BIOLOGICAL TECHNICAL REPORT

FOR

PHASE I PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

LOCATED IN THE CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

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September 10, 2020

INFORMATION SUMMARY

A. Report Date: September 10, 2020

B. Report Title: Biological Technical Report for the Phase I Perris Valley Storm Drain Channel Improvement Project Located in the City of Perris, Riverside County, California.

C. Project Site Location: USGS 7.5' series Perris Quadrangle, City of Perris, Riverside County, Township 4 South, Range 3 West, Section 8, 850 feet north of the Ramona Expressway, 1,600 feet south of East Rider Street, east of Redlands Avenue.

D. Owner/Applicant:
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F. Report Summary:

A biological study was performed for the proposed Phase I Perris Valley Storm Drain Channel Improvement Project (Phase I/Project) Study Area located in the City of Perris, Riverside County, California. The Project would make improvements to an approximate 3,491 linear-foot segment of the Perris Valley Storm Drain (PVSD) and adjacent uplands located east of Redlands Avenue from an area approximately 100 feet north of East Morgan Street to an area approximately 120 feet south of East Rider Street. Phase I improvements will be constructed in connection with the development of the Rider 2 and 4 Warehouse Project (Rider 2 and 4), which is located adjacent to the site. The biological resources and impacts associated with Rider 2 and 4 have been addressed separately as part of a separate standalone report[1]. This document provides the results of field studies performed to evaluate the potential occurrence of biological resources and the requirements triggered by environmental laws and regulations. The site is within the

[1] Biological Technical Report for the Rider 2 and Rider 4 Warehouse Project, located in the City of Perris, Riverside County, California. Prepared by Glenn Lukos Associates (November 2019).

Mead Valley Area Plan of the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP), but outside of Criteria Cells and survey areas for mammals and amphibians, as well as outside of core and linkage areas.

The Phase I Project Study Area occurs in the Criteria Area Plant Species Survey Area, Narrow Endemic Plant Species Survey Area, and Burrowing Owl Survey Area for the MSHCP. The PVSD is classified as Public/Quasi-Public (PQP) Conserved Lands by the MSHCP. Habitat assessments were performed for special-status plants and animals, and evaluations were performed to determine the presence/absence of federal and/or state jurisdictional waters and wetlands, including MSHCP Riparian/Riverine areas and vernal pools. The Project Study Area does not support potential habitat for riparian birds or fairy shrimp. The Project Study Area supports both state and federal jurisdictional waters and MSHCP Riparian/Riverine areas. No vernal pools are present. The Project is expected to increase the overall limits of Corps/Regional Board, CDFW, and MSHCP Riparian/Riverine habitats and PQP Conserved Lands by at least 20 acres.

A focused habitat assessment for rare plants was performed and suitable habitat was determined to be absent from the site. A focused survey for burrowing owl was performed and the species was determined to be absent from the site. There is no proposed or designated Critical Habitat present.

G. Individuals Conducting Fieldwork:

Lesley Lokovic Gamber, GLA
Trina Ming, GLA
April Nakagawa, GLA
Martin Rasnick, GLA
David Smith, GLA
Jillian Stephens, GLA

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1.0 INTRODUCTION

1.1 Background and Scope of Work

This document provides the results of general biological surveys and focused biological surveys for the approximately 29.70-acre Phase I Perris Valley Storm Drain Channel Improvement Project (Project) located in the City of Perris, Riverside County, California, which includes an approximate 3,491 linear-foot segment of the Perris Valley Storm Drain (PVSD) from approximately 100 feet north of East Morgan Street to an area approximately 120 feet south of East Rider Street. The Project will be constructed in connection with the development of the Rider 2 and 4 Warehouse Project (Rider 2 and 4), which is located adjacent to the site. The biological resources and impacts associated with Rider 2 and 4 have been addressed separately as part of a separate standalone report[2]. Additional PVSD Channel improvements, located north and south of Project, which may be constructed in the future, will be addressed separately as part of future phases and are not a part of this report.

This report addresses the 29.70-acre Phase I PVSD Project. Impacts to biological resources associated with Rider 2 and 4 *are not* addressed in this report. For this report, the terms *Project. Phase I, and Limits of Disturbance* are defined as that area proposed for direct impact (both temporary and permanent) by the proposed Project, totaling 29.70 acres. The term *Project Study Area* totals 39.18 acres and includes those lands proposed for direct impact (both temporary and permanent, totaling 29.70 acres) and all avoided areas (totaling 9.48 acres) that were analyzed as part of the Project but are not within the Limits of Disturbance. The term *burrowing owl survey area* refers to the Project Study Area and a 500-foot buffer scanned through the use of binoculars.

This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the California Environmental Quality Act (CEQA), and State and Federal regulations such as the federal and state Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code.

The scope of this report includes a discussion of existing conditions for the Project Study Area, all methods employed regarding the general biological surveys and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and other applicable agencies/organizations.

[2] Biological Technical Report for the Rider 2 and Rider 4 Warehouse Project, located in the City of Perris, Riverside County, California. Prepared by Glenn Lukos Associates (November 2019).

The field study focused on a number of primary objectives that would comply with CEQA requirements, including (1) a general reconnaissance survey and vegetation mapping; (2) general biological surveys; (3) habitat assessments for special-status wildlife species (including species with applicable MSHCP survey requirements); (4) assessments for MSHCP Riparian/Riverine areas and vernal pools; and (5) assessments for areas subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the CWA, The Regional Water Quality Control Board (Regional Board) pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC), and the CDFW jurisdiction pursuant to Division 2, Chapter 6, Sections 1600-1617 of the State of California Fish and Game Code. Observations of all plant and wildlife species were recorded during the general biological surveys and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium.

1.2 Project Location

The Project site is located in the City of Perris, Riverside County, California [Exhibit 1 – Regional Map]. The Project is within Sections 8 and 17 of Township 4 South and Range 3 West. The Project is located east of Redlands Avenue from an area approximately 100 feet north of East Morgan Street to an area approximately 120 feet south of East Rider Street [as depicted on the U.S. Geological Survey (USGS) topographic map Perris, California (dated 1967, photorevised 1979)] [Exhibit 2 – Vicinity Map].

The Project site is located east of Rider 2 and 4 and is contained within Assessor Parcel Numbers (APN) 30-160-008, 303-170-016, and 303-170-017. The PVSD Channel forms the eastern boundary of the Perris Valley Commerce Center Specific Plan (PVCCSP) area.

1.3 Project Description

The Project involves the construction and subsequent operation and maintenance of improvements to an approximate 3,491 linear-foot segment of the PVSD Channel [Exhibit 3 – Project Aerial Map]. The Project will be constructed in connection with the development of Rider 2 and 4, which is located adjacent to the site. The biological resources and impacts associated with Rider 2 and 4 have been addressed separately as part of a separate standalone report[3].

The PVSD Channel is currently maintained by the Riverside County Flood Control and Water Conservation District (Flood Control). The proposed improvements to the PVSD Channel analyzed in this Report (i.e., the Project), entail Phase 1 of a larger channel improvement project, which would ultimately extend north to just past Ramona Expressway and south of Rider Street. Additional improvements for later Phases of the PVSD may be undertaken in the future by others, depending upon availability of funding and other factors. Phase 1 of the proposed PVSD Channel improvements begins approximately 100 feet north of Morgan Street. The PVSD Channel in this area would transition to a 550-foot-wide channel. The proposed PVSD Channel right-of-way would be up to 580-feet-wide and would include 15-foot wide access roads on each side until it reaches the Colorado River Aqueduct (CRA). The Project has been designed to

[3] Biological Technical Report for the Rider 2 and Rider 4 Warehouse Project, located in the City of Perris, Riverside County, California. Prepared by Glenn Lukos Associates (October 2019).

protect the CRA and associated existing MWD manholes in place. Downstream of the CRA, the PVSD Channel would be deepened and would transition with an engineered drop structure at the MWD easement to a 440-foot-wide channel with a 56-foot-wide by 5-foot-deep low flow channel. In this area, the proposed PVSD Channel right-of-way would be 495 feet wide and would also include 15-foot wide access roads on each side. The PVSD Channel would be earthen except in the vicinity of the engineered drop structure and Rider Street bridge, where it would have concrete side slopes. Erosion protection features would be installed, and existing storm drain inlets that tie into the PVSD would be reconstructed as part of the Project. The proposed Project is expected to increase the amount of earthen jurisdictional waters, as well as MSHCP Riparian/Riverine habitats and PQP Conserved Lands onsite by up to 20 acres[4].

The existing Rider Street crossing over the PVSD Channel includes one travel lane in each direction, with a painted median and shoulders, and is supported by a reinforced concrete box (RCB) culvert. The existing Rider Street Bridge over the PVSD Channel consists of a cast-in-place reinforced concrete box, which would be replaced and widened to allow for two travel lanes and a sidewalk in each direction, and a median, consistent with Rider Street's designation as a Secondary Arterial. Based on the preliminary hydraulic and roadway geometric settings, the proposed bridge is expected to be a 5-span continuous slab structure, 260 feet long and 78 feet 6 inches wide. There would be four piers in the channel and two abutments at the banks. The PVSD Channel in the area where the bridge span is to be constructed, which would be soft-bottomed, and the bridge would be supported by concrete piers. The bridge design has not yet been finalized; therefore, for purposes of this report, the proposed bridge span is being considered as a permanent impact. It is expected that impacts associated with the proposed bridge span will decrease upon completion of the final project design.

Construction of the Project is expected to begin in the fall 2020 and is expected to be completed within two years. Construction of Phase I would involve excavation and would require approximately 180,000 cubic yards (cy) of soil export. The soil would be exported to the adjacent Rider 2 and 4 site using scrapers, which eliminates the need for trucks to haul the soil offsite. It is anticipated the earthwork would balance within the Project area.

1.4 Relationship of the Project Site to the MSHCP

1.4.1 MSHCP Background

The Western Riverside County 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, such that the impacts are reduced to below a level of significance pursuant to CEQA.

[4] This estimate is approximate and excludes proposed permanent structures.

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*) identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animals species (burrowing owl, mammals, amphibians) 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, southwestern willow flycatcher, western yellow-billed cuckoo, 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 in order 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.

1.4.2 Relationship of the Project Site to the MSHCP

The Project Study Area is located within the Mead Valley Area Plan of the MSHCP. The Project Study Area is not within an MSHCP Criteria Cell and as such, the HANS and JPR processes do not apply to the Project. The proposed Project consists of Phase I improvements to the PVSD which is a water feature that is mapped as PQP Conserved Lands and is owned by Flood Control. The Project Study Area is located within the NEPSSA, CAPSSA, and Burrowing Owl Survey Area [Exhibit 4 – MSHCP Overlay Map]. Target species associated with CAPSSA include Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), little mousetail (*Myosurus minimus* ssp. *apus*), mud nama (*Nama stenocarpa*), Parish's brittlescale (*Atriplex parishii*), round-leaved filaree (*Erodium macrophyllum*), San Jacinto valley crownscale (*Atriplex coronata* var. *notatior*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), and thread-leaved brodiaea (*Brodiaea filifolia*). Target species associated with NEPSSA include California Orcutt grass (*Orcuttia californica*), San Diego ambrosia (*Ambrosia pumila*), spreading navarretia (*Navarretia fossalis*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). The Project does not occur within any MSHCP Core or Linkage Area, or Mammal or Amphibian Survey Areas.

Within the designated MSHCP survey areas, the MSHCP requires habitat assessments and focused surveys within areas of suitable habitat. For locations with positive survey results, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species have been met throughout the MSHCP. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met, if applicable. If equivalency findings cannot be demonstrated, then "biologically equivalent or superior preservation" must be provided.

2.0 METHODOLOGY

To adequately identify biological resources in accordance with the requirements of CEQA, Glenn Lukos Associates (GLA) assembled biological data consisting of the following components:

- Delineation of aquatic resources (including wetlands and riparian habitat) subject to the jurisdiction of the Corps, Regional Board, CDFW, and MSHCP Riparian/Riverine areas and vernal pools policy;
- Performance of vegetation mapping for the Project Study Area;
- Performance of site-specific habitat assessments and biological surveys to evaluate the potential presence/absence of special-status species (or potentially suitable habitat) to the satisfaction of CEQA, federal and state regulations, and MSHCP requirement;
- Performance of a focused habitat evaluation for rare plants; and
- Performance of a focused survey for burrowing owl.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDB (CDFW November 2018), CNPS 8th edition online inventory (CNPS November 2018), Natural Resource Conservation Service (NRCS 2018) soil data, MSHCP species and habitat maps and sensitive soil maps (Dudek 2003), and other pertinent literature and knowledge of the region. Site-specific general surveys within the Project Study Area were conducted on foot in the proposed development areas for each target plant or animal species identified below.

Vegetation was mapped directly onto a 200-scale (1"=200') aerial photograph. All flora and fauna identified on site during vegetation mapping were recorded and are provided in Appendices A and B.

2.1 Summary of Surveys

GLA conducted biological studies in order to identify and analyze actual or potential impacts to biological resources associated with development of the Project Study Area. Observations of all plant and wildlife species were recorded during each of the above-mentioned survey efforts [Appendix A: Floral Compendium and Appendix B: Faunal Compendium]. Table 2-1 provides a summary list of survey dates, survey types and personnel.

Table 2-1. Summary of Biological Surveys for the Project Study Area

Survey Type	2018 Survey Dates	Biologist(s)
General Biological Surveys	8/16, 8/29, 11/27	DS, JS, AN, MR
Evaluation of Riparian/Riverine Areas	8/29	DS, JS, LL, MR
Evaluation of Vernal and/or Seasonal Pools	8/29	DS, JS, LL, MR
Federal and State Jurisdictional Waters	8/29	DS, JS
Focused Rare Plant Habitat Evaluation	8/29	DS, JS
Focused Burrowing Owl Surveys	8/16, 8/20 8/23, 8/27	DS, TM

LL = Lesley Lokovic Gamber; TM = Trina Ming; AN = April Nakagawa; MR = Martin Rasnick; DS = David Smith; JS = Jillian Stephens

Individual plants and wildlife species were evaluated in this report based on their "special-status." For this report, plants were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; and/or
- CNPS Rare Plant Inventory Rank 1A, 1B, 2A, 2B, 3, or 4.

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; and
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species.

Vegetation communities and habitats were considered "special-status" based on one or more of the following criteria:

- Global (G) and/or State (S) ranking of category 3 or less based on CDFW (see Section 3.2.2 below for further explanation); and
- Riparian/Riverine habitat.

2.2 Botanical Resources

A site-specific survey program was designed to accurately document the botanical resources within the Project Study Area, and consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project Study Area; (3) general field reconnaissance surveys; (4) vegetation mapping; and (5) habitat assessments for special-status plant species (including those with MSHCP requirements).

2.2.1 Literature Search

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

- CNPS, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2018); and

- CNDDB for the USGS 7.5' quadrangles: Perris, El Casco, Lake Elsinore, Lakeview, Riverside East, Romoland, Steele Peak, Sunnymead, and Winchester, California (CDFW 2018).

- Informational Planning and Consultation (IPaC) Program. 2018. IPac Resource List. (USFWS 2018)

2.2.2 Vegetation Mapping

Vegetation communities within the Project Study Area were mapped according to Holland (1986) when possible. The majority of the Project site does not meet the parameters of any natural vegetation classification system. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph.

2.2.3 Special-Status Plant Species and Habitats Evaluated for the Project Study Area

A literature search was conducted to obtain a list of special status plants with the potential to occur within the Project Study Area. 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 (2018) and the RCA MSHCP website (http://wrcrca.maps.arcgis.com/apps, accessed in November 2018).

The Project is located within NEPSSA and CAPSSA. Pursuant to the MSHCP, the following target species must be evaluated through habitat assessments and focused surveys (if suitable habitat is present): California Orcutt grass, Coulter's goldfields, Davidson's saltscale, little mousetail, mud nama, Parish's brittlescale, round-leaved filaree, San Diego ambrosia, San Jacinto valley crownscale, smooth tarplant, spreading navarretia, thread-leaved brodiaea, and Wright's trichocoronis.

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the Project Study Area 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 Project Study Area; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the Project Study Area, if applicable.

2.2.4 Botanical Surveys

GLA biologists visited the Study Area on August 29, 2018 to conduct a focused habitat evaluation for sensitive plants, the results of which indicated that focused botanical surveys would not be necessary (refer to Section 4.0, Table 4-2 for supporting information). 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 Project site. The focused evaluation was conducted by walking the Project site and reviewing site conditions including but not limited to disturbances, soils, and hydrology (or lack thereof). All plant species encountered during the field survey 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. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

2.3 Wildlife Resources

Wildlife species were evaluated and detected during the field survey(s) by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project Study Area 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 Project Study Area is provided in Appendix B. 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 (CDFG 2008), 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 survey(s), habitat assessment(s), and/or focused surveys for special-status animals are included below.

2.3.1 General Surveys

Birds

During the general biological and reconnaissance survey within the Project Study Area, birds were identified incidentally within each habitat type. Birds were detected by both direct observation and by vocalizations and were recorded in field notes.

Mammals

During general biological and reconnaissance survey within the Project Study Area, mammals were identified incidentally within each habitat type. Mammals were detected both by direct observations and by the presence of diagnostic sign (i.e. tracks, burrows, scat, etc.).

Reptiles and Amphibians

During general biological and reconnaissance surveys within the Project Study Area, reptiles and amphibians were identified incidentally during surveys within each habitat type. 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.

2.3.2 Special-Status Animal Species Evaluated for the Project Study Area

A literature search was conducted to obtain a list of special-status wildlife species with the potential to occur within the Project Study Area. Species were evaluated based on three factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in vicinity of the Project Study Area, (2) species survey areas as identified by the MSHCP for the Project Study Area; and 3) any other special-status animals that are known to occur within the vicinity of the Project Study Area, or for which potentially suitable habitat occurs on the Project Study Area.

2.3.3 Habitat Assessment for Special-Status Animal Species

GLA biologists conducted habitat assessments for special-status animal species on August 16, 2018. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site.

2.3.4 Focused Surveys for Special-Status Animals Species

Based on the habitat assessments and MSHCP requirements, a focused survey was performed for burrowing owl.

Burrowing Owl

The Project Study Area is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologists Trina Ming and David Smith conducted focused surveys for the burrowing owl in all suitable habitat within the Project Study Area. 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 be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on August 16, 2018. Focused burrowing owl surveys were conducted on August 16, 20, 23, and 27, 2018. The burrowing owl survey visits need to be conducted from one hour prior to sunrise to two hours after sunrise or two hours before sunset to one hour after sunset.

Both the burrow and owl surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high

winds (> 20 mph), dense fog, or temperatures over 90 °F. Refer to Table 2-1 in Section 2.0 for survey condition details.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat, which included the entire Project Study Area with the exception of paved roadways and concrete-lined flood control channel [Exhibit 5 – Vegetation Map]. Transects were spaced between 22 feet and 65 feet 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 320 feet 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. An additional buffer of approximately 500 feet beyond the Project site was also visually surveyed using binoculars for presence of burrowing owl. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Table 2-2. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover
8/16/18	DS/TM	6:00AM/9:00AM	68/86	0-1	Clear
8/20/18	DS/TM	6:00AM/9:00AM	68/78	1-2	Mostly sunny
8/23/18	DS/TM	6:00AM/9:00AM	63/73	0	Clear
8/27/18	DS/TM	6:10AM/9:00AM	60/70	0	Overcast

TM = Trina Ming; DS = David Smith

2.4 Jurisdictional Delineation

Prior to beginning the field delineation, a 200-scale color aerial photograph and the previously cited USGS topographic maps were examined 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 at the subject Study Area were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[5] (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)[6]. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States[7] in conjunction with the

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

[6] 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.

[7] 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).

Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.[8] While in the field the limits of the OHWM, wetlands (if applicable), and CDFW jurisdiction were recorded using GPS technology and/or on copies of the aerial photography. Other data were recorded onto the appropriate datasheets.

2.5 MSHCP Riparian/Riverine Areas and Vernal Pools

GLA surveyed the Project Study Area 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.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal laws and regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state- and federally-listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; special-status species which are not listed as threatened or endangered by the state or federal governments; and special-status vegetation communities.

[8] 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.

3.1 Endangered Species Acts

3.1.1 California Endangered Species Act

California's 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.

3.1.2 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 USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations

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 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.

3.1.4 Take Authorizations Pursuant to the MSHCP

The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the federal and state wildlife agencies and participating entities. The 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. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species pursuant to Section 10(a) of the FESA.

Through agreements with the USFWS and the CDFW, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 “Covered

Species" designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, through project participation with the MSHCP, the MSHCP provides mitigation for project-specific impacts to Covered Species so that the impacts would be reduced to below a level of significance pursuant to CEQA. As noted above, project-specific survey requirements exist for species designated as "Covered Species not yet adequately conserved". These include NEPSSA; CAPSSA; animal species as identified by survey area; and plant and animal species associated with Riparian/Riverine areas and vernal pool habitats (*Volume I, Section 6.1.2* of the MSHCP document).

For projects that have a federal nexus such as through federal CWA Section 404 permitting, take authorization for federally listed covered species would occur under Section 7 (not Section 10) of FESA and that USFWS would provide a MSHCP consistency review of the proposed project, resulting in a biological opinion. The biological opinion would require no more compensation than what is required to be consistent with the MSHCP.

3.2 California Environmental Quality Act

3.2.1 CEQA Guidelines Section 15380

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 requires the analysis of Project impacts on 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 CNPS Ranked 3 or 4.

3.2.2 Special-Status Plants, Wildlife and Vegetation Communities Evaluated Under 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)

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 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 3-1.

Table 3-1. 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.

3.3 Jurisdictional Waters

3.3.1 Army Corps of Engineers

Pursuant to Section 404 of the CWA, the 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), pursuant to the *Navigable Waters Protection Rule*[9] (NWPR), as:

[9] U.S. Environmental Protection Agency & Department of Defense. 2020. Federal Register / Vol. 85, No. 77 / Tuesday, April 21, 2020 / Rules and Regulations.

(a) Jurisdictional waters. For purposes of the CWA, 33 U.S.C. 1251 *et seq.* and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term ‘‘waters of the United States’’ means:

(1) The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
(2) Tributaries;
(3) Lakes and ponds, and impoundments of jurisdictional waters; and
(4) Adjacent wetlands.

(b) Non-jurisdictional waters. The following are not ‘‘waters of the United States’’:

(1) Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;
(2) Groundwater, including groundwater drained through subsurface drainage systems;
(3) Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;
(4) Diffuse stormwater run-off and directional sheet flow over upland;
(5) Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;
(6) Prior converted cropland;
(7) Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;
(8) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;
(9) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
(10) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;
(11) Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and
(12) Waste treatment systems.

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.

1. Wetland Definition Pursuant to Section 404 of the Clean Water Act

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 the Wetland Manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the Wetland 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 Wetland Manual and Arid West 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 Arid West 2016 Regional Wetland Plant List[10],[11]);

* 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 Wetland 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.

3.3.2 Regional Water Quality Control Board

Section 401 of the CWA 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. The Corps, by law, cannot issue a Section 404 permit until a 401 certification is issued or waived.

[10] 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.

[11] Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.[12] The memorandum states:

> *California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus, if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required…*
>
> *The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states….*
>
> *Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification….*

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act.[13]

3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1617 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.

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[12] Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

[13] On June 17, 2016, the SWRCB issued a draft "Procedures for Discharges of Dredged or Fill Materials to Waters of the State" which provides definitions for wetlands, procedures for jurisdictional delineations, and procedures for obtaining permits for impacts to waters of the State.

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.

4.0 RESULTS

This section provides the results of general biological surveys, vegetation mapping, habitat assessments and focused surveys for special-status animals, an assessment for MSHCP Riparian/Riverine areas and vernal pools, and a jurisdictional delineation for Waters of the United States (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFW.

4.1 Existing Conditions

The PVSD is an engineered flood control channel that is mowed and maintained on an annual basis by Flood Control. The PVSD is tributary to the San Jacinto River, which is ultimately tributary to Lake Elsinore, which is ultimately tributary to the Santa Ana River, which is tributary to the Pacific Ocean. The PVSD is mapped as PQP Conserved Lands under the MSHCP.

The Natural Resource Conservation Service (NRCS) identifies the following soil types (series) as occurring (currently or historically) within the Project Study Area [Exhibit 6– Soils Map]: Domino silt loam, saline-alkali and Exeter sandy loam.

4.2 Vegetation Mapping

The Project Study Area supports the following vegetation/land use types: developed, ruderal (upland), ruderal (channel), disturbed emergent marsh, and disturbed southern riparian scrub. Table 4-1 provides a summary of the vegetation/land use types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as [Exhibit 5]. Photographs depicting the Project Study Area are shown in [Exhibit 10 – Site Photographs].

Table 4-1. Summary of Vegetation/Land Use Types for the Project Study Area

Vegetation Type	Area of Project Study Area (acres)
Developed	7.28
Ruderal (Upland)	23.99
Ruderal (Channel)	7.69
Disturbed Southern Riparian Scrub	0.20
Total*	**39.18**

* totals may not equal sum of parts due to rounding error.

4.2.1 Developed

The Project Study Area supports approximately 7.28 acres of disturbed/developed land use. This land use type consists of maintained asphalt and dirt access roads, concrete sidewalks and asphalt pedestrian paths, concrete aprons, unvegetated inlet/outlet features, riprap, and ornamentally planted vegetation associated with the adjacent Morgan Park [Exhibit 10, Photographs 1 and 2].

4.2.2 Ruderal (Upland)

The Project Study Area supports approximately 23.99 acres of ruderal (upland) vegetation. This vegetation type consists of upland areas adjacent to the PVSD dominated by weedy non-native plant species such as black mustard (*Brassica nigra*), Russian thistle (*Salsola tragus*), and stinknet (*Oncosiphon piluliferum*), with patches of bare ground throughout [Exhibit 10, Photographs 3 and 4].

4.2.3 Ruderal (Channel)

The Project Study Area supports approximately 7.69 acres of ruderal (channel) vegetation. The majority of the PVSD is comprised of a maintained, largely bare channel bottom with locally dense patches of weedy plant species that do not require mesic conditions in which to thrive, including Bermuda grass (*Cynodon dactylon*), English plantain (*Plantago lanceolata*), rough cocklebur (*Xanthium strumarium*), Russian thistle, stinknet, western ragweed (*Ambrosia psilostachya*), and white sweet clover (*Melilotus albus*) [Exhibit 10, Photographs 5 and 6].

4.2.4 Disturbed Southern Riparian Scrub

The Project Study Area supports approximately 0.20 acre of disturbed southern riparian scrub. This vegetation type occurs in a relatively discrete patch in the approximate center of the PVSD, immediately south of East Morgan Street. Dominant disturbed southern willow scrub species include black willow saplings (*Salix gooddingii*), rough cocklebur, and salt cedar (*Tamarix ramosissima*) [Exhibit 10, Photographs 7 and 8].

4.3 Special-Status Vegetation Communities

The CNDDB identifies the following six special-status vegetation communities for the Perris, El Casco, Lake Elsinore, Lakeview, Riverside East, Romoland, Steele Peak, Sunnymead, and

Winchester quadrangle maps: southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern riparian scrub, and southern sycamore alder riparian scrub. The Project site contains approximately 0.20 acre of disturbed southern riparian scrub, though it is immature and highly disturbed. There are no vegetation communities within the Project Study Area that would be classified as a "sensitive" vegetation community under CEQA.

4.4 Special-Status Plants

No special-status plant species were detected at the Project site. A focused habitat evaluation was performed and no plants with special status were judged to have potential to occur. Species with Table 4-2 provides a list of special-status plants evaluated for the Project Study Area through general biological surveys and habitat assessments. 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 Project Study Area, 2) applicable MSHCP survey areas, 3) planning species identified by the Mead Valley Area Plan, and 4) any other special-status plants that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs onsite.

Table 4-2. Special-Status Plants Evaluated for the Project Area

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).

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

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)

OCCURRENCE

- Does not occur – The Study Area does not contain habitat for the species and/or the Study Area does not occur within the geographic range of the species.
- Absent – The Study Area contains suitable habitat for the species, but the species has been confirmed absent through Study Area inspection or 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	Occurrence
Buxbaum's sedge *Carex buxbaumii*	Federal: None State: None CNPS: Rank 4.2	Bogs and fens, Meadows and seeps (mesic) and marshes and swamps.	While conditions within the PVSD are wet, this species is not associated with saline/alkaline soils and/or high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite. Furthermore, this sedge is known from only one location in southern California.
California Orcutt grass *Orcuttia californica*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Vernal pools	Does not occur onsite due to a lack of suitable habitat. No ponding or low-lying features are present. The channel environs are not conducive for this species along this section of the PVSD.
California screw moss *Tortula californica*	Federal: None State: None CNPS: Rank 1B.2	Sandy soil in chenopod scrub, and valley and foothill grassland.	Does not occur on Project site due to a lack of suitable habitat.
Chaparral ragwort *Senecio aphanactis*	Federal: None State: None CNPS: Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	Does not occur on Project site due to a lack of suitable soils and habitat.

Species Name	Status	Habitat Requirements	Occurrence
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).	Does not occur on Project site due to a lack of suitable habitat. The site lacks the appropriate hydrology (seasonal ponding) required by this species. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
Coulter's matilija poppy *Romneya coulteri*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Often in burns in chaparral and coastal scrub.	Confirmed absent. Would have been observed if present during the focused habitat evaluation.
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.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
Heart-leaved pitcher sage *Lepechinia cardiophylla*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Closed-cone coniferous forest, chaparral, and cismontane woodland.	Does not occur on Project site due to a lack of suitable habitat.
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.	Does not occur on Project 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.	Does not occur on Project site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Little mousetail *Myosurus minimus* ssp. *apus*	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils, the site lacks the appropriate hydrology (seasonal ponding) required by this species. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
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	Does not occur on Project site due to a lack of suitable habitat.
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.	Does not occur on Project site due to a lack of suitable habitat.
Marsh sandwort *Arenaria paludicola*	Federal: FE State: SE CNPS: Rank 1B.1	Bogs and fens, freshwater marshes and swamps.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
Mud nama *Nama stenocarpum*	Federal: None State: None CNPS: Rank 2B.2 MSHCP(d)	Marshes and swamps	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
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	Does not occur on Project site due to a lack of suitable habitat.
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.	Does not occur on Project site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
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.	Does not occur on Project site due to a lack of suitable habitat.
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.	Not expected to occur on Project site due to low habitat quality. While marginally suitable habitat occurs onsite, this species is highly detectable and was confirmed absent during focused habitat assessments.
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Chenopod scrub, playas, vernal pools.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
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.	Does not occur on Project 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.	Does not occur on Project site due to a lack of suitable habitat.
Peninsular spineflower *Chorizanthe leptotheca*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Alluvial fan, granitic. Chaparral, coastal scrub, lower montane coniferous forest.	Does not occur on Project 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.	Does not occur on Project site due to a lack of suitable habitat.
Robinson's pepper grass *Lepidium virginicum* var. *robinsonii*	Federal: None State: None CNPS: Rank 4.3	Chaparral, coastal sage scrub	Does not occur on Project site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimum*	Federal: FE State: SE CNPS: Rank 1B.2	Coastal dune, coastal salt marshes and swamps.	Does not occur on Project site due to a lack of suitable habitat. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite. Furthermore, there are no known occurrences of this species outside of the Santa Ana River.
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.	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils, this species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
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).	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils and conditions within the PVSD are wet, this species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
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.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.

Species Name	Status	Habitat Requirements	Occurrence
San Diego sagewort *Artemisia palmeri*	Federal: None State: None CNPS: Rank 4.2	Sandy and mesic soils in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland.	Does not occur onsite due to a lack of suitable habitat. This species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite. Furthermore, this species is only known from two records in all of Riverside County that are in question as to their identification.
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.	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils and conditions within the PVSD are wet, this species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
Slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur on Project site due to a lack of suitable habitat.
Small-flowered microseris *Microseris douglasii* ssp. *platycarpha*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Cismontane woodland, coastal sage scrub, valley and foothill grassland, vernal pools. Occurring on clay soils.	Does not occur on Project site due to a lack of suitable habitat.
Small-flowered morning-glory *Convolvulus simulans*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Does not occur on Project site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
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.	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils, this species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite. .
Snake cholla *Cylindropuntia californica* var. *californica*	Federal: None State: None CNPS: Rank 1B.1	Chaparral, coastal sage scrub.	Does not occur on Project site due to a lack of suitable habitat.
South coast saltscale *Atriplex pacifica*	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, playas.	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils and conditions within the PVSD are wet, this species is not associated with high-energy riverine environments such as the PVSD. Additionally, the regularly disturbed and maintained nature of the site is such that there is no suitable habitat present onsite.
Southern California black walnut *Juglans californica*	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces.	Does not occur on Project 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).	Does not occur on Project site due to a lack of suitable habitat. While conditions within the PVSD are wet, the high-energy riverine environment of the PVSD make conditions unsuitable for the species. Additionally, the regularly disturbed and maintained nature of the site is such that suitable habitat is not present.
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, vernal pools.	Does not occur on Project site due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Vernal barley *Hordeum intercedens*	Federal: None State: None CNPS: Rank 3.2 MSHCP	Coastal dunes, coastal sage scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	Does not occur on Project site due to a lack of suitable habitat. While conditions within the PVSD are wet, the high-energy riverine environment of the PVSD make conditions unsuitable for the species. Additionally, the regularly disturbed and maintained nature of the site is such that suitable habitat is not present.
Woven-spored lichen *Texosporium sancti-jacobi*	Federal: None State: None CNPS: Rank 3	On soil, small mammal pellets, dead twigs, and on *Selaginella* spp. Chaparral (openings).	Does not occur on Project site due to a lack of suitable habitat. The Project site does not exhibit woody vegetation or *Selaginella* spp. required by this species.
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.	Does not occur on Project site due to a lack of suitable habitat. While the Project site does exhibit alkaline soils and conditions within the PVSD are wet, the regularly disturbed and maintained nature of the site is such that suitable habitat is not present.
Yucaipa onion *Allium marvinii*	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Chaparral (clay, openings).	Does not occur on Project site due to a lack of suitable habitat.

4.4.1 Special-Status Plants Detected at the Project Study Area

No special-status plants were detected at the Project Study Area during focused habitat assessments, including those species identified by the NEPSSA and CAPSSA.

4.5 Special-Status Animals

No special-status animal species were detected at the Project site. Table 4-3 provides a list of special-status animals evaluated for the Project Study Area through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project Study Area, 2) applicable MSHCP survey areas, and 3) any other special-status animals that are known to occur within the vicinity of the Project Study Area, for which potentially suitable habitat occurs on the Study Area.

Table 4-3. Special-Status Animals Evaluated for the Project Study Area

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
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.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat. The Project site lacks the appropriate hydrology (seasonal ponding) required by this species.
Vernal pool fairy shrimp *Branchinecta lynchi*	Federal: FT State: None MSHCP(a)	Seasonal vernal pools	Does not occur on the Project site due to a lack of suitable habitat. The Project site lacks the appropriate hydrology (seasonal ponding) required by this species.
Amphibians			
Western spadefoot *Spea hammondii*	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur on the Project site due to a lack of suitable habitat.
Reptiles			
California glossy snake *Arizona elegans occidentalis*	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Does not occur on the Project site 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.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat.
Coastal whiptail *Aspidoscelis tigris stejnegeri (multiscutatus)*	Federal: None State: SSC MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within	Not expected to occur on the Project site due to a lack of suitable habitat.

		shrub or grassland associations.	
Orange throat whiptail *Aspidoscelis hyperythra*	Federal: None State: WL MSHCP	Coastal sage scrub, chaparral, non-native grassland, oak woodland, and juniper woodland.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat.
San Bernardino ringneck snake *Diadophis punctatus modestus*	Federal: None State: None	Moist habitats including woodlands, forest, grasslands, chaparral, farms, and gardens.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat.
Western pond turtle *Emys marmorata*	Federal: None State: SSC	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.	Does not occur on the Project site due to a lack of suitable habitat. The PVSD is a high-energy system that would not support this species.
Birds			
Bald eagle (nesting & wintering) *Haliaeetus leucocephalus*	Federal: Delisted State: SE, FP MSHCP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur on the Project site due to a lack of suitable habitat.
Bell's sage sparrow *Artemisiospiza belli belli*	Federal: BCC State: WL MSHCP	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Does not occur on the Project site due to a lack of suitable habitat.
Burrowing owl (burrow sites & some wintering sites) *Athene cunicularia*	Federal: BCC 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.	Confirmed absent from Project site as determine by focused burrowing owl survey. Burrowing owl was detected on an adjacent property but was not detected on the Project site.

California black rail *Laterallus jamaicensis coturniculus*	Federal: BCC State: ST, FP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Does not occur on the Project site due to a lack of suitable habitat.
Coastal cactus wren (San Diego & Orange County only) *Campylorhynchus brunneicapillus sandiegensis*	Federal: BCC State: SSC MSHCP	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Does not occur on the Project site due to a lack of suitable habitat.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur on the Project site due to a lack of suitable habitat.
Golden eagle (nesting & wintering) *Aquila chrysaetos*	Federal: BCC 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.	Does not occur on the Project site due to a lack of suitable habitat. Low potential to occur onsite for foraging only.
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.	Does not occur on the Project site due to a lack of suitable habitat.
Loggerhead shrike (nesting) *Lanius ludovicianus*	Federal: BCC 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.	Not expected to occur on the Project site due to a lack of suitable habitat. Low potential to occur onsite for foraging only.
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.	Does not occur on the Project site 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.	Not expected to occur on the Project site due to a lack of suitable habitat. Low potential to occur onsite for foraging only.
Southwestern willow flycatcher (nesting) *Empidonax traillii extimus*	Federal: FE State: SE MSHCP(a)	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur on the Project site due to a lack of suitable habitat.
Tricolored blackbird (nesting colony) *Agelaius tricolor*	Federal: BCC State: CE, SSC MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of	Not expected to occur on the Project site due to a lack of suitable habitat.

		natural grassland, woodland, or agricultural cropland.	
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.	Does not occur on the Project site due to a lack of suitable habitat.
Western yellow-billed cuckoo (nesting) *Coccyzus americanus occidentalis*	Federal: FT, BCC State: SE MSHCP(a)	Dense, wide riparian woodlands with well-developed understories.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat. Low potential to occur onsite for foraging only.
Yellow warbler (nesting) *Setophaga petechia*	Federal: BCC 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.	Does not occur on the Project site 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.	Does not occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat.
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.	Does not occur on the Project site due to a lack of suitable habitat. The entire site was surveyed for burrowing owl burrows and badger burrows were confirmed absent.
Dulzura pocket mouse *Chaetodipus californicus femoralis*	Federal: None State: SSC	Coastal scrub, grassland, and chaparral, especially at grass-chaparral edges	Does not occur on the Project site due to a lack of suitable habitat.

Los Angeles pocket mouse *Perognathus longimembris brevinasus*	Federal: None State: SSC MSHCP(c)	Fine, sandy soils in coastal sage scrub and grasslands.	Does not occur on the Project site due to a lack of suitable habitat. The Project site occurs outside of the MSHCP survey area for this species.
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	Federal: None State: SSC MSHCP	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Does not occur on the Project site due to a lack of suitable habitat.
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.	Does not occur on the Project site due to a lack of suitable habitat.
San Bernardino kangaroo rat *Dipodomys merriami parvus*	Federal: FE State: SSC 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.	Does not occur on the Project site due to a lack of suitable habitat.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Federal: None State: SSC MSHCP	Occupies a variety of habitats but is most common among shortgrass habitats. Also occurs in sage scrub but needs open habitats.	Not expected to occur on the Project site 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.	Not expected to occur on the Project site 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.	Does not occur on the Project site due to a lack of suitable habitat.
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Not expected to occur on the Project site due to a lack of suitable habitat. While this species has a high tolerance for routine disturbances, the Project site's substrate is very disked such that species is not expected to occur.
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,	Does not occur on the Project site due to a lack of suitable habitat.

		and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	
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.	Does not occur on the Project site due to a lack of suitable habitat.

STATUS

Federal	State
FE – Federally Endangered	SE – State Endangered
FT – Federally Threatened	ST – State Threatened
FPT – Federally Proposed Threatened	SC– State Candidate
FC – Federal Candidate	CFP – California Fully-Protected Species
BGEPA– Bald and Golden Eagle Protection Act	SSC – Species of Special Concern

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

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

OCCURRENCE

Does not occur – The Study Area does not contain habitat for the species and/or the Study Area does not occur within the geographic range of the species.
Confirmed absent – The Study Area 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 based on suitable habitat, however its presence/absence has not been confirmed.
Confirmed present – The species was detected onsite incidentally or through focused surveys

4.5.1 Special-Status Wildlife Species Observed within the Project Study Area

No special-status animal species were observed within the Project Study Area.

4.5.2 Special-Status Wildlife Species Not Observed but with a Potential to Occur at the Project Study Area

The Project Study Area contains habitat with low potential to support foraging by special-status species, which are not expected to reside or breed within the Project Study Area but have low potential to forage onsite. These species include golden eagle, loggerhead shrike, northern harrier, San Diego black-tailed jackrabbit, and Stephen's kangaroo rat. All of these species are covered species under the MSHCP; therefore, no survey action would be required. Refer to Section 5.4 for an analysis of potential impact.

4.5.3 Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Study Area

The burrowing owl is designated as a CDFW California Species of Special Concern at burrow sites and some wintering sites. It is a year-long resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains. In California, burrowing owls are restricted to the central valley extending from Redding south to the Grapevine, east through the Mojave Desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Diego and the Sonoran Desert (Grinnell and Miller 1944). It was a resident in the open areas of the lowlands over much of the Southern California region (Garrett and Dunn 1981).

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, *et al.* 1993). They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches (Haug, *et al.* 1993). They may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner, *et al.* 1990). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows.

Although the Project Study Area is within the MSHCP Burrowing Owl Survey Area, burrowing owls were confirmed absent from the Study Area during 2018 focused breeding season surveys. No sign or detection of burrowing owl was made during any field work performed for this Project. Exhibit 7 illustrates the potential burrows present in the Study Area and the area surveyed for this species [Exhibit 7 – Burrowing Owl Survey Area Map].

4.5.4 Raptor Use

The Project Study Area provides marginally suitable foraging habitat for a number of raptor species, including special-status raptors.

Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as

Red-tailed Hawk (*Buteo jamaicensis*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

Many of the raptors that would be expected to forage and nest within western Riverside are fully covered species under the MSHCP with the MSHCP providing the necessary conservation of both foraging and nesting habitats. Some common raptor species (e.g., Red-tailed Hawk) are not covered by the MSHCP but are expected to be conserved with implementation of the Plan due to the parallel habitat needs with those raptors covered under the Plan.

It is important to understand that the MSHCP does not provide Fish and Game Code take for raptors covered under the Plan.

Appendix B (faunal compendium) provides a list of the raptors detected over the course of the field studies. A single raptor species, red-tailed hawk, was observed. Great horned owl (*Bubo virginianus*) and barn owl (*Tyto alba*) may also forage at the Study Area. Additionally, burrowing owl was observed on an adjacent offsite property. The Project Study Area lacks potential nesting habitat (e.g., mature trees, tall shrubs) for these and other raptor species but is expected to provide foraging marginal habitat for all of these species in the form of insects, spiders, lizards, snakes, small mammals, and other birds.

4.5.5 Nesting Birds

The Project Study Area contains shrubs and ground cover that provide marginal suitable habitat for nesting native birds. Mortality of native birds (including eggs) is prohibited under the California Fish and Game Code.[14]

Birds anticipated to nest on the Project site would be those that are common to ruderal, agricultural lands that are routinely mechanically disturbed such as killdeer (*Charadrius vociferus*) and mourning dove (*Zenaida macroura*).

4.5.6 Critical Habitat

The Project Study Area is not located within proposed or designated Critical Habitat.

4.6 Jurisdictional Delineation

4.6.1 Corps Jurisdiction

Waters of the U.S. (WoUS) subject to the jurisdiction of the Corps are limited to the segment of the PVSD and Tributary 1 within the Study Area. Total Corps jurisdiction associated with the Study Area is 4.98 acres, none of which consists of jurisdictional wetlands. A total of 3,491

[14] Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

linear feet of streambed are present within the Study Area. The extent of WoUS is depicted on [Exhibit 8 – Corps/RWQCB Jurisdictional Delineation Map].

Perris Valley Storm Drain

Corps jurisdiction within the Study Area associated with the PVSD totals approximately 4.94 acres, none of which consists of jurisdictional wetlands. A total of 3,134 linear feet of channel are present within the Study Area.

The PVSD is a man-made, engineered feature constructed for flood control purposes, which is maintained and mowed annually by Flood Control.

The PVSD flows from north to south for 3,134 linear feet within the Study Area and ranges in width from approximately 52 feet to 144 feet wide. The PVSD is tributary to the San Jacinto River, which is ultimately tributary to Lake Elsinore, which is ultimately tributary to the Santa Ana River, which is tributary to the Pacific Ocean, a TNW. Corps jurisdiction is extended to the limits of the OHWM which was determined based on the presence of litter and debris, changes in the character of soil, natural lines impressed on the bank, and destruction of terrestrial vegetation.

The PVSD segment within the Study Area is frequently disked and heavily maintained which does not allow the formation of wetland soils, hydrology or the establishment of wetland vegetation. As the portion of the PVSD within the Study Area does not exhibit wetland characteristics, that portion has been considered as non-wetland waters in this report.

Photographs depicting the portion of the PVSD within the Study Area are attached as Exhibit 10, Photographs 5-8. Wetland data sheets are attached as Appendix C. See Section 4.2.4 for a description of vegetation composition for these areas.

Tributary 1

Corps jurisdiction within the Study Area associated with Tributary 1 totals 0.04 acre, none of which consists of jurisdictional wetlands. A total of 357 linear feet of streambed are present within the Study Area. Tributary 1 is an offsite tributary located near the intersection of Morgan Street and Redlands Avenue. Tributary 1 begins at this intersection and flows for 357 linear feet from west to east across the Study Area before discharging into the PVSD. Tributary 1 is a man-made drainage feature which does not support vegetation.

4.6.2 Regional Board Jurisdiction

The PVSD and Tributary 1 have been determined to be Corps jurisdictional waters subject to regulation pursuant to Section 401 and 404 of the CWA and does not need to be addressed separately pursuant to Section 13260 of the CWC, the Porter-Cologne Act.

All waters within the Project Site that were determined to be WoUS pursuant to Section 404 of the CWA fall within Regional Board jurisdiction pursuant to Section 401 of the CWA. None of

the features at the Site were determined to be non-federal waters that would require separate analysis.

4.6.3 CDFW Jurisdiction

The Study Area supports one jurisdictional stream, the PVSD. CDFW jurisdiction within the Study Area associated with the PVSD and Tributary 1 totals 8.48 acres, of which approximately 0.20 acre consists of vegetated riparian habitat and 8.28 acres are non-riparian streambed. A total of 3,491 linear feet of streambed are present within the Study Area, of which 271 linear feet are vegetated riparian and 3,220 linear feet are non-riparian streambed.

Perris Valley Storm Drain

CDFW jurisdiction within the Study Area associated with the PVSD totals 8.41 acres, of which approximately 0.20 acre consists of vegetated riparian habitat and 8.21 acres are non-riparian streambed. A total of 3,134 linear feet of streambed are present within the Study Area, of which 271 linear feet are vegetated riparian and 2,863 linear feet are non-riparian streambed.

The PVSD is a man-made, engineered feature constructed for flood control purposes, which is maintained by Flood Control. The PVSD flows in north to south direction for 3,134 linear feet within the Study Area and is tributary to the San Jacinto River. CDFW jurisdiction is extended to the top of the bank for the channel. The boundaries of CDFW jurisdiction are depicted on [Exhibit 9 – CDFW Jurisdictional Delineation/MSHCP Riparian Riverine Map]. Vegetation is as previously stated. Photographs depicting the PVSD are attached as Exhibit 10.

The segment of the PVSD within the Study Area, from East Morgan Street to just south of East Rider Street, contains a 0.20-acre patch of vegetated riparian habitat immediately south of East Morgan Street which is by two storm drains located on both sides of the PVSD. Photographs depicting the riparian habitat are attached as Exhibit 10, Photographs 9 and 10.

Tributary 1

CDFW jurisdiction within the Study Area associated with Tributary 1 totals 0.07 acre, none of which consists of riparian streambed and all of which is non-riparian streambed. A total of 357 linear feet of streambed are present within the Study Area. Tributary 1 is an offsite tributary located near the intersection of Morgan Street and Redlands Avenue. Tributary 1 is a man-made drainage feature which does not support vegetation.

4.7 MSHCP Riparian/Riverine Areas and Vernal Pools

Vegetation communities associated with riparian systems and vernal pools are depleted natural vegetation communities because, similar to coastal sage scrub, they have declined throughout Southern California during past decades. In addition, they support a large variety of special-status wildlife species. Most species associated with Riparian/Riverine areas are covered species under the MSHCP (under Section 6.1.2 of the Plan). The MSHCP has specific policies and procedures regarding the evaluation and conservation of Riparian/Riverine resources (including

riparian vegetation) and vernal pools because it supports MSHCP covered species. Specifically, the MSHCP states that "Riparian/Riverine areas are natural lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.". Thus, the MSHCP classification of Riparian/Riverine includes both riparian (depleted natural vegetation communities) as well as ephemeral drainages that are natural in origin but may lack riparian vegetation. For this analysis, all features that qualify as state streambeds are considered MSHCP Riparian/Riverine resources.

MSHCP Riparian/Riverine jurisdiction in the Project Study Area occurs wholly within the PVSD and is identical to that of CDFW jurisdiction. MSHCP Riparian/Riverine areas total 8.48 acres, 0.20 acre of which consists of disturbed southern riparian scrub, 1.24 acres of which consists of developed land, 0.10 acre of which consists of ruderal (upland) vegetation, and 6.94 acres of which consists of ruderal (channel) vegetation [Exhibit 5 and Exhibit 9]. The PVSD receives water input routinely and to a level supportive of riparian conditions. However, high-energy hydrological activity within the PVSD combined with routine maintenance reduces the quality of this resource. Refer to Section 4.2 for a full summary including Table 4-1 that summarizes the vegetation present within the PVSD.

4.8 Wildlife Linkages/ Corridors and Nursery Sites

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but may can be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of "gene flow" between populations, with movement taking potentially many generations.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species.

There is no potential for wildlife nurseries to be present on the Project site. The PVSD could provide wildlife movement habitat but lacks the typical structure needed such as riparian trees and/or shrubs which provide cover and protection to animals as they move through an area. As discussed in Section 1.4.2, there are no MSHCP Cores or Linkages adjacent to or within the Project site. The PVSD is owned by Flood Control and is mapped as PQP Conserved Lands under the MSHCP.

5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed project[15]. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other offsite areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise, the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by non-native invasives, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact can occur from multiple individual effects from the same project, or from several projects. The cumulative impact from several projects is the change in the environment resulting from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.1 California Environmental Quality Act (CEQA)

5.1.1 Thresholds of Significance

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

[15] For purposes of this report, impacts associated with the proposed Rider Street bridge span are being considered as permanent and may decreased upon completion of the final bridge span design.

"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 2018 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Impacts to Natural Vegetation

The proposed Project would temporarily impact approximately 0.20 acre of disturbed southern riparian scrub. The proposed Project would also temporarily impact 4.49 acres of disturbed/developed land, 15.80 acres of ruderal (upland) vegetation, and 5.58 acres of ruderal (channel) vegetation. The Project would also permanently remove 1.49 acres of disturbed/developed land, 1 acre of ruderal (upland) vegetation, and 1.12 acres of ruderal (channel vegetation). See Table 5-1 for a summary of impacts to vegetation types and land uses.

Table 5-1. Summary of Impacts to Vegetation/Land Use Types for the Project Study Area

Vegetation Type	Area of Avoidance within Project Study Area	Area of Temporary Impacts within Project Study Area (acres)	Area of Permanent Impacts within Project Study Area (acres)
Developed	1.30	4.49	1.49
Ruderal (Upland)	7.19	15.80	1.00
Ruderal (Channel)	0.99	5.58	1.12
Disturbed Southern Riparian Scrub	0.00	0.20	0.00
TOTALS[1]	**9.48**	**26.07**	**3.61***

[1]-totals may not equal sum of parts due to rounding error.

*For purposes of this report, vegetation impacts associated with the proposed Rider Street bridge span portion of the Project are being considered as permanent and may decreased upon completion of the final bridge span design.

Impacts to disturbed/developed land (4.49 acres temporary and 1.49 acres permanent) would be a less-than-significant impact under CEQA because this land does not support vegetation.

Impacts to ruderal (upland/channel) vegetation (21.38 acres temporary and 2.12 acres permanent) would be a less-than-significant impact under CEQA as the Project site is heavily disturbed and routinely maintained, and the ruderal vegetation is composed of non-native plant species, some of which are classified as invasive.

The proposed temporary impact to the 0.20 acre of disturbed southern riparian scrub within the PVSD would be a significant impact under CEQA because the riparian area supports important hydrological functions and values. However, the riparian area is not expected to support high value biological functions and values due to high cover of non-native plant species and the

routine mowing which does not allow complex vegetation structure to occur and persist. Furthermore, these proposed impacts would only be temporary.

Section 6.0 of this report provides measures to ensure consistency with the MSHCP and to ensure any temporary impacts to the above-mentioned vegetation types that would occur by the Project are reduced to less-than-significant under CEQA.

5.3 Impacts to Special-Status Plants

The proposed Project will not result in any impacts to special-status plants as no special-status plant species are present within the Project site. The Project Study Area is located within the NEPSSA and CAPSSA; however, the Study Area is not expected to support NEPSSA or CAPSSA, or other special-status plant species, due to the absence of the necessary vegetation communities, hydrology, and/or soils; as well as the ongoing disturbance levels to the soils.

5.4 Impacts to Special-Status Animals

5.4.1 Federal and/or State Listed Animals

The Project has very low potential to support foraging by SKR in the ruderal uplands. This species is listed as Endangered by the federal government and listed as Threatened by the state of California. The Project would temporarily disturb 15.80 acres of potential habitat and permanently remove 1 acre of potential habitat. This would be a potentially significant impact under CEQA. However, the Project site occurs within the SKR Habitat Conservation Plan (RCHCA 1996) and with fee payment to this HCP, these potentially significant impacts would be fully mitigated.

5.4.2 Non-Listed Special-Status Animals

No special-status species were detected on the Project site.

The Project would result in the temporary loss of marginal foraging habitat for golden eagle, loggerhead shrike, northern harrier, and San Diego black-tailed jackrabbit. The Project would temporarily impact 21.38 acres of marginal foraging habitat for these species. The Project would permanently impact 2.12 acres of marginal foraging habitat for these species. As discussed, the lands are routinely disked and support ruderal non-native vegetation. The proposed impacts would be less than significant due to the heavily disturbed condition of the property and the relatively low level of sensitivity of these species. Additionally, all of these species are Covered Species under the MSHCP, with any potential impacts mitigated under the Plan.

As documented in Section 4.5.3, the Project site is not currently occupied by burrowing owl and based on this, the Project would not impact this species. However, the site has the potential to support burrowing owls in the future based on the presence of foraging habitat and the mercurial nature of burrowing owl. The MSHCP typically requires a preconstruction survey for burrowing owls to ensure that projects would not result in the direct harm of owls. Section 6.0 of this report

provides a measure to ensure consistency with the MSHCP and to ensure no direct impact to burrowing owl would occur by the Project.

5.5 Impacts to Raptors

Raptors (Birds of Prey) include owls, hawks, eagles, and falcons. Common species of raptors (e.g. Red-tailed hawk) as well as less common special-status species (i.e. northern harrier, golden eagle) have potential to forage on the Project site. The Project would temporarily impact 21.38 acres of potential foraging habitat (ruderal vegetation). The Project would permanently impact 2.12 acres of potential foraging habitat (ruderal vegetation). The Project site does not support potential nesting habitat for raptors. The temporary and permanent loss of 23.50 acres of potential foraging habitat would not be a significant impact under CEQA given that a majority of the impacts are only temporary and the level of ongoing disturbances that reduce the prey base. In addition, those raptors with special-status and potential to be present are fully covered by the MSHCP and thus, compliance with the MSHCP would mitigate for any potential significant impacts to these species.

5.6 Impacts to Critical Habitat

The proposed Project will not impact lands designated as critical habitat by the USFWS, as none is present within the Project site.

5.7 Impacts to Nesting Birds

The project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the California Fish and Game Code. A project-specific mitigation measure is identified in Section 6.0 of this report to avoid impacts to nesting birds.

Although impacts to native birds are prohibited by the California Fish and Game Code, impacts to native birds due to development of the proposed Project would not be a significant impact under CEQA. The native birds with potential to nest on the Project Study Area would be those that are extremely common to the region and highly adapted to human landscapes (e.g., mourning dove, killdeer). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species. A recommended measure is identified in Section 6.0 of this report to avoid impacts to nesting birds.

5.8 Impacts to Wildlife Migration/Nurseries

The Project site does not occur within MSHCP Cores or Linkages and lacks wildlife nursery sites. However, the PVSD may support wildlife movement and during construction activities, wildlife may temporarily avoid use of the PVSD. After construction, any potential wildlife movement that does occur is expected to continue. The PVSD is not expected to support regional movement due to the routine maintenance that occurs that eliminates shrub/tree cover that is needed by regionally moving wildlife. Any potential impacts to wildlife movement would

be less than significant under CEQA. In addition, any potential impacts to wildlife movement would be mitigated by the MSHCP.

The Project Study Area does not support a wildlife nursery site; therefore, the proposed Project will not result in an impact to wildlife nurseries.

5.9 Impacts to Jurisdictional Waters

The Project would temporarily impact 3.37 acres and 2,660 linear feet of WoUS subject to the jurisdiction of the Corps and the Regional Board (all non-wetland waters), and 6.38 acres and 2,660 linear feet of streambed subject to the jurisdiction of CDFW (0.20 acre and 264 linear feet of which consist of riparian streambed). The Project would also permanently impact 0.98 acre and 415 linear feet of WoUS subject to the jurisdiction of the Corps and the Regional Board (all non-wetland waters), and 1.14 acres and 415 linear feet of streambed subject to the jurisdiction of CDFW (all non-riparian) [Exhibits 8 and 9]. Refer to Table 5-2 below for a summary of impacts by jurisdiction and feature. The proposed impacts would be a potentially significant impact under CEQA because these resources are riparian and/or potentially provide important hydrological functions and values. However, because of the routine mechanical disturbance to the PVSD, which supports non-native plant species and eliminates growth of complex vegetation structure, the hydrological functions and values have been reduced. Furthermore, a majority of these impacts are only temporary. Refer to Section 6.0 for measures to address this impact.

Table 5-2. Summary of Proposed Impacts to Corps, Regional Board, and CDFW Jurisdiction

		Corps/Regional Board			CDFW			Length
Drainage Feature	**Impact Type**	**Wetland (acres)**	**Non-wetland Waters (acres)**	**Total (acres)**	**Vegetated Streambed (acres)**	**Non-Riparian Streambed (acres)**	**Total (acres)**	**Total Streambed (linear feet)**
Tributary 1	Permanent	0.0	0.0	0.0	0.0	0.0	0.0	0
	Temporary	0.0	0.01	0.01	0.0	0.01	0.01	131
Perris Valley Storm Drain	Permanent*	0.0	0.98	0.98	0.0	1.14	1.14	415
	Temporary	0.0	3.36	3.36	0.20	6.17	6.37	2,529
TOTALS[1]		**0.0**	**4.36**	**4.36**	**0.20**	**7.31**	**7.51**	**3,075**

[1]-totals may not equal sum of parts due to rounding error.

*For purposes of this report, impacts to jurisdiction associated with the proposed Rider Street bridge span portion of the Project are being considered as permanent and may decreased upon completion of the final bridge span design.

5.10 Impacts to MSHCP Riparian/Riverine Areas

The proposed Project would result in temporary impacts to MSHCP Riparian/Riverine vegetation totaling 0.20 acre. [Exhibit 9]. MSHCP Riparian vegetation within the Project impact area includes the 0.20 acre of disturbed southern riparian scrub. The Project would result in temporary impacts to 6.18 acres of MSHCP Riverine resources and permanent impacts to 1.14 acres of MSHCP Riverine resources within the Project impact area, which includes ruderal

upland, ruderal channel, and developed areas.[16] These MSHCP Riparian/Riverine resources may provide potentially important hydrological functions and values and the proposed impacts would be potentially significant under CEQA. However, these vegetation types are not expected to provide important biological functions and values because of the routine mechanical disturbance to the PVSD, which supports non-native plant species and eliminates growth of complex vegetation structure. Furthermore, a majority of these impacts are only temporary. Refer to Table 5-3 below for a summary of impacts to MSHCP Riparian/Riverine resources.

Table 5-3. Summary of Proposed Impacts to MSHCP Riparian/Riverine Resources

Drainage Feature	Impact Type	Riverine Streambed	Riparian Streambed	Total (acre)	Length (Linear Feet)
Tributary 1	Permanent	0.0	0.0	0.0	
	Temporary	0.01	0.0	0.01	131
Perris Valley Storm Drain	Permanent*	1.14	0.0	1.14	415
	Temporary	6.17	0.20	6.37	2,529
TOTALS[1]		**7.31**	**0.20**	**7.51**	**3,075**

[1]-totals may not equal sum of parts due to rounding error.

*For purposes of this report, impacts to jurisdiction associated with the proposed Rider Street bridge span portion of the Project are being considered as permanent and may decreased upon completion of the final bridge span design.

Pursuant to Volume I, Section 6.1.2 of the MSHCP, if avoidance or Riparian/Riverine resources are infeasible, then the unavoidable impacts must be mitigated and a Determination of Biologically Equivalent or Superior Preservation (DBESP) is required. Refer to Section 6.0 for details.

5.11 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to adjacent native open space. Potential indirect effects associated with development include water quality impacts from associated with drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities.

During the widening of the PVSD there would be potential for significant impacts to occur to wetlands and riparian habitat through degraded water quality, introduction of invasive plant species, dust, and noise. However, with implementation of avoidance and minimization measures provided in Section 6.0, potential indirect impacts to this resource would be reduced to a level of less than significant under CEQA. The PVSD, owned by Riverside County Flood

[16] Please note, sum of individual parts may not equal total sum l due to rounding error.

Control, is classified as PQP conservation lands by the MSHCP. As such, the MSHCP Urban/Wildland Interface Guidelines (MSHCP *Volume I, Section 6.1.4*) apply to this Project.

To minimize potential edge effects, the guidelines are to be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area.

The Project applicant will implement measures consistent with the MSHCP guidelines to address the following:

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

5.11.1 Drainage

Proposed projects in proximity to the MSHCP Conservation Area shall incorporate measures, including measures requires through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharges to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

The Project's contractor will develop a Stormwater Pollution Prevention Plan (SWPPP) to prevent pollutants from entering the PVSD during construction activities.

5.11.2 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.

The proposed Project will implement a SWPPP that will address runoff during construction. A WQMP will be developed to ensure that runoff into the MSHCP Conservation Area is minimized per developable standards.

5.11.3 Lighting

Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Implementation of the proposed project could result in unwanted spillover of light into the MSHCP Conservation Area (the PVSD). The additional lighting could cause adverse impacts (e.g. predation) to the species inhabiting the conserved lands.

If night lighting is required during construction, shielding shall be incorporated to ensure ambient lighting in the MSHCP Conservation Area (the PVSD) is shielded and directed away from foraging or nesting habitat areas. Night work and lighting would also be limited around areas supporting, or with the potential to support, sensitive wildlife species.

5.11.4 Noise

As discussed below in Section 7.0, MSHCP compliance, 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 (the PVSD) should not be subject to noise that would exceed biological noise level standards of the Equivalent Continuous [Average] Sound Level (Leq), which is 65 dBA Leq.

The Project Noise Study notes that the Leq during construction activity ranges from 34.9 to 77.9 dBA Leq at noise-sensitive receiver locations. The threshold for special-status wildlife species and nesting birds as noted above, is 65 dBA Leq, which would be exceeded during construction soil import/export operations and bridge construction, although there will be no pile driving of the Rider Street Bridge and/or its abutments.

Since the noise threshold for special-status wildlife and nesting birds would be exceeded during construction, soil import and/or export, and bridge construction work, should be conducted outside of the breeding season (February 1 to August 31 is recognized as the breeding season) to further reduce potential indirect noise effects on special-status wildlife. If this is not feasible, then sound walls, hay bales, or other measures designed to reduce effects from Project noise levels on special-status wildlife species would be installed/erected prior to the commencement of ground-disturbing activities. Sound monitoring would also occur as needed, within 300 feet of known burrowing owl and nesting bird territories to ensure that noise levels at these locations are below the 65 dBA Leq level and would not affect special-status wildlife species.

5.11.5 Invasives

Projects adjacent to the MSHCP Conservation Area shall avoid the use of invasive plant species in landscaping, including invasive, non-native plant species listed in Volume I, *Table 6-2* of the MSHCP.

5.11.6 Barriers

Projects 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.

5.11.7 Grading/Land Development

The MSHCP states that manufactured slopes associated with development shall not extend into the MSHCP Conservation Area (the PVSD). The Project will not extend manufactured slopes into the MSHCP Conservation Area.

5.11.8 Monitoring

Orange silt fencing will be placed to demarcate the Limits of Disturbance in the PVSD. Its placement will be overseen by a biological monitor and all preliminary vegetation removal and initial grading will be monitored by a biologist to ensure no encroachment beyond the Limits of Disturbance in the PVSD will occur.

5.11.9 Post-Construction Grading

Once construction activities in the PVSD have ceased, the area of temporary disturbance will be returned to natural elevation contours.

5.11.10 Post-Construction Seeding

To prevent non-native recruitment, the disturbance area within the PVSD will be seeded using a native seed mix appropriate to the PVSD hydric conditions. The seed mix will be applied within one month of completion of construction activities.

5.12 Cumulative Impacts to Biological Resources

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project.

Anticipated cumulative impacts are addressed by the MSHCP, which, as currently adopted, addresses 146 "Covered Species" that represent a broad range of habitats and geographical areas within western Riverside County, including threatened and endangered species and regionally- or locally-sensitive species that have specific habitat requirements and conservation and management needs. The MSHCP addresses biological impacts for take of Covered Species within the MSHCP area. Impacts to Covered Species and establishment and implementation of a regional conservation strategy and other measures included in the MSHCP are intended to

address the federal, state, and local mitigation requirements for these species and their habitats. Specifically, Section 4.4 of the MSHCP states that:

The MSHCP was specifically designed to cover a large geographical area so that it would protect numerous endangered species and habitats throughout the region. It is the projected cumulative effect of future development that has required the preparation and implementation of the MSHCP to protect multiple habitats and multiple endangered species.

SKR is listed as Endangered/Threatened and the Project would temporarily impact up to 15.80 acres and permanently impact 1 acre of potential habitat with the potential habitat (ruderal upland) being judged low in value. However, given the status of the species, the removal of this potential habitat could make a cumulatively considerable contribution to the regional decline of the species. The species is fully covered under the SKR HCP with both potential project-specific and cumulative effects mitigated to a level of less than significant under CEQA through fee payment to the RCHCA.

Impacts (21.38 acres temporary and 2.12 acres permanent) to potential foraging habitat for golden eagle, loggerhead shrike, northern harrier, and San Diego black-tailed jackrabbit could potentially be a cumulatively significant impact. However, each of these species is a fully covered species by the MSHCP and as such any potential cumulative impacts would be mitigated through coverage afforded by the MSHCP.

The Project has the potential to impact native bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting native birds are prohibited by the MBTA and California Fish and Game Code. Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code (FGC), impacts to native birds by the proposed Project would not make a cumulatively considerable contribution to the regional decline of native nesting birds. The native birds with potential to nest in the Project footprint would be those that are common to the region. The number of individuals potentially affected by the Project would not significantly affect regional populations of such species. A recommended measure is identified in Section 6.2 of this report to comply with MBTA and FGC.

The Project would result in temporary and permanent impacts to federal and state jurisdictional waters (refer to Section 5.9) and 0.20 acre of CDFW/MSHCP riparian resources would be temporarily disturbed (Section 5.10). These resources have declined appreciably over the past several decades and there is potential the Project could make a cumulatively considerable contribution to the regional decline of these resources. Refer to Section 6.0 for measures to address this impact.

There is no potential for cumulative impacts to occur to wildlife migration or wildlife nurseries, as the Project does not support these resources.

6.0 MITIGATION/AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts to special-status resources.

6.1 Burrowing Owl

The Project site contains suitable habitat for burrowing owls; however, burrowing owls were not detected within the Project Study Area during focused surveys. MSHCP Objective 6 for burrowing owls requires that pre-construction surveys prior to site grading. As such, the following mitigation measure is recommended to avoid direct impacts to burrowing owls and to ensure consistency with the MSHCP:

A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls within 30 days prior to site disturbance. If burrowing owls are detected onsite, the owls will be relocated/excluded from the site outside of the breeding season following accepted protocols, and subject to the approval of the City and/or the RCA and wildlife agencies.

Refer to MM Bio 2 from the Perris Valley Commerce Center Specific Plan Final EIR (PVCCSP EIR) [Appendix D] for a complete description of this measure.

6.2 Nesting Birds

The Project site contains vegetation with the potential to support native nesting birds. As discussed above, the California Fish and Game Code prohibits mortality of native birds, including eggs. The following measure is recommended to avoid mortality to nesting birds. Potential impacts to native birds was not considered a biologically significant impact under CEQA; however, to comply with state law, the following is recommended:

As feasible, vegetation clearing should be conducted outside of the nesting season, which is generally identified as February 1 through August 31. 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, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

Refer to MM Bio 1 from the PVCCSP EIR (Appendix D) for a complete description of this measure.

6.3 Jurisdictional Waters

The Project would temporarily impact 3.37 acres of non-wetland WoUS subject to the jurisdiction of the Corps and the Regional Board and 6.38 acres of streambed subject to the jurisdiction of CDFW (0.20 acre of which consist of riparian streambed). The Project would also permanently impact up to 0.98 acre of non-wetland WoUS subject to the jurisdiction of the

Corps and the Regional Board and up to 1.14 acres of streambed subject to the jurisdiction of CDFW (all non-riparian)[17].

Impacts to Corps/Regional Board jurisdiction will trigger the need for a CWA Section 404 permit and a Section 401 Water Quality Certification. Project impacts will result in the widening of the PVSD channel and would increase the amount of Corps/Regional Board jurisdiction onsite beyond pre-project conditions by up to 20 acres[18]; therefore, the Project is self-mitigating and impacts would be reduced to a less than significant level.

Impacts to CDFW jurisdiction will require a Streambed Alteration Agreement under Section 1602 of the Fish and Game Code. Project impacts will result in the widening of the PVSD channel and would increase the amount of CDFW jurisdiction onsite beyond pre-project conditions by up to 20 acres[19]; therefore, the Project is self-mitigating and impacts would be reduced to a less than significant level.

The proposed Project would temporarily impact 0.20 acre of MSHCP Riparian resources consisting of disturbed southern riparian scrub. The Project would also temporarily impact 6.18 acres of MSHCP Riverine resources and permanently impact up to 1.14 acres of MSHCP Riverine resources, consisting of ruderal channel, ruderal upland, and developed areas[20].

Temporary and permanent impacts to MSHCP Riparian/Riverine resources triggers the requirement under the MSHCP that a DBESP be drafted and approved by the Wildlife Agencies. The DBESP details the type of resource proposed for impact, why avoidance was not feasible, and the compensation provided to ensure biologically equivalent or superior preservation. Compensation that will be presented in the DBESP will be the same as what is proposed for CDFW riparian mitigation: Because the proposed Project consists of widening the existing onsite portion of the PVSD, the Project is self-mitigating as it will increase the amount of onsite jurisdictional waters beyond pre-Project conditions by up to 20 acres[21].

The Wildlife Agencies are provided the DBESP for review by the City and they have 60 days to review the DBESP and provide comments. If no comments are provided by the Wildlife Agencies within 60 days, the DBESP is considered approved. If comments are received, the comments will be addressed until the City and the Wildlife Agencies are in agreement.

Refer to MMs Bio 3-6 (Appendix D) for additional information pertaining to mitigation and avoidance for impacts to jurisdictional waters.

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[17]This report analyzes the maximum amount of potential permanent impact to the PVSD Channel associated with the Rider Street bridge span portion of the Project. It is expected that impacts to Corps, Regional Board, and CDFW jurisdiction will be decreased upon completion of the final bridge span design.

[18] This estimate is approximate and excludes proposed permanent structures.

[19] This estimate is approximate and excludes proposed permanent structures.

[20]This report analyzes the maximum amount of potential permanent impact to the PVSD Channel associated with the Rider Street bridge span portion of the Project. It is expected that impacts to Corps, Regional Board, and CDFW jurisdiction will be decreased upon completion of the final bridge span design.

[21] This estimate is approximate and excludes proposed permanent structures.

Additionally, as stated in Section 5.11.8 above, orange silt fencing will be placed to demarcate the Limits of Disturbance in the PVSD. Its placement will be overseen by a biological monitor and all preliminary vegetation removal and initial grading will be monitored by a biologist to ensure no encroachment beyond the Limits of Disturbance in the PVSD will occur.

6.4 Noise (Construction)

Since the noise threshold for special-status wildlife and nesting birds would be exceeded during construction, soil import and/or export, project construction adjacent to sensitive biological resources, and bridge construction work, should be conducted outside of the breeding season (February 1 to August 31 is recognized as the breeding season) to further reduce potential indirect noise effects on special-status wildlife. If this is not feasible, then sound walls, hay bales, or other measures designed to reduce effects from Project noise levels on special-status wildlife species would be installed/erected prior to the commencement of ground-disturbing activities. Sound monitoring would also occur as needed, within 300 feet of known burrowing owl and nesting bird territories to ensure that noise levels at these locations are below the 65 dBA Leq level and would not affect special-status wildlife species.

7.0 MSHCP CONSISTENCY ANALYSIS

The purpose of this section is to provide an analysis of the proposed Project with respect to compliance with biological aspects of the Western Riverside County 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).

7.1 Project Relationship to Reserve Assembly

The Project does not occur within the MSHCP Criteria Area and therefore the acquisition of lands for the MSHCP Conservation Area is not required. Furthermore, the Project is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or the Joint Project Review (JPR) process.

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

Volume I, Section 6.1.2 of the MSHCP establishes procedures through which the protection of Riparian/Riverine Areas and Vernal Pools would occur within the Plan Area. The purpose of the procedures is to ensure that the biological functions and values of these habitat areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained.

As discussed in Section 5.10 of this report, the proposed Project would temporarily impact 0.20 acre of MSHCP Riparian resources consisting of disturbed southern riparian scrub. The Project

would also temporarily impact 6.18 acres of MSHCP Riverine resources and permanently impact up to 1.14 acres of MSHCP Riverine resources, consisting of ruderal channel, ruderal upland, and developed areas[22]. As stated in Section 6.3, a DBESP will be required, after which, the proposed Project will be consistent with *Volume I, Section 6.1.2* of the MSHCP. Compensation that will be presented in the DBESP will be the Project itself. Because the proposed Project consists of widening the existing onsite portion of the PVSD, the Project is self-mitigating as it will increase the amount of onsite riverine areas beyond pre-Project conditions by up to 20 acres[23]. Following the completion of construction activities, the area of disturbance will be seeded with a native seed mix to prevent non-native habitat from re-establishing in the channel. No vernal pools are present within the Project site; therefore, no impact to vernal pools would occur.

7.3 Protection of Narrow Endemic Plants

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present. The Project is located in the NEPSSA but will not result in impacts to NEPSSA target species as the habitat evaluation for this plant species concluded that habitat for NEPSSA target species was absent from the site. As such, the Project will be consistent with Section 6.1.3 of the MSHCP.

7.4 Guidelines Pertaining to the Urban/Wildland Interface

The MSHCP Urban/Wildland Interface Guidelines 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;
- Invasive species,
- Barriers; and
- Grading/Land Development.

[22]This report analyzes the maximum amount of potential permanent impact to the PVSD Channel associated with the Rider Street bridge span portion of the Project. It is expected that impacts to Corps, Regional Board, and CDFW jurisdiction will be decreased upon completion of the final bridge span design.

[23] This estimate is approximate and excludes proposed permanent structures.

As discussed in Section 5.0 of this report, the Project site occurs within the PVSD which is classified as PQP conservation lands by the MSHCP such that the MSHCP Urban/Wildland Interface Guidelines (MSHCP *Volume I, Section 6.1.4*) apply to this Project (refer to Section 5.11). The Project shall comply with these guidelines and will be consistent with *Section 6.1.4* of the MSHCP.

7.5 Additional Survey Needs and Procedures

The Project site occurs within the CAPSSA will not impact CAPSSA target species as suitable habitat for CAPSSA target species is absent from the site [refer to Section 5.3 for additional information].

In addition, the Project site occurs within the burrowing owl survey area but will not result in impacts to burrowing owls based on the results of a focused burrowing owl burrow survey. As noted in Section 6.1 of this report, the Project will implement pre-construction surveys to ensure the Project will not result in the direct harm of burrowing owls that could occur onsite in the future. The Project will be consistent with *Section 6.3.2* of the MSHCP.

7.6 Conclusion of MSHCP Consistency

As outlined above, the proposed Project will be consistent with the biological requirements of the MSHCP; specifically pertaining to the Project's relationship to 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).

8.0 REFERENCES

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9.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signed:  for Martin Rasnick

Date: _ September 10, 2020

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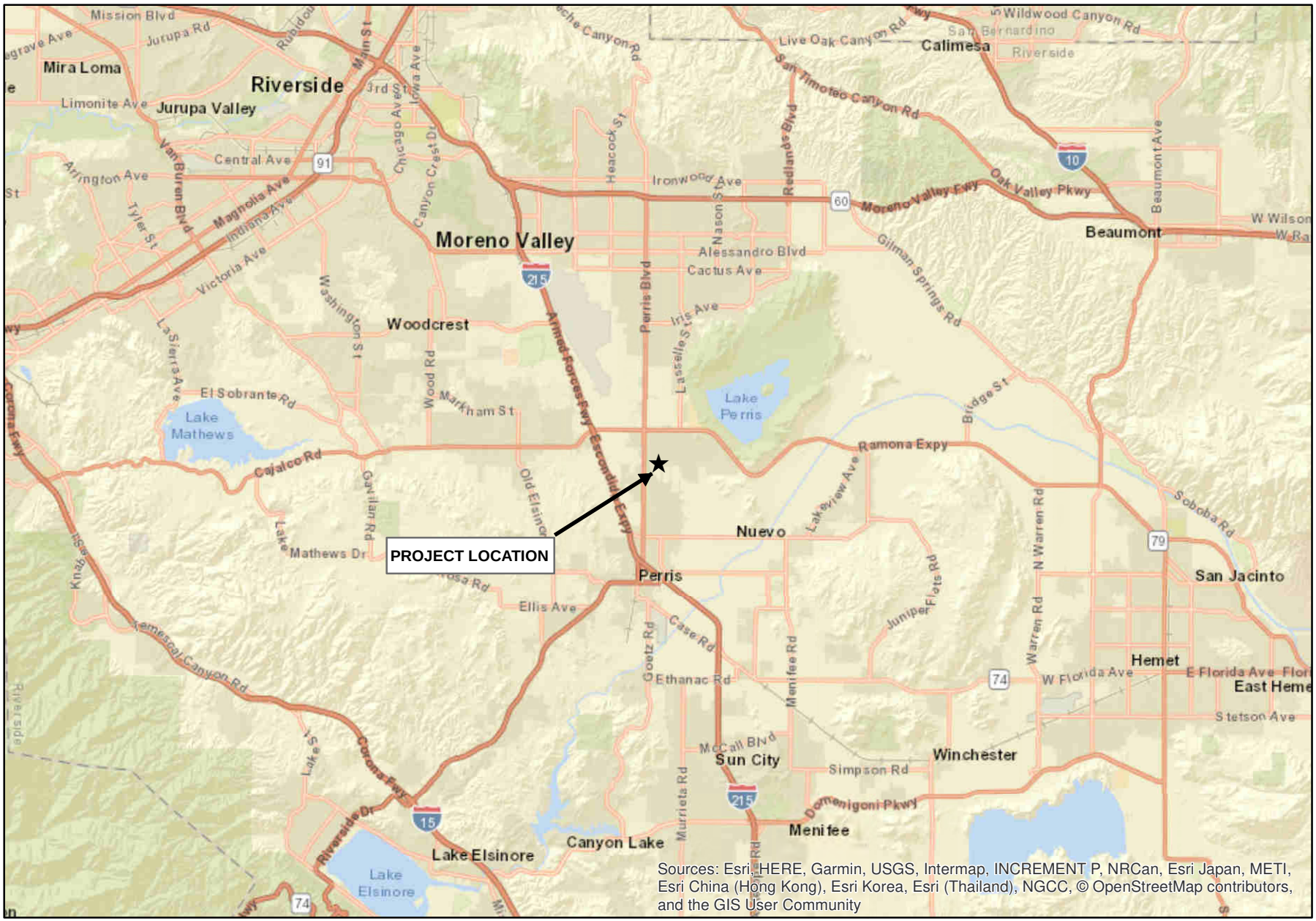


Source: ESRI World Street Map

N

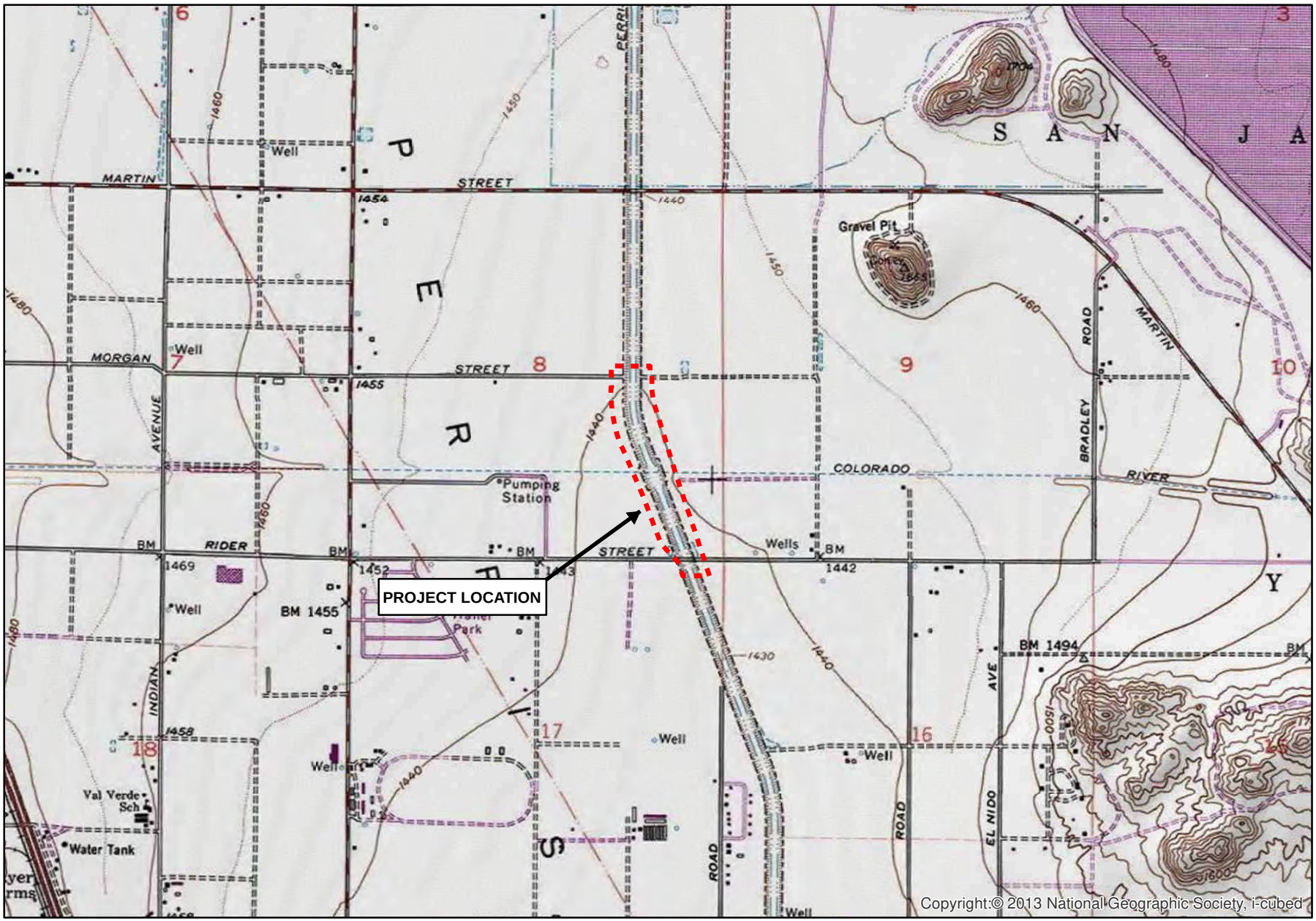
0 2 4 8 Miles

RIDER 2 AND 4 DEVELOPMENT PROJECT

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Perris, CA quadrangle

N

0 1,000 2,000 4,000 Feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2

Phase I PVSD Channel Improvement Study Area Boundary

Future Phases North & South Study Area Boundaries

Rider 2 & 4 Study Area Boundaries

Limits of Disturbance – Temporary

Limits of Disturbance – Permanent

N

0 175 350 700

Feet

1 inch = 350 feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Project Aerial Map

GLENN LUKOS ASSOCIATES

Exhibit 3

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Future
Phase North
(NAP)

East Morgan Street

Rider 2 & 4
(Addressed in a Seperate Biotech Report)

East Rider Street

Wilson Avenue

Future
Phase South
(NAP)

bing

- Phase I PVSD Channel Improvement Study Area Boundary
- Future Phases North & South Study Area Boundaries
- Rider 2 & 4 Study Area Boundaries
- Public Quasi - Public Conserved Lands
- Narrow Endemic Plants Survey Area
- Criteria Area Plant Species Survey Area
- Burrowing Owl Survey Area

N

0 175 350 700
Feet

1 inch = 350 feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

MSHCP Overlay Map

GLENN LUKOS ASSOCIATES

Exhibit 4

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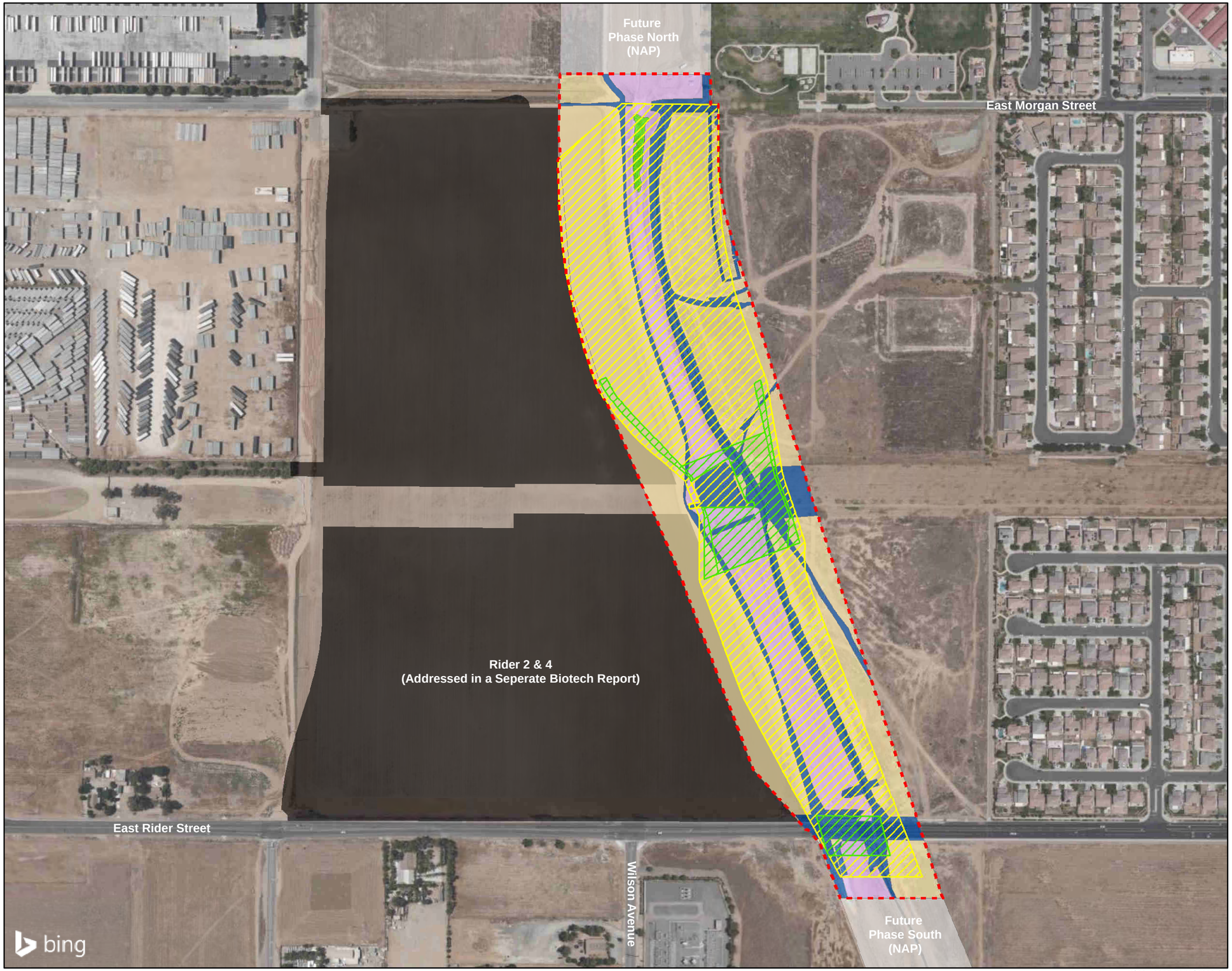

- Phase I PVSD Channel Improvement Study Area Boundary
- Future Phases North & South Study Area Boundaries
- Rider 2 & 4 Study Area Boundaries
- Developed
- Disturbed Southern Riparian Scrub
- Ruderal (Channel)
- Ruderal (Upland)
- Limits of Disturbance – Temporary
- Limits of Disturbance – Permanent

N

0 175 350 700

Feet

1 inch = 350 feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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Future
Phase North
(NAP)

East Morgan Street

Dv

W

Rider 2 & 4
(Addressed in a Seperate Biotech Report)

East Rider Street

Wilson Avenue

Future
Phase South
(NAP)

bing

Phase I PVSD Channel Improvement Study Area Boundary

Future Phases North & South Study Area Boundaries

Rider 2 & 4 Study Area Boundaries

Dv - Domino silt loam, saline-alkali

W - Water

N

0 175 350 700

Feet

1 inch = 350 feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 6

X:\00 - 0362 ONLY\0300-81RIDE\300-81_GIS\2019_GIS\SoilsGIS\300-81_PVSD_Soils.mxd

Future
Phase North
(NAP)

East Morgan Street

Rider 2 & 4
(Addressed in a Seperate Biotech Report)

East Rider Street

Wilson Avenue

Future
Phase South
(NAP)

bing

Phase I PVSD Channel Improvement Study Area Boundary

Future Phases North & South Study Area Boundaries

Rider 2 & 4 Study Area Boundaries

500' Buffer Area

Burrowing Owl Burrow

Burrow Locations

N

0 212.5 425 850

Feet

1 inch = 425 feet

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Burrowing Owl Survey Area Map

GLENN LUKOS ASSOCIATES

Exhibit 7

X:\00 - 0362 ONLY\0300-81RIDE\300-81_GIS\2019_GIS\BUOWGIS\300-81_PVSD_BUOW.mxd

- Phase I PVSD Channel Improvement Study Area Boundary
- Future Phases North & South Study Area Boundaries
- Rider 2 & 4 Study Area Boundaries
- Corps/RWQCB Non-Wetland Waters
- Limits of Disturbance – Temporary
- Limits of Disturbance – Permanent
- Width of OHWM (in feet)
- Data Pit
- Photo Location

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: December 16, 2019

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

Exhibit 8

X:\00 - 0362 ONLY\0300-81RIDE\300-81_GIS\2019_GIS\DelineationGIS\REV2\300-81_PVSD_JD_CorpsRWQCB_REV2.mxd

- Phase I PVSD Channel Improvement Study Area Boundary
- Future Phases North & South Study Area Boundaries
- Rider 2 & 4 Study Area Boundaries
- CDFW Riparian Streambed/MSHCP Riparian
- CDFW Non-Riparian Streambed/MSHCP Riverine
- Limits of Disturbance – Temporary
- Limits of Disturbance – Permanent
- Data Pit
- Photo Location

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: December 16, 2019

PHASE I
PERRIS VALLEY STORM DRAIN CHANNEL IMPROVEMENT PROJECT

CDFW Jurisdictional Delineation/MSHCP Riparian Riverine Map

GLENN LUKOS ASSOCIATES

Exhibit 9

X:\00 - 0362 ONLY\0300-81RIDE\300-81_GIS\2019_GIS\DelineationGIS\REV2\300-81_PVSD_JD_CDFW_REV2.mxd

Photograph 1: View facing approximately east depicting developed conditions on the Project site.

Photograph 2: View facing approximately west depicting developed conditions on the Project site.

GLENN LUKOS ASSOCIATES

Exhibit 10

PERRIS VALLEY STORM DRAIN CHANNEL WIDENING PROJECT

Site Photographs

Photograph 3: View facing approximately west depicting ruderal (upland) vegetation on the Project site.

Photograph 4: View facing approximately northwest depicting ruderal (upland) vegetation on the Project site.

GLENN LUKOS ASSOCIATES

Exhibit 10

PERRIS VALLEY STORM DRAIN CHANNEL WIDENING PROJECT

Site Photographs

Photograph 5: View facing approximately south depicting the disturbed PVSD with ruderal (channel) vegetation.

Photograph 6: View facing approximately south depicting the disturbed PVSD with ruderal (channel) vegetation.

GLENN LUKOS ASSOCIATES

Exhibit 10

PERRIS VALLEY STORM DRAIN CHANNEL WIDENING PROJECT

Site Photographs

Photograph 7: View facing approximately southeast depicting disturbed southern riparian scrub.

Photograph 8: View facing approximately east depicting disturbed southern riparian scrub.

GLENN LUKOS ASSOCIATES

Exhibit 10

PERRIS VALLEY STORM DRAIN CHANNEL WIDENING PROJECT

Site Photographs

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 Jepson Flora Project (2013)[1]. An asterisk (*) denotes a non-native species.

EUDICOTS

Amaranthaceae – Amaranth Family

* *Amaranthus albus*, Pigweed amaranth
Amaranthus blitoides, Prostrate Pigweed

Arecaceae – Palm Family

* *Washingtonia robusta*, Mexican Fan Palm

Asteraceae – Sunflower Family

Ambrosia psilostachya, Western Ragweed
Baccharis pilularis, Coyote Brush
Baccharis salicifolia, Mule Fat Baccharis
* *Centaurea melitensis*, Tocalote
Centromadia pungens ssp. *pungens*, Common Tarweed
Erigeron canadensis, Horseweed
Helianthus annuus, Common Sunflower
Heterotheca grandiflora, Telegraph Golden-aster
* *Oncosiphon piluliferum*, Stinknet
* *Pulicaria paludosa*, Spanish False Fleabane
Xanthium strumarium, Rough Cocklebur

Boraginaceae – Borage Family

Heliotropium curassavicum, Salt Heliotrope

Brassicaceae – Mustard Family

* *Hirschfeldia incana*, Short-pod Mustard

Convolvulaceae – Bindweed Family

Cuscuta sp., Dodder sp.

Chenopodiaceae – Goosefoot Family

* *Salsola tragus*, Prickly Russian-thistle

---

[1] Jepson Flora Project (B. D. Baldwin, D. J. Keil, S. Markos, B. D. Mishler, R. Patterson, T. J. Rosatti, and D. H. Wilken, eds.) [JFP]. 2013. *Jepson Flora Project*. Accessed through 31 Oct 2014. Facets of this extensive online resource include the Jepson eFlora, available at http://ucjeps.berkeley.edu//IJM.html and Jepson Online Interchange (JOI), available at http://ucjeps.berkeley.edu/interchange.html. The latter enables searches of the Index to California Plant Names (ICPN) for nomenclature, status, and relationships, often with links to helpful details and discussion. All information incorporated here was accessed after, or confirmed accurate through, inclusion of the "Errata and Small Changes" at http://ucjeps.berkeley.edu/JM12_errata.html (dated 01 Jul 2013) and "Supplement 1 to" TJM2 at http://ucjeps.berkeley.edu/IJM_suppl_summary.html, (dated Jul 2013).

Cyperaceae – Sedge Family
* *Cyperus difformis*, Flatsedge
Cyperus eragrostis, Tall Flatsedge
Isolepis cernua, Low Bulrush

Euphorbiaceae – Spurge Family
* *Euphorbia maculata*, Spotted Spurge
* *Ricinus communis*, Castor-bean

Fabaceae – Pea Family
Acmispon glaber, Deerweed Trefoil
* *Caesalpinia gilliesii*, Bird of Paradise
* *Melilotus albus*, White Sweetclover
* *Parkinsonia aculeata*, Mexican Palo Verde

Lythraceae – Loosestrife Family
Ammannia coccinea, Scarlet Toothcup

Malvaceae – Mallow Family
* *Malva parviflora*, Cheeseweed

Onagraceae – Evening-primrose Family
* *Oenothera xenogaura*, Drummond's gaura

Plantaginaceae – Plantain Family
* *Plantago aristata*, Bristly Plantain
* *Plantago lanceolata*, English Plantain

Polygonaceae – Buckwheat Family
* *Rumex crispus*, Curly Dock

Salicaceae – Willow Family
Salix gooddingii, Goodding's Black Willow

Solanaceae – Nightshade Family
Datura wrightii, Jimsonweed
* *Nicotiana glauca*, Tree Tobacco
Physalis crassifolia, Thick Leaved Ground Cherry

Tamaricaceae – Tamarisk Family
* *Tamarix ramosissima*, Salt Cedar

Typhaceae – Bulrush Family
Typha latifolia, Broadleaf Cattail

MONOCOTS

Poaceae – Grass Family

* *Bromus madritensis* ssp. *rubens*, Foxtail Brome
* *Cynodon dactylon*, Bermuda Grass
* *Echinochloa crus-galli*, Barnyard Grass
Leptochloa fusca ssp. *uninervia*, Mexican Sprangletop

APPENDIX B: FAUNAL COMPENDIUM

The faunal compendium lists species that were either observed within or adjacent to the Project site. Taxonomy and common names are taken from Pelham (2008)[2] for butterflies, AOU (1998 et seq.)[3] for birds, Crother (2012)[4] for amphibian, turtle, and reptile taxonomy, and Wilson and Reeder (2005)[5] for mammals.

BIRDS

Accipitridae – Hawk Family
Buteo jamaicensis, Red-tailed Hawk

Columbidae – Pigeon and Dove Family
Zenaida macroura, Mourning Dove

Trochilidae – Hummingbird Family
Calypte anna, Anna's Hummingbird

Tyrannidae – Tyrant Flycatcher Family
Sayornis nigricans, Black Phoebe
Sayornis saya, Say's Phoebe
Tyrannus verticalis, Western Kingbird

Corvidae – Jay and Crow Family
Corvus brachyrhynchos, American Crow

Hirundinidae – Swallow Family
Hirundo rustica, Barn Swallow
Stelgidopteryx serripennis, Northern Rough-winged Swallow

Emberizidae – Sparrow Family
Passerculus sandwichensis, Savannah Sparrow
Melospiza melodia, Song Sparrow

Icteridae –Blackbird Family
Sturnella neglecta, Western Meadowlark
Agelaius phoeniceus, Red-winged Blackbird

Fringillidae – Finch Family
Haemorhous mexicanus, House Finch

MAMMALS

[2] Jonathan Pelham. 2008. Catalogue of the Butterflies of the United States and Canada. Journal of Research on the Lepidoptera 40: xiv + 658 pp.
[3] American Ornithologists' Union 1998. The A.O.U. Checklist of North American Birds, seventh edition. American Ornithologists' Union, Washington D.C.; and 2000, 2002, 2003, and 2004 supplements.
[4] Crother, B. I., ed. 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, 7th Edition*. SSAR Herpetological Circular 39:1-92. Shoreview, MN: Society for the Study of Amphibians and Reptiles, Committee On Standard English And Scientific Names.
[5] Wilson, D. E., and D. M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference, 3rd Edition*. Baltimore, MD: Johns Hopkins University Press. Available online at http://www.bucknell.edu/msw3/browse.asp. No separate corrigenda or updates since initial publication.

Leporidae – Hare and Rabbit Family

Sylvilagus audubonii, Desert Cottontail

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 1

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, , Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): concave Slope (%): 0-1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Xanthium strumarium	5	yes	FAC
2. Ambrosia psilostachya	5	yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 5	x 4 = 20
UPL species 0	x 5 = 0
Column Totals: 10 (A)	35 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/3	50					sandy	
	2.5Y 7/3	50					sandy	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ✔ **No** _____

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

Remarks:

Surface soil cracks and sediment deposits within channel indicate hydrology

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 2

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, , Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Ludwigia peploides	15	yes	OBL
2. Leptochloa fusca	15	yes	FACW
3. Echinochloa crus-galli	5	no	FACW
4. Tamarix ramosissima	1	no	UPL
5. Ammannia coccinea	1	no	OBL
6. Bolboschoenus maritimus	1	no	OBL
7.			
8.			
	38 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 17	x 1 = 17
FACW species 20	x 2 = 40
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 1	x 5 = 5
Column Totals: 38 (A)	62 (B)

Prevalence Index = B/A = 1.6

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 5/3	100					sandy clay	
10								restrictive layer

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: restrictive layer

Depth (inches): 10 inches

Hydric Soil Present? Yes ____ No ✔

Remarks:

Soil forms ribbon ~1 inch long before crumbling. Note that while soils are alkaline, the problematic soil type has not prevented the formation of hydric features as seen in Pits 3 and 4. Therefore, alkalinity in those areas does not necessarily preclude the formation of hydric features and, therefore, soils that do not exhibit hydric features may be reasonably deemed non-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ____ No ✔ Depth (inches): ____

Water Table Present? Yes ✔ No ____ Depth (inches): 8 inches

Saturation Present? (includes capillary fringe) Yes ✔ No ____ Depth (inches): 0 inches

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 3

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, , Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

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

Are Vegetation _____, Soil ✔, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Leptochloa fusca	35	yes	FACW
2. Echinochloa crus-galli	25	yes	FACW
3. Ammannia coccinea	15	no	OBL
4. Ludwigia peploides	10	no	OBL
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 25	x 1 =	25
FACW species 60	x 2 =	120
FAC species 0	x 3 =	0
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 85 (A)		145 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

25% cover of open water

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	GLEY1 2.5/10Y	60					sandy clay	
	2.5Y 4/3	40					sandy clay	
3-12	2.5Y 4/3	100					sandy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

soil forms ribbon ~1 inch long before crumbling

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✔ No ___ Depth (inches): 1.5 inches

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

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

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 4

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, , Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Cyperus difformis	20	yes	OBL
2. Echinochloa crus-galli	20	yes	FACW
3. Ammannia coccinea	15	yes	OBL
4. Tamarix ramosissima	15	yes	UPL
5. Pulicaria paludosa	10	no	FAC
6. Cynodon dactylon	8	no	FACU
7. Ludwigia peploides	5	no	OBL
8. Medicago polymorpha	1	no	FACU
	99 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	9	x 4 =	36
UPL species	15	x 5 =	75
Column Totals:	99 (A)		226 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

Herb stratum continued:
Isolepis cernua, 5% absolute cover, not a dominate species, OBL

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	2.5Y 3/3	100					clay loam	
1-7	GLEY1 2.5/N	65					sandy	
	2.5Y 5/3	35					sandy loar	
7-12	2.5Y 5/3	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ✔ **No** _____

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

Remarks:

Wetland hydrology present due to sediment deposits within plot radius from storm drain effluent

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 5

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Ludwigia peploides	30	yes	OBL
2. Pulicaria paludosa	25	yes	FAC
3. Amaranthus blitoides	15	no	FACU
4. Cyperus eragrostis	10	no	FACW
5. Echinochloa crus-galli	5	no	FACW
6. Melilotus alba	2	no	UPL
7. Ammannia coccinea	2	no	OBL
8. Ambrosia psilostachya	1	no	FACU
	90 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	32	x 1 =	32
FACW species	15	x 2 =	30
FAC species	25	x 3 =	75
FACU species	16	x 4 =	64
UPL species	2	x 5 =	10
Column Totals:	90 (A)		211 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					loam	
2-10	10YR 4/3	100					sandy	
10-12	10YR 5/4	100					clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

Note that while soils are alkaline, the problematic soil type has not prevented the formation of hydric features as seen in Pits 3 and 4. Therefore, alkalinity in those areas does not necessarily preclude the formation of hydric features and, therefore, soils that do not exhibit hydric features may be reasonably deemed non-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ✔ **No** _____

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

Remarks:

Wetland hydrology present due to cracks in soil surface

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 6

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Cynodon dactylon	20	yes	FACU
2. Plantago aristata	15	yes	UPL
3. Grass sp.	15	yes	OBL
4. Cyperus eragrostis	5	no	FACW
5.			
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 15	x 1 =	15
FACW species 0	x 2 =	0
FAC species 0	x 3 =	0
FACU species 20	x 4 =	80
UPL species 15	x 5 =	75
Column Totals: 50 (A)		170 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

Unknown grass species in plot, assumed OBL.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 4/4	100					loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 7

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Typha sp.	40	yes	OBL
2. Bolboschoenus maritimus	20	yes	OBL
3. Xanthium strumarium	15	no	FAC
4. Pulicaria paludosa	5	no	FAC
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 60	x 1 = 60
FACW species 0	x 2 = 0
FAC species 20	x 3 = 60
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 80 (A)	120 (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	100					silty clay	
7-12	2.5Y 4/3	100					sandy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: concrete

Depth (inches): 12 inches

Hydric Soil Present? Yes ____ No ✔

Remarks:

Concrete layer 12 inches beneath the surface. Soils and vegetation above. Concrete slab is part of drainage outlet. Note that while soils are alkaline, the problematic soil type has not prevented the formation of hydric features as seen in Pits 3 and 4. Therefore, alkalinity in those areas does not necessarily preclude the formation of hydric features and, therefore, soils that do not exhibit hydric features may be reasonably deemed non-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ____ No ✔ Depth (inches): ____

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

Saturation Present? (includes capillary fringe) Yes ✔ No ____ Depth (inches): 7 inches

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

surface water present in some areas (but not within plot radius)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 8

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ✔, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Cyperus eragrostis	10	yes	FACW
2. Amaranthus blitoides	8	yes	FACU
3. Persicaria lapathifolia	5	no	FACW
4. Tamarix ramosissima	5	no	UPL
5. Euphorbia maculata	3	no	UPL
6. Ammannia coccinea	1	no	OBL
7.			
8.			
	32 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	8	x 4 =	32
UPL species	8	x 5 =	40
Column Totals:	32 (A)		103 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/3	50					sandy	
	2.5Y 7/3	50					sandy	
4-12	10YR 4/4	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rider 2 and 4 Development, PVSC City/County: Perris / Riverside Sampling Date: 9/6/18

Applicant/Owner: State: CA Sampling Point: 9

Investigator(s): David Smith and Jillian Stephens Section, Township, Range: Section 8, Township 4 South, Range 3 West

Landform (hillslope, terrace, etc.): storm channel outlet Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 33.833871 Long: -117.214072 Datum:

Soil Map Unit Name: Dv - Domino silt loam, saline-alkali, W - Water NWI classification:

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

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

Are Vegetation _____, Soil ✔, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Xanthium strumarium	60	yes	FAC
2. Bolboschoenus maritimus	10	no	OBL
3. Pulicaria paludosa	5	no	FAC
4.			
5.			
6.			
7.			
8.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species 10	x 1 =	10
FACW species 0	x 2 =	0
FAC species 65	x 3 =	195
FACU species 0	x 4 =	0
UPL species 0	x 5 =	0
Column Totals: 75 (A)		205 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4							sandy	cobble/fill material
4-12	2.5Y 5/3	100					sandy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

Note that while soils are alkaline, the problematic soil type has not prevented the formation of hydric features as seen in Pits 3 and 4. Therefore, alkalinity in those areas does not necessarily preclude the formation of hydric features and, therefore, soils that do not exhibit hydric features may be reasonably deemed non-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

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

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

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

Air Quality							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	MM Air 20: Each implementing development project shall be encouraged to implement, at a minimum, an increase in each building's energy efficiency 15 percent beyond Title 24, and reduce indoor water use by 25 percent. All requirements will be documented through a checklist to be submitted prior to issuance of building permits for the implementing development project with building plans and calculations.	Prior to issuance of building permits	Submission of a Title 24 worksheet with building plans	City of Perris Development Services Department			
	MM Air 21: Each implementing development project shall implement, at a minimum, use of water conserving appliances and fixtures (low-flush toilets, and low-flow shower heads and faucets) within all new residential developments.	In conjunction with development applications and prior to issuance of building permits	Verification by City of incorporation of project design features and issuance of building permits	City of Perris Development Services Department			

Biological Resources							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Have a substantial adverse effect, either directly or through habitat modifications, on any species	**MM Bio 1:** In order to avoid violation of the MBTA and the California Fish and Game Code, site-preparation activities (removal of trees and vegetation) for all PVCC	Mitigation measure required only between February 1 and August 31	Pre-activity field survey report provided to City of Perris	Developer Qualified biologist City of Perris			

Biological Resources							
					Verification of Compliance		
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Initials**	**Date**	**Remarks**
identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.	implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species. If site-preparation activities for an implementing project are proposed during the nesting/breeding season (February 1 to August 31), a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone. If active nests are not located within the implementing project site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (non-listed), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (non-listed), or within 100 feet of sensitive or	No more than 30 days prior to issuance of grading permit for each implementing development project		Planning Division			

Biological Resources							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	protected songbird nests until the nest is no longer active.						
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan.	**MM Bio 2:** Project-specific habitat assessments and focused surveys for burrowing owls will be conducted for implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity will be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP. If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided or the owls actively or passively relocated. To	Project-specific habitat assessments and focused surveys, if required, will be prepared in conjunction with development applications as part of the CEQA process Pre-construction surveys to be conducted no more than 30 days prior to grading or construction activities	Habitat assessments, focused surveys, pre-construction surveys to be provided to City of Perris Planning Division	Developer Qualified biologist City of Perris Planning Division			

Biological Resources							
					Verification of Compliance		
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Initials**	**Date**	**Remarks**
	adequately avoid active nests, no grading or heavy equipment activity shall take place within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season. If burrowing owls occupy any implementing project site and cannot be avoided, active or passive relocation shall be used to exclude owls from their burrows, as agreed to by the City of Perris Planning Department and the CDFG. Relocation shall be conducted outside the breeding season or once the young are able to leave the nest and fly. Passive relocation is the exclusion of owls from their burrows (outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors shall be left in place 48 hours to ensure owls have left the burrow. Artificial burrows shall be provided nearby. The implementing project area shall be monitored daily for one week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during						

Biological Resources							
					Verification of Compliance		
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Initials**	**Date**	**Remarks**
	excavation to maintain an escape route for any animals inside the burrow. The CDFG shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If avoidance is infeasible, then a DBESP will be required, including associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occur outside of the nesting season.						

Biological Resources							
					Verification of Compliance		
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Initials**	**Date**	**Remarks**
Have a substantial adverse effect onfederally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	**MM Bio 3:** Project-specific delineations will be required to determine the limits of ACOE, RWQCB, and CDFG jurisdiction for implementing projects that may contain jurisdictional features. Impacts to jurisdictional waters will require authorization by the corresponding regulatory agency. If impacts are indicated in an implementing project-specific delineation, prior to the issuance of a grading permit, such implementing projects will obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters. Authorizations may include, but are not limited to, a Section 404 permit from the ACOE, a Section 401 Water Quality Certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement from CDFG.	Project-specific habitat assessments and focused surveys, if required, will be prepared in conjunction with development applications as part of the CEQA process Authorizations from regulatory agencies will be obtained prior to issuance of a grading permit	Delineations to be provided to City of Perris Planning Division Copies of authorizations from regulatory agencies to be provided to City of Perris Planning Division	Developer City of Perris Planning Division			
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.	**MM Bio 4:** Project-specific mapping of riparian and unvegetated riverine features will be required for implementing projects pursuant to Section 6.1.2 of the MSHCP. For areas not excluded as artificially created, the MSHCP requires 100 percent avoidance of riparian/riverine areas. If for any implementing project avoidance is not feasible, then such implementing projects will require the approval of a DBESP including	Project-specific habitat riparian and unvegetated riverine features, if required, will be prepared in conjunction with development applications as part of the CEQA process	Results of the riparian and unvegetated features mapping and the DEPSP report, if required, to be provided to the City of Perris Planning Division	Developer City of Perris Planning Division			

Biological Resources							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan.	appropriate mitigation to offset the loss of functions and values as they pertain to the MSHCP covered species. Riparian vegetation will also need to be evaluated for the least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo.	Approval of a DBESP will be required as part of the CEQA process					
	MM Bio 5: Project-specific mapping of vernal pools for implementing projects will be required pursuant to Section 6.1.2 of the MSHCP. For areas not excluded as artificially created, the MSHCP requires 100 percent avoidance of vernal pools. If for any implementing project avoidance is not feasible, then such implementing projects will require the approval of a DBESP including appropriate mitigation to offset the loss of functions and values as they pertain to the MSHCP and covered species. Vernal pools and other seasonal ponding depressions will also need to be evaluated for listed fairy shrimp.	Project-specific mapping of vernal pools, if required, will be prepared in conjunction with development applications as part of the CEQA process Approval of a DBESP will be required as part of the CEQA process	Results of the vernal pool mapping and the DEPSP report, if required, to be provided to the City of Perris Planning Division	Developer City of Perris Planning Division			
	MM Bio 6: Within areas of suitable habitat associated with the Narrow Endemic Plant Species Survey Area (NEPSSA) and Criteria Area Plant Species Survey Area (CAPSSA), focused plants surveys will be required for implementing projects. The MSHCP requires	Project-specific NEPSSA and CAPSSA focused plant surveys focused surveys, if required, will be prepared in	NEPSSA and CAPSSA focused plant surveys and, if required, the DBESP report to be provided to City of Perris	Developer City of Perris Planning Division			

Biological Resources							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
	at least 90 percent avoidance of areas providing long-term conservation value for the NEPSSA and CAPSSA target species. If avoidance is not feasible, then such implementing projects will require the approval of a DBESP including appropriate mitigation.	conjunction with development applications as part of the CEQA process Approval of a DBESP will be required as part of the CEQA process	Planning Division				

Cultural Resources							
Impact/Threshold	**Mitigation Measure**	**Monitoring Timing/ Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
The project would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the *CEQA Guidelines*.	**MM Cultural 1:** Prior to the consideration by the City of Perris of implementing development or infrastructure projects for properties that are vacant, undeveloped, or considered to be sensitive for cultural resources by the City of Perris Planning Division, a Phase I Cultural Resources Study of the subject property prepared in accordance	In conjunction with development applications, and prior to issuance of grading permits	Submittal of a Phase I Cultural Resources Study and issuance of grading permits	City of Perris Planning Division			