification of Critical Habitat for these species. Furthermore, none of these species were detected in the BSA during the 2019 focused surveys. Therefore, the Project would result in a "No Affect" determination.

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

Essential Fish Habitat Consultation Summary

No proposed or designated Essential Fish Habitat is located within or adjacent to the BSA (National Oceanic and Atmospheric Administration National Marine Fisheries Service 2019); therefore, consultation with NMFS regarding Essential Fish Habitat is not required, resulting in a "No Effect" determination to EFH.

California Endangered Species Act Consultation Summary

No take of a state listed species is expected to occur as a result of the proposed Project; therefore, California Endangered Species Act consultation would not be required.

Wetlands and Other Waters Coordination Summary

No wetlands or other waters coordination has occurred specific to the Project to date.

Invasive Species

Per Executive Order 13112, species included on the California Invasive Plant Council (CalIPC) list of invasive species would not be utilized in landscaping within the BSA.

Several invasive species, such as various bromes (*Bromus* spp.) and prickly Russian-thistle (*Salsola tragus*) are present within the BSA. Therefore, the following measures would be implemented to prevent the spread of invasive species:

- Any new landscaping installed as a part of proposed improvements would not include species on the CalIPC list of invasive species.

- All equipment will be washed in an upland location where any seed material from invasive species will be contained, prior to entering and upon leaving the Project impact area.

- All vegetative material removed from the Project impact area will be transported in a covered vehicle and will be disposed of at a certified disposal site.

Other

Federal Migratory Bird Treaty Act

The BSA contains shrubs, grasses and forbs, and bare ground that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and FGC.

With the exception of burrowing owl, which is addressed separately in Chapter 4 above, development of the Project impact area does not pose a biologically significant impact to native nesting birds under CEQA. This is because the species of native birds with potential to nest within the BSA are common and abundant to the region (e.g. killdeer) and the number of individuals possibly impacted would not substantially reduce existing local or regional populations. The MBTA and the FGC do not make a distinction based upon the stability and/or abundance of populations, but instead prohibit the "take" of any native bird. As such, the following is a recommendation for complying with the MBTA and the Fish and Game Code:

- Vegetation clearing should be conducted outside of the nesting season (February 1 through September 15) to avoid impacts to nesting birds, including raptors. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests (generally between 200 and 500 feet for raptors and between 50 and 300 feet for passerine species, with specific buffer widths to be determined by a qualified biologist), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds have fledged and left the nest.

The key is to ensure that no direct mortality of a native bird, which when nesting includes eggs and young. Implementation of this measure will ensure the Project applicant is not in violation of the MBTA and FGC.

Wild and Scenic Rivers Consultation Summary

Areas designated as Wild and Scenic Rivers are not located within the BSA (USFWS 2019); therefore, consultation would not be required.

California Coastal Commission Coordination Summary

The BSA is not located within the Coastal Zone; therefore, California Coastal Commission coordination is not required.

Western Riverside Multiple Species Habitat Conservation Plan

The purpose of this section is to provide an analysis of the proposed Project with respect to compliance with biological aspects of the MSHCP. Specifically, this analysis evaluates the proposed Project with respect to the Project's consistency with MSHCP Reserve Assembly requirements, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

Project Relationship to Reserve Assembly

The proposed Project is identified as a covered activity in MSHCP *Section 7.4.2*; therefore, is not subject to MSHCP Reserve Assembly requirements; however, the proposed Project will be subject to a Joint Project Review (JPR).

Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Volume I, Section 6.1.2 of the MSHCP requires that site-specific focused surveys for species associated with Riparian/Riverine areas are conducted for all public and private projects where appropriate habitat is present. Specifically, focused surveys are required for the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) within areas of suitable habitat. The BSA does not contain suitable habitat for these species.

Protection of Narrow Endemic Plants and Criteria Area Plants

The BSA is located within NEPSSA 3 and CAPSSA 3. *Volume I, Section 6.1.3* (Narrow Endemic Plants) and *Section 6.3.2* (Criteria Area Plants) of the MSHCP requires that within identified plant survey areas, site-specific focused surveys for Narrow Endemic Plants and Criteria Area Plants (special-status plants) will be required for all public and private projects where appropriate soils and habitat are present.

As discussed above in Chapter 4, the proposed Project would not result in direct impacts to special-status plant species, because no special-status plants were detected within the BSA, and therefore the PIA. The Project alignment has been designed to avoid impacts to special-status plants by positioning the alignment almost entirely within existing dirt roads that do not support special-status plants. Downstream of I-215, a known population of the San Jacinto Valley crownscale occurs on the eastern side of the San Jacinto River between I-215 and Case Road. The alignment will be located on the western side of the river in order the avoid the crownscale population, and then will cross the San Jacinto River south of the population. Indirect effects have been minimized through implementation of the measures listed in Chapter 4.

The Project has demonstrated consistency with Sections 6.1.3 and 6.3.2 of the MSHCP

Guidelines Pertaining to the Urban/Wildland Interface

The MSHCP Urban/Wildlands Interface Guidelines (*Section 6.1.4*) are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. As the MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area. Future development in proximity to the MSHCP Conservation Area may result in edge effects with the potential to adversely affect biological resources within the Conservation Area. To minimize such edge effects, the guidelines shall be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area and address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives;
- Barriers; and
- Grading/Land Development.

Drainage

The Project will not adversely affect drainage to the PVSD Channel and San Jacinto River. The trail alignment would cross the Metz Channel, which currently connects to the PVSD Channel; the G-Street Channel, which currently connects to the San Jacinto River; and an Unnamed Ephemeral Drainage, which currently connects to the San Jacinto River; as well as the San Jacinto River itself. In all cases, the trail will be constructed to span the upper banks of these waters and will not affect drainage from the surrounding watershed to the PVSD Channel or San Jacinto River, or drainage patterns within the San Jacinto River itself. Where the edge of the trail abuts against the edge of the PVSD Channel or San Jacinto River, a six-inch by eight-inch concrete mow curb will separate the trail from the adjacent channel slope. The mow curb will be notched every 10 feet for drainage and would be set two inches above the slope grade and one inch above the trail. The mow curb will define a barrier between the trail and the PVSD/River, while allowing water to drain off of the trail and down the adjacent slope, as it does in the existing condition.

Toxics

Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.

Construction, use, and maintenance of the trail will not introduce toxics into the PVSD Channel or San Jacinto River. A narrow landscaping strip may be placed along certain areas at the outer edge of the trail (away from the PVSD Channel); however, no fertilizers or other chemicals will be used in the landscaping with the potential to enter the PVSD Channel or downstream areas in the San Jacinto River.

Lighting

The MSHCP requires that night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

No lighting will be installed along the trail.

Noise

The MSHCP requires that proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

Construction of the trail may generate noise that may exceed residential noise standards. However, since the adjacent PVSD Channel and San Jacinto River along the trail alignment do not support any riparian scrub or forest habitat with the potential to support special-status bird or mammal species, those areas do not contain resources that could be affected by noise. The exception to this is for burrowing owls, which, as noted in Chapter 4 above, were detected within and adjacent to the PVSD Channel between San Jacinto Avenue and the San Jacinto River.

As discussed in Chapter 4, above, if burrowing owls are detected during pre-construction surveys, a Burrowing Owl Protection and Relocation Plan will be prepared that will address protective measures including construction monitoring, and the timing of construction to avoid the nesting season, if such seasonal avoidance is justified in areas where the trail alignment occurs in proximity to occupied burrows.

Noise generated by use of the trail, and by maintenance, would not be expected to exceed residential noise standards and would not require any specific measures.

Invasives

When approving landscape plans for development that is proposed adjacent to the MSHCP Conservation Area, Permittees shall not consider the use of invasive, non-native plant species listed in *Table 6-2* of the MSHCP, and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of development that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features.

Land on the opposite side of the trail alignment from the PVSD Channel would be landscaped to the property line. Landscaping will consist of native (non-invasive), drought resistant vegetation.

Barriers

The MSHCP states that proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.

As noted above, a mow curb will be placed along the trail edge adjacent to the PVSD Channel and San Jacinto River to provide a barrier to maintenance vehicles and bicycles from the adjacent channels.

Grading/Land Development

The MSHCP requires that manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area. The proposed Project will be constructed at grade with existing topography along both the PVSD Channel and San Jacinto River and will not result in grading extending into those areas.

Additional Survey Needs and Procedures

In addition to Criteria Area Plants (as discussed above), *Volume I, Section 6.3.2* requires surveys for certain animals based on occurrence within a designated MSHCP survey area and based on the presence of suitable habitat. The BSA is located within the survey area for the burrowing owl and the Los Angeles pocket mouse. Small mammal trapping was performed in the vicinity of the BSA, but the Los Angeles pocket mouse was not detected. Focused burrowing owl surveys were performed to determine the potential for burrowing owl use within the BSA and PIA.

As noted above, burrowing owls were detected occupying burrows within the BSA (and within a 500-foot buffer area of the PIA) during the 2018 focused breeding season surveys, but outside of the PIA. One natal burrow supporting a breeding owl pair was detected approximately 300 feet east of the BSA on the opposite side of the PVSD Channel from the trail alignment, adjacent to an access road atop the eastern bank of the PVSD Channel. Burrowing owls associated with this family group were observed at additional satellite burrows, including two located within the BSA, but outside of the PIA.

Although the Project would not impact occupied burrows based on existing survey data, there is some potential for burrows within the PIA in the future that could become occupied by burrowing owls. Measures are included in Chapter 4 to perform a pre-construction survey no more than 30 days prior to ground disturbing activities, and to develop a Burrowing Owl Protection and Relocation Plan (if owls are detected during pre-construction surveys) to avoid direct harm to owls and to minimize indirect impacts during construction. With the implementation of these measures, the Project would be consistent with the Additional Survey Needs and Procedures identified under the MSHCP.

BEST MANAGEMENT PRACTICES

As applicable, the construction of the proposed Project will implement best management practices identified in Volume I, Appendix C of the MSHCP. The following are a list of relevant BMPs that will be employed by the Project:

- A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of FESA and the MSHCP, the need to adhere to the provisions of FESA and the MSHCP, the penalties associated with violating the provisions of FESA, the general measures that are being implemented to conserve the species of concern as they relate to the proposed Project, and the PIA boundaries within which the project activities must be accomplished.
- Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.
- The PIA shall be minimized to the maximum extent feasible. Access to sites shall be from within the PIA.
- Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
- Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian birds identified in MSHCP Global Species Objective No. 7.
- Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials shall be reported to appropriate entities including but not limited to the City of Perris, USFWS, CDFW, and RWQCB, and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
- A qualified biologist shall monitor construction activities for the duration of the ground-disturbing activities (where applicable) to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the PIA.
- Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
- To avoid attracting predators of the species of concern, the PIA site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
- Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the PIA. The construction area(s) shall be the minimal area necessary to complete the proposed Project and shall be specified in the construction plans. The PIA will be fenced with orange snow fence or orange silt fence (where applicable). Exclusion fencing should be maintained until the completion of all ground-disturbing activities. Employees shall be instructed that their activities are restricted to the PIA.

- The City of Perris shall have the right to access and inspect any portion of the PIA and any restoration/enhancement area for compliance with project approval conditions including these BMPs.

Conclusion of MSHCP Consistency

The proposed Project is a Covered Activity as a trail project, pursuant to *Volume I, Section 7.4.2* of the MSHCP.

As outlined above, the proposed Project will be consistent with the biological requirements of the MSHCP; specifically, pertaining to the Project's relationship to the reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures).

Chapter 6 – References

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Appendices

Appendix A – Floral Compendium
Appendix B – Faunal Compendium
Appendix C – U.S. Fish and Wildlife Service Species List

APPENDIX A

FLORAL COMPENDIUM

The floral compendium lists all species identified during floristic level/focused plant surveys conducted for the Project site. Taxonomy typically follows The Jepson Manual, 2nd Edition (2012). Common plant names are taken from Baldwin (2012), Munz (1974), and Roberts et al (2004) and Roberts (2008). An asterisk (*) denotes a non-native species.

SCIENTIFIC NAME	COMMON NAME
MAGNOLIOPHYTA	**FLOWERING PLANTS**
MONOCOTYLEDONES	**MONOCOTS**
CYPERACEAE	**Sedge Family**
Cyperus eragrostis	tall flat sedge
Eleocharis macrostachya	common spikerush
POACEAE	**Grass Family**
* ***Bromus diandrus***	ripgut grass
* ***Bromus madritensis***	Madrid brome
* ***Cynodon dactylon***	Bermuda grass
Distichlis spicata	salt grass
* ***Festuca perennis***	Italian rye grass
* ***Hordeum murinum***	wall barley
***** ***Phalaris minor***	little-seed canary grass
EUDICOTYLEDONES	**EUDICOTS**
ADOXACEAE	**Muskroot Family**
Sambucus nigra ssp. caerulea	blue elderberry
AMARANTHACEAE	**Amaranth Family**
***** ***Amaranthus albus***	tumbleweed
ANACARDIACEAE	**Sumac Family**
***** ***Schinus molle***	pepper tree
ASTERACEAE	**Sunflower Family**
***** ***Centaurea melitensis***	tocalote

*	***Oncosiphon piluliferum***	stinknet
	Xanthium strumarium	rough cocklebur
BRASSICACEAE		**Mustard Family**
*****	***Hirschfeldia incana***	short-pod mustard
CHENOPIDIACEAE		**Goosefoot Family**
*	***Salsola tragus***	Russian thistle
CONVOLVULACEAE		**Morning Glory Family**
	Convolvulus arvensis	bindweed
	Cressa truxillensis	spreading alkaliweed
FABACEAE		**Legume Family**
*	***Medicago polymorpha***	bur clover
*	***Melilotus albus***	white sweet clover
*	***Melilotus indicus***	sourclover
*	***Vicia sativa***	spring vetch
LYTHRACEAE		**Loosestrife Family**
	Lythrum californicum	California loosestrife
MALVACEAE		**Mallow Family**
	Malvella leprosa	alkali mallow
PLANTAGINACEAE		**Plantain Family**
*	***Plantago major***	common plantain
POLYGONACEAE		**Knotweed family**
*	***Polygonum aviculare***	knotweed
*	***Rumex crispus***	curly dock

APPENDIX B

FAUNAL COMPENDIUM

Vertebrates identified in the field by sight, calls, tracks, scat, or other signs are cited according to the nomenclature of AOU (2019)[1] for birds and California Department of Fish and Wildlife (2016)[2] for mammals. Species were noted by direct observation, call identification, or detection of tracks, scat, or other diagnostic signs.

LEGEND

† Denotes special-status species
* Denotes non-native species

TERRESTRIAL VERTEBRATES

BIRDS

ACCIPITRIDAE - HAWKS

Buteo jamaicensis
red-tailed hawk
Elanus leucurus
white-tailed kite

AEGITHALIDAE – BUSHTITS

Psaltriparus minimus
bushtit

ALAUDIDAE - AMERICAN SPARROWS

Eremophila alpestris
California horned lark

COLUMBIDAE - PIGEONS & DOVES

[1] Chesser, R. T., K. J. Burns, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., D. F. Stotz, and K. Winker. 2019. Check-list of North American Birds (online). American Ornithological Society. http://checklist.aou.org/taxa

[2] California Department of Fish and Wildlife, May 2016. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. California Wildlife Habitat Relationships Program, Sacramento. 26 pp.

Zenaida macroura
mourning dove
****Columba livia***
rock pigeon

CORVIDAE - JAYS & CROWS

Corvus corax
common raven

FALCONIDAE - FALCONS

Falco sparverius
American kestrel

FRINGILLIDAE - FINCHES

Haemorhous mexicanus
house finch

HIRUNDINIDAE - SWALLOWS

Hirundo rustica
barn swallow
Petrochelidon pyrrhonota
cliff swallow

ICTERIDAE - BLACKBIRDS AND ORIOLES

Sturnella neglecta
western meadowlark

LANIIDAE – SHRIKES

Lanius ludovicianus
loggerhead shrike

PASSERELLIDAE - AMERICAN SPARROWS

Zonotrichia leucophrys
white-crowned sparrow
Melozone crissalis
California towhee

PICINAE – WOODPECKERS

Dryobates nuttallii
Nuttall’s woodpecker

POLIOPTILIDAE - GNATCATCHERS

Polioptila caerulea
blue-gray gnatcatcher

STRIGIDAE - TRUE OWLS

†***Athene cunicularia***
burrowing owl

TROCHILIDAE - HUMMINGBIRDS

Calypte anna
Anna's hummingbird

TROGLODYTIDAE - WRENS

Troglodytes aedon
house wren
Spinus psaltria
lesser goldfinch

TYRANNIDAE - TYRANT FLYCATCHERS

Sayornis nigricans
black phoebe
Sayornis saya
Say's phoebe
Tyrannus vociferans
Cassin’s kingbird

TYTONIDAE - BARN OWLS

Tyto alba
barn owl

MAMMALS

CRICETIDEA – MICE, RATS, AND VOLES

Mus musculus
house mouse

Peromyscus maniculatus
deer mouse

LEPORIDAE - RABBITS AND HARES

Sylvilagus audubonii
Audubon's cottontail

Appendix C – U.S. Fish and Wildlife Service Species List

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Riverside County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

San Bernardino Merriam's Kangaroo Rat Dipodomys merriami parvus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat Dipodomys stephensi (incl. D. cascus) No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher Polioptila californica californica There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Insects

NAME	STATUS
Quino Checkerspot Butterfly Euphydryas editha quino (=E. e. wrighti) There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5900	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp Streptocephalus woottoni There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8148	Endangered

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Munz's Onion Allium munzii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2951	Endangered
San Diego Ambrosia Ambrosia pumila There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered
San Jacinto Valley Crownscale Atriplex coronata var. notatior There is **final** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions and/or exclusions. See Federal Register publication for details. https://ecos.fws.gov/ecp/species/4353	Endangered
Spreading Navarretia Navarretia fossalis There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/1334	Threatened
Thread-leaved Brodiaea Brodiaea filifolia There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Spreading Navarretia Navarretia fossalis https://ecos.fws.gov/ecp/species/1334#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN

THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black-chinned Sparrow *Spizella atrogularis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	Breeds Apr 15 to Jul 31
Burrowing Owl *Athene cunicularia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Costa's Hummingbird *Calypte costae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10

Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Long-billed Curlew Numenius americanus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Marbled Godwit Limosa fedoa This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Mountain Plover Charadrius montanus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3638	Breeds elsewhere
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5

Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any

week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

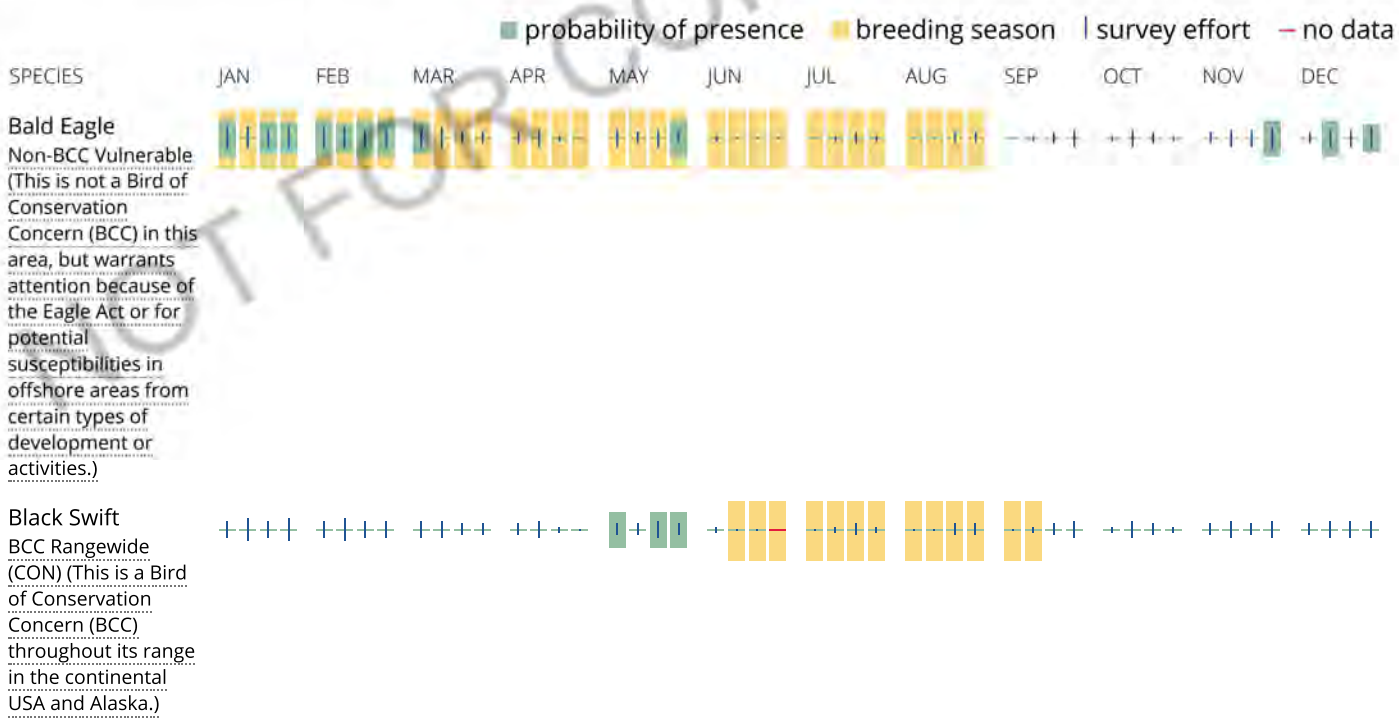
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

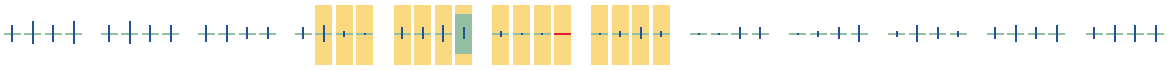
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

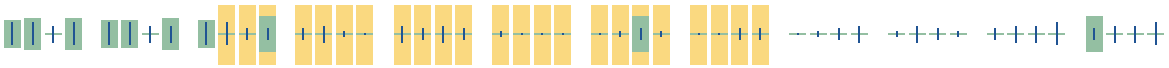
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



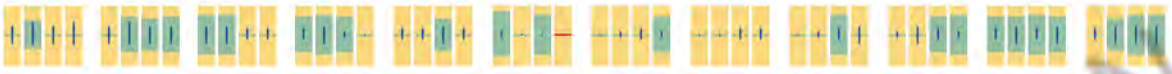
Black-chinned Sparrow
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



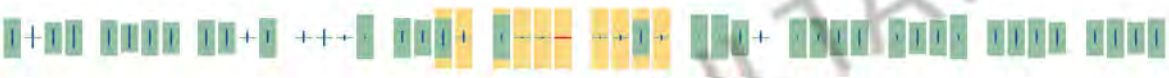
Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

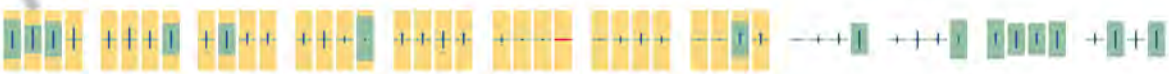


Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

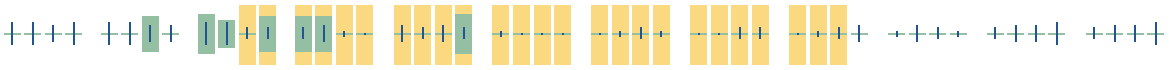


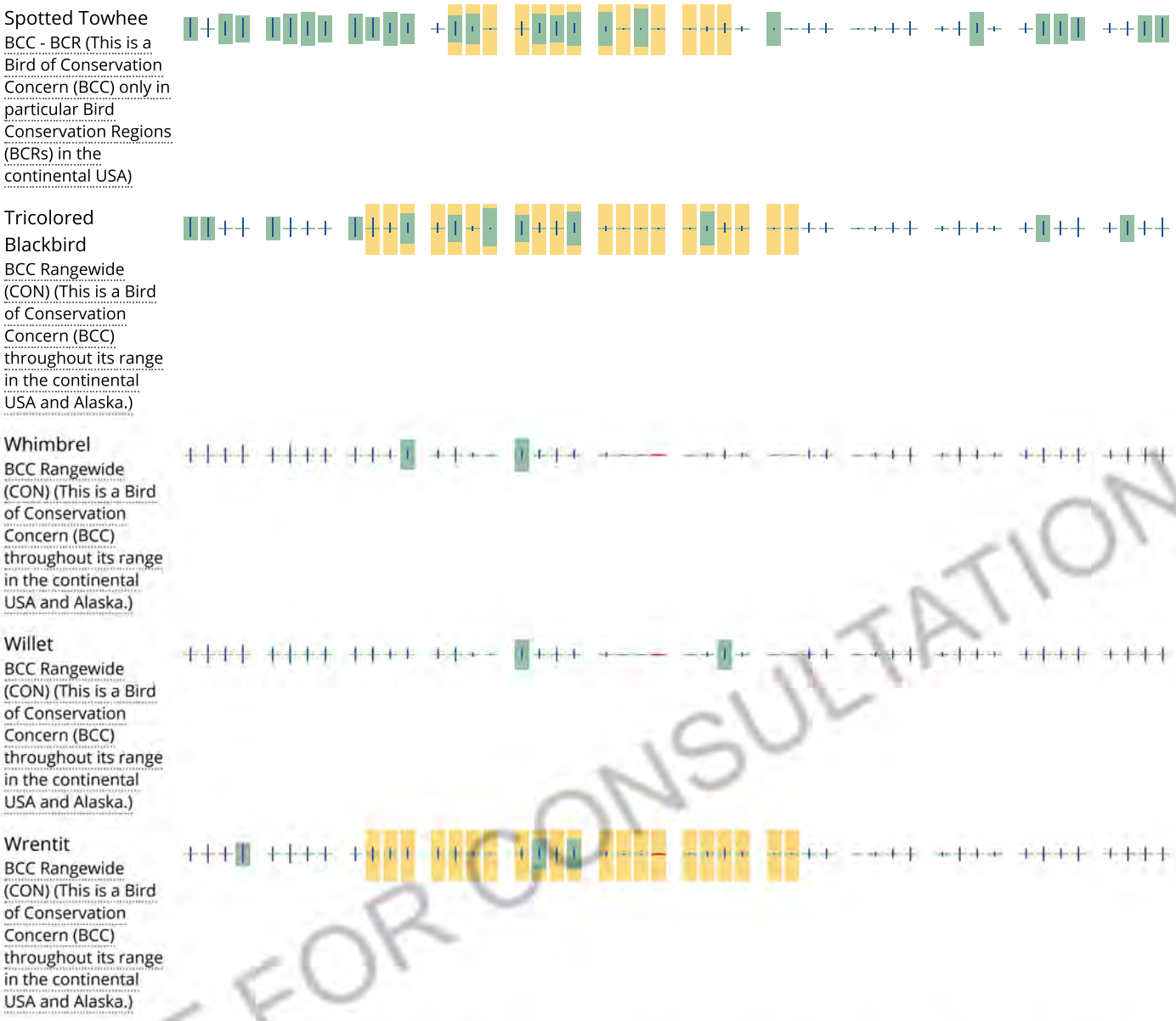
Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project

intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PSSC

RIVERINE

R4SBAx
R5UBFx
R5UBF

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

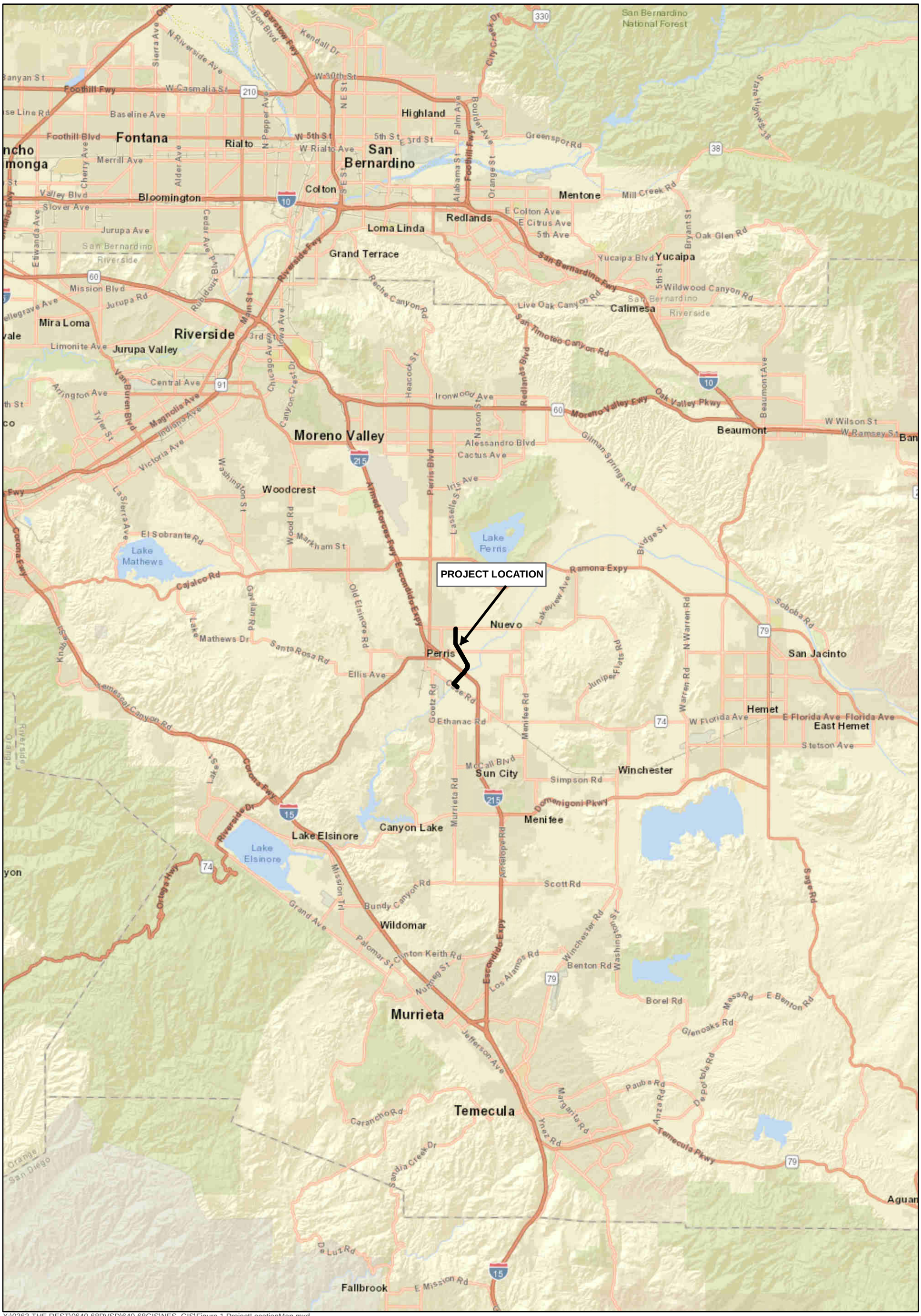
Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish

the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 1 ProjectLocationMap.mxd

N

0 2 4 8

Miles

1 inch = 4 miles

Biological Study Area

Figure 1 -
Project Location Map

Perris Valley Storm Drain Channel Trail-Phase 2 Project

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Biological Study Area

N

0 1,000 2,000 4,000

Feet

1 inch = 2,000 feet

Figure 2 -
Project Biological Study Area

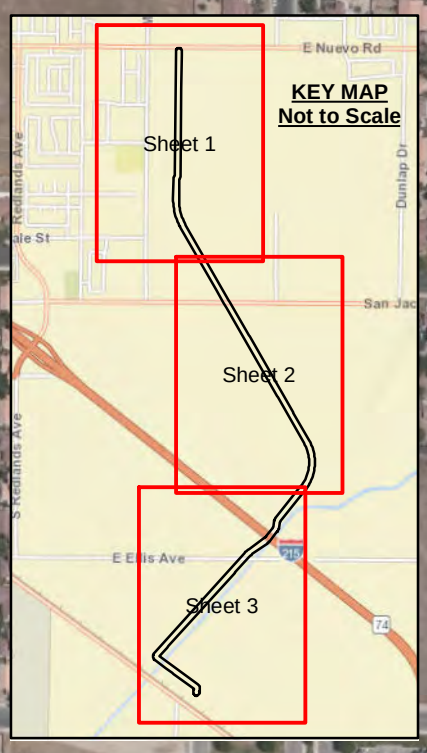
Perris Valley Storm Drain Channel Trail-Phase 2 Project

East Nuevo Road

East Metz Road

Murrieta Road

Perris Valley Storm Drain



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Biological Study Area
Project Impact Area
Agriculture
Developed
Disturbed
Disturbed Alkali Meadow
Emergent Wetland
Unvegetated Streambed

N

0 175 350 700
Feet

1 inch = 350 feet

Figure 3 - Vegetation Map Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

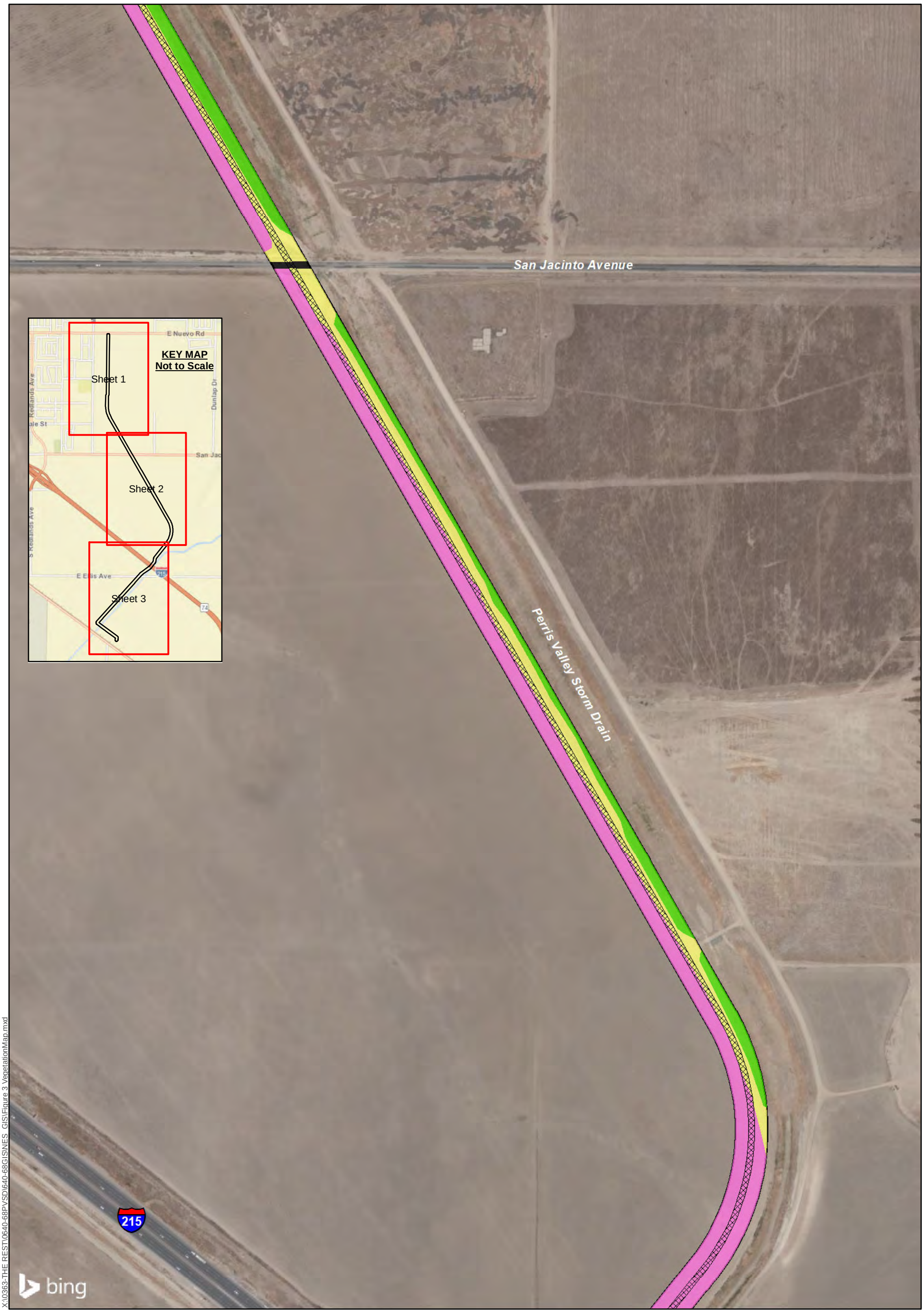

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Figure 3 - Vegetation Map Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 3 VegetationMap.mxd

Biological Study Area
Project Impact Area
Agriculture
Developed
Disturbed
Disturbed Alkali Meadow
Emergent Wetland
Unvegetated Streambed

N

0 175 350 700
Feet

1 inch = 350 feet

Figure 3 - Vegetation Map Sheet
Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

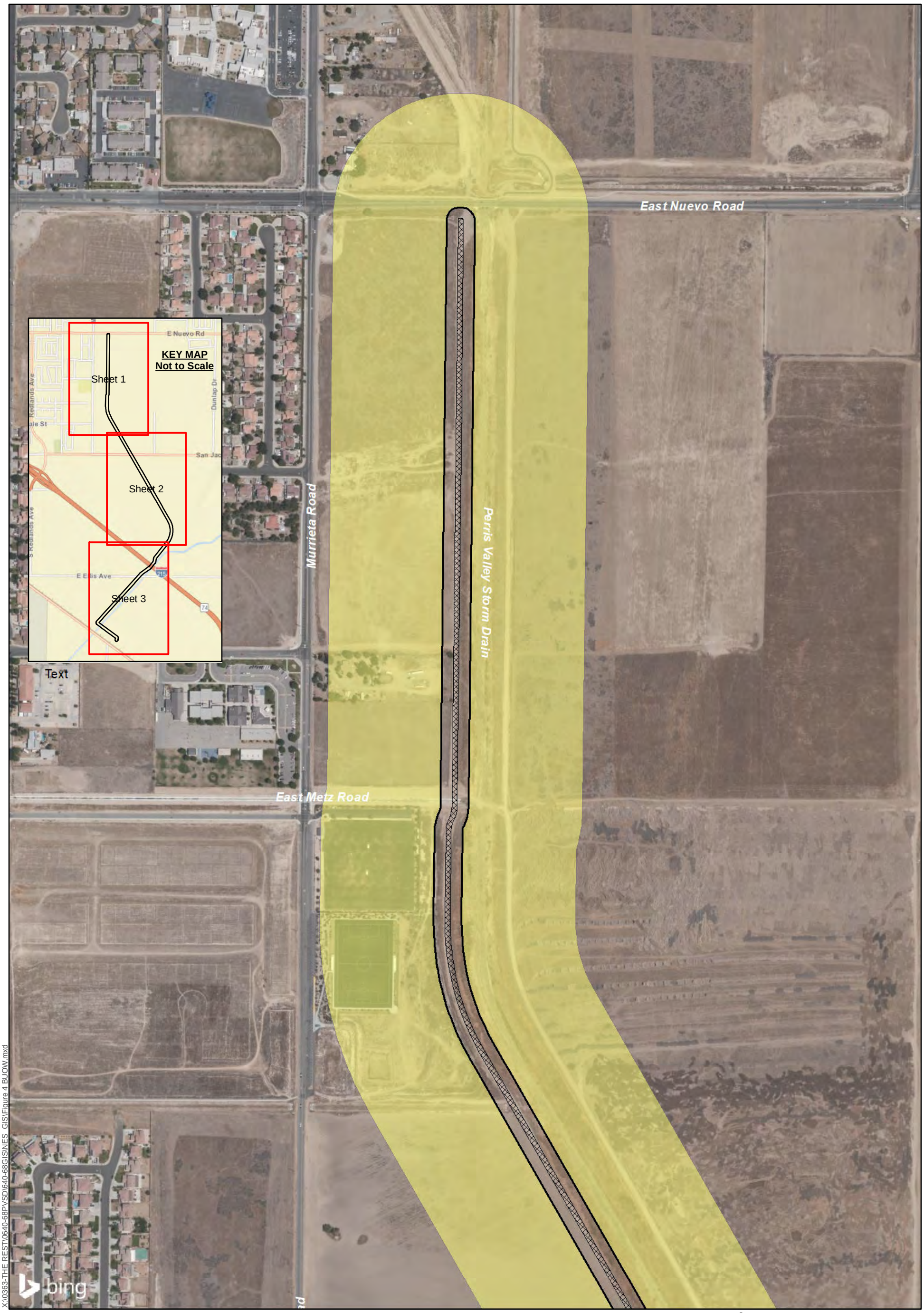
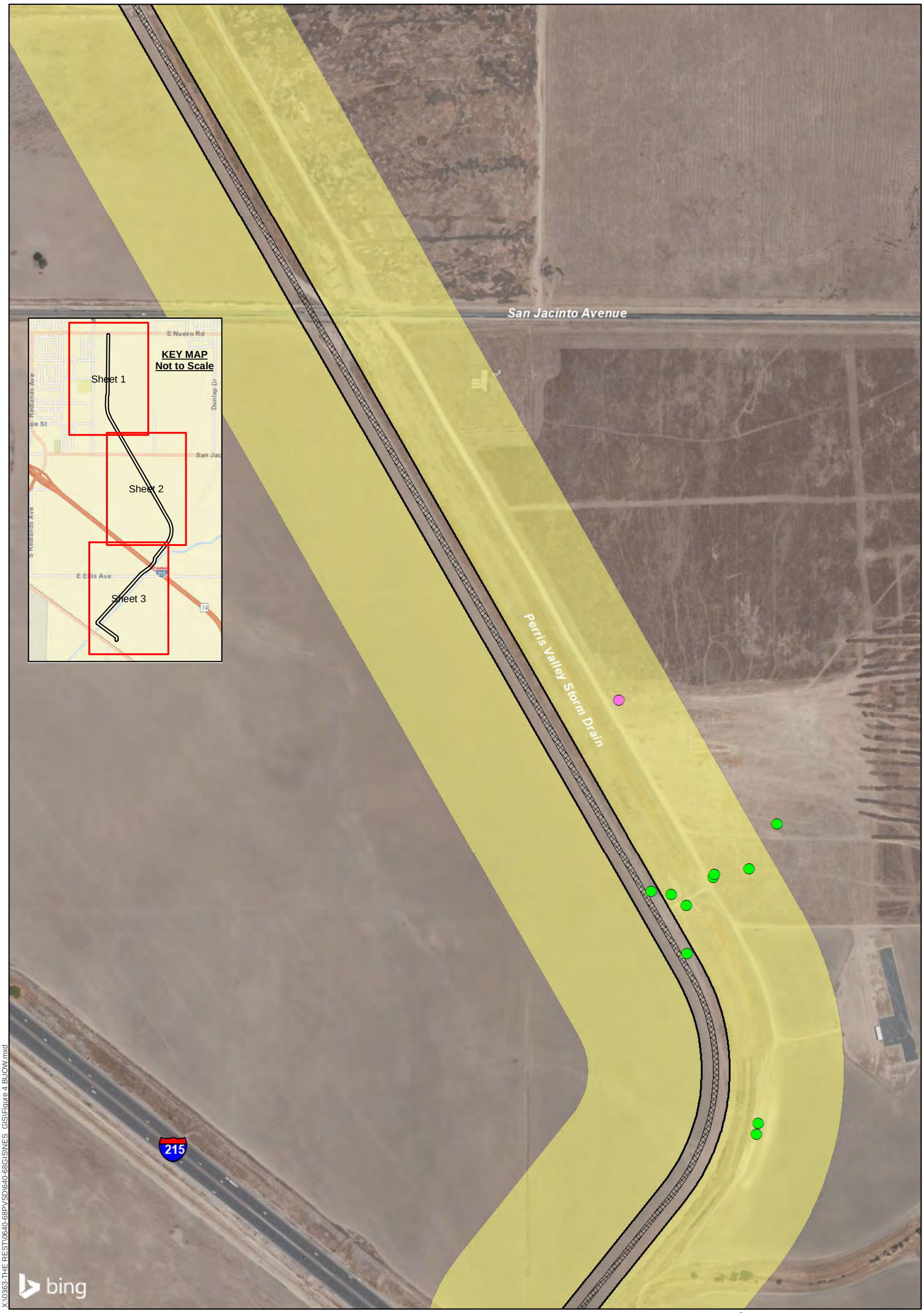


Figure 4 -
Burrowing Owl Location Map
Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



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Biological Study Area

Project Impact Area

500' Buffer Area

Nest Burrow

Satellite Burrows

N

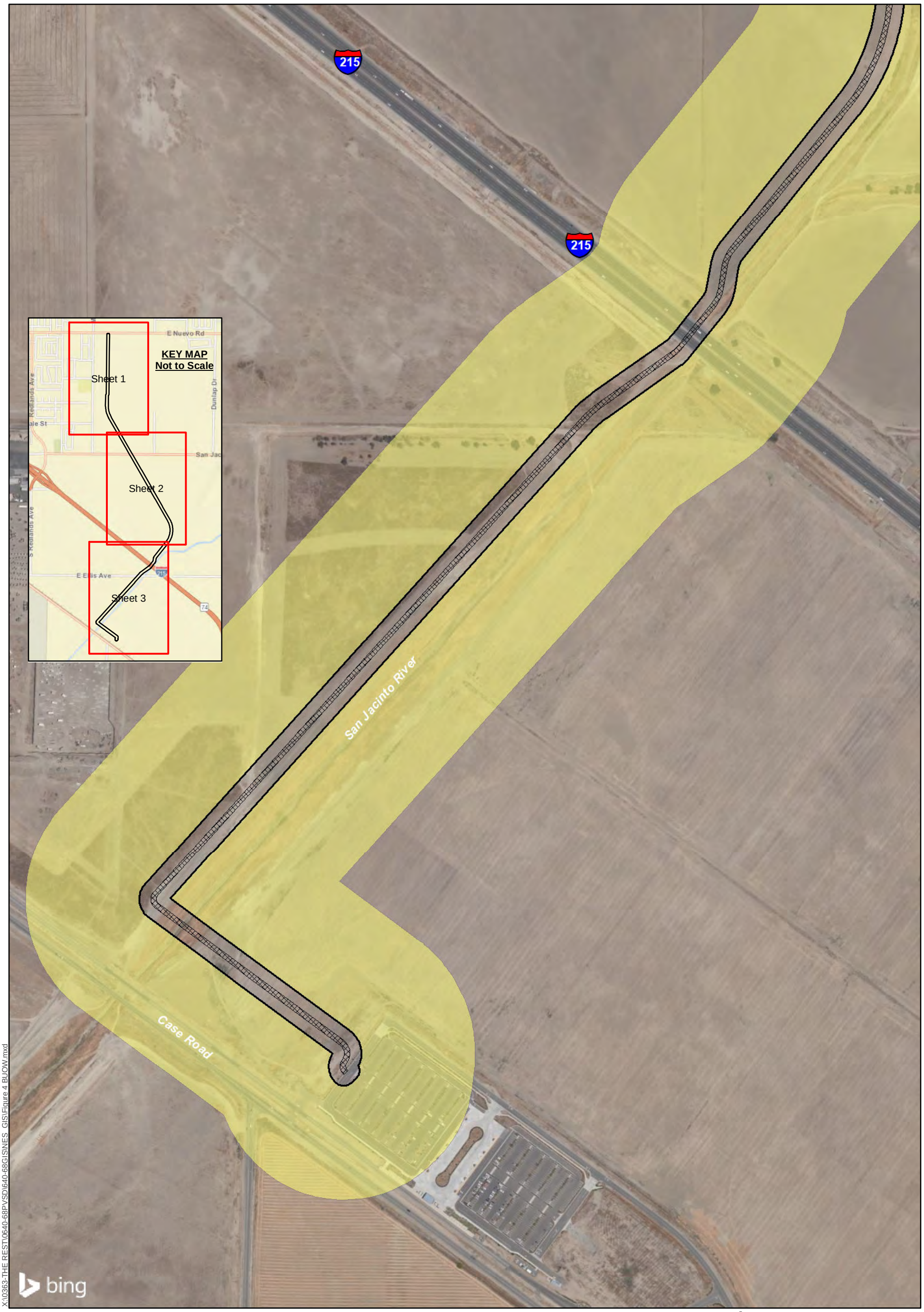
0 200 400 800

Feet

1 inch = 400 feet

Figure 4 -
Burrowing Owl Location Map
Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



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Biological Study Area

Project Impact Area

500' Buffer Area

Nest Burrow

Satellite Burrows

N

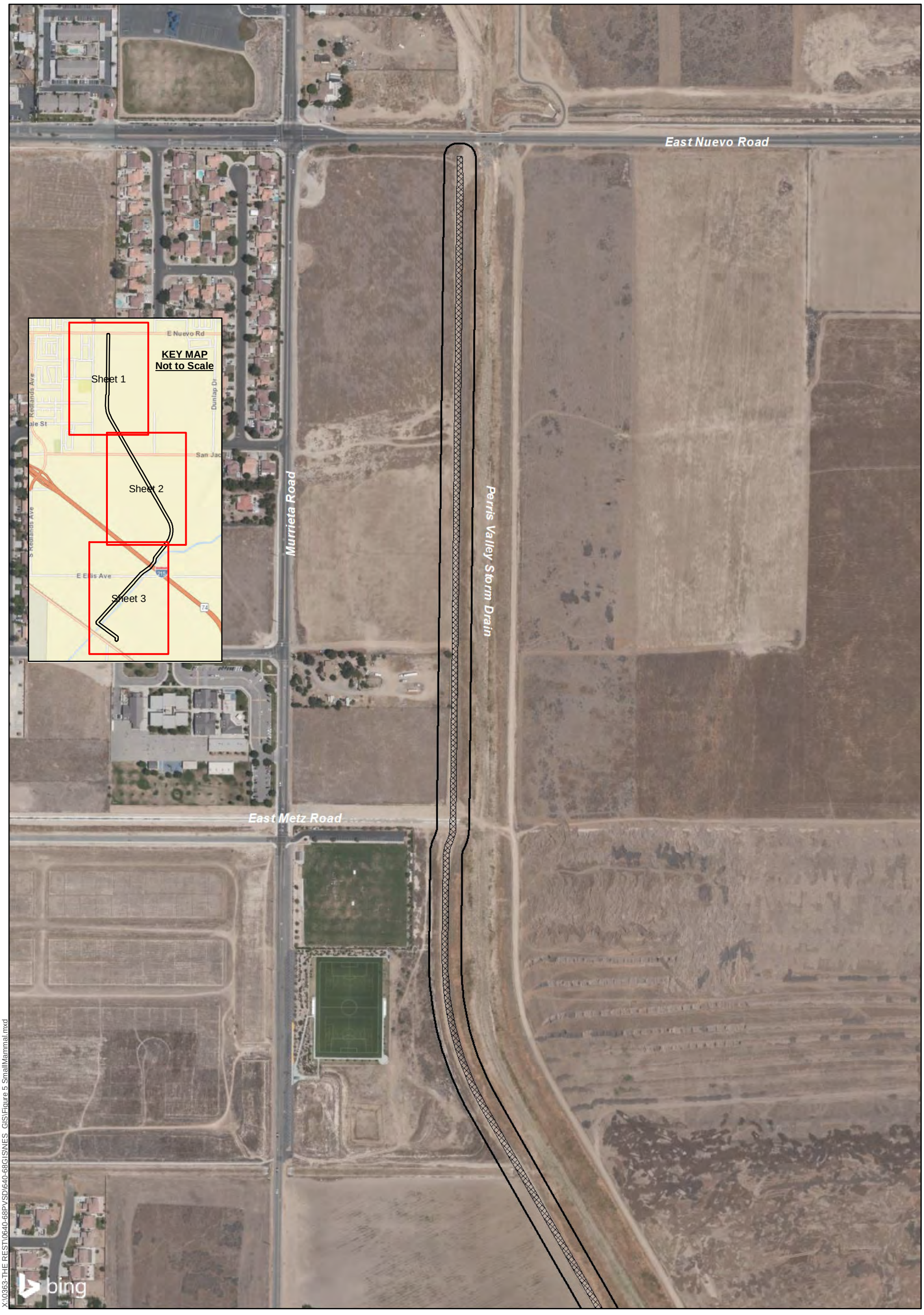
0 200 400 800

Feet

1 inch = 400 feet

Figure 4 -
Burrowing Owl Location Map
Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



Biological Study Area

Project Impact Area

Trapline Polygon

Trapline Point

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 5 - Small Mammal Trapping Survey Map Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

Biological Study Area

Project Impact Area

Trapline Polygon

Trapline Point

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 5 - Small Mammal Trapping Survey Map Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

X:\10363-THE REST\0640-68PVSD\640-68GIS\WES_GIS\Figure 5 SmallMammal.mxd

Biological Study Area

Project Impact Area

Trapline Polygon

Trapline Point

N

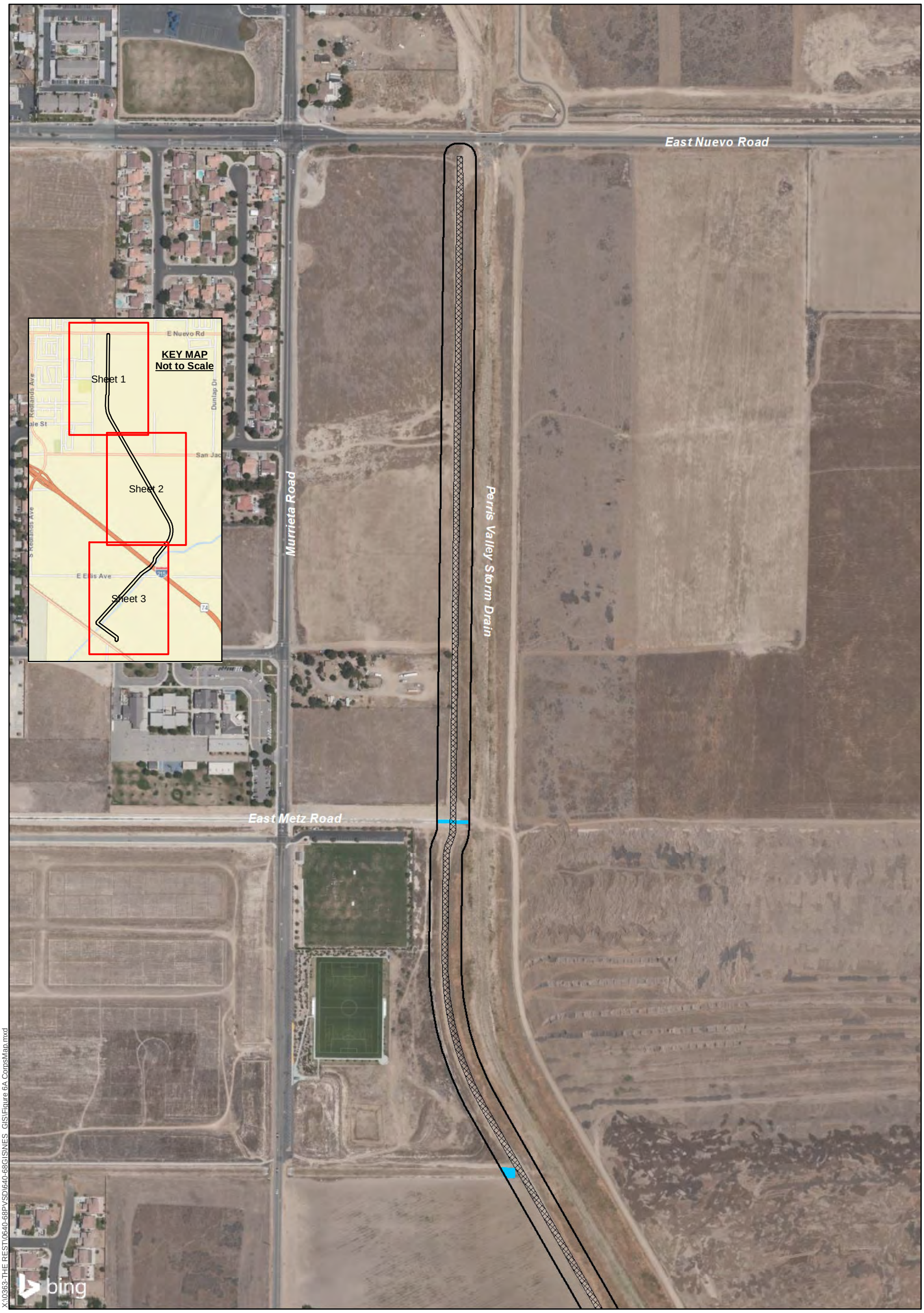
0 175 350 700

Feet

1 inch = 350 feet

Figure 5 - Small Mammal Trapping Survey Map Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



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Biological Study Area

Project Impact Area

Corps/RWQCB Non-Wetland Waters

Corps/RWQCB Wetland

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 6A - Corps/Regional Board Jurisdictional Delineation Map
Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

Biological Study Area

Project Impact Area

Corps/RWQCB Non-Wetland Waters

Corps/RWQCB Wetland

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 6A - Corps/Regional Board Jurisdictional Delineation Map Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 6A CorpsMap.mxd

Biological Study Area

Project Impact Area

Corps/RWQCB Non-Wetland Waters

Corps/RWQCB Wetland

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 6A - Corps/Regional Board Jurisdictional Delineation Map Sheet 3 of 3

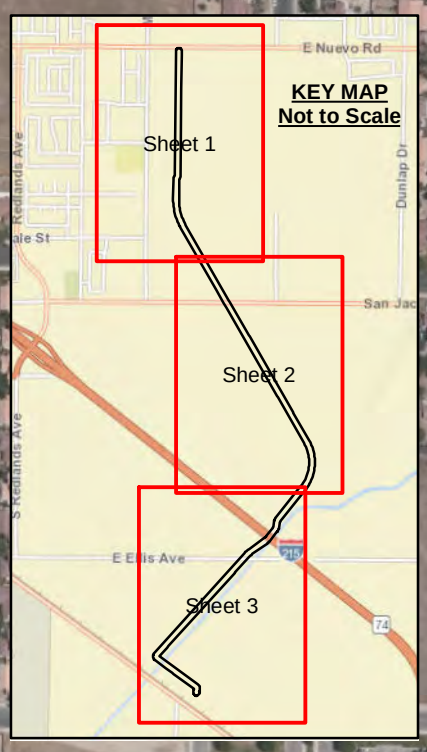
Perris Valley Storm Drain Channel Trail-Phase 2 Project

East Nuevo Road

East Metz Road

Murrieta Road

Perris Valley Storm Drain



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Biological Study Area

Project Impact Area

CDFW Non-Riparian Streambed

CDFW Riparian

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 6B - CDFW Jurisdictional Delineation Map Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

X:\10363-THE REST\10640-68PVSD\10640-68GIS\NES_GIS\Figure 6B CDFWMap.mxd

Biological Study Area
Project Impact Area
CDFW Non-Riparian Streambed
CDFW Riparian

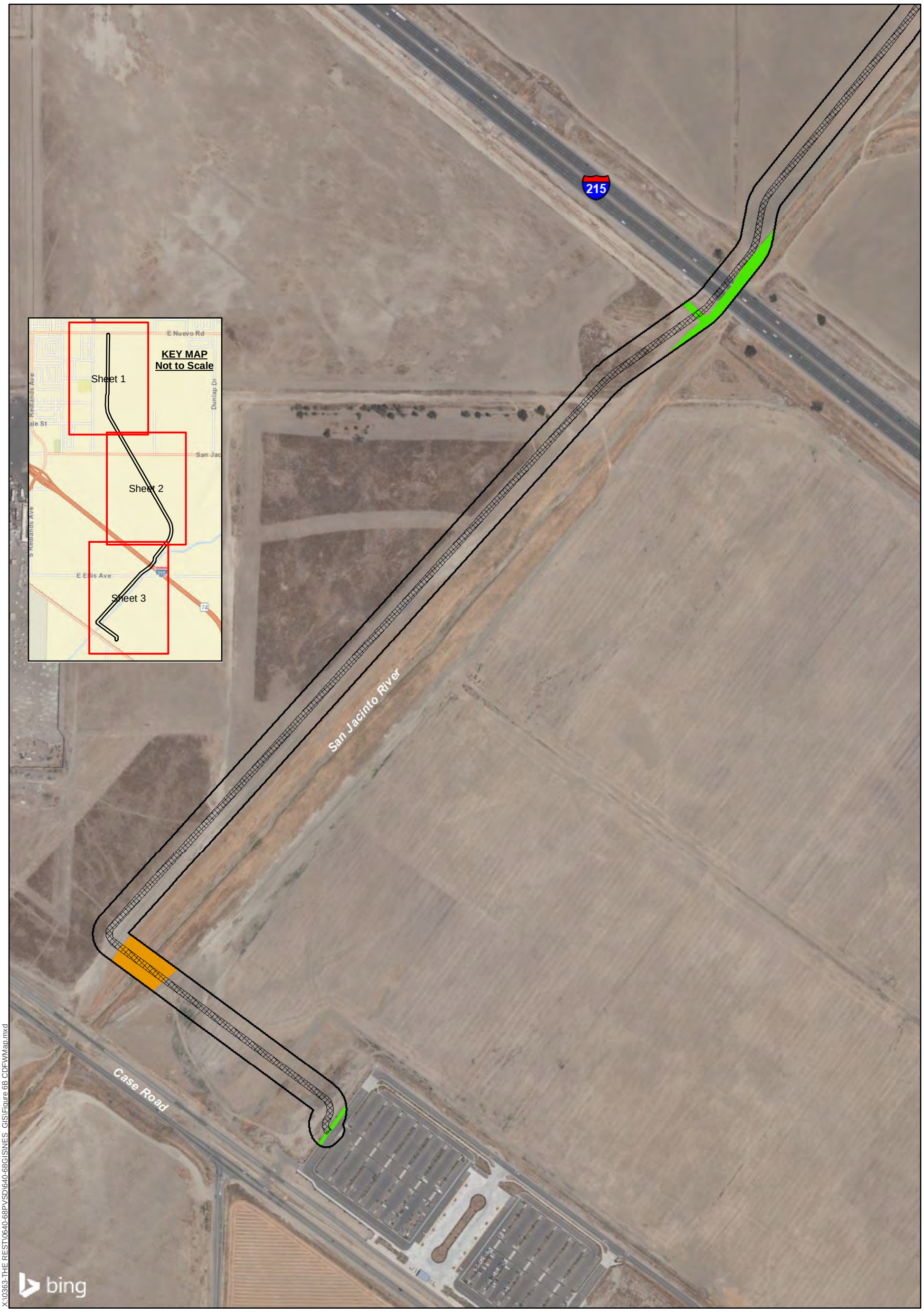
N

0 175 350 700
Feet

1 inch = 350 feet

Figure 6B - CDFW Jurisdictional Delineation Map Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 6B_CDFWMap.mxd

Biological Study Area

Project Impact Area

CDFW Non-Riparian Streambed

CDFW Riparian

N

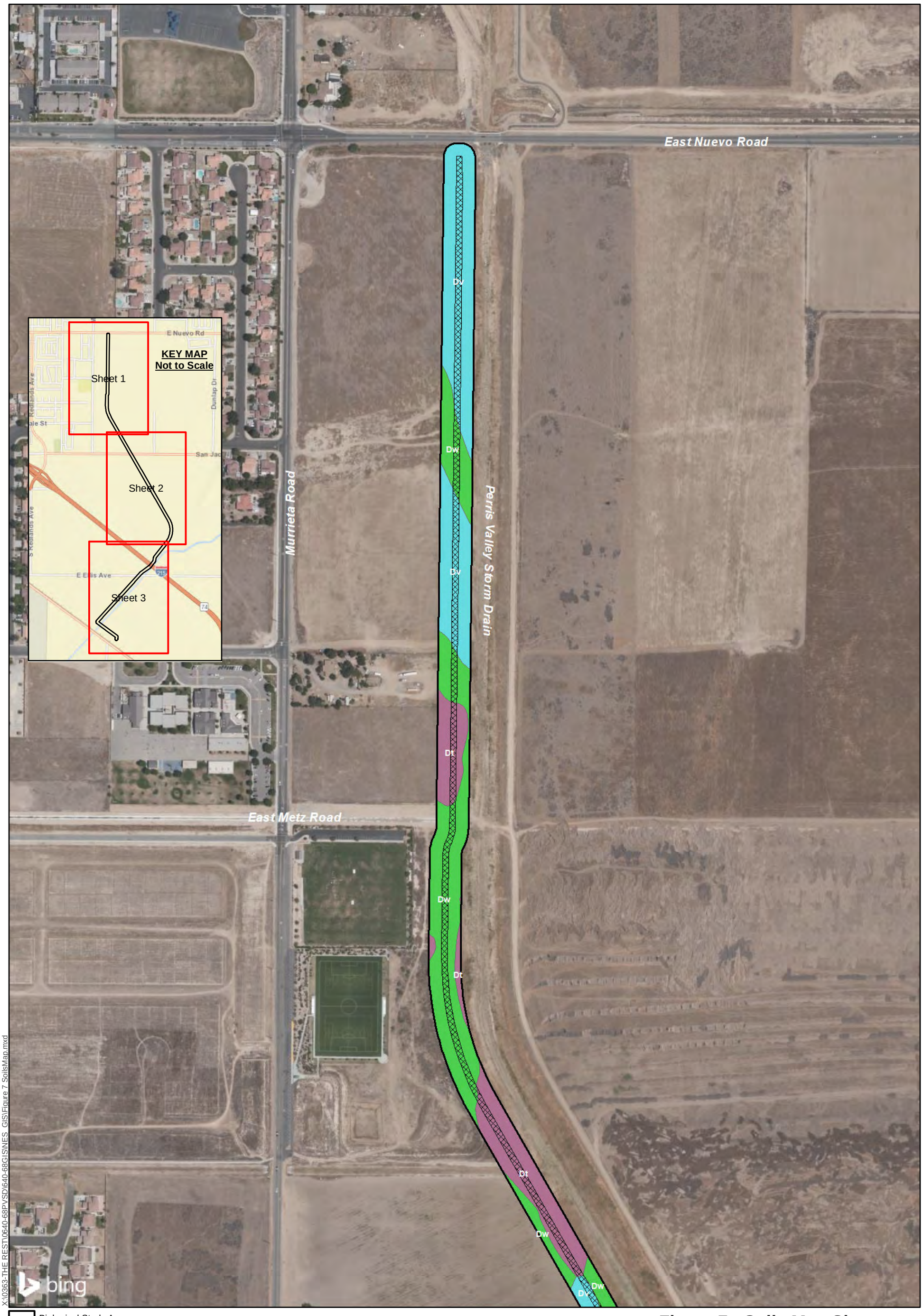
0 175 350 700

Feet

1 inch = 350 feet

Figure 6B - CDFW Jurisdictional Delineation Map Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\10363-THE REST\0640-68PVSD\0640-68GIS\NES_GIS\Figure 7 SoilsMap.mxd

Biological Study Area
Project Impact Area
Dt - Domino fine sandy loam, saline-alkali
Dv - Domino silt loam, saline-alkali
Dw - Domino silt loam, strongly saline-alkali
W - Water
Wf - Willows silty clay
Wg - Willows silty clay, saline-alkali
Wn - Willows silty clay, deep, strongly saline-alkali

N

0 175 350 700
Feet

1 inch = 350 feet

Figure 7 - Soils Map Sheet
Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

X:\10363-THE REST\10640-68PVSD\6640-68GIS\NES_GIS\Figure 7 SoilsMap.mxd

- Biological Study Area
- Project Impact Area
- Dt - Domino fine sandy loam, saline-alkali
- Dv - Domino silt loam, saline-alkali
- Dw - Domino silt loam, strongly saline-alkali
- W - Water
- Wf - Willows silty clay
- Wg - Willows silty clay, saline-alkali
- Wn - Willows silty clay, deep, strongly saline-alkali

N

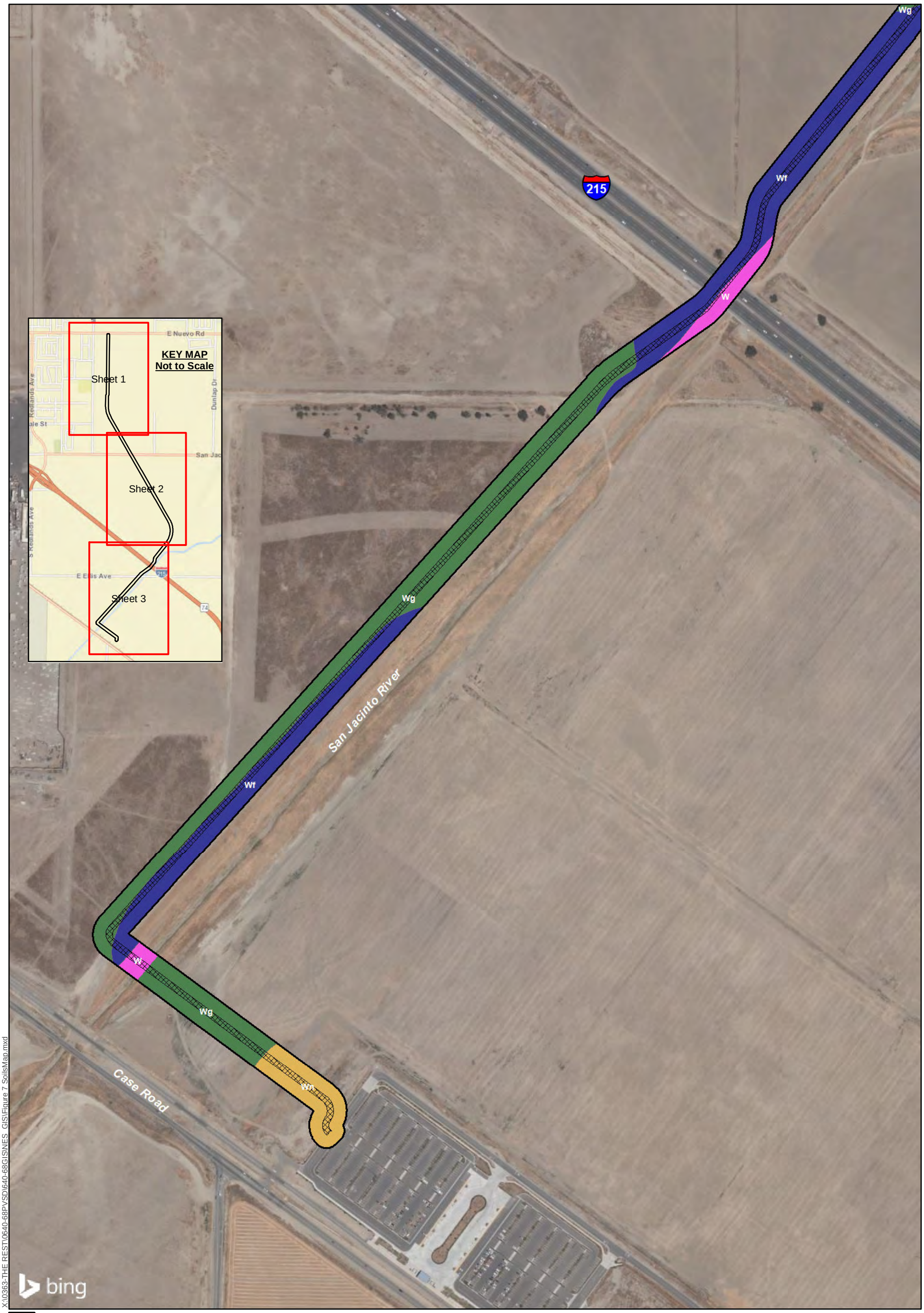
0 175 350 700

Feet

1 inch = 350 feet

Figure 7 - Soils Map Sheet
Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 7 SoilsMap.mxd

- Biological Study Area
- Project Impact Area
- Dt - Domino fine sandy loam, saline-alkali
- Dv - Domino silt loam, saline-alkali
- Dw - Domino silt loam, strongly saline-alkali
- W - Water
- Wf - Willows silty clay
- Wg - Willows silty clay, saline-alkali
- Wn - Willows silty clay, deep, strongly saline-alkali

N

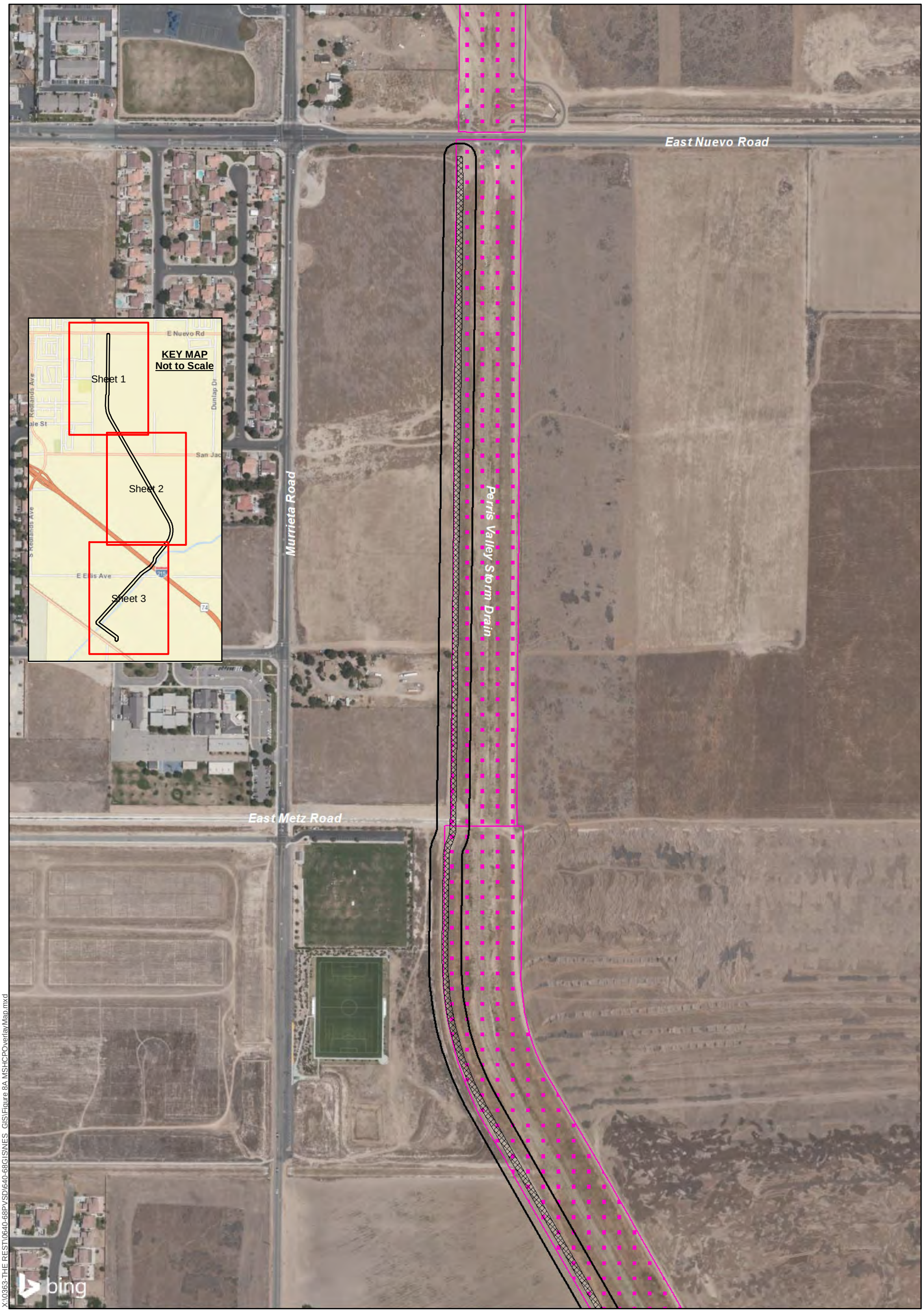
0 175 350 700

Feet

1 inch = 350 feet

Figure 7 - Soils Map Sheet
Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 8A MSHCPOverlayMap.mxd

Biological Study Area
Project Impact Area
Criteria Cells
Cell Group
PQP Conserved Lands
Conservation Easements

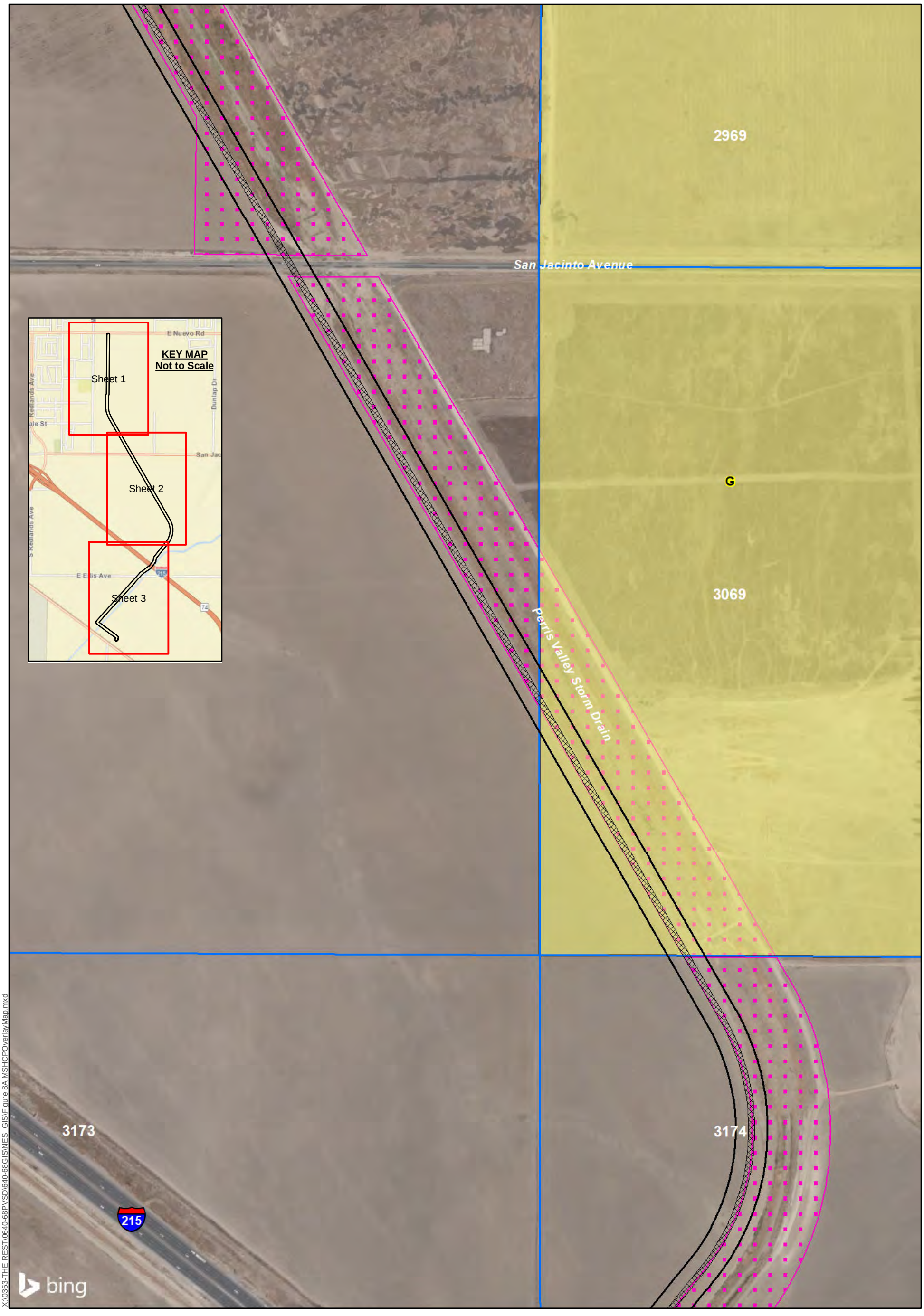
N

0 175 350 700
Feet

1 inch = 350 feet

Figure 8A - MSHCP Overlay Map Sheet
Sheet 1 of 3

Perris Valley Storm Drain Channel Trail- Phase 2 Project



Biological Study Area
Project Impact Area
Criteria Cells
Cell Group
PQP Conserved Lands
Conservation Easements

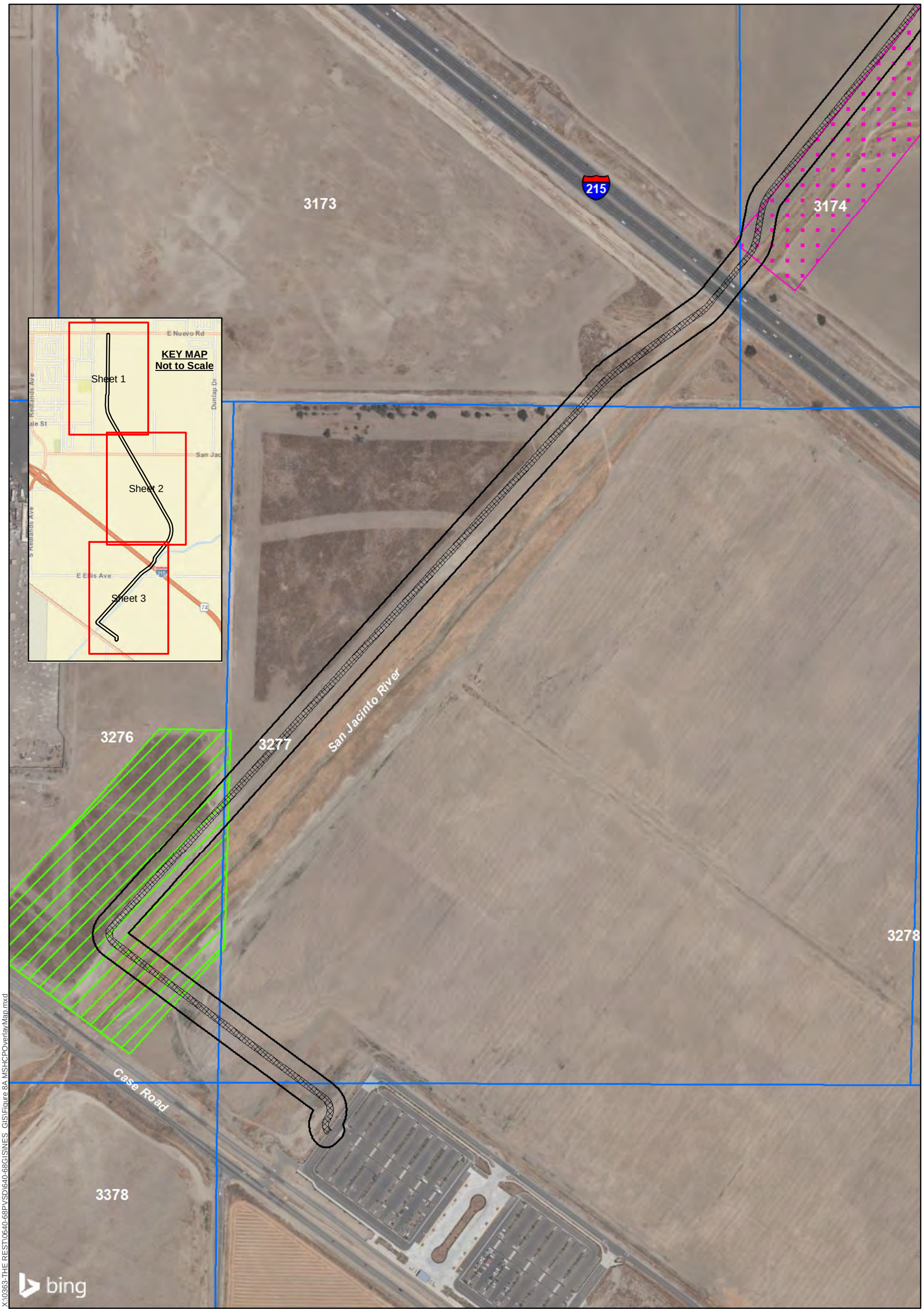
N

0 175 350 700
Feet

1 inch = 350 feet

Figure 8A - MSHCP Overlay Map Sheet
Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 8A MSHCPOverlayMap.mxd

- Biological Study Area
- Project Impact Area
- Criteria Cells
- Cell Group
- PQP Conserved Lands
- Conservation Easements

N

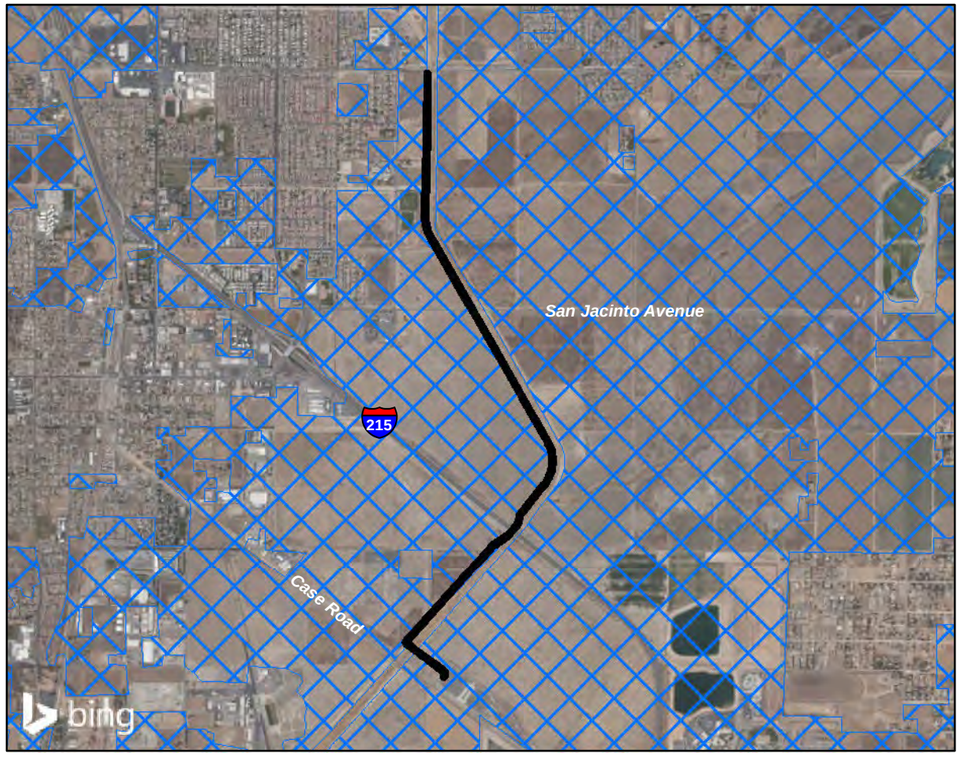
0 175 350 700

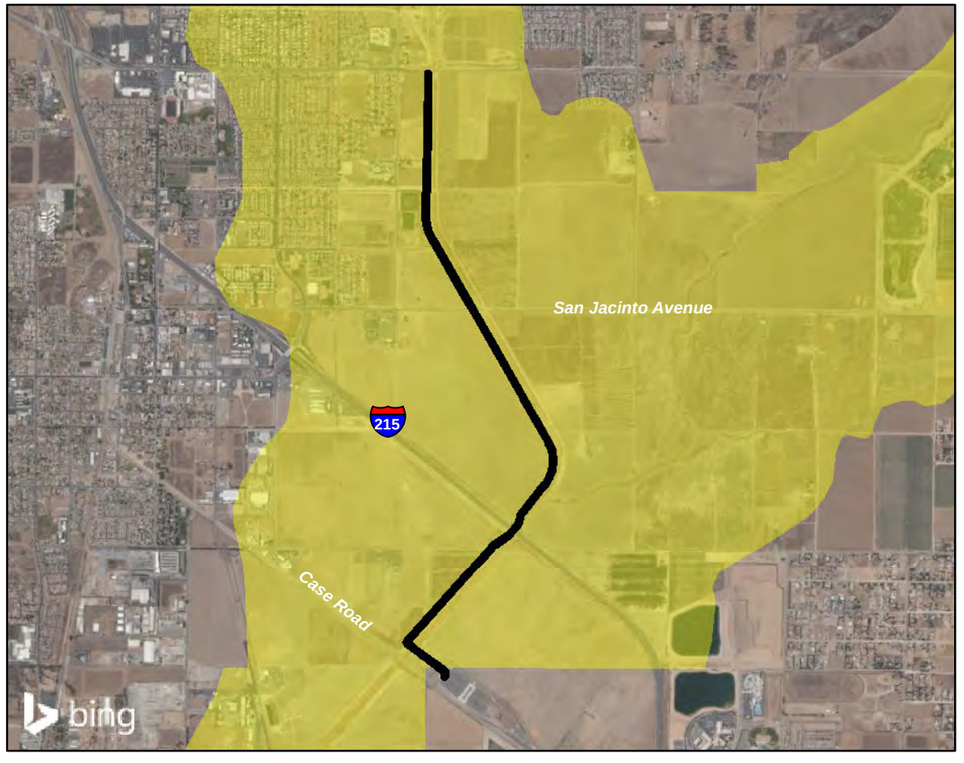
Feet

1 inch = 350 feet

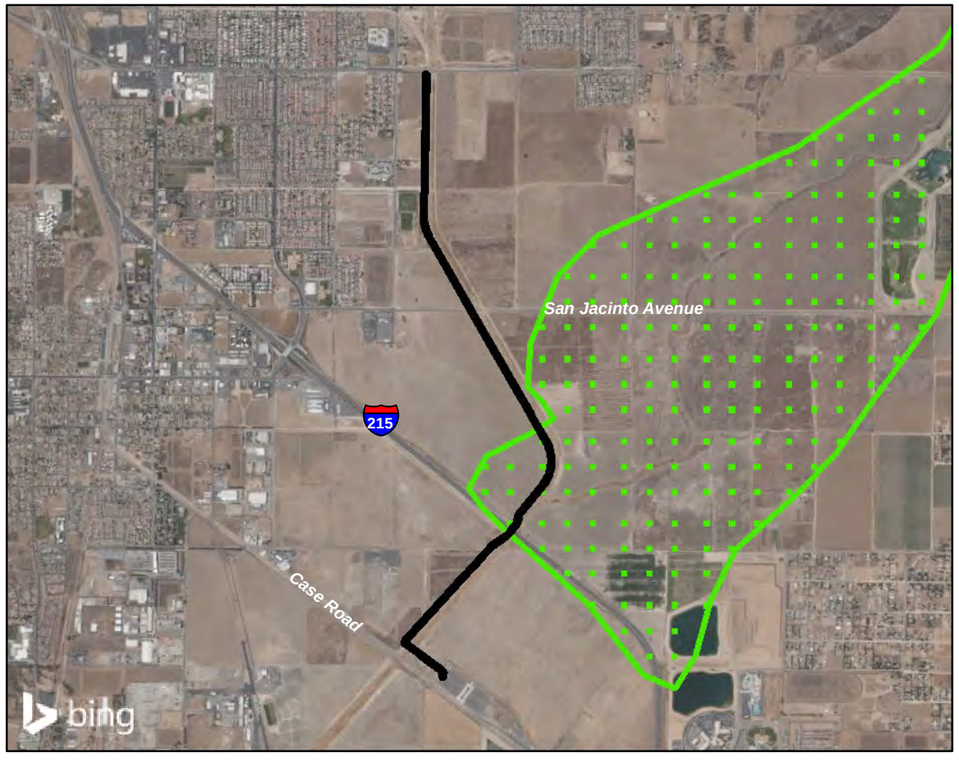
Figure 8A - MSHCP Overlay Map Sheet
Sheet 3 of 3

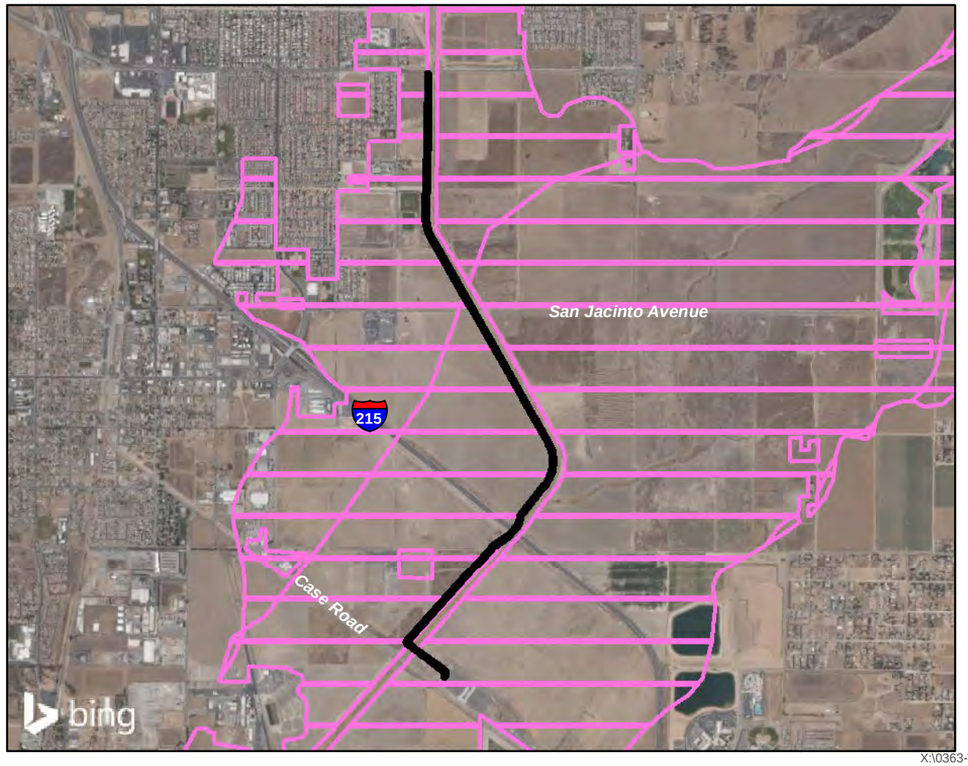
Perris Valley Storm Drain Channel Trail-Phase 2 Project





Biological Study Area
Burrowing Owl Survey Area
Criteria Area Species Survey Area
Mammals Survey Area
Narrow Endemic Plants Survey Area





N

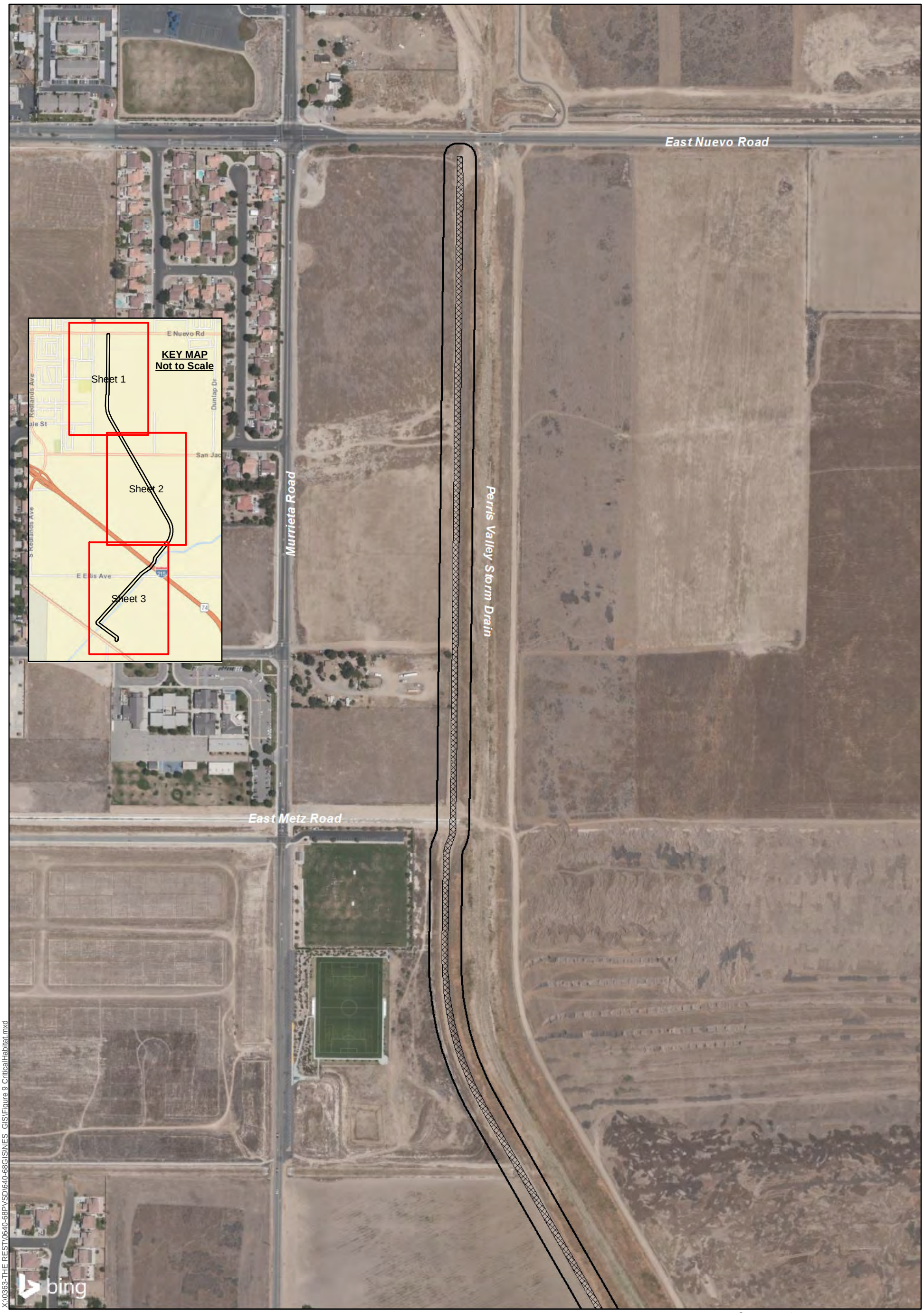
0 1,675 3,350 6,700
Feet

1 inch = 3,350 feet

Figure 8B -
MSHCP Survey Areas Map

Perris Valley Storm Drain Channel Trail- Phase 2 Project

X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 8B MSHCPSurveyAreasMap.mxd



X:\10363-THE REST\10640-68PVSD\640-68GIS\NES_GIS\Figure 9 CriticalHabitat.mxd

Biological Study Area

Project Impact Area

Spreading Navarretia

Thread-leaved brodiaea

San Jacinto Valley Crownscale

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 9 -
USFWS Critical Habitat Map
Sheet 1 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

Biological Study Area

Project Impact Area

Spreading Navarretia

Thread-leaved brodiaea

San Jacinto Valley Crownscale

N

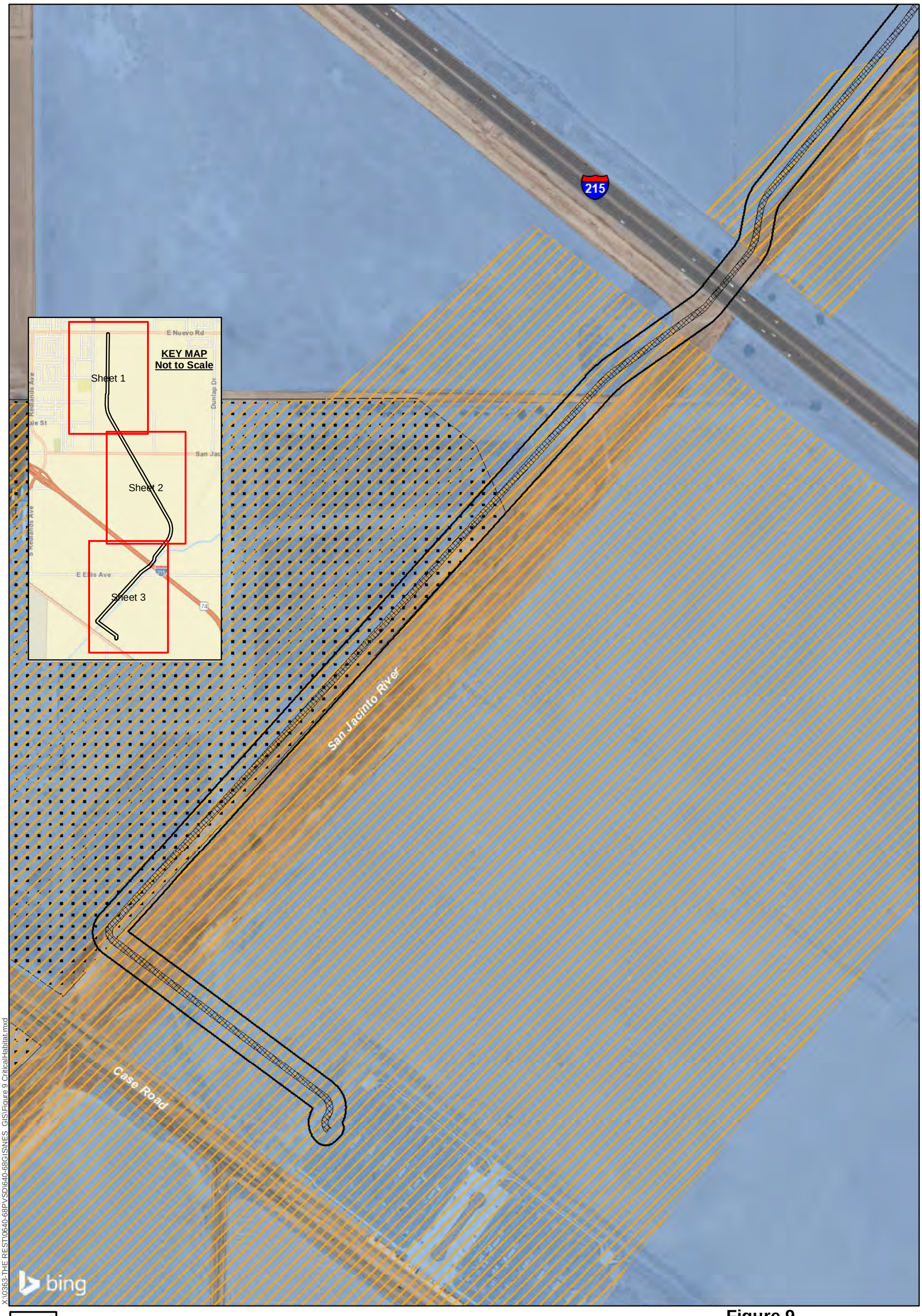
0 175 350 700

Feet

1 inch = 350 feet

Figure 9 -
USFWS Critical Habitat Map
Sheet 2 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project



X:\0363-THE REST\0640-68PVSD\640-68GIS\NES_GIS\Figure 9 CriticalHabitat.mxd

Biological Study Area

Project Impact Area

Spreading Navarretia

Thread-leaved brodiaea

San Jacinto Valley Crownscale

N

0 175 350 700

Feet

1 inch = 350 feet

Figure 9 -
USFWS Critical Habitat Map
Sheet 3 of 3

Perris Valley Storm Drain Channel Trail-Phase 2 Project

Photograph 1: View of the trail alignment looking south along the Perris Valley Storm Drain Channel.

Photograph 2: View of the trail alignment looking south along the Perris Valley Storm Drain Channel.

Photograph 3: View of the trail alignment looking north. The Perris Valley Storm Drain Channel is located to the east (right side of the road). The photo also depicts a burrowing owl perched on the berm go the right of the dirt access road.

Photograph 4: View of the trail alignment looking east along Case Road towards the Perris – South Metrolink Station.

Figure 10 - Site Photos

PERRIS VALLEY STORM DRAIN CHANNEL TRAIL – PHASE 2 PROJECT