Biological Technical Report and MSHCP Consistency Analysis - Revised

Latitude Business Park Development (75 acres)

Riverside County, California
APNs 279-121-004, -005, -006;
279-122-001, -002, -003, -004;
279-123-001, -002, -003;
279-125-003, -004;
279-134-001, -002, -003, -004;
279-140-001, -007; and
279-231-044

Prepared for:

Latitude Business Park, LLC
1285 Corona Pointe Court
Corona, California 92879

Prepared By:

ECORP Consulting, Inc.
215 North 5th Street
Redlands, California 92374

March 3, 2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

ECORP Consulting, Inc. was retained by Latitude Business Park, LLC., to provide a biological report in support of the California Environmental Quality Act (CEQA) document for the proposed Latitude Business Park (Project) north of Tom Barnes Street and west of Temescal Canyon Road and east of Interstate 15 (I-15) located in the City of Corona, Riverside County. The site is approximately 75 acres in size.

Historically the Project site was a subset of a 191.6-acre aggregate mining facility (Surface Mining Permit #109) that underwent mine reclamation activities during the late 1990s. In 2000, the portion of this former mine site to the south of Tom Barnes Street was rezoned to a commercial and industrial designation and approved for development into what is now the Crossings at Corona retail center (Tentative Parcel Map No. 29503). This resulted in subdivision of the Project site from the larger property. As a part of that previous entitlement for the Crossings Project, a portion of land within the Latitude Business Park property along Joseph Canyon Wash was set aside in a Conservation Easement, located adjacent to Tom Barnes Street. This area is maintained for conservation purposes and is not a part of the planned development. As a part of the environmental commitments for the Crossings Project, surveys have been conducted on the Project site. These have included annual monitoring reports for the restoration effort within Joseph Canyon Wash (TPA 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; and 2018) as well as a Phase I Biological and Burrowing Owl Assessment for the site (TPA 2018). These reports were reviewed and incorporated into this study.

A conservation easement totaling 1.7 acres is in place along the southern boundary, along Joseph Canyon Wash, and was created as part of the entitlement process for the adjacent Crossings Project. Per discussions with Jeff Brandt of the CDFW, during a field meeting on May 9, 2019, a native plant setback was also added to this conservation easement to create a buffer zone between Joseph Canyon Wash and the proposed development. This area is one acre in size and its planting plan has not yet been finalized.

A reconnaissance-level biological survey of the Project site was conducted to document the existing biological resources, to assess the habitat for its potential to support sensitive plant and wildlife species, and to determine whether Project-related impacts would occur to sensitive biological resources, as required under CEQA. Subsequent to this survey, a field meeting with the CDFW and U.S. Fish and Wildlife Service (USFWS) was held on January 30, 2020 to examine the site and determine if aquatic resources are present. During this meeting, aquatic resources were identified on the project area. The results of this field meeting are incorporated into this report. The CDFW also provided comments on the previous draft of this report, and these comments have been incorporated into this revised version.

This report also reports consistency of the Project with Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a regional plan that provides coverage for "take" of 146 different plant and animal species, while also establishing a planning network of open space and connecting corridors for biological resource conservation. Information on the MSHCP can be found at www.rctlma.org (Riverside County Transportation and Land Management Agency [RCTLMA] 2019).

Under separate cover, the project applicant has also prepared a Determination of Biologically Equivalent or Superior Preservation (DBESP) report.

1.1 Project Location

The Project site is located within the City of Corona north of Tom Barnes Street and west of Temescal Canyon Road in northwest Riverside County (Figures 1 and 2) on 21 separate Assessor Parcel Numbers (APNs)(Table 1). The Project site is depicted on the U.S. Geological Survey (USGS) Corona South 7.5-minute topographic quadrangle within the northwest ¼ of Section 16, Range 6 West Township 4 South and the approximate center of the site is located at 33.827809° latitude and -117.522073° longitude within the San Jacinto Watershed (Hydrologic Unit Code #18070202). Elevations at the Project site range from approximately 836 to 948 feet above mean sea level. The Project is connected with the Crossings at Corona, a retail shopping center.

Table 1 Assessor Parcel Numbers

APN	Acreage
279140001	34.54
279140007	8.58
279122003	2.28
279125001	0.22
279125002	0.18
279123001	0.91
279231044	19.75
279134003	0.17
279125004	0.02
279121004	1.92
279125003	0.02
279134004	0.24
279123002	0.81
279122004	0.79
279134001	0.06
279134002	0.17
279122001	0.75
279122002	0.80
279123003	0.83
279121006	0.08
279121005	0.76

1.2 Project Description

The Proposed Project would construct industrial facilities and an associated parking lot within the entire 75 acres of the property, except for the proposed conservation easement and native plant setback (Figure 3). The Project entails the construction of 15 industrial buildings ranging in size from approximately 18,262 square feet (sq. ft.) to approximately 253,798 sq. ft. There are also parking lots to be constructed adjacent to the buildings. No offsite improvements are planned for the Project.

The planned native plant setback is of varying widths, according to the dripline of the trees planted within the conservation easement. Originally, in addition to the conservation easement that was proposed, there was to be an additional conservation element within this property directly adjacent to Joseph Canyon Wash. The setback has been proposed as that conservation element.

Location: N:\2019\2019-124 Latitude Business Park\MAPS\Location_Vicinity\Lat_Vicinity_V1.mxd (MAG)-mguidry 9/25/2019

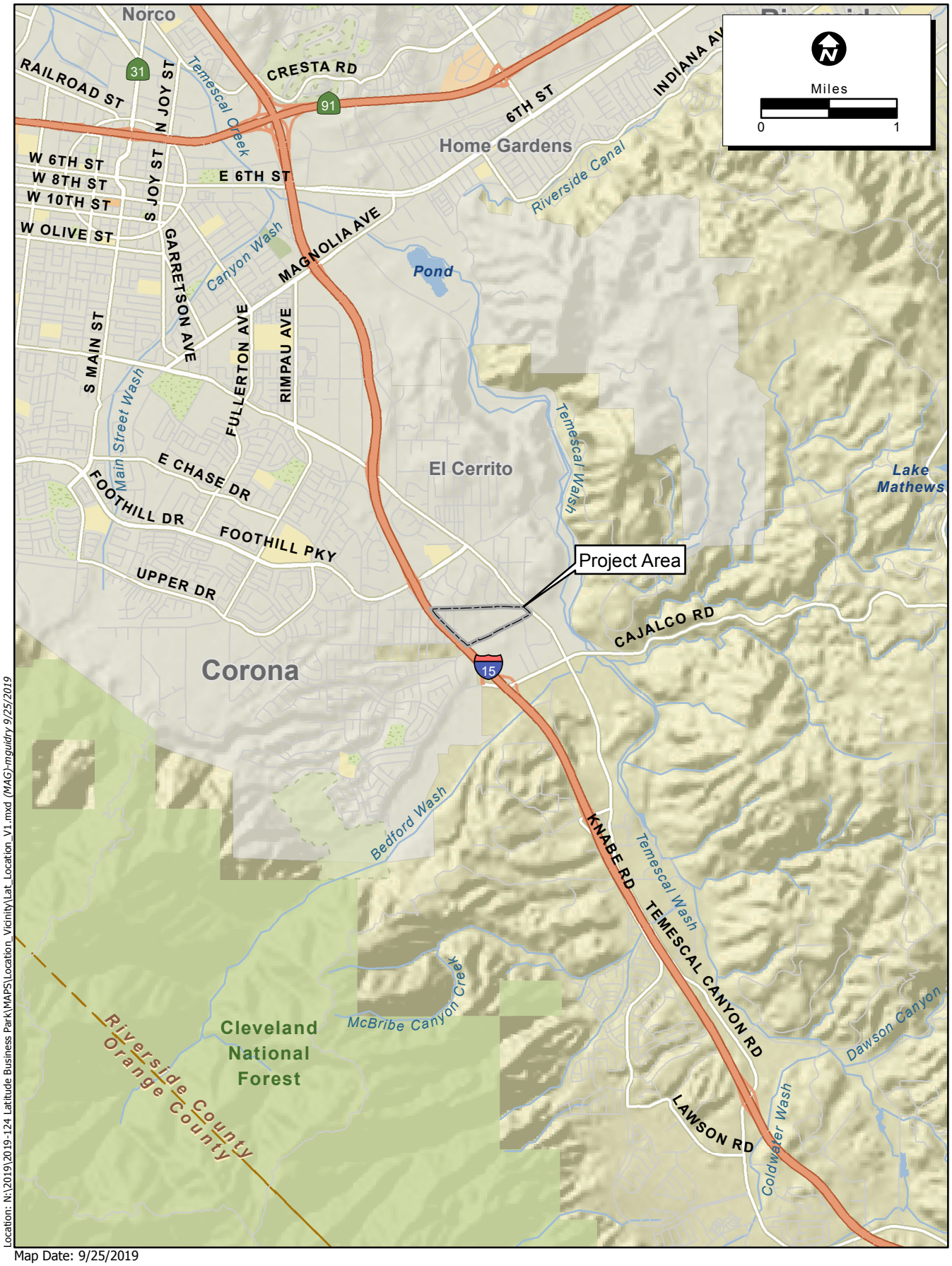
Map Date: 9/25/2019

Service Layer Credits: Sources: Esri, USGS, NOAA

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2019-124 Latitude Business Park



Location: N:\2019\2019-124 Latitude Business Park\MAPS\Location_Vicinity\Lat_Location_V1.mxd (MAG)-mguidry 9/25/2019

Map Date: 9/25/2019
Source: ESRI

Figure 2. Project Location

2019-124 Latitude Business Park

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2019\2019-124 Latitude Business Park\MAPS\Restoration\Lat_Cons_Project_Components_V1.mxd (MAG, 10/17/2019) - mguidry

Map Date: 10/17/2019
Photo Source: NAIP (2018)

Note: Project Plan matched to Riverside County GIS parcel boundaries

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3. Project Components

2019-124 Latitude Business Park

A portion of the property, approximately 18.5 acres, falls within MSHCP Criteria Cell 2400. Although this area is within the cell, the portion designated for conservation within the cell is located within the eastern part of the cell, across Temescal Canyon Road and fully within Temescal Wash. Project consistency with the MSHCP is discussed later within this report (Section 3.2).

1.3 Previous Agency Coordination

On May 9, 2019, a meeting was held at the site of the Joseph Canyon Wash mitigation site located between the Latitude Business Park and Corona Crossings projects in the City of Corona, Riverside County, California. The attendees at the meeting from the various resource agencies included Ms. Peggy Bartels from the U.S. Army Corps of Engineers (USACE), Mr. Jeff Brandt from the California Department of Fish and Wildlife (CDFW), and Mr. David Woelfel from the Regional Water Quality Control Board (RWQCB). The purpose of the meeting was to review the status of the habitat at the mitigation site, to review the outstanding conditions in the various permits (404, 401, and Lake and Streambed Alteration Agreement [LSA]), and to develop a course of action to complete the mitigation requirements for the purpose of closing out the permits and release the existing performance bond posted by Castle and Cook (Bond #28-87-96 in the amount of $ 1,038,948.00).

The LSA permit requires that a Conservation Easement be placed over the mitigation site and that the site is protected and managed in perpetuity. Mr. Brandt mentioned CDFW had a preference for a robust Conservation Easement, but he also stated that a robust Open Space Mitigation Easement might also work. He committed to working with Castle & Cooke to get a Conservation Easement completed and he stated he could get it completed relatively quickly if it included a robust plan to maintain and monitor the mitigation site. As part of the plan, Mr. Brandt stated he would like to see a vegetative "buffer" on the Latitude Business Park side of the mitigation site, which would be comprised of native plantings. He stated the "buffer" should extend out to at least the dripline of the existing trees. REXCO determined they would include such a vegetative "buffer" into an offset area between their industrial development and the northern edge of the CE boundary.

Mr. Woelfel (RWQCB) stated he would like to see the mitigation site conserved with a Conservation Easement and managed for the long-term because the habitat is a valuable resource for wildlife. He also stated the RWQCB would no longer require the Low Flow Channel Seasonal Monitoring Reports, which were required as a condition in the 401 Permit. Mr. Woelfel stated he agreed with the USACE decision to pursue the completion of the Conservation Easement through the CDFW and to require offsite mitigation in lieu of the USACE condition requiring the Conservation Easement.

The USACE is now requiring offsite mitigation as a condition to replace the requirement in the original Individual Permit for a Conservation Easement through the USACE. The requirement for offsite mitigation can be accomplished by paying an in-lieu fee to a conservancy that has an in-lieu fee agreement with the USACE, such as the Riverside-Corona Resource Conservation District. The amount of the in-lieu fee would be equivalent to the acreage of offsite enhancement required by the USACE and the monies are typically used to implement restoration or enhancement programs on lands owned by the conservancy.

Other alternatives exist, which could include purchasing mitigation credits in an established mitigation bank, such as the Cajon Creek Conservation Management Area, Soquel Canyon Mitigation Bank, or Barry Jones (aka Skunk Hollow) Wetland Mitigation Bank. The mitigation banks have an established fee

per credit/acre and the offsite mitigation can be accomplished by purchasing the equivalent number of credit/acres that correspond to the USACE acreage requirement for offsite mitigation. This option is mentioned in case the Riverside Corona Resource Conservation District's in-lieu fee program isn't a viable option.

Mr. Scott Thayer has corresponded with the Riverside - Corona Resource Conservation District and three mitigation banks to discuss the USACE offsite mitigation requirement. On August 2, 2019, Mr. Thayer talked to ECORP about taking the lead on completing the USACE offsite mitigation requirement with one of these entities. If the decision is made to pay an in-lieu fee or to purchase mitigation credits in a mitigation bank, both of these options can be completed in a very short period of time. Once the fees are paid, then the USACE will sign off that the mitigation requirement has been fulfilled. With completion of the USACE offsite mitigation requirement in the 404 Individual Permit Modification, the performance bond (Bond No. 28-87-96) in the amount of $1,038,948, which was set up on July 26, 2002 by Gateway Business Park (renamed Latitude Business Park), will be released.

At the request of the City, a field meeting was held with the CDFW and USFWS on January 30, 2020 to review the site. During this meeting, aquatic resources were identified on the property that corresponded with the detention basin system that was constructed during the reclamation phase for the previous mining effort. Within the detention basin, there were riparian habitats identified that are discussed later within this report.

2.0 SPECIAL-STATUS SPECIES REGULATIONS

This biological study addresses potential constraints and ensures compliance with state and federal regulations regarding listed, protected, and sensitive species, which are detailed below.

2.1 Federal Regulations

2.1.1 The Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

The MSHCP, of which the Project site is a part, constitutes an HCP compliant with Section 10 of the ESA, providing for take of endangered and threatened species within its purview. This report has been

prepared, in part, to demonstrate compliance with the MSHCP and, by proxy, compliance of the Project with the ESA. More about the MSHCP and its implications for the Project, can be found in ensuing sections.

2.1.2 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The federal Clean Water Act's (CWA's) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (U.S.) without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency acts as a cooperating agency to set policy, guidance and criteria for use in evaluation permit applications and also reviews USACE permit applications.

The USACE regulates "fill" or dredging of fill material within its jurisdictional features. "Fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the State Water Resources Control Board, administered by each of nine California Regional Water Quality Control Boards.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the State). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game

Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code § 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 California Fish and Game Code

Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement (SAA). Often, projects that require an SAA also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA may overlap.

Migratory Birds

The CDFW enforces the protection of nongame native birds in §§ 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds' nests and also make it unlawful to take these birds. All raptor species are protected from "take" pursuant to California Fish and Game Code § 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.5 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional HCP focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP identified 146 species, referred to as "Covered Species," for which the federal and California ESAs "take" authorization has been granted to signatories to the plan as long as they comply with its requirements. Of the 146 Covered Species within the MSHCP, 118 are considered to be "adequately conserved." The remaining 28 Covered Species will be considered to be adequately conserved when certain landmark conservation requirements are met during the course of future development. The goal of the MSHCP is to maintain the biological and ecological diversity within a rapidly urbanizing region while also improving the future economic development in the county by providing an efficient, streamlined regulatory process through which development can proceed in and efficient way.

The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies allows signatories of the IA to issue "take" authorizations for all species covered by the MSHCP, including state- and federally listed species, as well as other identified sensitive species and/or their habitats. Each city of local jurisdiction will impose a Development Mitigation Fee for projects within their jurisdiction. With payment of the mitigation fee to the county and compliance with the survey requirements of the MSHCP where required, full mitigation in compliance with CEQA, National Environmental Policy Act (NEPA), the California ESA, and the ESA will be granted. The Development Mitigation Fee varies according to project size and project description and is dependent on development density (Riverside County Ordinance No. 810.2). Payment of the mitigation fee and compliance with the requirements of Section 6.0 of the MSHCP are intended to provide full mitigation under CEQA, NEPA, and the California and federal ESAs for impacts to the species and habitats covered by the MSHCP, pursuant to agreements with USFWS, CDFW, and/or any other appropriate participating regulatory agencies as set forth in the IA for the MSHCP.

2.2.6 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;

- 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Review

ECORP biologists performed a literature review using the CDFW's California Natural Diversity Data Base (CNDDB; CDFW 2019a) and the California Native Plant Society's (CNPS') Electronic Inventory (CNPSEI; CNPS 2019) to determine the special-status plant and wildlife species that have been documented in the vicinity of the Project site. The CNDDB and CNPSEI database searches were conducted on July 23, 2019. ECORP searched CNDDB and CNPSEI records within the Project site boundaries as depicted on USGS 7.5-minute Corona South topographic quadrangle, plus the surrounding eight topographic quadrangles, including Corona North, Lake Matthews, Riverside West, Prado Dam, Black Star Canyon, Santiago Peak, El Toro and Alberhill. The CNDDB and CNPSEI contain records of reported occurrences of federally or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), and/or other special-status species or habitat that may occur within or in the vicinity of the Project. A USFWS species list for the Project site was also taken from the Information for Planning and Consultation (IPaC) website.

Additional information was gathered from the following sources and includes, but is not limited to:

- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) *Web Soil Survey* (NRCS 2019);
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2019b);
- *Special Animals List* (CDFW 2019c);
- *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012);
- *The Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009); and
- various online websites (e.g., CalFlora 2019).

Using this information and observations in the field, a list of special-status plant and animal species that have potential to occur within the Project site was generated. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California ESAs;
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515;
- are of expressed concern to resource and regulatory agencies or local jurisdictions; and/or
- are covered species under the MSHCP.

Special-status species reported for the region in the literature review or for which suitable habitat occurs on the Project site were assessed for their potential to occur within the Project site based on the following guidelines:

Present: The species was observed on site during a site visit or focused survey.

High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within five miles of the site.

Moderate: Either habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been reported in the database, but not within five miles of the site, or a known occurrence occurs within five miles of the site and marginal or limited amounts of habitat occurs on Site.

Low: Limited habitat for the species occurs on site and a known occurrence has been reported in the database, but not within five miles of the site, or suitable habitat strongly associated with the species occurs on site, but no records were found in the database search.

Presumed Absent: Focused surveys were conducted, and the species was not found, or species was found in the database search but habitat (including soils and elevation factors) is not present on site, or the known geographic range of the species does not include the survey area.

Note: Location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that particular species.

A desktop review of the NRCS' Web Soil Survey (NRCS 2019) and the corresponding USGS topographic maps was also conducted to determine if there were any blue line streams or drainages that might potentially fall under the jurisdiction of either federal or state agencies were present on the Project site.

3.2 Western Riverside County MSHCP Consistency Analysis

Data regarding the Project site were reviewed to determine consistency with the MSHCP. The Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to

determine requirements for habitat assessment(s), potential focused survey(s), or other issues related to biological resources that could exist on the Project site (RCA 2019).

Section 6.0 of the MSHCP also requires that an assessment of the Project site be completed to identify any potential Project-related effects on biological resources, including riparian/riverine areas, vernal pools, and fairy shrimp, if applicable. In addition, the MSHCP requires that an Urban/Wildlands Interface analysis be conducted to address the indirect effects associated with locating proposed development in the proximity of MSHCP Conservation Areas.

3.3 Field Survey

3.3.1 Biological Reconnaissance Survey

A brief biological reconnaissance survey was conducted by walking the entire Project site to identify the vegetation communities and wildlife habitats present. The biologist documented the plant and animal species present on the Project site, and the location and condition of the Project site were assessed for the potential to provide habitat for special-status plant and wildlife species. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were also taken during the survey to provide visual representation of the various vegetation communities within the Project site. The Project site was also examined to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region. In addition, the biologist mapped the vegetation communities present on the Project site.

Plant and wildlife species, including any special-status species that were observed during the survey, were recorded. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles (SSAR 2017), *Check-list of North American Birds* (American Ornithologists' Union [AOU] 2018), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

In instances where a special-status species was observed, the date, species, location and habitat, and GPS coordinates were recorded. The locations of special-status species observations were recorded using a handheld GPS in NAD 83, Universal Transverse Mercator coordinates, Zone 11S.

3.3.2 Aquatic Resources Delineation

A desktop review was conducted to identify potential streams and hydric soils on the property. This entailed examination of the NRCS Soil Mapper (2019), National Wetland Inventory (NWI) mapping, and the USGS topographic mapping of the Project site to aid in identifying potential biological constraints to the Project due to jurisdictional streams. The primary known jurisdictional feature within the Project site is Joseph Canyon Wash, which is channelized and is a part of a dedicated Conservation Easement located along Tom Barnes Street. This area is not affected by the proposed Project.

As a result of the field meeting with CDFW and USFWS, additional aquatic resources were mapped that coincide with the locations of detention basins that were constructed as part of the mine reclamation effort for the property. The two basins were constructed to minimize and control runoff from the property, allowing flows to settle on site and drain slowly into underground culverts that lead to Temescal Wash. The purpose of the basins is ultimately to reduce sedimentation and erosion.

3.4 Burrowing Owl Habitat Assessment and Focused Surveys

A burrowing owl (*Athene cunicularia*) habitat assessment was conducted in accordance with MSCHP burrowing owl survey guidelines (County of Riverside 2006). A qualified biologist familiar with burrowing owl identification, habitat, behavior, vocalizations, and sign performed the survey by walking the Project site and identifying areas that provide suitable habitat for burrowing owl. In addition to walking the entire Project site, a 500-foot buffer around the site was examined. Areas where access was not permitted were scanned with the aid of binoculars. Any burrows encountered were mapped and inspected for presence of owls and owl sign (e.g., feathers, whitewash, pellets). If owl sign was present, a burrow was considered to be occupied, even if no owl was observed. Any occupied and potentially suitable burrows were mapped utilizing a handheld GPS unit. Additional biological resource information that was collected included the following:

- Plant and wildlife species observed
- Characterization of habitats present on-site
- Animal sign (e.g., scat, tracks, feathers)
- Mammal burrows and any other special habitat features
- Representative site photographs

4.0 RESULTS

Summarized below are the results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

The CNDDB and CNPSEI searches were conducted on September 23, 2019. The database searches identified 53 special-status plant species and 54 special-status wildlife species that could occur on and/or near the Project site. A list was generated from the results of the literature review and the Project site was evaluated for suitable habitat that could support any of the special-status plant or wildlife species on the list. Appendix A contains a list of the special-status plant species with potential to occur on and/or near the Project site and Appendix B contains a list of the special-status wildlife species with potential to occur on and/or near the Project site.

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

Species identified in the IPaC search included several wildlife species for consideration in the Project site analysis, including Stephens' kangaroo rat (Dipodomys stephensi), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax extimus traillii*), arroyo toad (*Anaxyrus californica*) and quino checkerspot butterfly (*Euphydryas editha quino*). Two plant species were also identified, including San Diego ambrosia (*Ambrosia pumila*) and Santa Monica Mountains dudleya (*Dudleya cymosa* ssp. *ovatifolia*). The Project site is not located within any USFWS-designated critical habitat and there are no areas of designated critical habitat in proximity to the Project site.

4.1.3 Jurisdictional Drainages

The desktop review of the NRCS, NWI, and the USGS topographic map identified one blue-line stream associated with historic Joseph Canyon Wash, which connects to Temescal Canyon Wash. No other potentially jurisdictional features, hydric soils, or wetlands were recorded as present on the remainder of the Project site in the literature search.

4.2 Biological Reconnaissance Survey and Aquatic Resources Delineation

The biological reconnaissance survey was conducted on May 1, 2019 between 0930 and 1145 by ECORP biologist Scott Taylor. A delineation of aquatic resources was conducted on February 12, 2020 to identify areas which were under MSHCP jurisdiction as riparian/riverine habitats and were identified during the field meeting on January 30, 2020 with the CDFW and USFWS.

Summarized below are the results of the biological reconnaissance survey and delineation, including site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors). Weather conditions during the survey were warm, with clear skies, wind speeds of 3 to 8 miles per hour, and an average temperature of 76 degrees Fahrenheit.

4.2.1 Property Characteristics

The Project site consists of an undeveloped lot containing mostly non-native grassland, with a relatively flat topography. The property is abutted by I-15 along its western boundary, with adjacent slopes. To the north is residential development and to the east is Temescal Canyon Road. To the south, along Tom Barnes Street, is Joseph Canyon Wash located within a constructed channel and vegetated with restored riparian vegetation. A small patch of Riversidean sage scrub is associated with the western slopes adjacent to I-15. Most of the Project site had low vegetation growth at the time of the survey, with grasses of moderate height. Representative site photographs are included in Appendix C.

Soil types within the Project site consist of Altamont Clay, Arbuckle Loam, Cieneba Rocky Sandy Loam, Cortina Gravelly Coarse Sandy Loam, Garretson Very Fine Sandy Loam, Temescal Rocky Loam, Terrace Escarpments and Vallecitos Loam. The majority of these soil types are derived from volcanic or granitic sources, largely associated with alluvial deposits. However due to the previous mining activities, and subsequent reclamation activities, the soils present currently may not reflect historic conditions.

4.2.2 Vegetation Communities

The Project site is within an urban environment and was subject to surface mining, followed by mine reclamation, and therefore it has been subjected to repeated and ongoing disturbance from human activities. The entire Project site is covered in nonnative annual grassland, with some Riversidean sage scrub along its western boundary (Figure 4). The area along Joseph Canyon Wash supports riparian woodland communities, but this area is not being affected by the proposed development and has been set aside as a mitigation site. The plant species observed on the Project site were nonnative or invasive weedy species over the majority of the area and native plant species are limited largely to the Joseph Canyon Wash Conservation Easement and the slopes adjacent to I-15, which were part of ongoing revegetation activities associated with environmental compliance for the Crossings Project.

Location: N:\2019\2019-124 Latitude Business Park\MAPS\Vegetation_and_LandCover\Lat_Vegetation_V1.mxd (MAG, 9/26/2019) - mguidry

Map Date: 9/26/2019
Photo Source: NAIP (2018)

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 4. Vegetation Communities

2019-124 Latitude Business Park

A portion of the site had two stormwater/detention basins that collected and managed storm flows. They consisted of an areas that pooled stormflows shallowly. Some limited riparian vegetation was present within these basins, consisting of mule fat scrub and freshwater marsh. Both of these basins flow into standpipes that enter culverts that direct stormflows ultimately into Temescal Wash.

Below is a brief discussion of the vegetation communities that are present within the Project site.

Riparian Woodland

This 1.7-acre plant community occurs along Joseph Canyon Wash, an earthen channel area dedicated as conservation under existing entitlements for the Crossings Project. Plant species within the channel were all planted along with the original restoration at the time the Crossings Project was constructed. The mitigation pallet contained western sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), toyon (*Heteromoles arbutifolia*), coast live oak (*Quercus agrifolia*), coyote bush (*Baccharis pilularis*), narrow-leaf willow (*Salix exigua*), black willow (*Salix goodingii*), arroyo willow (*Salix lasiolepis*), yerba mansa (*Anemopsis californica*), mule fat (*Baccharis salicifolia*) and blackberry (*Rubus ursinus*).

Most of these plant species are present, along with some volunteer species along the banks, including California buckwheat (*Eriogonum fasciculatum*) and western ragweed (*Ambrosia psilostachya*). The area receives flows from a storm drain system to the west of I-15, which enters into a cement channel beneath I-15 to empty into a drain that serves the restoration area. An overflow channel continues into a storm drain underneath Tom Barnes Street, to handle larger storm events.

Mule Fat Scrub

Within the easternmost detention basin, somewhat close to the standpipe, there is a large patch of mule fat scrub. This habitat is a tall, riparian scrub community dominated by mule fat and is considered to be an early seral community that is maintained by periodic flooding or other disturbances. It is considered to be a pioneer plant community in floodplains and will develop into more mature riparian communities in the absence of periodic flooding. The mule fat scrub on site also contains large amounts of tree tobacco (*Nicotiana glauca*). The site contains 0.55 acre of mule fat scrub.

Freshwater Marsh

Within portions of the easternmost detention basin, along its northern boundary, there are two small patches of freshwater marsh habitat. Marsh is dominated by perennial, emergent monocots which reach a height of 12 to 15 feet. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of static bodies of water such as lakes or ponds. The areas are typically permanently flooded by fresh water, or nearly so, but lack a significant current. The plant community on site is dominated by cattails (*Typha latifolia*) with scattered shrubby black willows. There is 0.204 acre of freshwater marsh present.

Riversidean Sage Scrub

Areas mapped as Riversidean sage scrub were a part of the slope revegetation that was included in the environmental compliance efforts for the Crossings Project. The vegetation on the slopes consists of California sagebrush (*Artemisia californica*), brittlebush (*Encelia farinosa*) and California buckwheat primarily. The understory is composed mostly of nonnative grasses including weedy species such as wild oat (*Avenua fatua*) and short-pod mustard (*Hirschfeldia incana*).

Nonnative Annual Grassland

Areas mapped as nonnative annual grasslands dominate the site in a manner consistent with the frequent disturbance the Project site has undergone. Species present include wild oat, short-pod mustard, ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), Bermuda grass (*Cynodon dactylon*), wild barley (*Hordeum* sp.), tree tobacco (*Nicotiana glauca*), dove weed (*Eremocarpus setigerus*), Russian thistle (*Salsola tragus*) and castor bean (*Ricinus communis*). The majority of these grasses and forbs are from the Mediterranean region, and have naturalized to southern California and elsewhere.

4.2.3 Plants

Plant species observed on the Project site were generally characteristic of disturbed urban areas, and soils that have been heavily modified. The only native plant species were either of very low cover within the non-native grassland or were associated with revegetated areas along Joseph Canyon Wash or on slopes adjacent to I-15.

4.2.4 Wildlife

The Project site provided habitat for a mixture of resident species adapted to disturbances and urban environments, along with others that are primarily using the site for foraging. One reptile species was observed during the survey, western fence lizard (*Sceloporus occidentalis*).

Twelve bird species were observed during the reconnaissance visit: house finch (*Haemorhous mexicanus*), California towhee (*Pipilo crissalis*), house sparrow (*Passer domesticus*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), red-tailed hawk (*Buteo jamaicensis*), horned lark (*Eremophila alpestris*) and Anna's hummingbird (*Calypte annae*).

During the survey, there was also a regional dispersion of painted lady butterflies (*Cynthia cardui*) and many hundreds were observed flying through the area.

4.2.5 Potential for Special-Status Plant and Wildlife Species to Occur on the Project Site

The literature search documented 53 special-status plant species (of those, 9 are federally and/or state listed and all of those are covered by the MSHCP). Because the Project site boundaries consist entirely of nonnative annual grassland, all were presumed absent due to lack of suitable habitat. A complete list of the 53 special-status plant species, with details regarding blooming periods, habitat requirements, and potential for occurrence designations, is included as Appendix A.

The literature search documented 54 special-status wildlife species in the vicinity of the Project site, 15 of which are federally and/or state-listed and all of those are covered by the MSHCP). Most of those species were eliminated for consideration in the potential for occurrence analysis due to the lack of suitable habitat. A complete list of the 54 special-status wildlife species, with details regarding habitat requirements and potential for occurrence designations, is included as Appendix B.

4.2.6 Potentially Jurisdictional Drainages

The delineation mapping is presented in Figure 5 below. The primary feature identified on the Project site is Joseph Canyon Wash, but this area is entirely located outside of any development plans. This feature is considered jurisdictional to the USACE, SWRCB and CDFW because it is associated with an historic stream and connects to Temescal Canyon Wash. All of the jurisdictional portions of Joseph Canyon Wash and the associated riparian vegetation have been placed within a Conservation Easement are not being impacted by the Project.

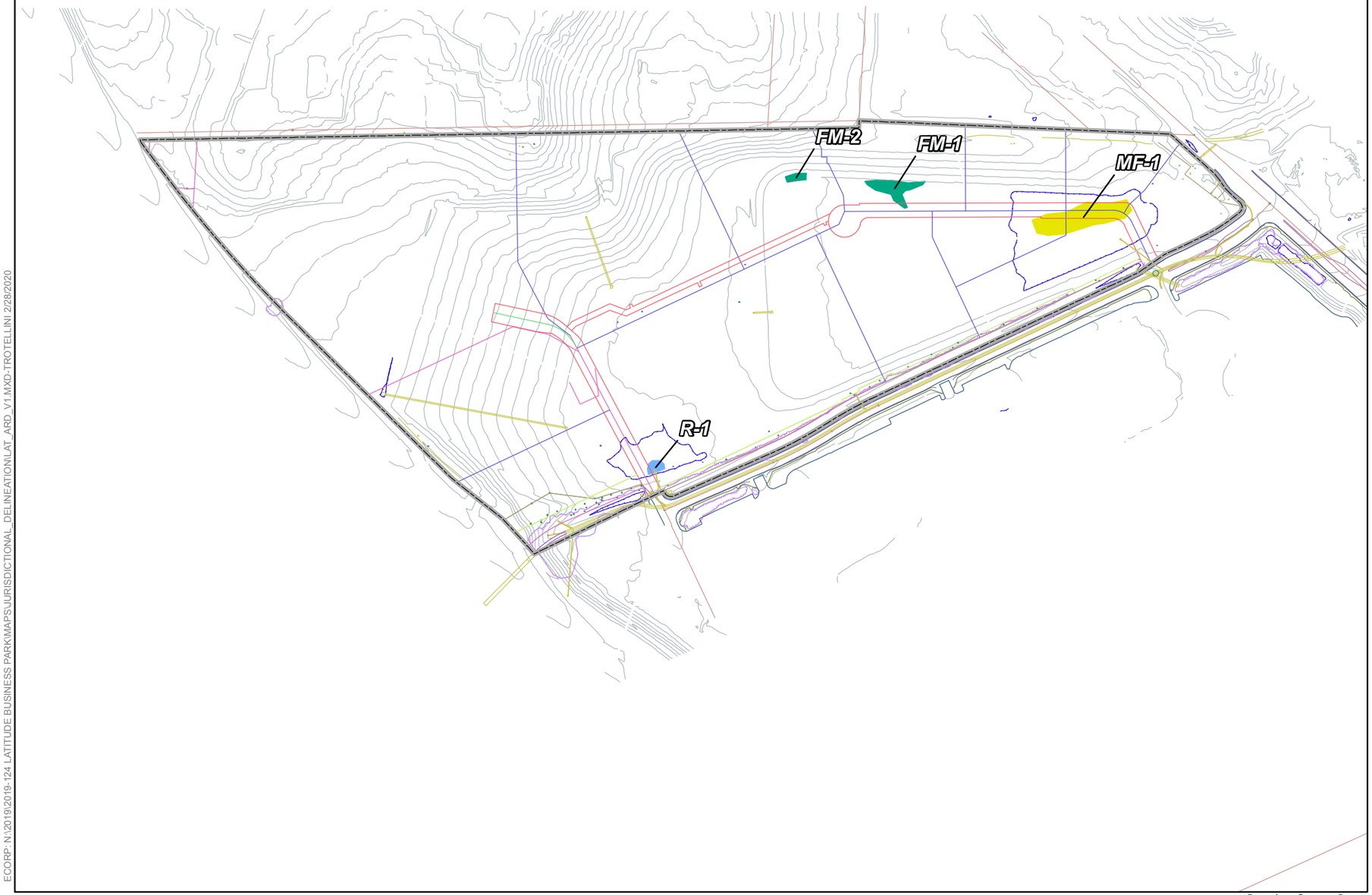
Within the non-native grassland areas, there are shallow basins that collect water for stormwater management, and had limited riparian vegetation such as mule fat and freshwater marsh habitats. These areas are, however, considered to be "stormwater control features created in dry land" and not considered jurisdictional to the USACE under 33 CFR Part 328.3.b (Definitions). However as a result of a field meeting with the CDFW and USFWS, the riparian portions of these areas are considered to be riparian/riverine habitat in accordance with MSHCP definitions. In addition, a small area of ponding adjacent to the stand pipe associated with the smaller, more northerly detention basin was mapped as riverine (no riparian habitat is present at this location). The riparian/riverine habitat areas are considered jurisdictional to the CDFW, under the Lake and Streambed Alteration Program.

4.3 Burrowing Owl Habitat Assessment

The MSHCP has specific habitat assessment and survey requirements for burrowing owl. The project site is located within a designated burrowing owl survey area and, therefore, a burrowing owl habitat assessment and burrow survey was conducted in accordance with the MSHCP burrowing owl survey guidelines (County of Riverside 2006) in 2018 (TPA 2018). No burrowing owls or potential owl burrows were identified during this survey.

The burrowing owl is a California SSC and a covered species under the MSHCP. Burrowing owls historically occurred throughout much of California and the western United States; however, many former California populations have been extirpated. The burrowing owl inhabits open habitats, primarily grasslands and deserts. Burrowing owls require burrows for roosting and nesting cover. Although they often nest in abandoned California ground squirrel (*Otospermophilus beecheyi*) burrows, they will also use other small mammal burrows, pipes, culverts, and nest boxes, particularly where burrows are scarce (Zeiner et al. 1990). The CNDDB documents several historic (more than 20 years old) burrowing owl occurrences within five miles of the Project site. Only one occurrence was documented more recently, in 2009, south of the runway at March Air Reserve Base, approximately four miles west of the Project site (Occurrence 99; CDFW 2019a). The Project site did not provide suitable habitat for burrowing owl due to the lack of suitable burrows or burrow structure, absence of California ground squirrel activity, extremely dense vegetation in the central portion of the Project site, and evidence of frequent mechanical disturbances throughout the entire Project site (especially around the edges of the site). Due to the lack of habitat and no recently (less than 20 years old) documented burrowing owl occurrences in the vicinity of the Project site, burrowing owl has a low potential to occur. Nevertheless, a pre-construction survey for burrowing owls would be recommended prior to ground disturbance. More detail on the burrowing owl and recommended mitigation measures for this species is described in ensuing sections.

Figure 5
Riparian/Riverine Features



Map Features

Project Area

Riparian/Riverine Features (0.810 ac)

Riparian - Freshwater Marsh (0.169 ac)

Riparian - Mulefat Scrub (0.551 ac)

Riverine (0.055 ac)

Riparian/Riverine Feature	Acres	UTM_WGS_84
R-1	0.055	11S 451747 3743000
MF-1	0.551	11S 452197 3743267
FM-1	0.169	11S 451998 3743296
FM-2	0.035	11S 451894 3743308

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

** The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Map Date: 2/28/2020

2019-124 Latitude Business Park

Scale in Feet
0 200 400

Boundary Source: Rexco
Delineator: Scott Taylor
Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet

4.4 Raptors and Migratory Birds

Potential nesting habitat for migratory birds and raptors protected by the MBTA and California Fish and Game Code was present adjacent to the Project site in particular within trees and shrubs associated with Joseph Canyon Wash. Raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August. A pre-construction survey for raptor species is recommended prior to ground disturbance. More detail on raptors and migratory bird species and recommended mitigation measures for this species is described in ensuing sections.

4.5 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

Wildlife corridors constitute linkages between habitat areas that allow wildlife species to move from one habitat area to another. Corridors vary in configuration and type, ranging from wide stream systems to narrow culverts in urban landscapes. Ideally a corridor provides some level of plant cover, water sources and food sources as well. Corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example.

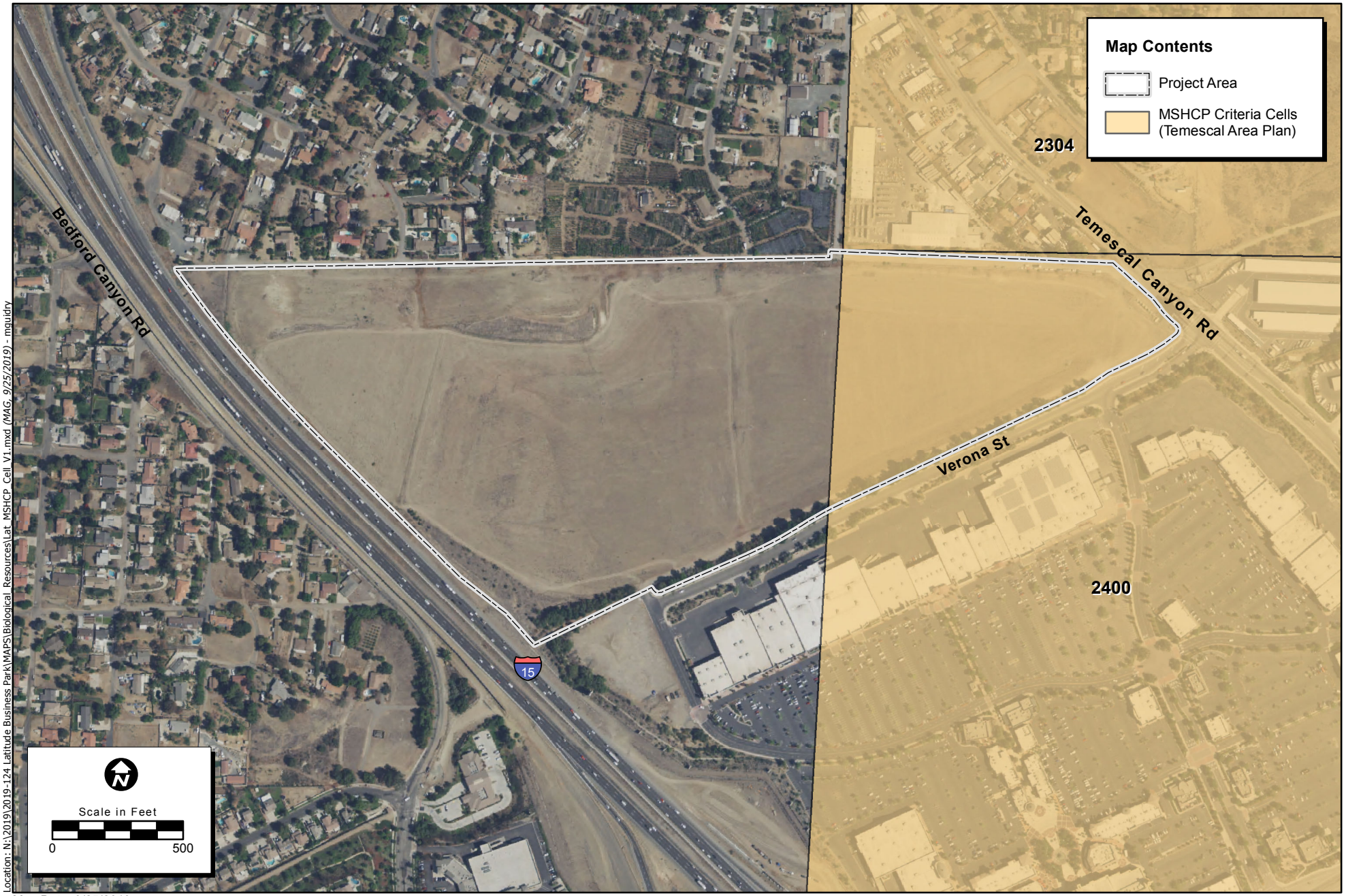
The Project site was assessed for its ability to function as a wildlife corridor. The Project site is very disturbed and surrounded by development to the west, south, and east. Undeveloped areas within the Project site are undoubtedly used by wildlife, but these areas are limited by the level of disturbance present. Joseph Canyon Wash provides some level of connectivity through the site and towards Temescal Canyon Wash, but this channel is very narrow, ranging up to around 100 feet in width. Also to the west the channel becomes a concrete, urbanized feature that traverses beneath I-15. Wildlife use of the site is considered to be limited largely to small to medium sized mammal species, birds and smaller reptiles and amphibians. The lack of vegetative cover and the urban nature of the Project site would likely deter larger wildlife species such as deer (*Hemonianus odocoileus*) and mountain lions (*Felis concolor*) from moving through the area.

5.0 WESTERN RIVERSIDE COUNTY MSHCP CONSISTENCY ANALYSIS

The Project site is located within the Temescal Canyon Area Plan and partially within Criteria Cell 2400 of the MSHCP (Figure 6). The target conservation acreage range for the Temescal Canyon Area Plan is approximately 29,555 to 31,870 acres; it is composed of approximately 26,070 acres of existing Public/Quasi-Public Lands and 3,485 – 5,800 acres of Additional Reserve Lands. The City of Corona sits entirely within the Temescal Area Plan. The Project site is located within Subunit 3 – Temescal Canyon Wash West, an area whose chief goal consists of conserving native habitats associated with Temescal Canyon Wash, which is located approximately ¼ mile from the Project site's eastern boundary.

Section 6.0 of the MSHCP requires assessment of the potential effects from the Project on biological resources including riparian/riverine areas, vernal pools, and fairy shrimp, burrowing owl, and Narrow Endemic Plant Species. In addition, the MSHCP requires an Urban/Wildlands Interface analysis be conducted in order to address the indirect effects associated with locating proposed development in proximity of MSHCP Conservation Areas. These resources were assessed during the reconnaissance survey and are discussed below in relation to the Project.

Since development of the Project site is a covered activity within the MSHCP, it is an allowable use that has been contemplated within the MSHCP. However, projects that are covered still need to comply with MSHCP requirements.



Location: N:\2019\2019-124 Latitude Business Park\MAPS\Biological Resources\Lat_MSHCP_Cell_V1.mxd *(MAG, 9/25/2019)* - mguidry

Map Date: 9/25/2019
Photo Source: NAIP (2018)

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 6. MSHCP Cells

2019-124 Latitude Business Park

5.1 Riparian/Riverine, Vernal Pool, and Fairy Shrimp Habitat Assessment (MSHCP Section 6.1.2)

In accordance with Section 6.1.2 of the MSHCP, a habitat assessment was performed for riparian and riverine communities, vernal pools, and fairy shrimp. The Project site, consisting largely of various loams, with only limited clays, did not contain vernal pool habitat or suitable habitat for fairy shrimp. Additionally, the soils within the site have been disturbed heavily by the former mine site and its reclamation.

5.1.1 Riparian/Riverine Areas

Riparian vegetation observed on the Project site is primarily associated with Joseph Canyon Wash, an area that is avoided by the Project. This wash has been channelized into underground storm drain systems through residential and commercial areas to the west of Interstate 15, runs in an earthen channel along the southern site boundary and empties into Temescal Wash to the east of the site. Temescal Wash is an important regional waterway and wildlife corridor and remains the focus of several conservation efforts.

As a part of the Crossings mitigation and permits, Joseph Canyon Wash was replanted with riparian plantings, and since 2005 the wash has been monitored fin compliance with the Crossings Habitat Mitigation and Monitoring Plan (HMMP) according to the Crossings Project environmental compliance measures. The wash currently supports a diverse variety of riparian plants including willows (*Salix* sp.), cottonwoods (*Populus fremontii*), western sycamore (*Platanus racemosa*), cattails (*Typha latifolia*) and mule fat (*Baccharis salicifolia*). There are also several understory species present typical of riparian areas as well as coastal sage scrub species along the banks of the channel. The area currently meets or exceeds its required success criteria. The Joseph Canyon Wash accounts for approximately one acre of the Project site, averages 20 feet in width and is approximately 2,100 feet in length. Annual monitoring reports for the wash are available upon request.

Per Section 6.1.2 of the MSHCP, "if an avoidance alternative is selected, measures shall be incorporated into the project design to ensure the long-term conservation of the area to be avoided, and associated functions and values, through the use of deed restriction, conservation easement, or other appropriate mechanisms." (MSHCP Section 6.1.3). Joseph Canyon Wash meets this requirement through a conservation easement.

In addition to Joseph Canyon Wash, two detention basins occur on the site, the easternmost of which supports a patch of mule fat scrub in addition to two patches of freshwater marsh. These features were originally created as a part of the mine reclamation process, and have the purpose of reducing erosion and sedimentation downstream into Temescal Wash. The CDFW conducted a field review of these features and considers them to consist of riparian/riverine habitat under the MSHCP definition. They also identified a pool of water surrounding the smaller, westerly detention basin and consider that to qualify as riverine habitat under the MSHCP definition.

Mitigation for these two areas will consist of use of the Joseph Canyon Wash area and its planned native plant setback, to the extent practicable. The details of a mitigation strategy are the subject of ongoing negotiations between the CDFW, USFWS and the Project proponent.

5.1.2 Vernal Pools and Fairy Shrimp

Vernal pools are seasonal wetlands that contain semi-impermeable soils, allowing water to perch for long periods of time, and concave topography. True vernal pools also support a variety of plant species that are specific to vernal pool ecological parameters. An area that is not a true vernal pool, such as a road rut or road pool, may exhibit similar characteristics. Vernal pools and similar habitat areas tend to occur within clay soils zones. Soils within the Project site consist of Altamont series, Arbuckle series, Terrace Escarpments, Cortina Series, Temescal series and Vallecitos series soils. See Table 2 for detailed soils information.

Table 2. Natural Resources Conservation Service Soil Types

Soil Unit	Hydric?	Hydric Components (NRCS 2019)
AaD-Altamont Clay, 5 to 18 percent slopes	No	None
AkC-Arbuckle loam, 2 to 8 percent slopes	No	None
AlC-Arbuckle gravelly loam, 2 to 9 percent slopes, dry, MLRA 1	Yes	Bakersfield component
CnC-Cortina gravelly coarse sandy loam, 2 to 8 percent slopes	No	None
TbF2-Temescal rocky loam, 15 to 50 percent slopes, eroded	No	None
TeG-Terrace escarpments	No	None
VeF2-Vallecitos loam, thick solum variant, 15 to 50 percent slopes, eroded	No	None

According to the MSHCP (Section 6.1.2), "determinations that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis." The determinations are made based on the length of the time the area is expected to support vernal pool hydrological characteristics based primarily on its history, vegetation, soils, and drainage characteristics. Fairy shrimp are an invertebrate class of species that are particularly adapted to vernal pool ecology and ephemeral pools that support similar characteristics.

The Project site did not contain any apparent vernal pool habitat or suitable habitat for fairy shrimp, although there were basins located on site whose purpose was to detain stormwater flows across the site. These basins were created as part of the mining reclamation and are shallow, are artificially created and are located within the southeast corner of the site within areas mapped as Arbuckle loam. The basins contain stand pipes that allow drainage and only hold stormwater during times immediately after storm events, and they do not hold water for long enoug periods of time needed to support fairy shrimp. Within the MSHCP (Section 6.1.2), it states that "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." For these reasons, the site is not considered to support fairy shrimp habitat or vernal pools.

5.2 Narrow Endemic Plant Species

The RCA MHSCP Information Map was reviewed to determine whether the Project site or staging areas are located within a Narrow Endemic Plant Species Survey Area (NEPSSA), in accordance with Section 6.1.3 of the MSHCP. The Project site is not located within a NEPSSA or a Criteria Area. Further, all of the plant species identified in the literature review were determined to be presumed absent from the Project site due to the high level of disturbance and lack of native vegetation communities.

5.3 Burrowing Owl Habitat Assessment (MSHCP Section 6.3.2)

In accordance with Section 6.3.2 of the MSHCP, a habitat assessment for burrowing owl was performed. Additionally, the RCA MSHCP Information Map was reviewed to identify areas within the Project site that may fall within the designated burrowing owl survey areas. The entire Project site is located within the burrowing owl survey area (Figure 3). Burrowing owls or suitably-sized burrows were not identified on the Project site during the burrowing owl habitat assessment that was performed in accordance with the MSHCP burrowing owl guidelines (County of Riverside 2006) during the reconnaissance survey.

Based on the results of the burrowing owl habitat assessment and focused burrow survey, focused burrowing owl surveys will not be required for the Project due to the lack of suitable habitat and presence of potential burrows; however, due to the mobile nature of burrowing owls, this species could be found using the site prior to the start of Project construction activities. Therefore, a pre-construction survey for burrowing owls will need to be completed prior to construction activities in accordance with the MSHCP burrowing owl survey guidelines (County of Riverside 2006). Implementation of Mitigation Measure BIO-2 would avoid impacts to burrowing owl and violations of the MSHCP requirements in Section 6.3.2.

5.4 Urban/Wildlands Interface Guidelines (MSHCP Section 6.1.4)

The requirements for Urban/Wildlands Interface for the management of edge factors do not apply to the Project site or staging areas because the Project site is not situated adjacent to any wildlands or MSHCP-designated Conservation Areas. The Project site and staging areas are relatively isolated from larger, contiguous blocks of native habitat and completely surrounded by residential development, urban development, and other anthropogenic land use. A net long-term increase of edge impacts within proposed conservation areas is not expected as a result of this Project.

Because Joseph Canyon Wash is tributary to Temescal Wash, which is a part of Existing Core 2, indirect impacts to the wash should be minimized and avoided, where such impacts may affect downstream water and habitat quality. Runoff and toxins from the Project into Joseph Canyon Wash are the most likely potential indirect impact of this nature. In order to control release of toxins and runoff into downstream waters, each proposed lot of the project directs flows over the surface towards a catch basin inlet connected to an underground storage system which detains and regulates outflow through a modular wetland system to treat stormwater flows for each parcel per the County and State requirements. These treated storm flows discharge into proposed storm drains that connect to one of four existing storm drain laterals that have been extended into the site. The laterals extend northerly of the Joseph Canyon Wash area without disturbing it. The overall discharges for the site are below the levels these laterals were designed to accept due to the underground storage system detaining and slowing down discharge rates. These existing laterals are located on Parcel 10 & 11 and the two street

intersections and connect to the existing concrete box storm drain located in Tom Barnes Avenue. The Joseph Canyon Wash discharges into this storm drain box. There is no impact to the wash due to the reduction of design flows and treatment of all project flows prior to discharge.

In addition, species listed in the MSHCP as invasive species (Section 6.1.4) would not be used in landscaping for the Project.

5.5 Additional Surveys (MSHCP Section 6.3.2)

The RCA MSHCP Information Map was reviewed to determine if the Project Site was located with any other MSHCP designated survey areas beyond burrowing owl. The Information Map revealed that the Project site is not located within the amphibian species, criteria area species, or mammalian species survey areas. Therefore, no further habitat assessments or surveys are required.

6.0 IMPACT ANALYSIS

All areas where construction and/or grading are currently proposed to take place are highly disturbed areas. Impacts to sensitive biological resources resulting from construction activities are presented below.

6.1 Special-Status Species

The literature review and database searches identified 53 special-status plant species that occur near the Project site but, due to elevational factors and the current lack of suitable habitat for special-status plant species on Project site, all of the special-status plant species identified in the literature review were presumed absent from the Project site. Impacts to the Project site will not contribute to the overall decline of any of the special-status plant species identified in the literature review and database searches. No significant impacts to special-status plant species are anticipated to result from the development of this Project.

Of the 54 special-status wildlife species identified in the literature search, 16 were found to have a low potential to occur due to the lack of high-quality suitable habitat on the project site, none of which are state- or federally listed. The historic agricultural activities, frequent mechanical disturbances on site, proximity to commercial and residential development, and the presence of anthropogenic influences on site likely preclude these species from occurring on or adjacent to the site. If these species were present, impacts in the form of ground disturbance, vegetation removal, mortality, construction noise, and vibrations may occur. However, if these species were present on the project site, they would likely be in such low numbers that impacts to the species would not be considered significant, nor would they contribute to the overall decline of the species. The Project is not expected to result in significant impacts to any of the SSC species with a low potential to occur.

6.1.1 Burrowing Owl

The Project site is located within a designated survey area under the MHSCP for burrowing owl, and a habitat assessment and focused burrow survey was conducted during 2018. It was determined that no potential burrows or burrowing owls were present and burrowing owl has a low potential to occur on the Project site and vicinity due to the disturbance present and proximity of commercial and residential development. Although the site was found to not provide suitable habitat for burrowing owl, due to the mobile nature of the species it is possible that burrowing owl could use the site prior to the start of

Project activities. If burrowing owl are found to be using or nesting on the Project site prior to the start of construction due to a change in potential burrow presence, direct impacts in the form of ground disturbance, vegetation removal, habitat loss, and mortality and indirect impacts from construction noise and vibrations may occur. Impacts to burrowing owl would be less than significant with the implementation of Mitigation Measure BIO-1. The Mitigation Measures for the Proposed Project are discussed in Section 6 below.

6.1.2 Nesting Birds

The trees on and immediately adjacent to the Project site within Joseph Canyon Wash could provide nesting habitat for nesting birds and raptors protected by the MBTA and California Fish and Game Code. If construction of the proposed Project occurs during the bird breeding season (typically February 1 through August 31), ground-disturbing construction activities could directly affect birds protected by the MBTA and their nests through the removal of habitat on the Project site, and indirectly through increased noise, vibrations, and increased human activity. Impacts to nesting birds would be less than significant with the implementation of Mitigation Measure BIO-2.

6.1.3 Riparian Bird Species

Joseph Canyon Wash has been monitored for faunal species use since 2005. As of recently (2017) the only sensitive riparian bird species that has been observed regularly includes yellow warbler (*Setophaga petechia*), a California Species of Special Concern. In 2017, western toads (*Bufo boreas*) were also observed within the wash. Least Bell's vireo (*Vireo bellii pusillus*) use is considered to be possible within the wash but the species has not been seen despite multiple surveys for faunal species since 2005. The least Bell's vireo uses riparian habitats that are composed primarily of various willows, preferring some structural diversity and an understory where nests can be placed. They tend to prefer riparian "edge" habitat zones, along the boundaries of riparian areas and other habitat types. Vireos are territorial, establishing territories of approximately one acre during the breeding season, which occurs from approximately April 10 through August 31. Direct impacts to Joseph Canyon Wash are not proposed as a part of the Project, but there may be indirect impacts on Joseph Canyon Wash due to construction noise and dust. If activities with the potential to disrupt nesting birds are scheduled to occur during the breeding season, protocol-level least Bell's vireo surveys will be completed prior to any such activities, in order to rule out the presence of least Bell's vireo. During the winter months, least Bell's vireos migrate southwards into Mexico and are not present within southern California.

The habitat present along Joseph Canyon Wash is fairly narrow (about 20 feet in width) and is surrounded by non-habitat areas such as paved roads and disturbed areas. The riparian areas are structurally diverse but the willow species cover is relatively low in comparison with what is typical for areas where least Bell's vireos are common. Generally the riparian habitat is considered of low quality and low potential for least Bell's vireos due to the narrowness of the habitat area, surrounding disturbances and relatively low structural diversity present.

The mule fat scrub and freshwater marsh areas located on site within the easternmost detention basin are considered to be too small in patch size, too structurally uniform and too isolated from one another to support sensitive riparian bird species. Most sensitive riparian bird species prefer habitats with a mixture of tall and short shrub and tree species, and areas that are larger than an acre in size. Regardless, these areas could still provide nesting substrate for generalist bird species that use the site.

Any ground disturbance activities shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California Fish and Game Code §§ 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist who is experienced in the identification of avian species and conducting nesting bird surveys. Further information regarding this mitigation measure is described below in Mitigation Measures BIO-2 and BIO-3.

6.1.4 Fairy Shrimp

Because vernal pool habitat is considered to be absent from the Project site, fairy shrimp are not expected to occur.

6.2 Sensitive Natural Communities

In general, the Project site consists of disturbed and developed land that supports mostly nonnative grass and forb species. There is riparian habitat present, however, within Joseph Canyon Wash and Riversidean sage scrub along some of the slopes adjacent to I-15. No impacts to Joseph Canyon Wash will occur because this area is set aside as a Conservation Easement. Impacts to Riversidean sage scrub would occur but this community is considered very limited in extent, surrounded by development and non-native habitat areas primarily and is not anticipated to support sensitive biological resources.

6.3 State or Federally Protected Wetlands and Waters of the United States

The Project site does not contain any state or federally protected wetlands or Waters of the U.S. other than those identified within Joseph Canyon Wash, which is being fully avoided by the Project, and riparian/riverine areas identified that are within the two detention basins, as identified above. The development of the Project site will therefore not result in impacts to federally protected wetlands or Waters of the United States but is likely to result in impacts to CDFW jurisdictional areas.

6.4 Wildlife Corridors and Nursery Sites

The Project site is located within and adjacent to areas containing existing disturbances (e.g., paved roads and residential, commercial, and industrial developments). The Project site is heavily disturbed and/or developed and contains very little vegetative cover that would facilitate wildlife movement. No migratory wildlife corridors or native wildlife nursery sites were identified within the Project site. No impacts to these resources are expected to occur during the development of the Project site.

6.5 Habitat Conservation Plans and Natural Community Conservation Plans

The Project site is located within the planning area for the Western Riverside MSHCP. The Project site is located within a designated Criteria Cells for conservation within Temescal Canyon Wash, and none of the portions of the cell located within site boundaries are designated for conservation. For this reason, development of the Project site would be considered to be consistent with the MSHCP.

6.5.1 Stephens' Kangaroo Rat Mitigation Fee

No suitable habitat is present for Stephens' kangaroo rat (*Dipodomys stephensi*) on the project site, and the Project site is not located within the Stephens' kangaroo rat fee assessment area. Therefore no

further coordination with the RCA regarding the mitigation fee for Stephens' kangaroo rat would be required.

7.0 MITIGATION MEASURES

The following mitigation measures would reduce impacts to sensitive biological resources to a less than significant level.

BIO-1 Preconstruction Burrowing Owl Survey: A pre-construction survey for burrowing owls should be completed within the Project site no more than 30 days prior to construction activities in accordance with the Western Riverside MSHCP burrowing owl survey guidelines (County of Riverside 2006). If burrowing owls are observed during the preconstruction survey, a specific mitigation methodology for the owl shall be determined in coordination with CDFW in order to reduce impacts to a level that is less than significant. Mitigation measures for any owls present could include avoidance of the owl burrows during their nesting season and/or passive relocation of burrowing owls.

BIO-2 Preconstruction Survey for Nesting Birds: Any ground disturbance activities shall be conducted during the non-breeding season for birds (approximately September 1 through January 31). This will avoid violations of the MBTA and California Fish and Game Code §§ 3503, 3503.5 and 3513. If activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season (February 1 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist who is experienced in the identification of avian species and conducting nesting bird surveys. The nest surveys shall include the Project site and adjacent areas where Project activities have the potential to cause nest failure. If no nesting birds are observed during the survey, site preparation and construction activities may begin. If nesting birds (including nesting raptors) are found to be present, avoidance or minimization measures shall be undertaken to avoid potential project-related impacts. Measures may include establishment of an avoidance buffer until nesting has been completed and periodic nest monitoring by the project biologist. The width of the avoidance buffer will be determined by the Project biologist. Typically this is 300 feet from the nest site in all directions (500 feet is typically recommended by CDFW for raptors), until the juveniles have fledged and there has been no evidence of a second attempt at nesting. The monitoring biologist will monitor the nest(s) during construction and document any findings.

BIO-3 Protocol Surveys for Least Bell's Vireo: Due to the potential presence of least Bell's vireo within Joseph Canyon Wash, if activities with the potential to disrupt nesting birds are scheduled to occur during the breeding season, protocol-level least Bell's vireo surveys will be completed prior to any such activities, in order to rule out the presence of least Bell's vireo. Surveys involve eight surveys from April 10 through July 31, spaced at least 10 days apart. If least Bell's vireo is detected during the surveys, then all work within 500 feet of the location of the least Bell's vireo territory will be halted and the CDFW will be consulted regarding mitigation and avoidance measures during construction. At a minimum, an avoidance buffer will be planned and established in consultation with the CDFW to avoid indirect impacts to least Bell's vireo. The buffer is expected to be a

minimum of 500 feet in width. The width of the avoidance buffer will be determined by the Project biologist, in consultation with the CDFW. Other mitigation measures may also be applied based on that consultation process.

BIO-4 Section 1600 Streambed Alteration Agreement: Due to the presence of areas jurisdictional to the CDFW, the applicant will be required to consult with the CDFW regarding Fish and Game Code Section 1602 Streambed Alteration Agreement. Additional consultation may be required with the USACE regarding a Clean Water Act Section 404 permit and with the State Water Resources Control Board regarding a Clean Water Act Section 401 permit. Through this process, the Project will be required to mitigate impacts to riparian/riverine habitats by preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Other mitigation measures may also be applicable based on that consultation process.

BIO-5 MSHCP Riparian/Riverine DBESP: Due to the presence of riparian/riverine resources within areas proposed for development, the applicant will prepare a DBESP and obtain written concurrence from the USFWS and CDFW that the DBESP has met the requirements of the MSHCP. Alternatively, if a DBESP is determined at a future date to not be necessary a written documentation of that decision shall be prepared and submitted for the Project record.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the 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. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

Signed:  Date: March 3 2020

Scott Taylor
Senior Biological Program Manager

9.0 LITERATURE CITED

America Ornithologists' Union (AOU). 2016. Checklist of North American Birds, Seventh edition with Seventh Supplement.

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, California. 1400 pp.

Bradley, R.D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A Cook, R.C. Dowler, C. Jones, D.J Schmidly, F.B. Stangl, Jr., R.A. Van Den Bussche, B. Wursig. 2014. Revised Checklist of North American Mammals North of Mexico. Museum of Texas Tech University.

CalFlora: Information on California plants for education, research and conservation. [Web application]. 2019. Berkeley, California: The CalFlora Database [a non-profit organization]. Available from: http://www.calflora.org.

California Department of Fish and Wildlife (CDFW). 2019a. California Native Diversity Database. Rarefind 5 [computer program]. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife. Accessed on February 4, 2019.

_____2019b. Special animals list. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

_____2019c. California Natural Diversity Database Special Vascular Plants, Bryophytes and Lichens List. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

California Native Plant Society (CNPS). 2019. Inventory of Rare and Endangered Plants (online edition, v7-08c). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, CA. Available at: http://www.cnps.org/inventory.

County of Riverside. 2006. Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area. edited by Environmental Programs Department. Riverside, CA: County of Riverside.

Moreno Valley Municipal Code. 2019. Section 8.60 Threatened and Endangered Species. Available at: https://qcode.us/codes/morenovalley/

Natural Resources Conservation Service (NRCS). 2019. Online Web Soil Survey. U.S. Department of Agriculture. Accessed on February 8, 2019, from http://websoilsurvey.nrcs.usda.gov

Regional Conservation Authority (RCA). 2019. RCA MSHCP Information Tool. Available from: https://www.wrc-rca.org/rcamaps/

County of Riverside Transportation and Land Management Agency (RCTLMA). 2019. Western Riverside County Multiple Species Habitat Conservation Plan. Available from: http://rctlma.org/Portals/0/mshcp/volume1/index.html

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society, Sacramento, CA.

Society for the Study of Amphibians and Reptiles (SSAR). 2017. Scientific and Standard English Names of Amphibians and Reptiles of North American North of Mexico, With Comments Regarding Confidence in our Understanding. Eighth Edition. Committee on Standard English and Scientific Names.

U.S. Fish and Wildlife Service (USFWS). 1918. Migratory Bird Treaty Act of 1918. Section 16 of the U.S. Code (703-712), as amended 1989.

Zeiner D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, editors (California Department of Fish and Wildlife). 1990. California's Wildlife. Volume II, Birds. Sacramento (CA): State of California, the Resources Agency, Department of Fish and Wildlife.

LIST OF APPENDICES

APPENDIX A

Sensitive Plant Species Potential for Occurrence

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Abronia villosa var. *aurita* Chaparral sand-verbena	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	(Jan) Mar-Sept 75-1600	Occurs in chaparral, coastal scrub, and desert habitats. Often found in sandy soil.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in sandy soils within chaparral, coastal scrub, and desert dunes.
Allium munzii Munz's onion	Fed: Ca: CNPS: MSHCP:	END THR 2B.3 COV	Mar-May 297-1070	Occurs in chaparral, Cismontane woodlands, coastal scrub, pinyon and juniper woodlands, and valley and foothill grassland habitats. Often found in mesic clay soil.	Presumed Absent: No suitable habitat was present on the Project Site. Typically associated in mesic, clay soils within chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, or valley and foothill grassland habitat.
Ambrosia pumila San Diego ambrosia	Fed: Ca: CNPS: MSHCP:	END none 1B.1 COV	April-Oct 20-415	Occurs in chaparral, coastal scrub, valley and foothill grassland, and vernal pool habitats. Often found in disturbed areas and in areas with sandy loam or clay soil and occasionally alkaline soil.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in sandy loam or clay, often in disturbed areas, sometimes alkaline within chaparral, coastal scrub, valley and foothill grassland, or vernal pools.
Asplenium vespertinum western spleenwort	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	Feb-June 180-1000	Occurs in chaparral, cismontane woodland, and coastal scrub. Often found in areas with rocky soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Astragalus brauntonii Braunton's milk-vetch	Fed: Ca: CNPS: MSHCP:	END none 1B.1 none	Jan- Aug 4-640	Occurs in chaparral, coastal scrub, and valley and foothill grassland habitats. Often found in recently burned or disturbed areas. Usually in sandstone soil with carbonate layers.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, valley grassland, coastal sage scrub, and closed-cone pine forest.
Atriplex coulteri Coulter's saltbush	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	March-Oct 3-460	Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland habitats. Often found in clay or alkaline soils.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in coastal strand, valley grassland, and coastal sage scrub. Usually occurs in non-wetlands, occasionally in wetlands.
Baccharis malibuensis Malibu baccharis	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	August 150-305	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodlands habitat.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, coastal sage scrub, and oak woodlands.
Brodiaea filifolia thread-leaved brodiaea	Fed: Ca: CNPS: MSHCP	THR END 1B.1 COV	March-June 25-1120	Occurs in chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pool habitat. Often found in clay soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Calandrinia breweri Brewer's calandrinia	Fed: Ca: CNPS: MSHCP	none none 4.2 none	(Jan) Mar-June 10-1220	Occurs in chaparral and coastal scrub. Often found in recently burned or disturbed areas. Usually in sandy or loamy soils.	Presumed Absent: No suitable habitat was present on the Project Site.

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Calochortus catalinae Catalina mariposa lily	Fed: Ca: CNPS: MSHCP	none none 4.2 none	(Feb) March-June 15-700	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	Presumed Absent: No suitable habitat was present on the Project Site.
Calochortus plummerae Plummer's mariposa lily	Fed: Ca: CNPS: MSHCP	none none 4.2 COV	May-July 100-1700	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland in granitic, rocky soils.	Presumed Absent: No suitable habitat was present on the Project Site.
Calochortus weedii var. *intermedius* intermediate mariposa lily	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	May-July 105-855	Occurs in chaparral, coastal scrub, and valley and foothill grasslands, in rocky, calcareous soils.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in rocky, calcareous soils within chaparral, coastal scrub, or valley and foothill grassland habitat.
Calystegia felix lucky morning-glory	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	March-Sept 30-215	Historically occurs in wetlands and marshy places but also occurs in meadows and seeps and riparian scrub habitats. Found in areas of silty and alkaline soil.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in meadows and seeps, and riparian scrub with silty loams and sometimes alkaline soils.
Camissoniopsis lewisii Lewis' evening-primrose	Fed: Ca: CNPS: MSHCP:	None None 3 none	March-May (June) 0-300	Occurs in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland. Typically found in sandy or clay soils.	Presumed Absent: No suitable habitat was present on the Project Site.
Caulanthus simulans Payson's jewelflower	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	Feb-June 90-2200	Occurs in chaparral and coastal scrub habitats. Often found in sandy, granitic soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Centromadia pungens ssp. *laevis* smooth tarplant	Fed: Ca: CNPS: MSHCP:	END END 1B.2 COV	April-Sept 0-640	Occurs in chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley and foothill grassland habitats. Often found in alkaline soil.	Presumed Absent. No suitable habitat was present on the Project Site. Occurs in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland (alkaline).
Chorizanthe leptotheca Peninsular spineflower	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	May-August 300-1900	Occurs in coastal scrub and valley and foothill grassland habitat. Often occurs in sandy soils.	Presumed Absent. No suitable habitat was present on the Project Site. Elevation range does not exist within the Project Site.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	Fed: Ca: CNPS: MSHCP:	THR END 4.2 COV	April-July 150-1220	Occurs coastal scrub, and valley and foothill grassland habitat.	Presumed Absent. No suitable habitat was present on the Project Site. Occurs in coastal sage scrub.
Chorizanthe parryi var. *parryi* Parry's spineflower	Fed: Ca: CNPS: MSHCP:	none none 1B.1 COV	April-June 275-1220	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitat. Often found in sandy or rocky openings.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands (sandy or rocky openings).

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Chorizanthe polygonoides var. *longispina* long-spined spineflower	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	April-June 30-1530	Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pool habitat. Often found in clay soil.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in clay soils within chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, or vernal pools.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-June 300-1200	Occurs in coastal scrub, Mojavean desert scrub, and pinyon and juniper woodland habitats. Often found in areas of sandy or gravelly soil.	Presumed Absent. No suitable habitat was present on the Project Site. Elevation range does not exist within the Project Site.
Clinopodium chandleri San Miguel savory	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	March-July 120-1075	Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodlands, and valley and foothill grassland habitat in rocky, gabbroic or metavolcanics soils.	Presumed Absent: No suitable habitat was present on the Project Site.
Comarostaphylis diversifolia ssp. diversifolia summer holly	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	April-June 30-790	Occurs in chaparral and cismontane woodland habitat.	Presumed Absent: No suitable habitat was present on the Project Site.
Convolvulus simulans small-flowered morning-glory	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	March-July 30-740	Occurs in chaparral openings, coastal scrub, and valley and foothill grassland habitat. Often found in clay, serpentinite seeps.	Presumed Absent: No suitable habitat was present on the Project Site.
Deinandra paniculata paniculate tarplant	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	April-Nov (March-Dec) 25-940	Occurs in coastal scrub, valley and foothill grasslands, and vernal pool habitat. Often found in vernally mesic soils, occasionally found in sandy soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Diplacus clevelandii Cleveland's bush monkeyflower	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	April-June 450-2000	Occurs in chaparral, cismontane woodland, and lower montane coniferous forest habitats. Often found in disturbed areas with openings and rocky, gabbroic soil.	Presumed Absent. No suitable habitat was present on the Project Site. Elevation range does not exist within the Project Site.
Dodecahema leptoceras slender-horned spineflower	Fed: Ca: CNPS: MSHCP:	END END 1B.1 COV	April-June 200-760	Occurs in chaparral, cismontane woodland and coastal scrub habitats. Often found in sandy soil.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in chaparral, coastal scrub, and cismontane woodland habitats.
Dudleya cymose ssp.*ovatifolia* Santa Monica dudleya	Fed: Ca: CNPS: MSHCP:	THR none 1B.1 none	March-June 150-1675	Occurs in chaparral and coastal scrub habitats. Often found in rocky areas with volcanic or sedimentary soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Dudleya multicaulis many-stemmed dudleya	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	April-July 15-790	Occurs in chaparral, coastal scrub, and valley and foothill grassland habitats. Often found in areas of clay soil.	Presumed Absent. No suitable habitat was present on the Project Site. Typically occurs in clay soils within chaparral, coastal scrub, or valley and foothill grassland habitats.

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Dudleya viscida sticky dudleya	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	May-June 10-550	Occurs in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub habitat. Often found in areas of rocky soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woollystar	Fed: Ca: CNPS: MSHCP:	END END 1B.1 COV	April-Sept 91-610	Occurs in chaparral and coastal scrub habitats. Often found in areas of sandy or gravelly soils.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in alluvial fans with chaparral and/or coastal sage scrub
Harpagonella palmeri Palmer's grapplinghook	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	March-May 20-955	Occurs in chaparral, coastal scrub, and valley and foothill grassland habitats. Often found in open grassy areas with shrubland and clay soil.	Presumed Absent: No suitable habitat was present on the Project Site.
Hesperocyparis forbesii Tecate cypress	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	Perennial evergreen tree 80-1500	Occurs in closed-cone coniferous forest, and chaparral habitat. Often found in areas with clay, gabbroic or metavolcanics soils.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral and/or closed-cone pine forest.
Hordeum intercedens vernal barley	Fed: Ca: CNPS: MSHCP:	none none 3.2 COV	March-June 5-1000	Occurs in coastal dunes, coastal scrub, valley and foothill grassland, and vernal pool habitats. Often found in areas with saline flats and depressions.	Presumed Absent: No suitable habitat was present on the Project Site.
Horkelia cuneata var. puberula mesa horkelia	Fed: Ca: CNPS: MSHCP:	none none 1B.1 COV	Feb-July (Sep) 70-810	Occurs in chaparral (maritime), cismontane woodland, and coastal scrub habitats. Often found in areas with sandy or gravelly soils.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, cismontane woodland or coastal scrub with sandy or gravelly soils.
Juglans californica Southern California black walnut	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	March-Aug 50-900	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Often found in alluvial areas.	Presumed Absent: No suitable habitat was present on the Project Site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	Fed: Ca: CNPS: MSHCP:	none none 1B.1 COV	Feb-June 1-1220	Occurs in marshes and swamps, playas, and vernal pool habitat.	Presumed Absent. No suitable habitat was present on the Project Site. Marshes and swamps (coastal salt), playas, valley and foothill grassland, and vernal pools.
Lepechinia cardiophylla heart-leaved pitcher sage	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	April-June 520-1370	Occurs in closed-cone coniferous forest, chaparral, and cismontane woodland habitats.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, foothill woodland, and closed-cone pine forest.

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Lilium humboldtii ssp. ***ocellatum*** ocellated Humboldt lily	Fed: Ca: CNPS: MSHCP:	none none 4.2 COV	March-Aug 30-1800	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland habitats. Often found in open areas.	Presumed Absent: No suitable habitat was present on the Project Site.
Monardella australis ssp. ***jokerstii*** Jokerst's monardella	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	July-Sept 1350-1750	Occurs in chaparral and lower montane coniferous forest habitats. Often in areas with steep scree or talus slopes between breccia. Found in areas with alluvial benches along drainages and washes.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in in non-wetlands, occasionally in wetlands.
Monardella hypoleuca ssp. ***intermedia*** intermediate monardella	Fed: Ca: CNPS: MSHCP:	none none 1B.3 none	April-Sep 400-1250	Occurs in chaparral, cismontane woodland, and occasionally in lower montane coniferous forest habitat. Often found in areas of understory.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in the understory chaparral, cismontane woodland, and sometimes in lower montane coniferous forest.
Monardella macrantha ssp. hallii Hall's monardella	Fed: Ca: CNPS: MSHCP:	none none 1B.3 COV	June-Oct 730-2195	Occurs in broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland habitats.	Presumed Absent. No suitable habitat was present on the Project Site. Elevation range does not exist within the Project Site.
Nama stenocarpa mud nama	Fed: Ca: CNPS: MSHCP:	none none 2B.2 COV	Jan-June 5-500	Occurs in marshes and swamps. Often in lake margins and riverbanks.	Presumed Absent: No suitable habitat was present on the Project Site.
Nolina cismontana chaparral nolina	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	(Mar) May-July 140-1275	Occurs in chaparral and coastal scrub habitats. Often found in areas with sandstone or gabbro.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral or coastal scrub.
Penstemon californicus California beardtongue	Fed: Ca: CNPS: MSHCP:	none none 1B.2 COV	May-June (Aug) 1170-2300	Occurs in chaparral, lower montane coniferous forest, and pinyon and juniper woodland habitats. Often found in sandy areas.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, yellow pine forest, or pinyon-juniper woodland.
Pentachaeta aurea ssp. ***allenii*** Allen's pentachaeta	Fed: Ca: CNPS: MSHCP:	none none 1B.1 none	March-June 75-520	Occurs in coastal scrub, and valley and foothill grassland habitats.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in valley grassland or southern oak woodland.
Phacelia keckii Santiago Peak phacelia	Fed: Ca: CNPS: MSHCP:	none none 1B.3 none	May-June 545-1600	Occurs in closed-cone coniferous forest and chaparral habitats.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral or closed-cone pine forest.
Phacelia stellaris Brand's star phacelia	Fed: Ca: CNPS: MSHCP:	none none 1B.3 COV	March-June 1-400	Occurs in coastal dunes and coastal scrub habitats.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in coastal strand or coastal sage scrub.

Scientific Name Common Name	Status		Bloom Period & Elevation (meters)	Habitat Requirements	Potential for Occurrence; Habitat
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	July-Dec 0-2100	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Often found in sandy and gravelly areas.	Presumed Absent: No suitable habitat was present on the Project Site.
Senecio aphanactis chaparral ragwort	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	Jan-May 15-800	Occurs in chaparral, cismontane woodland, and coastal scrub habitats. Sometimes found in alkaline areas.	Presumed Absent: No suitable habitat was present on the Project Site. Sometimes occurs in alkaline soils within chaparral, cismontane woodlands, and coastal scrub habitats.
Sidalcea neomexicana salt spring checkerbloom	Fed: Ca: CNPS: MSHCP:	none none 4.2 none	March-June 15-1530	Occurs in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas habitats. Often found in alkaline and mesic areas.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in red fir forest habitat.
Symphyotrichum defoliatum San Bernardino aster	Fed: Ca: CNPS: MSHCP:	none none 2B.2 none	July-Dec 2-2040	Occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland habitats. Often found in areas near ditches, streams, and springs.	Presumed Absent: No suitable habitat was present on the Project Site. Typically occurs in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas in alkaline and mesic soils.
Tortula californica California tortula moss	Fed: Ca: CNPS: MSHCP:	none none 1B.2 none	10-1460	Occurs in chenopod scrub and valley and foothill grassland habitats. Often found in areas of sandy soil.	Presumed Absent: No suitable habitat was present on the Project Site.

Federal Designations:
(Federal Endangered Species Act, USFWS)
END: federally listed, endangered
THR: federally listed, threatened

State designations:
(California Endangered Species Act, CDFG)
END: state-listed, endangered
THR: state-listed, threatened
Rare: CDFW Rare

Other Designations
(Western Riverside MSHCP)
COV: Covered

Source: California Natural Diversity Data Base (CNDDB) California Native Plant Society Electronic Inventory (CNPSEI) Black Star Canyon, Corona North, Corona South, Fontana, Guasti, Lake Mathews, Ontario, Prado Dam, and Riverside West.7.5-minute topographic quadrangles.

APPENDIX B

Sensitive Wildlife Species Potential for Occurrence

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
INVERTEBRATES				
Bombus crotchii Crotch bumble bee	Fed: Ca: MSHCP:	none CE none	Various grassland and scrub habitat types within coastal habitat areas	Presumed Absent. No suitable habitat was present on the Project Site.
Branchinecta sandiegonensis San Diego fairy shrimp	Fed: Ca: MSHCP:	END none COV	Found in grassed or mud bottomed pools or basalt flow depression pools in unplowed grasslands within vernal pools and similar ephemeral wetlands.	Presumed Absent. No suitable habitat was present on the Project Site.
Carolella busckana Busck's gallmoth	Fed: Ca: MSHCP:	none none none	Coastal sand dunes.	Presumed Absent. No suitable habitat was present on the Project Site.
Ceratochrysis longimala Desert cuckoo wasp	Fed: Ca: MSHCP:	none none none	Chaparral habitats	Presumed Absent. No suitable habitat was present on the Project Site.
Euphydryas editha quino quino checkerspot butterfly	Fed: Ca: MSHCP:	END none COV	Chaparral and coastal sage scrublands in Riverside and San Diego counties.	Presumed Absent. No suitable habitat was present on the Project Site.
Streptocephalus woottoni Riverside fairy shrimp	Fed: Ca: MSHCP:	END none COV	Occurs in vernal pools, tectonic swales, and earth slump basins in Riverside County.	Presumed Absent. No suitable habitat was present on the Project Site.
FISH				
Catostomus santaanae Santa Ana sucker	Fed: Ca: MSHCP:	THR SSC COV	Endemic to the Los Angeles basin and south coastal streams. Prefers sand-rubble-boulder bottoms with cool and clear water and algae.	Presumed Absent. No suitable habitat was present on the Project Site.
Gila orcutti arroyo chub	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in slow water stream sections with mud or sand bottoms.	Presumed Absent. No suitable habitat was present on the Project Site.
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	Fed: Ca: MSHCP:	END none COV	Typically occurs in slow water steams or rives.	Presumed Absent. No suitable habitat was present on the Project Site.
Rhinichthys osculus ssp. *3* Santa Ana speckled dace	Fed: Ca: MSHCP:	none none COV	Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Presumed Absent. No suitable habitat was present on the Project Site.
AMPHIBIANS				

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Anaxyrus californicus arroyo toad	Fed: Ca: MSHCP:	END SSC COV	Typical breeding habitat includes creek and pool and typical nonbreeding (terrestrial) habitat includes cropland/hedgerow, grassland, playa/salt flat, savanna, chaparral, and woodlands.	Presumed Absent. No suitable habitat was present on the Project Site.
Lithobates pipiens northern leopard frog	Fed: Ca: MSHCP:	none SSC none	Typically occurs near permanent or semi-permanent water in a variety of habitats	Presumed Absent. No suitable habitat was present on the Project Site.
Spea hammondii western spadefoot toad	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in rivers with sandy banks, willows, cottonwoods, and sycamores with loose, gravelly areas of streams in drier parts of range.	Presumed Absent. No suitable habitat was present on the Project Site.
Taricha torosa coast range newt	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in coastal drainages and breeds in ponds reservoirs and slow-moving streams.	Presumed Absent. No suitable habitat was present on the Project Site.
REPTILES				
Anniella stebbinsi southern California legless lizard	Fed: Ca: MSHCP:	none SSC none	Typically occurs in moist warm loose soil with plant cover in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	Presumed Absent. No suitable habitat was present on the Project Site.
Arizona elegans occidentalis California glossy snake	Fed: Ca: MSHCP:	none SSC none	Typically occurs in scrub or grassland habitat, often with loose or sandy soils.	Presumed Absent. No suitable habitat was present on the Project Site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in chaparral, woodland, and riparian areas with sparse foliage.	Presumed Absent. No suitable habitat was present on the Project Site.
Coleonyx variegatus abbotti San Diego banded gecko	Fed: Ca: MSHCP:	none SSC COV	Occurs in a wide variety of sage scrub and chaparral habitats, where suitable cover exists associated with granitic outcrops and boulder fields where there is also ground debris.	Presumed Absent. No suitable habitat was present on the Project Site.
Crotalus ruber red-diamond rattlesnake	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. Needs rodent burrows, cracks in rocks or surface cover objects.	Presumed Absent. No suitable habitat was present on the Project Site.

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Emys marmorata western pond turtle	Fed: Ca: MSHCP:	none SSC COV	Typically occurs in slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, and other long term water deposits, where abundant cover is available.	Presumed Absent. No suitable habitat was present on the Project Site.
Phrynosoma blainvillii coast horned lizard	Fed: Ca: MSHCP:	none SSC COV	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Prefers open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Presumed Absent. No suitable habitat was present on the Project Site.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: Ca: MSHCP:	none SSC none	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Presumed Absent. No suitable habitat was present on the Project Site.
Thamnophis hammondii two-striped gartersnake	Fed: Ca: MSHCP:	none SSC none	Typically occurs near permanent or semi-permanent water in a variety of habitats	Presumed Absent. No suitable habitat was present on the Project Site.
AVES				
Agelaius tricolor tricolored blackbird (nesting colony)	Fed: Ca: MSHCP:	none END COV	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	Presumed Absent. No suitable habitat was present on the Project Site.
Ammodramus savannarum grasshopper sparrow	Fed: Ca: MSHCP:	none FP COV	Nests on rock ledges, cliffs, and sometimes in large trees.	Presumed Absent. No suitable habitat was present on the Project Site.
Aquila chrysaetos golden eagle (nesting & wintering)	Fed: Ca: MSHCP:	none FP COV	Nests on rock ledges, cliffs, and sometimes in large trees.	Presumed Absent. No suitable habitat was present on the Project Site.
Asio otus long-eared owl (nesting)	Fed: Ca: MSHCP:	none SSC none	Nests in trees or tree cavities within deciduous and evergreen forests, orchards, wooded parks, farm woodlots, river woods, desert oases.	Presumed Absent. No suitable habitat was present on the Project Site.
Athene cunicularia burrowing owl (burrow sites and some wintering sites)	Fed: Ca: MSHCP:	none SSC COV	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	Presumed Absent. No suitable habitat was present on the Project Site.

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Buteo swainsoni Swainson's hawk	Fed: Ca: MSHCP:	none SSC COV	Typically breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural lands with groves of trees.	Presumed Absent. No suitable habitat was present on the Project Site.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	Fed: Ca: MSHCP:	none SSC COV	Inhabits coastal sage scrub and chaparral communities.	Presumed Absent. No suitable habitat was present on the Project Site.
Charadrius alexandrinus nivosus western snowy plover	Fed: Ca: MSHCP:	THR SSC none	Forages in dry or wet sandy beaches often among washed up kelp. Needs sandy, gravelly or friable soils above high tide line for nesting. May nest on sandy beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. Known protected population in the Tiajuana Estuary.	Presumed Absent. No suitable habitat was present on the Project Site.
Circus hudsonius northern harrier	Fed: Ca: MSHCP:	none SSC COV	Marshes, wetlands, agricultural fields, and grasslands. Nests in on ground among dense and tall vegegtation.	Low. Limited habitat was present on the Project Site.
Coccyzus americanus occidentalis western yellow-billed cuckoo (nesting)	Fed: Ca: MSHCP:	THR END COV	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Presumed Absent. No suitable habitat was present on the Project Site.
Coturnicops noveboracensis yellow rail	Fed: Ca: MSHCP:	none none none	Typically occurs in freshwater marshlands.	Presumed Absent. No suitable habitat was present on the Project Site.
Elanus leucurus white-tailed kite (nesting)	Fed: Ca: MSHCP:	none FP COV	Nests in trees, often near a marsh, usually 6-15 meters above the ground in branches near the top of a tree.	Presumed Absent. No suitable habitat was present on the Project Site.
Empidonax traillii extimus southwestern willow flycatcher (nesting)	Fed: Ca: MSHCP:	END END COV	Occurs in riparian woodlands in southern California.	Presumed Absent. No suitable habitat was present on the Project Site.
Haliaeetus leucocephalus bald eagle (nesting & wintering)	Fed: Ca: MSHCP:	DL END COV	Breeding habitat most commonly includes areas close to coastal areas, bays, rivers, lakes, reservoirs, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, or seabirds	Presumed Absent. No suitable habitat was present on the Project Site.

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Icteria virens yellow-breasted chat (nesting)	Fed: Ca: MSHCP:	none SSC COV	Occurs in second growth, shrubby old pastures, thickets, bushy areas, scrub, woodland undergrowth, and fence rows, including low wet places near streams, pond edges, or swamps; thickets with few tall trees; early successional stages of forest regeneration; commonly in sites close to human habitation.	Presumed Absent. No suitable habitat was present on the Project Site.
Laterallus jamaicensis coturniculus California black rail (nesting)	Fed: Ca: MSHCP:	none THR and FP none	Occurs in salt marshes, freshwater marshes, and wet meadows.	Presumed Absent. No suitable habitat was present on the Project Site.
Polioptila californica californica coastal California gnatcatcher	Fed: Ca: MSHCP:	THR SSC COV	Obligate, permanent resident of coastal sage scrub below 2500 feet in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes; not all areas classified as coastal sage scrub are occupied.	Presumed Absent. No suitable habitat was present on the Project Site.
Setophaga petechia yellow warbler	Fed: Ca: MSHCP:	none SSC COV	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Presumed Absent. No suitable habitat was present on the Project Site.
Spinus lawrencei Lawrence's goldfinch	Fed: Ca: MSHCP:	none none none	Open woodlands including oak and pine, chaparall, and pinyon-juniper woods. Nests in woodlands and foothills near water in semi-arid country.	Low.Limited habitat was present on the Project Site.
Vireo bellii pusillus least Bell's vireo (nesting)	Fed: Ca: MSHCP:	END END COV	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mulefat, mesquite.	Presumed Absent. No suitable habitat was present on the Project Site.
MAMMALS				

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Antrozous pallidus pallid bat	Fed: Ca: MSHCP:	none SSC none	Typically found in chaparral, and forages along the edges between shrubs and small open areas. Less commonly found in arid grassland, desert, and coastal scrub habitats.	Presumed Absent. No suitable habitat was present on the Project Site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: Ca: MSHCP:	none SSC COV	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego Co. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Presumed Absent. No suitable habitat was present on the Project Site.
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: Ca: MSHCP:	END SSC COV	Occurs in alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	Presumed Absent. No suitable habitat was present on the Project Site.
Dipodomys stephensi Stephen's kangaroo rat	Fed: Ca: MSHCP:	END THR COV	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil.	Presumed Absent. No suitable habitat was present on the Project Site.
Eumops perotis californicus western mastiff bat	Fed: Ca: MSHCP:	none SSC none	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.	Presumed Absent. No suitable habitat was present on the Project Site.
Lasiurus xanthinus western yellow bat	Fed: Ca: MSHCP:	none SSC none	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Presumed Absent. No suitable habitat was present on the Project Site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: Ca: MSHCP:	none SSC COV	Found in intermediate canopy stages of shrub habitats and open shrub/herbaceous and tree/herbaceous edges; coastal sage scrub habitats in southern California.	Presumed Absent. No suitable habitat was present on the Project Site.
Myotis yumanensis Yuma myotis	Fed: Ca: MSHCP:	none none none	Roosts near water in cliff crevices, caves, trees, buildings, and bridges. Occurs near water in riparian areas, moist woodlands and forests, and desert scrub.	Presumed Absent. No suitable habitat was present on the Project Site.

Scientific Name Common Name	Status		Habitat	Potential for Occurrence
Neotoma lepida intermedia San Diego desert woodrat	Fed: Ca: MSHCP:	none SSC COV	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops & rocky cliffs & slopes.	Presumed Absent. No suitable habitat was present on the Project Site.
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: Ca: MSHCP:	none SSC none	Roosts in caves, rock crevices in cliff faces, and man-made structures.	Presumed Absent. No suitable habitat was present on the Project Site.
Onychomys torridus ramona southern grasshopper mouse	Fed: Ca: MSHCP:	none SSC none	Low, semi-open, and open scrub habitats especially in arid desert. Habitats include chaparral, coastal sage scrub, and low sagebrush.	Low. Limited habitat was present on the Project Site.

Federal Designations (Federal Endangered Species Act, USFWS)
END: federally listed, endangered
THR: federally listed, threatened
DL: federally delisted

State designations: (California Endangered Species Act, CDFW)
END: state-listed, endangered
THR: state-listed, threatened
SSC: California Species of Special Concern
FP: Fully Protected species
CE: candidate endangered

Other Designations
COV: Covered under the Western Riverside MSHCP

Source: California Natural Diversity Data Base (CNDDB) California Native Plant Society Electronic Inventory (CNPSEI) Black Star Canyon, Corona North, Corona South, Fontana, Guasti, Lake Mathews, Ontario, Prado Dam, and Riverside West.7.5-minute topographic quadrangles.

APPENDIX C

Representative Site Photographs

Photo 1. Overview of site

Photo 2. Southern boundary along Conservation Eastment

Photo 3. Riparian Habitat within Joseph Canyon Wash

Photo 4. Portions of site with some native species growth

Photo 5. Non-native grassland within site

Photo 6. Ruderal habitat along with mule fat

Photo 7. Non-native grassland

Photo 8. Stormwater basin vegetation

APPENDIX D

Project GIS Files (Provided Separately)