

**HABITAT ASSESSMENT
AND
MSHCP CONSISTENCY ANALYSIS**

FOR

6869 WYNDHAM HILLS DRIVE DEVELOPMENT PROJECT

**LOCATED IN THE CITY OF RIVERSIDE,
RIVERSIDE COUNTY, CALIFORNIA**

Prepared For:

Guthrie Companies
1451 Research Park Drive, Suite 200
Riverside, California 92507
Contact: Jim Guthrie
Phone: (951) 334-9003

Prepared By:

Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 340-3851
Report Preparer: Lesley Lokovic-Gamber

**September 23, 2022
Revised October 2, 2023**

INFORMATION SUMMARY

- A. Report Date:** September 23, 2022
October 2, 2023
- B. Report Title:** Habitat Assessment and MSHCP Consistency Analysis for the 6869 Wyndham Hills Drive Development Project
- C. Project Site Location:** The Project site is located at latitude 33.928287° N and longitude - 117.372438° W (center reading) in Section 11, Township 3 South, and Range 5 West of the USGS Riverside East, California quadrangle, and is in the Hawarden Hills residential area northeast of Whistler Way, northwest of Chartwell Drive, and south of Hawarden Drive in the City of Riverside, Riverside County, California.
- D. Owner/Applicant:** Jim Guthrie
Guthrie Companies
1451 Research Drive, Suite 200
Riverside, California 92507
Phone: (951) 334-9003
[Email: Jim@GuthrieCompanies.com](mailto:Jim@GuthrieCompanies.com)
- E. Principal Investigator:** Glenn Lukos Associates, Inc.
1940 E. Deere Avenue, Suite 250
Santa Ana, California 92705
Phone: (949) 837-0404
Report Preparer: Lesley Lokovic-Gamber
- F. Individuals Conducting Fieldwork:** April Nakagawa, Lesley Lokovic-Gamber, David Smith, and Joseph Vu
- G. Report Summary:**

This report describes the current biological conditions for the 6869 Wyndham Hills Drive Development [Project] and evaluates impacts to biological resources from development of the Project.

The proposed Project is located within the Gavilan Habitat Management Unit (HMU) of the MSHCP but is not located within the MSHCP Criteria Area. The proposed Project is located within the burrowing owl survey area but is not located within any other MSHCP species survey areas. The proposed Project occurs within the historical limits of Alessandro Arroyo as depicted

in the City's grading plans¹, which extend east of the property boundary. Chapter 17.28 of the Riverside Municipal Code Minimum Grading Standards and General Requirements (Municipal Code) applies grading standards and requirements regarding hillside and arroyo grading. The Municipal Code requires that no development or grading of any kind shall be permitted within 50 feet of the limits of the Alessandro Arroyo or its associated tributaries; however, the Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area².

The City's Grading and Arroyo Preservation Ordinance was adopted in 1998. This ordinance was intended to minimize grading in hillside areas and to protect natural arroyos and their tributaries. The limits of arroyos were determined through the use and review of topographic maps and aerial photography. Areas with greater than 30 percent slopes were placed within the arroyo designation whereas flatter areas were left out. No biological field studies were conducted to establish the original arroyo boundaries; therefore, it was always understood by City staff that exceptions to the arroyo ordinance could be made if biological field studies concluded that the area in question did not have any biological impacts.

Glenn Lukos Associates, Inc. (GLA) biologists/regulatory specialists conducted general biological and site-specific surveys on March 4, 2020 and conducted focused burrowing owl (*Athene cunicularia*) surveys on July 29, and August 9, 20, and 27, 2021. GLA also conducted a jurisdictional delineation for riparian/riverine areas on March 4, 2020. Pursuant to MSHCP policies, biological surveys included habitat assessments for special status species and animal species. In addition, GLA conducted vegetation mapping, including potential MSHCP riparian/riverine areas, and an evaluation of federal and state jurisdictional waters. As part of the evaluation, GLA identified and updated the limits of the Alessandro Arroyo based on existing field conditions.

As noted above, the Project site is located within the MSHCP burrowing owl survey area and focused surveys were performed in 2021. Burrowing owls were not detected during the focused surveys. Since potential habitat for burrowing owl occurs within the Project site, a pre-construction burrowing owl survey will be performed within 30 days prior to Project construction activities.

The proposed Project may result in impacts to five sensitive species: coastal California gnatcatcher, loggerhead shrike, Swainson's hawk, white-tailed kite, and San Diego black-tailed jackrabbit. As all of these species are covered under the MSHCP, impacts to these species would be less than significant with consistency and participation with the MSHCP and payment of MSHCP development fees.

The Project site has the potential to support Stephens' Kangaroo Rat (SKR); however, the Project site occurs within the SKR Habitat Conservation Plan (RCHCA 1996) and the associated

¹ Chapter 17.08.011 of the City of Riverside's City Code of Ordinances depicts the historical limits of Alessandro Arroyo.

² Chapter 17.08.020 of the City of Riverside's City Municipal Code for Hillside/arroyo grading.

SKR Fee Assessment Area. Impacts to SKR are covered with payment of the SKR fee without additional surveys, conservation, and/or mitigation requirements.

The proposed Project will not result in any impacts to MSHCP riparian/riverine areas; therefore, a Determination of Biologically Equivalent or Superior Preservation (DBESP) is not required. As noted above, the proposed Project is subject to the City Municipal Code for hillside/arroyo grading. The proposed Project would not result in any impacts to the Alessandro Arroyo or its associated tributaries. However, portions of the proposed Project would occur within approximately 35-45 feet of a tributary to the Alessandro Arroyo (Feature 1) in the southern portion of the site. As such, Project development will require City approval.

The proposed Project would result in the loss of habitat for special-status animal species, including MSHCP Covered Species. Impacts to Covered Species would be less than significant with consistency and participation with the MSHCP and payment of MSHCP fees.

The proposed Project would be consistent with all applicable MSHCP policies, specifically pertaining to the Project's relationship to reserve assembly, *Section 6.1.2* (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), *Section 6.1.3* (Protection of Narrow Endemic Plant Species), *Section 6.1.4* (Guidelines Pertaining to the Urban/Wildlands Interface), and *Section 6.3.2* (Additional Survey Needs and Procedures). Through compliance with the MSHCP, the Plan would fully mitigate for potentially significant impacts under CEQA that would occur by the Project, including potential cumulative impacts.

TABLE OF CONTENTS

	Page #
1.0 INTRODUCTION.....	1
1.1 Background and Scope of Work.....	1
1.2 Project Location	1
1.3 Project Description	2
1.4 Relationship of the Study Area to the MSHCP	2
1.4.1 MSHCP Background.....	2
1.4.2 Relationship of the Study Area to the MSHCP	3
2.0 METHODOLOGY.....	4
2.1 Botanical Resources.....	5
2.1.1 Literature Search	5
2.1.2 Vegetation Mapping	5
2.1.3 Special-Status Plant Species and Habitats Evaluated for the Project Site.....	5
2.1.4 Botanical Surveys.....	6
2.2 Wildlife Resources.....	6
2.2.1 General Surveys.....	7
2.2.2 Special-Status Animal Species Evaluated for the Project Site	7
2.2.3 Habitat Assessment for Special-Status Animal Species.....	7
2.2.4 Focused Surveys for Special-Status Animals Species.....	7
2.3 MSHCP Riparian/Riverine Areas and Vernal Pools	8
2.4 Grading and Arroyo Preservation Ordinance	9
3.0 REGULATORY SETTING	10
3.1 Endangered Species Acts.....	10
3.2 California Environmental Quality Act.....	12
3.3 Jurisdictional Waters	14
3.4 Grading and Arroyo Preservation Ordinance	19
4.0 RESULTS	20
4.1 Existing Conditions	20
4.2 Vegetation Mapping	20
4.4 Special-Status Plants.....	22
4.5 Special-Status Animals.....	26

4.5.1	Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Site	32
4.5.2	Special-Status Wildlife Species Not Observed but with a Potential to Occur at the Project Site	32
4.5.3	Raptor Use	35
4.6	Nesting Birds	36
4.7	Wildlife Linkages/ Corridors and Nursery Sites	36
4.8	Critical Habitat.....	37
4.9	Jurisdictional Waters	37
4.10	MSHCP Riparian/Riverine Areas and Vernal Pools	37
4.11	Mapped Grading and Arroyo Preservation Ordinance Jurisdiction	38
5.0	IMPACT ANALYSIS	38
5.1	California Environmental Quality Act (CEQA)	39
5.2	Special-Status Species	41
5.3	Sensitive Vegetation Communities.....	42
5.4	Wetlands	42
5.5	Wildlife Movement and Native Wildlife Nursery Sites	42
5.6	Local Policies or Ordinances	43
5.7	Habitat Conservation Plans.....	44
5.8	Jurisdictional Waters	44
5.9	Indirect Impacts to Biological Resources	44
5.10	Cumulative Impacts to Biological Resources.....	45
6.0	CONDITIONS OF APPROVAL	46
6.1	Burrowing Owl	46
6.2	Nesting Birds	46
6.3	Local Policies/Ordinances	47
7.0	MSHCP CONSISTENCY ANALYSIS	47
7.1	Project Relationship to Reserve Assembly.....	47
7.2	Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools	47
7.3	Protection of Narrow Endemic Plants	48
7.4	Guidelines Pertaining to the Urban/Wildland Interface	48
7.5	Additional Survey Needs and Procedures	49
7.6	Conclusion of MSHCP Consistency.....	49
8.0	REFERENCES.....	50
9.0	CERTIFICATION	53

TABLES

Table 2-1. Summary of Biological Surveys for the Project	4
Table 2-2. Summary of Burrowing Owl Surveys	8
Table 3-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions	14
Table 4-1. Summary of Vegetation/Land Use Types for the Project Site	21
Table 4-2. Special-Status Plants Evaluated for the Property.	23
Table 4-3. Special-Status Animals Evaluated for the Property.....	26
Table 5-1. Summary of Vegetation/Land Use Impacts for the Project Site.....	42

EXHIBITS

Exhibit 1 – Regional Map	
Exhibit 2 – Vicinity Map	
Exhibit 3 – Site Plan Map	
Exhibit 4 – MSHCP Overlay Map	
Exhibit 5 – Vegetation/Impact Map	
Exhibit 6 – Site Photographs	
Exhibit 7 – MSHCP Riparian Riverine Areas Map	
Exhibit 8 – Burrowing Owl Survey Area Map	
Exhibit 9 – Soils Map	
Exhibit 10 – Arroyo Comparison Map	
Exhibit 11 – Project Grading Plans with Arroyo Limits and 50-Foot Buffer Overlay	

APPENDICES

Appendix A	Floral Compendium
Appendix B	Faunal Compendium

1.0 INTRODUCTION

1.1 Background and Scope of Work

This document provides the results of general biological surveys and focused biological surveys for the approximately 17.62-acre Wyndham Hills Drive Development Project (the Project) and its associated 0.28-acre offsite impact area located in the City of Riverside, Riverside County, California (collectively, the Project site). This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the California Environmental Quality Act (CEQA), and Chapter 17.28 of the City of Riverside (City) Municipal Code Minimum Grading Standards and General Requirements (Municipal Code).

The scope of this report includes a discussion of existing site conditions for the approximate 17.90-acre Project site, all methods employed regarding the general biological surveys and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and other applicable agencies/organizations.

The field study focused on a number of primary objectives that would comply with CEQA and MSHCP requirements, including (1) general biological surveys and vegetation mapping; (2) habitat assessments for special-status plant species (including species with applicable MSHCP survey requirements); (3) habitat assessments for special-status wildlife species (including species with applicable MSHCP survey requirements); (4) assessment for the presence of wildlife movement and colonial nursery sites; and (5) assessments for MSHCP riparian/riverine areas and vernal pools. Observations of all plant and wildlife species were recorded during the biological studies and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium.

1.2 Project Location

The Project site comprises approximately 17.90 acres (17.62 acres onsite and 0.28 acre offsite) in the City of Riverside, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section 11, Township 3 South, and Range 5 West, of the U.S. Geological Survey (USGS) 7.5-minute quadrangle map Riverside East (dated 1967 and photorevised in 1980) [Exhibit 2 – Vicinity Map]. The Project is within the Hawarden Hills residential area and occurs northeast of Whistler Way, northwest of Chartwell Drive, and south of Hawarden Drive [Exhibit 3 – Site Plan Map]. The 0.28-acre offsite improvement area is located at the southeastern boundary of the Project and connects the Project with Chartwell Drive. The majority of adjacent land use to the north, south, and west consists of residential development.

1.3 Project Description

For this report, the *Project site* consists of the lands owned/controlled by the Project proponent (17.62 acres) as well as an offsite permanent impact area (0.28 acre), and totals 17.90 acres [Exhibit 3 – Site Plan Map]. This report analyzes the *Project Footprint*, which is the combined onsite and offsite Project impact area totaling 1.73 acres (1.45 acres onsite and 0.28 acre offsite). The 17.62-acre onsite Project is composed of Assessor’s Parcel Numbers (APNs): 241-210-011 and 241-210-013. The 0.28-acre offsite Project Footprint consists of a portion of APN 241-220-021. For this document, all direct impacts are assumed to be permanent.

The Project consists of a single-family residence with associated infrastructure, and open space areas. Off-site improvements would include the construction of a driveway along an existing ingress/egress easement from the intersection of Chartwell Drive and Wyndham Hill Drive to the proposed development.

1.4 Relationship of the Project Site to the MSHCP

1.4.1 MSHCP Background

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

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

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

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

1.4.2 Relationship of the Project Site to the MSHCP

The Project site is located within the Gavilan Habitat Management Unit (HMU) of the MSHCP but is not located within the MSHCP Criteria Area [Exhibit 4 – MSHCP Overlay Map] or existing Conserved Lands. The Project is located within the MSHCP Burrowing Owl Survey Area, but is not located within the NEPSSA, the CAPSSA, the Mammal or Amphibian Survey Areas, or Core and Linkage areas.

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

1.5 Grading and Arroyo Preservation Ordinance

Chapter 17.28 of the Municipal Code applies grading standards and requirements regarding hillside and arroyo grading. The Municipal Code requires that no development or grading of any kind shall be permitted within 50 feet of the limits of the Alessandro Arroyo or its associated tributaries; however, the Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area³,

The City’s Grading and Arroyo Preservation Ordinance was adopted in 1998. This ordinance was intended to minimize grading in hillside areas and to protect natural arroyos and their tributaries. The limits of arroyos were determined through the use and review of topographic maps and aerial photography. Areas with greater than 30 percent slopes were placed within the arroyo designation whereas flatter areas were left out. No biological field studies were

³ Chapter 17.08.020 of the City of Riverside’s City Municipal Code for Hillside/arroyo grading.

conducted to establish the original arroyo boundaries; therefore, it was always understood by City staff that exceptions to the arroyo ordinance could be made if biological field studies concluded that the area in question did not have any biological impacts.

2.0 METHODOLOGY

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

- Delineation of riparian/riverine areas and vernal pools policy subject to the MSHCP;
- Performance of vegetation mapping for the Project site;
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA and the MSHCP.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDDB (CDFW 2020 and 2021), the CNPS 8th edition online inventory (CNPS 2020 and 2021), Natural Resource Conservation Service soil data (NRCS 2020 and 2021), MSHCP species and habitat maps and sensitive soil maps (Dudek 2003), other pertinent literature, and knowledge of the region. Site-specific general surveys were conducted on foot in the proposed development areas for each target plant or animal species identified below. Table 2-1 provides a summary list of survey dates, survey types and personnel.

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

Survey Type	2019/2020 Survey Dates	Biologist(s)
General Biological Survey	03/04/2020	AN
	07/29/2021	JV
Evaluation of MSHCP Riparian/Riverine Areas	3/04/2020	AN
Evaluation of MSHCP Vernal Pools and Fairy Shrimp Habitat	03/04/2020	AN
General Botanical Survey	3/04/2020	AN
Focused Burrowing Owl Surveys	7/29/21	JV
	8/9/2021	JV
	8/20/2021	JV
	8/27/2021	JV

AN – April Nakagawa, JV – Joseph Vu

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

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

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

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

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

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

2.1 Botanical Resources

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

2.1.1 Literature Search

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

- California Native Plant Society, Rare Plant Program. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) (CNPS 2020); and
- CNDDDB for the USGS 7.5' quadrangle(s): Riverside East and all surrounding quadrangles (CDFW 2020).

2.1.2 Vegetation Mapping

Vegetation communities within the Project site were mapped according to Holland (1986) when possible. Plant communities were mapped in the field directly onto a 200-scale (1”=200’) aerial photograph. A vegetation map for the Project site is included as Exhibit 5 – Vegetation Map. Representative site photographs are included as [Exhibit 6 – Site Photographs].

2.1.3 Special-Status Plant Species and Habitats Evaluated for the Project Site

A literature search was conducted to obtain a list of special-status plants with the potential to occur within the Project site. The CNDDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to

develop a list of target species for the survey program included the CNPS online inventory (2020) and the MSHCP (Dudek 2003).

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

The Project site is not located within the MSHCP plant survey areas (i.e., NEPSSA or CAPSSA). As such, focused plant surveys are not required pursuant to the MSHCP.

2.1.4 Botanical Surveys

GLA biologist April Nakagawa visited the site on March 4, 2020 to conduct a general botanical survey. The survey was conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2010, Neslon 1984, USFWS 2000). As applicable, the survey was conducted at an appropriate time based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the Project site. The survey was conducted by following meandering transects within target areas of suitable habitat. All plant species encountered during the field survey were identified and recorded following the above-referenced guidelines. A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

2.2 Wildlife Resources

Wildlife species were evaluated and detected during the field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visits. A complete list of wildlife species observed within the Project site is provided in Appendix B. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians 6th Edition, Collins and Taggart (2009) for amphibians and reptiles, and the American Ornithologists' Society Online Checklist (2020) for birds. The methodology (including any applicable survey protocols) utilized to conduct general survey(s), habitat assessment(s), and/or focused surveys for special-status animals are included below.

2.2.1 General Surveys

Birds

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

Mammals

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

Reptiles and Amphibians

During general biological and reconnaissance surveys within the Project site, reptiles and amphibians were identified incidentally during surveys within each habitat type. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

2.2.2 Special-Status Animal Species Evaluated for the Project Site

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

2.2.3 Habitat Assessment for Special-Status Animal Species

GLA biologists conducted habitat assessments for special-status animal species on March 4, 2020 and July 29, 2021. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site.

2.2.4 Focused Surveys for Special-Status Animals Species

Burrowing Owl

The majority of the Project site is located within the MSHCP survey area for the burrowing owl (*Athene cunicularia*). GLA biologist Joseph Vu conducted focused surveys for the burrowing owl for all suitable habitat areas within the Project site. Surveys were conducted in accordance with survey guidelines described in the 2006 MSHCP Burrowing Owl Survey Instructions. The

guidelines stipulate that four focused survey visits be conducted on separate dates between March 1 and August 31. Within areas of suitable habitat, the MSHCP first requires a focused burrow survey to map all potentially suitable burrows. The focused burrow survey was conducted on July 29, 2021. Focused burrowing owl surveys were conducted on July 29, August 9, August 20, and August 27, 2021. The burrowing owl survey visits were generally conducted within a survey window from one hour prior to sunrise to two hours after sunrise.

The surveys were conducted during weather that was conducive to observing owls outside their burrows and detecting burrowing owl sign and not during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Additionally, all work was performed more than 5 days after a rain event.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Exhibit 8 identifies the burrowing owl survey areas at the Project site. Transects were spaced between 22 feet and 65 feet apart, adjusting for vegetation height and density, in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 320 feet along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Transect locations are provided on Exhibit 8, along with the 500-foot buffer area. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Table 2-2. Summary of Burrowing Owl Surveys

Survey Date	Biologist(s)	Start/End Time	Start/End Temperature (°F)	Start/End Wind Speed (mph)	Cloud Cover (%)
07/29/2021	JV	0550/0800	69/71	1-1	0%
08/09/2021	JV	0600/0810	66/68	0-0	0%
08/20/2021	JV	0610/0815	65/70	2-4	100%
08/27/2021	JV	0320/0810	70/75	8-4	0%

JV = Joseph Vu

2.3 MSHCP Riparian/Riverine Areas and Vernal Pools

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

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

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

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

GLA surveyed the Project site for riparian/riverine areas and vernal pool/seasonal pool habitat, including features with the potential to support fairy shrimp. To assess for vernal/seasonal pools (including fairy shrimp habitat), GLA biologists evaluated the topography of the site, including whether the site contained depressional features/topography with the potential to become inundated; whether the site contained soils associated with vernal/seasonal pools; and whether the site supported plants that suggested areas of localized ponding. The site was evaluated on March 4, 2020.

2.4 Grading and Arroyo Preservation Ordinance

Chapter 17.28 of the Municipal Code applies grading standards and requirements regarding hillside and arroyo grading. The Municipal Code requires that no development or grading of any kind shall be permitted within 50 feet of the limits of the Alessandro Arroyo or its associated tributaries; however, the Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area.⁴

The City's Grading and Arroyo Preservation Ordinance was adopted in 1998. This ordinance was intended to minimize grading in hillside areas and to protect natural arroyos and their tributaries. The limits of arroyos were determined through the use and review of topographic maps and aerial photography. Areas with greater than 30 percent slopes were placed within the arroyo designation whereas flatter areas were left out. No biological field studies were conducted to establish the original arroyo boundaries; therefore, it was always understood by City staff that exceptions to the arroyo ordinance could be made if biological field studies concluded that the area in question would not have any biological impacts.

GLA surveyed the Project site to determine the physical limits of the Alessandro Arroyo and its tributary [Feature 1]. GLA biologists evaluated the topography of the site, whether the site contained soils associated with wetland areas and arroyos, and whether or not the site supported plants that suggested the presence of riparian, riverine, or wetland habitat. The site was evaluated on March 4, 2020 to determine the physical limits of the arroyo and its associated tributary.

⁴Chapter 17.08.020 of the City of Riverside's City Municipal Code for Hillside/arroyo grading.

3.0 REGULATORY SETTING

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

3.1 Endangered Species Acts

3.1.1 California Endangered Species Act

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

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

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any

species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations

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

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

3.1.4 Take Authorizations Pursuant to the MSHCP

The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the federal and state wildlife agencies and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed

species) for special-status plant and animal species, as well as conditions for impacts to sensitive species pursuant to Section 10(a) of the FESA.

Through agreements with the U.S. Fish and Wildlife Service (USFWS) and the CDFW, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 “Covered Species” designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, through project participation with the MSHCP, the MSHCP provides mitigation for project-specific impacts to Covered Species so that the impacts would be reduced to below a level of significance pursuant to CEQA. As noted above, project-specific survey requirements exist for species designated as “Covered Species not yet adequately conserved”. These include Narrow Endemic Plant Species, as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species identified by the Criteria Area Species Survey Areas (CASSA); animal species as identified by survey area; and plant and animal species associated with riparian/riverine areas and vernal pool habitats (*Volume I, Section 6.1.2* of the MSHCP document).

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

3.2 California Environmental Quality Act

3.2.1 CEQA Guidelines Section 15380

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

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

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species

are no longer maintained in list form by the USFWS, nor are they formally protected. This term is employed in this document but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

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

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

State-Designated Special-Status Species

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

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

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

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 3-1.

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

CNPS Rank	Comments
Rank 1A – Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	Thought to be extinct in California based on a lack of observation or detection for many years.
Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
Rank 2A – Plants presumed Extirpated in California, But Common Elsewhere	Species that are presumed extinct in California but more common outside of California
Rank 2B – Plants Rare, Threatened or Endangered in California, But More Common Elsewhere	Species that are rare in California but more common outside of California
Rank 3 – Plants About Which More Information Is Needed (A Review List)	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific rank. In addition, many of the Rank 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
Rank 4 – Plants of Limited Distribution (A Watch List)	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for Rank 3 species, CNPS lacks survey data to accurately determine status in California. Many species have been placed on Rank 4 in previous editions of the “Inventory” and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	Comments
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

3.3 Jurisdictional Waters

3.3.1 Army Corps of Engineers

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

- (1) Waters which are:
 - (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
 - (ii) The territorial seas; or
 - (iii) Interstate waters;
- (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
- (3) Tributaries of waters identified in paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
- (4) Wetlands adjacent to the following waters:
 - (i) Waters identified in paragraph (a)(1) of this section; or
 - (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
- (5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Corps regulations at 33 CFR Part 328.3(b) exclude the following from being “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(2) through (5) above:

- (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
- (2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area’s status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;
- (3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
- (4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
- (5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- (6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

- (7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
- (8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(4) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

“Adjacent” wetlands are defined by 33 CFR 328.3(c)(2) as having a “continuous surface connection” to other waters of the United States.

Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the Arid West 2016 Regional Wetland Plant List⁵⁶);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season

⁵ Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

⁶ Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

3.3.2. Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States⁷ and waters of the State. Waters of the United States are defined above in Section II.A and waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows: “An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.”

The following wetlands are waters of the State:

1. Natural wetlands;
2. Wetlands created by modification of a surface water of the state;⁸ and

⁷ Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code of Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be “waters of the U.S.” in an approved jurisdictional determination; “waters of the U.S.” identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of “waters of the U.S.” or any current or historic federal regulation defining “waters of the U.S.” under the federal Clean Water Act.

⁸ “Created by modification of a surface water of the state” means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

3. Artificial wetlands⁹ that meet any of the following criteria:

- a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
- b. Specifically identified in a water quality control plan as a wetland or other water of the state;
- c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
- d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,
 - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
 - iv. Treatment of surface waters,
 - v. Agricultural crop irrigation or stock watering,
 - vi. Fire suppression,
 - vii. Industrial processing or cooling,
 - . Active surface mining – even if the site is managed for interim wetlands functions and values,
 - viii. Log storage,
 - ix. Treatment, storage, or distribution of recycled water, or
 - x. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
 - xi. Fields flooded for rice growing.¹⁰

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

⁹ Artificial wetlands are wetlands that result from human activity.

¹⁰ Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1617 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

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

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

The Project site contains the Alessandro Arroyo and Feature 1, which are subject to the jurisdictions of the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (Regional Board) pursuant to Section 401 of the CWA, and/or CDFW pursuant to Section 1600 of the California Fish and Game Code. Although a formal jurisdictional delineation was not conducted, the limits of potential MSHCP riverine/riparian habitat, as well as Corps, CDFW, and/or Regional Board jurisdiction, was reviewed in the field to verify that the Project would not result in an impact to any of these jurisdictions. Field surveys concluded that none of these jurisdictions would be impacted by the project. Please refer to Exhibit 7 for a depiction of these features' locations within the Project site.

3.4 Grading and Arroyo Preservation Ordinance

Chapter 17.28 of the Municipal Code applies grading standards and requirements regarding hillside and arroyo grading. The Municipal Code requires that no development or grading of any kind shall be permitted within 50 feet of the limits of the Alessandro Arroyo or its associated tributaries; however, the Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area¹¹.

The City's Grading and Arroyo Preservation Ordinance was adopted in 1998. This ordinance was intended to minimize grading in hillside areas and to protect natural arroyos and their tributaries. The limits of arroyos were determined through the use and review of topographic

¹¹ Chapter 17.08.020 of the City of Riverside's City Municipal Code for Hillside/arroyo grading.

maps and aerial photography. Areas with greater than 30 percent slopes were placed within the arroyo designation whereas flatter areas were left out. No biological field studies were conducted to establish the original arroyo boundaries; therefore, it was always understood by City staff that exceptions to the arroyo ordinance could be made if biological field studies concluded that the area in question did not have any biological impacts.

4.0 RESULTS

This section provides the results of general biological surveys, vegetation mapping, habitat assessments for special-status plants and a general botanical survey, habitat assessments and focused surveys for special-status animals, and an assessment for MSHCP riparian/riverine areas and vernal pools.

4.1 Existing Conditions

The Project site consists of undeveloped land that includes the western portion of Alessandro Arroyo as depicted by the City. The site contains the active low-flow channel and upper terraces of the Alessandro Arroyo and an unnamed drainage (Feature 1) along the southern Project boundary and the northwestern portion of a hill to the southeast [Exhibit 7 – MSHCP Riparian/Riverine Areas Map]. A small portion of a citrus grove and an access road occur in the southeastern corner of the site. The Project site slopes gently to the west with onsite elevation ranging from approximately 1,020 feet above mean sea level (AMSL) in Alessandro Arroyo to approximately 1,100 feet AMSL at the highest point of the hill. Representative photographs are included as Exhibit 6.

The Soil Conservation Service (SCS)¹² has mapped the following soil types as occurring in association with the Project site: Arlington loam, 2 to 5 percent slopes; Arlington loam, deep, 5 to 15 percent slopes; Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded; Gorgonio loamy sand, channeled, 2 to 15 percent slopes; Hanford coarse sandy loam, 2 to 8 percent slopes, and Terrace escarpments. A soils map is provided as Exhibit 9.

4.2 Vegetation Mapping

The Project site supports the following vegetation/land use types: Disturbed/Developed, Mulefat Scrub, Non-Native Grassland, Ornamental, Riversidean Sage Scrub, and Southern Willow Scrub. Table 4-1 provides a summary of the vegetation types and their corresponding acreage. Descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 5. Photographs depicting the site are shown in Exhibit 6.

¹² SCS is now known as the National Resource Conservation Service or NRCS.

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

VEGETATION/LAND USE TYPE	ONSITE AREAS (acres)	OFFSITE IMPACT AREA (acres)	TOTAL (acres)
Disturbed/Developed	0.36	0.28	0.64
Mulefat Scrub	2.23	0	2.23
Non-Native Grassland	4.40	0	4.40
Ornamental	0.49	0	0.49
Riversidean Sage Scrub	7.96	0	7.96
Southern Willow Scrub	2.18	0	2.18
Total	17.62	0.28	17.90

Disturbed/Developed

The Project site supports 0.64 acre of disturbed/developed areas, including 0.36 acre onsite and 0.28 acre offsite. These areas consist of vehicular access roads, structures, and existing paved roadways.

Mulefat Scrub

The Project site supports 2.23 acres of mulefat scrub in association with the Alessandro Arroyo and Feature 1. Mulefat scrub associated with these features consists predominantly of mulefat, blue elderberry, mustards, and rough cocklebur (*Xanthium strumarium*). Other noteworthy species observed include black willow, Mexican fan palm (*Washingtonia robusta*), poison hemlock (*Conium maculatum*), tamarisk (*Tamarix ramosissima*), and non-native grasses. Mulefat scrub generally decreases in density and exhibits more upland vegetation moving southerly from the arroyo towards the center of the Project site. Noteworthy upland species in these areas include fourwing saltbush, tarragon (*Artemisia dranunculus*), and white horehound (*Marrubium vulgare*). Mulefat scrub is considered riparian habitat; refer below for additional discussion regarding MSHCP riparian areas.

Non-Native Grassland

The Project site supports 4.40 acres of non-naive grassland. Non-native annual grassland occurs on the majority of the proposed onsite impact area, the downslope portions of the hill, on the upland terraces of Alessandro Arroyo, and in association with rocky areas in the southern portion of the Project site. These areas are primarily vegetated with non-native grasses and herbaceous annuals including baby blue eyes (*Nemophila menziesii*), big leaf filaree (*Erodium botrys*), black mustard (*Brassica nigra*), blue dicks (*Dichelostemma capitatum*), common fiddleneck, common Mediterranean grass, common phacelia (*Phacelia distans*), man-root (*Marah* sp.), red brome, red maids (*Calandrinia ciliata*), and summer mustard. Other noteworthy species observed include coyote melon (*Cucurbita palmata*), doveweed (*Croton setiger*), lanceleaf dudleya (*Dudleya lanceolata*), and western sunflower (*Helianthus annuus*).

Ornamental

The Project site contains 0.49 acre of lands supporting trees that were planted at the site or that established from other ornamental plantings, all of which are associated with the onsite portion of the Project. These areas primarily consist of non-native or planted tree species occurring in the western and southern portions of the Project site. Dominant plant species observed included eucalyptus (*Eucalyptus camaldulensis*) and Peruvian pepper tree (*Schinus molle*).

Riversidean Sage Scrub

The Project site supports 7.96 acres of Riversidean sage scrub, all of which is associated with the onsite portion of the Project. Riversidean sage scrub occurs in the southern and eastern portions of the Project site, primarily in association with the hill and the southeastern Project boundary. These areas are primarily vegetated with brittlebush (*Encelia farinosa*), California buckwheat (*Erigonium fasciculatum*), California sagebrush (*Artemisia californica*), common fiddleneck (*Amsinckia menziesii*), red stem filaree (*Erodium cicutarium*), and summer mustard (*Hirschfeldia incana*). Other noteworthy species include fourwing saltbush (*Atriplex canescens*), non-native grasses, popcornflower (*Plagiobothrys* sp.), rough cocklebur (*Xanthium strumarium*), Russian thistle (*Salsola tragus*), tocalote (*Centaurea melitensis*), and white sage (*Salvia apiana*). Brittlebush is the dominant Riversidean sage scrub species in the Project site's current condition. Along the hill's southwest toe of slope, Riversidean sage scrub transitions to a patchy combination of upland species and riparian species which occur in association with Feature 1.

Southern Willow Scrub

The Project site supports 2.18 acres of southern willow scrub, all of which are associated with the Alessandro Arroyo. Dominant species include black willow (*Salix gooddingii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), chairmaker's bulrush (*Schoenoplectus americanus*), mulefat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica*), toyon (*Heteromeles arbutifolia*), and watercress (*Nasturtium officinale*). Southern willow scrub is considered riparian habitat; refer below for additional discussion regarding MSHCP riparian areas.

4.3 Special-Status Habitats

A review of the March 2020 CNDDDB identified the following special-status habitats as occurring within the vicinity of the property: Riversidean alluvial fan sage scrub, southern California arroyo chub/Santa Ana sucker stream, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, and southern willow scrub. The Project site contains one of the special-status habitats identified above (southern willow scrub), but this habitat is being fully avoided onsite (see Exhibits 5 and 7).

4.4 Special-Status Plants

No special status plant species were identified during GLA's general survey, and none are expected to occur due to a lack of suitable habitat and the level of disturbance. Furthermore, the Project site does not occur within a NEPSSA or CAPSSA, and therefore, rare plant surveys are not required pursuant to the MSHCP. Table 4-2 provides a summary of all plants considered for this analysis. Species were evaluated based on the following factors: 1) species identified by the CNDDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Project site, 2) applicable MSHCP survey areas, and 3) any other special-status species that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs onsite.

Table 4-2. Special-Status Plants Evaluated for the Property.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Alvin Meadow bedstraw <i>Galium californicum</i> ssp. <i>primum</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(f)	Granitic and sandy soils in chaparral and lower montane coniferous forest.	Does not occur onsite due to a lack of suitable habitat.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Playas, vernal pools, marshes and swamps (coastal salt).	Does not occur onsite due to a lack of suitable habitat.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Often in burns in chaparral and coastal scrub.	Does not occur onsite due to a lack of suitable habitat.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(d)	Alkaline soils in coastal sage scrub, coastal bluff scrub.	Does not occur onsite due to a lack of suitable habitat.
Gambel's water cress <i>Nasturtium gambelii</i>	Federal: FE State: ST CNPS: Rank 1B.1	Marshes and swamps (freshwater or brackish).	Does not occur onsite due to a lack of suitable habitat.
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	Federal: None State: None CNPS: Rank 3.1 MSHCP(d)	Valley and foothill grassland, vernal pools (alkaline soils).	Does not occur onsite due to a lack of suitable habitat.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	Does not occur onsite due to a lack of suitable habitat.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: Rank 1B.2 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Does not occur onsite due to a lack of suitable habitat.
Marsh sandwort <i>Arenaria paludicola</i>	Federal: FE State: SE CNPS: Rank 1B.1	Bogs and fens, freshwater marshes and swamps.	Does not occur onsite due to a lack of suitable habitat.
Munz's onion <i>Allium munzii</i>	Federal: FE State: ST CNPS: Rank 1B.1 MSHCP(b)	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands	Does not occur onsite due to a lack of suitable habitat.
Nevin's barberry <i>Berberis nevinii</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(d)	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub.	Not expected to occur onsite due to a lack of suitable habitat.
Palmer's grapplinghook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Parish's brittlescale <i>Atriplex parishii</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Chenopod scrub, playas, vernal pools.	Does not occur onsite due to a lack of suitable habitat.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Not expected to occur onsite due to a lack of suitable habitat.
Payson's jewelflower <i>Caulanthus simulans</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Sandy or granitic soils in chaparral and coastal scrub.	Does not occur onsite due to a lack of suitable habitat.
Peninsular spineflower <i>Chorizanthe leptotheca</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Alluvial fan, granitic. Chaparral, coastal scrub, lower montane coniferous forest.	Not expected to occur onsite due to a lack of suitable habitat.
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Does not occur onsite due to a lack of suitable habitat.
Salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Federal: FE State: SE CNPS: Rank 1B.2	Coastal dune, coastal salt marshes and swamps.	Does not occur onsite due to a lack of suitable habitat.
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(b)	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	Not expected to occur onsite due to a lack of suitable habitat.
San Jacinto Valley crowscale <i>Atriplex coronata</i> var. <i>notatior</i>	Federal: FE State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Does not occur onsite due to a lack of suitable habitat.
Santa Ana River woolly star <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP	Alluvial fan sage scrub, chaparral. Occurring on sandy or rocky soils.	Not expected to occur onsite due to a lack of suitable habitat.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: Rank 1B.1 MSHCP(b)	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Not expected to occur onsite due to a lack of suitable habitat.
Small-flowered microseris <i>Microseris douglasii</i> ssp. <i>platycarpa</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Cismontane woodland, coastal sage scrub, valley and foothill grassland, vernal pools. Occurring on clay soils.	Does not occur onsite due to a lack of suitable habitat.
Small-flowered morning-glory <i>Convolvulus simulans</i>	Federal: None State: None CNPS: Rank 4.2 MSHCP	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Does not occur onsite due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: Rank 1B.1 MSHCP(d)	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	Not expected to occur onsite due to a lack of suitable habitat.
Spreading navarretia <i>Navarretia fossalis</i>	Federal: FT State: None CNPS: Rank 1B.1 MSHCP(b)	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	Does not occur onsite due to a lack of suitable habitat.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: Rank 1B.1 MSHCP(d)	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools.	Does not occur onsite due to a lack of suitable habitat.
Vernal barley <i>Hordeum intercedens</i>	Federal: None State: None CNPS: Rank 3.2 MSHCP	Coastal dunes, coastal sage scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	Does not occur onsite due to a lack of suitable habitat.
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Federal: None State: None CNPS: Rank 2B.1 MSHCP(b)	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	Does not occur onsite due to a lack of suitable habitat

STATUS

Federal

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

State

SE – State Endangered
ST – State Threatened

CNPS

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

Threat Code extension

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

MSHCP

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

OCCURRENCE

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

4.5 Special-Status Animals

No special status animal species were observed during GLA’s general survey. As noted above, the Project site is located within the MSHCP burrowing owl survey area but does not occur within the MSHCP mammal or amphibian survey areas. The Project site contains suitable habitat for the least Bell’s vireo (*Vireo belli pusillus*, LBV) and the burrowing owl (*Athene cunicularia*); therefore, focused burrowing owl surveys were conducted for MSHCP compliance. LBV surveys were not conducted but all habitat with the potential to support LBV, which consists of mulefat scrub and southern willow scrub habitats, is being avoided [see Exhibit 5].

Additional special-status mammal species having the potential to occur onsite include San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and Stephens’ kangaroo rat (*Dipodomys stephensi*, SKR). Several additional special-status birds including loggerhead shrike (*Lanius ludovicianus*), Swainson’s hawk (*Buteo swainsoni*), and white-tailed kite (*Elanus leucurus*) also have the potential to occur onsite.

Table 4-3 provides a summary of all animal species considered for this analysis. Species were considered based on a number of factors, including: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the Project site; and 2) any other special-status species that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs onsite.

Table 4-3. Special-Status Animals Evaluated for the Property.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Invertebrates			
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: SCE	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Not expected to occur.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Delhi-sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	Federal: FE State: None MSHCP	Fine, sandy soils, often associated with wholly or partially consolidated dunes referred to as the “Delhi” series. Vegetation consists of a sparse cover, including California buckwheat, California croton, deerweed, and evening primrose.	Does not occur.
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	Federal: FE State: None MSHCP	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include <i>Plantago erecta</i> and <i>Castilleja exserta</i> . Adults occur on sparsely vegetated rounded hilltops and ridgelines, and are known to disperse through disturbed habitats to reach suitable nectar plants.	Does not occur.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Federal: FE State: None MSHCP(a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur.
Fish			
Arroyo chub <i>Gila orcutti</i>	Federal: None State: SSC MSHCP	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur.
Santa Ana sucker <i>Catostomus santaanae</i>	Federal: FT State: None MSHCP	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.	Does not occur.
Southern steelhead - southern California DPS <i>Oncorhynchus mykiss irideus</i>	Federal: FE State: None	Clear, swift moving streams with gravel for spawning. Federal listing refers to populations from Santa Maria river south to southern extent of range (San Mateo Creek in San Diego county.)	Does not occur.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Amphibians			
Southern mountain yellow-legged frog <i>Rana muscosa</i>	Federal: FE State: SE MSHCP(c)	Streams and small pools in ponderosa pine, montane hardwood-conifer, and montane riparian habitat types.	Does not occur.
Western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC MSHCP	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur.
Reptiles			
Coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC MSHCP	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Not expected to occur.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i> (<i>multiscutatus</i>)	Federal: None State: SSC MSHCP	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Not expected to occur.
Red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: SSC MSHCP	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Not expected to occur.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	Federal: None State: SSC MSHCP	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	Does not occur.
Western pond turtle <i>Emys marmorata</i>	Federal: None State: SSC MSHCP	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur.
Birds			
Bald eagle (nesting & wintering) <i>Haliaeetus leucocephalus</i>	Federal: None State: SE, CFP MSHCP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Burrowing owl (burrow sites & some wintering sites) <i>Athene cunicularia</i>	Federal: None State: SSC MSHCP(c)	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Confirmed absent.
California black rail <i>Laterallus jamaicensis coturniculus</i>	Federal: None State: ST, FP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Does not occur.
Coastal California gnatcatcher <i>Polioptila californica</i>	Federal: FT State: SSC MSHCP	Low elevation coastal sage scrub and coastal bluff scrub.	Low potential to occur onsite.
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	Federal: FE State: SE MSHCP(a)	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Low to Moderate potential to occur within mulefat scrub and southern willow scrub habitats within the Alessandro Arroyo, which is being avoided (See Exhibit 5). Not expected to occur within the development footprint due to the lack of riparian habitats within the development footprint.
Loggerhead shrike (nesting) <i>Lanius ludovicianus</i>	Federal: None State: SSC MSHCP	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Low potential to occur on the Project site for foraging only. Not expected to occur on the Project site for nesting.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i>	Federal: FE State: SE MSHCP(a)	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Low potential to occur within mulefat scrub and southern willow scrub habitats within the Alessandro Arroyo, which is being avoided (See Exhibit 5). Not expected to occur within the development footprint due to the lack of suitable riparian habitats within the development footprint.
Swainson's hawk (nesting) <i>Buteo swainsoni</i>	Federal: None State: ST MSHCP	Summer in wide open spaces of the American West. Nest in grasslands, but can use sage flats and agricultural lands. Nests are placed in lone trees.	Low potential to occur on the Project site for foraging only. Not expected to occur on the Project site.
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	Federal: None State: SCE, SSC MSHCP	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not occur.
Western yellow-billed cuckoo (nesting) <i>Coccyzus americanus occidentalis</i>	Federal: FT State: SE MSHCP(a)	Dense, wide riparian woodlands with well-developed understories.	Does not occur.
White-tailed kite (nesting) <i>Elanus leucurus</i>	Federal: None State: CFP MSHCP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Low potential to occur on the Project site for foraging only. Not expected to occur on the Project site for nesting.
Yellow warbler (nesting) <i>Setophaga petechia</i>	Federal: None State: SSC MSHCP	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Not expected to occur.

Species Name	Status	Habitat Requirements	Potential for Occurrence
Yellow-breasted chat (nesting) <i>Icteria virens</i>	Federal: None State: SSC MSHCP	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Low potential to occur within the Alessandro Arroyo within mulefat scrub and southern willow scrub habitats within the Alessandro Arroyo, which is being avoided (See Exhibit 5). Not expected to occur within the development footprint due to the lack of suitable habitat within the development footprint.
Mammals			
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC MSHCP(c)	Fine, sandy soils in coastal sage scrub and grasslands.	Does not occur.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: SC (state candidate) MSHCP(c)	Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.	Not expected to occur.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: SSC MSHCP	Occupies a variety of habitats, but is most common among shortgrass habitats. Also occurs in sage scrub, but needs open habitats.	Low potential to occur onsite.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: SSC MSHCP	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Does not occur.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST MSHCP	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Low potential to occur onsite. Covered for impact through the SKR HCP.

STATUS

Federal

FE – Federally Endangered

FT – Federally Threatened

FPT – Federally Proposed Threatened

FC – Federal Candidate

Species BGEPA– Bald and Golden Eagle Protection Act SSC – Species of Special Concern

State

SE – State Endangered

ST – State Threatened

SCE– State Candidate Endangered

CFP – California Fully-Protected

MSHCP

MSHCP = No additional action necessary

MSHCP(a) = Surveys may be required as part of wetlands mapping

MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey area

MSHCP(c) = Surveys may be required within locations shown on survey maps

MSHCP(d) = Surveys may be required within Criteria Area

MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species

MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

OCCURRENCE

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

4.5.1 Special-Status Wildlife Species Confirmed Absent Through Focused Surveys at the Project Site

Burrowing Owl (*Athene cunicularia*) - The burrowing owl is designated as a CDFW Species of Special Concern. The burrowing owl is a covered not adequately conserved species under the MSHCP, which means that projects located within the burrowing owl survey area may have to evaluate avoidance measures if burrowing owls are present.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, et al. 1993). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover.

The burrowing owl was not detected at the Project site during the focused burrowing owl surveys. Exhibit 8 – Burrowing Owl Survey Area/Burrow Map depicts the location of the burrowing owl survey areas evaluated during the focused burrow survey. No suitable burrows were detected. GLA biologists did not observe burrowing owls, suitable burrows, or evidence of burrowing owls (e.g., cast pellets, preened feathers, or whitewash clustered at a burrow).

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

Birds

Coastal California Gnatcatcher (*Polioptila californica californica*) – The coastal California gnatcatcher (gnatcatcher) is designated as a federally threatened (FT) species, a California SSC,

and is a covered species under the MSHCP. Historically, gnatcatchers occurred from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, and into Baja California, Mexico. The gnatcatcher is a small member of the thrush family (Muscicapidae). The gnatcatcher typically occurs in or near sage scrub habitat, which is a broad category of vegetation that includes the following plant communities as classified by Holland (1986): Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. Declines in numbers and distribution of the gnatcatcher resulted from numerous factors, habitat destruction, fragmentation and adverse modification are the principal reasons for the gnatcatcher's current threatened status (USFWS 1993).

This species has a low potential to occur in Riversidean sage scrub within the Project boundary but was not detected during general biological surveys.

Least Bell's Vireo (*Vireo bellii pusillus*) – The LBV is designated as a federally and state endangered species. The LBV is a covered species not adequately conserved under the MSHCP, which means that projects with wetland mapping components may have to evaluate avoidance measures if LBV are present.

LBV primarily occupy riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically, it is associated with southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, wild blackberry, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses below 1,500 feet elevation in the interior (USFWS 1986; Small 1994). In the coastal portions of Southern California, the least Bell's vireo occurs in willows and other low, dense valley foothill riparian habitat and lower portions of canyons and along the western edge of the deserts in desert riparian habitat.

LBV have a low to moderate potential to occur onsite within mulefat scrub and southern willow scrub habitats in the Alessandro Arroyo; however, all suitable LBV habitat within the Property boundary will be avoided (See Exhibit 5).

Loggerhead Shrike (*Lanius ludovicianus*) - The loggerhead shrike is designated as a CDFW California Species of Special Concern when nesting and is a covered species under the MSHCP. The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs (Unitt 1984; Yosef 1996). Individuals like to perch on posts, utility lines and often use the edges of denser habitats (Zeiner, *et al.* 1990). In some parts of its range, pasture lands have been shown to be a major habitat type for this species, especially during the winter season (Yosef 1996) and breeding pairs appear to settle near isolated trees or large shrubs (Yosef 1994).

Loggerhead shrike has a low potential to forage within the disturbed/developed, ornamental, and non-native grassland areas on and/or offsite but was not detected during general biological surveys.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*) – The southwestern willow flycatcher is designated as a federal and state endangered species when nesting. Focused surveys may be required as part of mapping under the MSHCP. The southwestern willow flycatcher is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows (*Salix* spp.), cottonwoods (*Populus* spp.) or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.) (Sedgwick and Knopf 1992). It breeds in relatively dense riparian habitats in all or parts of seven southwestern states from near sea level in California to over 2,600 meters (8,500 feet) in Arizona and Colorado (USFWS 2001). Riparian habitat provides both breeding and foraging habitat for the species.

Southwestern willow flycatcher has a low potential to occur onsite in the Alessandro Arroyo within mulefat scrub and southern willow scrub habitats in the Alessandro Arroyo; however, all suitable flycatcher habitat within the Property boundary will be avoided (See Exhibit 5).

Swainson's Hawk (*Buteo swainsonii*) – The Swainson's hawk is listed as Threatened by the state and is also designated as a CDFW Species of Special Concern for nesting. It is also a covered species under the MSHCP without additional survey or conservation requirements. The Swainson's hawk does not breed in western Riverside County but does migrate through as a transient in the spring and fall and may occasionally winter within the area.

Swainson's hawk has a low potential to forage within the disturbed/developed, ornamental, and non-native grassland areas on and/or offsite, but was not detected during general biological surveys. onsite

White-Tailed Kite (*Elanus leucurus*) - The white-tailed kite does not have a federal or state designation, however this species is considered locally rare when nesting. It is also designated as a covered species under the MSHCP. The white-tailed kite inhabits low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Riparian areas adjacent to open areas are used for nesting (Dunk 1995). The white-tailed kite uses trees with dense canopies for cover and the specific plant associations seem to be unimportant with the vegetation structure and prey abundance apparently more important (Dunk 1995).

White-tailed kite has a low potential to forage within the disturbed/developed, ornamental, and non-native grassland areas on and/or offsite but was not detected during Project general biological surveys.

Yellow-Breasted Chat (*Icteria virens*) - The yellow-breasted chat is designated as a CDFW California Species of Special Concern when nesting and is a covered species under the MSHCP. Yellow-breasted chats as a whole may nest in second-growth, riparian thickets and brush (AOU 1998). By contrast, yellow-breasted chats in Southern California are primarily found in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the

borders of small ponds. Grinnell and Miller (1944) suggested that the plant cover in breeding habitat must be dense to provide shade and concealment.

Yellow-breasted chat has a low potential to occur onsite in the Alessandro Arroyo within mulefat scrub and southern willow scrub habitats in the Alessandro Arroyo; however, all suitable chat habitat within the Property boundary will be avoided (See Exhibit 5).

Mammals

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*) -This subspecies of the black-tailed jackrabbit is distributed along the coastal slope from around Point Conception south into Baja California. It requires extensive open spaces, such as grasslands or open sage scrub, usually in fairly level situations. The presence of substantial available cover, either dense grasses or shrubs, appears to be important for day roosts and is often adjacent to more open foraging areas.

This species was not observed during general biological surveys, but based onsite conditions, may be present. This species is a fully covered MSHCP species with no survey requirements.

Stephens' Kangaroo Rat (*Dipodomys stephensi*) – The SKR is designated as a federally endangered species and a state threatened species and is a covered species under the MSHCP. The Stephens' kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50 percent during the summer (*e.g.*, Bleich 1973; Bleich and Schwartz 1974; Grinnell 1933; Lackey 1967; O'Farrell 1990; Thomas 1973). Although there are no confirmatory data, it has been assumed that the Stephens' kangaroo rat historically occupied habitat dominated by native perennial grasses and forbs (*e.g.*, Price and Endo 1989). Soil type also is an important habitat factor for Stephens' kangaroo rat occupation (O'Farrell and Uptain 1987; Price and Endo 1989). As a fossorial (burrowing) animal, the Stephens' kangaroo rat typically is found in sandy and sandy loam soils with a low clay to gravel content, although there are exceptions where they can utilize the burrows of Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*). Additionally, the Stephens' kangaroo rat has been trapped in brittlebush (*Encelia farinosa*) dominated coastal sage scrub with an estimated shrub cover of over 50 percent (USFWS 1997).

SKR has a low potential to be present within the non-native grassland and Riversidean sage scrub areas onsite but was not detected during general biological surveys.

4.5.3 Raptor Use

Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as Red-tailed Hawk (*Buteo jamaicensis*) and American Kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods

and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

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

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

Appendix B (faunal compendium) provides a list of the hawks and falcons detected over the course of the field studies. These species include American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), and red-tailed hawk (*Buteo jamaicensis*). The Project site lacks potential nesting habitat (e.g., mature trees, shrubs) but is expected to provide foraging habitat for all of these species that supports prey species including insects, spiders, lizards, snakes, small mammals, and other birds. Additional raptor species with potential to forage in the area include but are not limited to Cooper's hawk (*Accipiter cooperii*) and white-tailed kite (*Elanus leucurus*).

4.6 Nesting Birds

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting native birds. Mortality of native birds (including eggs) is prohibited under California Fish and Game Code.¹³

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

4.7 Wildlife Linkages/ Corridors and Nursery Sites

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

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

¹³ Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

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

The Project site is located in the Cities of Riverside and Norco Plan Area but is not within any Criteria Cells. The Project site is surrounded by existing residential development. No existing or known proposed core areas, linkages, or habitat blocks are located near the Project site. The closest existing core area (Existing Core Area D) is located approximately 2 miles northeast of the Project site. The Alessandro Arroyo functions as a migratory corridor, however, this habitat would not be fragmented or interrupted because of the proposed Project.

4.8 Critical Habitat

The Project site does not contain USFWS-designated critical habitat.

4.9 Jurisdictional Waters

The Project site contains the Alessandro Arroyo and Feature 1, which are subject to the jurisdictions of the Corps pursuant to Section 404 of the CWA, the Regional Board pursuant to Section 401 of the CWA, and/or CDFW pursuant to Section 1600 of the California Fish and Game Code. Although a formal jurisdictional delineation was not conducted, the limits of potential MSHCP riverine/riparian habitat, as well as potential Corps, CDFW, and/or Regional Board jurisdiction, was reviewed in the field to verify that the Project would not result in an impact to any of these jurisdictions. Field surveys concluded that none of these jurisdictions would be impacted by the project. Please refer to Exhibit 7 for a depiction of CDFW and MSHCP jurisdictions, which are the most expansive jurisdictions as compared to the more limited boundaries of Corps and Regional Board jurisdiction within the Project site. All Corps, CDFW, and Regional Board jurisdictional waters are being avoided onsite.

4.10 MSHCP Riparian/Riverine Areas and Vernal Pools

As noted in Section 4.9 above, the Project site contains the Alessandro Arroyo and Feature 1. These drainage features qualify as MSHCP Riparian/Riverine areas. Riparian/Riverine areas associated with the Alessandro Arroyo totals 6.21 acres, of which 4.16 acres are riparian and 2.05 acres are riverine. Riparian/Riverine areas associated with Feature 1 totals 0.25 acre, all of which is riparian. As such, a total of 6.46 acres of MSHCP Riparian/Riverine areas occur within the Project site, of which 2.05 acres are riverine and 4.42 acres are riparian. No MSHCP Riparian/Riverine Areas occur within the Project Footprint. The limits of these features are depicted on Exhibit 7 – MSHCP Riparian/Riverine Areas Map, which includes a 50-foot grading setback/50-foot buffer in context of the proposed Project Footprint.

The riverine areas are dominated by Riversidean sage scrub, which is not suitable habitat for Riparian/Riverine-associated sensitive species such as LBV or western yellow-billed cuckoo. Riparian areas onsite are dominated by mulefat scrub and southern willow scrub, which provide potential habitat for the above-mentioned sensitive species. The MSHCP requires avoidance of all riparian and/or riverine features; however, if avoidance is infeasible, then impacts to MSHCP

riparian/riverine areas can be approved through the DBESP process. The DBESP process consists of a 60-day review process by the Wildlife Agencies (USFWS and CDFW). The authorization of a DBESP must also include mitigation.

The Project site does not contain vernal pools or other seasonal pools, including road ruts, stock ponds, and/or other artificially created depression features.

All MSHCP riparian/riverine areas associated with the Project are being avoided.

4.11 Mapped Grading and Arroyo Preservation Ordinance Jurisdiction

As noted in Section 4.9 above, the Project site contains the Alessandro Arroyo and Feature 1. Feature 1 is a tributary to the Alessandro Arroyo and is therefore considered a part of the Alessandro Arroyo. These drainage features qualify as areas subject to the City's Grading and Arroyo Preservation Ordinance.

The legal limits of arroyos were originally determined by the City through the use and review of topographic maps and aerial photography. Areas with greater than 30 percent slopes were placed within the arroyo designation whereas flatter areas were left out. Since no biological field studies were originally conducted to establish the arroyo boundaries, GLA conducted biological surveys to establish the Environmental Setback Buffer of the arroyo.

On March 4, 2020, GLA delineated the Environmental Setback Buffer of the Alessandro Arroyo and Feature 1 based on flow sign indicators, the presence of bed and bank, and associated riparian habitat. Based on GLA's biological studies of the Environmental Setback Buffer, a total of 6.46 acres of arroyo, including associated arroyo tributaries, occur within the Project site, of which 2.05 acres are riverine and 4.42 acres are riparian. As noted above, all MSHCP Riparian/Riverine areas associated with the Project site coincide with the Environmental Setback Buffer of the Alessandro Arroyo. These boundaries differ from what is depicted as the City's legal arroyo limit and 50-foot grading setback. An Arroyo Comparison Map is provided as Exhibit 10, and Project grading plans with an overlay of the Environmental Setback Buffer limits and its 50-foot grading setback as compared to the City's legal arroyo mapping and associated 50-foot setback¹⁴ are provided as Exhibit 11.

5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed project. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those

¹⁴ Chapter 17.08.011 of the City of Riverside's City Code of Ordinances depicts the historical limits of Alessandro Arroyo.

habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

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

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

5.1 California Environmental Quality Act (CEQA)

5.1.1 Thresholds of Significance

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

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

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or

performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

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

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

5.1.2 Criteria for Determining Significance Pursuant to CEQA

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

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.*
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

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

Appendix G(a) of the CEQA guidelines asks if a project is likely to “have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (now CA Department of Fish and Wildlife) or U.S. Fish and Wildlife Service.”

5.2 Special-Status Species

Appendix G(a) of the CEQA guidelines asks if a project is likely to “have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.”

5.2.1 Special-Status Plants

The proposed Project will not impact special-status plants. No special-status plant species were detected during biological surveys of the site, and the soils and conditions of the Project site do not have the potential to support special status plants. Additionally, the Project site does not occur in the NEPSSA and/or CAPSSA.

5.2.2 Special-Status Animals

No special-status animals were detected during biological surveys; however, the proposed Project would impact habitat for the following non-listed, special-status species that have potential to occur: coastal California gnatcatcher (0.93 acre of Riversidean sage scrub, loggerhead shrike (0.93 acre of Riversidean sage scrub, 0.41 acre of non-native grassland, and 0.39 acre of disturbed/developed areas), Swainson’s hawk (0.93 acre of Riversidean sage scrub, 0.41 acre of non-native grassland, and 0.39 acre of disturbed/developed areas), white-tailed kite (0.93 acre of Riversidean sage scrub, 0.41 acre of non-native grassland, and 0.39 acre of disturbed/developed areas), and San Diego black-tailed jackrabbit (0.41 acre of non-native grassland). These species are designated as MSHCP Covered Species without additional survey, conservation, and/or mitigation requirements.

The Project would also impact potential habitat for the federally endangered and state threatened Stephens’ kangaroo rat (0.93 acre of Riversidean sage scrub and 0.41 acre of non-native grassland); however, the Project site occurs within the SKR Habitat Conservation Plan (RCHCA 1996) and the associated SKR Fee Assessment Area. Impacts to SKR are covered with payment of the SKR fee without additional survey, conservation, and/or mitigation requirements.

5.3 Sensitive Vegetation Communities

Appendix G(a) of the CEQA guidelines asks if a project is likely to “have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.”

As shown in Table 5-1 below, the proposed Project would permanently impact a total of 1.73 acres of vegetation communities, of which 1.45 acres occur onsite, and 0.28 acre occurs offsite [Exhibit 5 – Vegetation Impact Map]. With the exception of Riversidean sage scrub, none of the vegetation communities to be impacted by the Project are considered as sensitive communities.

Table 5-1. Summary of Vegetation/Land Use Impacts for the Project Site

VEGETATION/LAND USE TYPE	Onsite Impacts (acres)	Offsite Impacts (acres)	Impact Total (acres)
Disturbed/Developed	0.11	0.28	0.39
Mulefat Scrub	0	0	0
Non-Native Grassland	0.41	0	0.41
Ornamental	0	0	0
Riversidean Sage Scrub	0.93	0	0.93
Southern Willow Scrub	0	0	0
Total	1.45	0.28	1.73

5.4 Wetlands

Appendix G(c) of the State CEQA guidelines asks if a project is likely to “have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.” No impacts to wetlands would occur.

5.5 Wildlife Movement and Native Wildlife Nursery Sites

Appendix G(d) of the State CEQA guidelines asks if a project is likely to “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.”

The Alessandro Arroyo functions as a migratory corridor, however, this habitat would not be fragmented or interrupted because of the proposed Project. Therefore, the proposed Project would not interfere or impact (1) the movement of native resident or migratory fish or wildlife species or (2) established native resident or migratory wildlife corridors, or (3) impede the use of native wildlife nursery sites.

The Project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code.

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

5.6 Local Policies or Ordinances

Appendix G(e) of the State CEQA guidelines asks if a project is likely to “conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.”

5.6.1 Grading and Arroyo Preservation Ordinance

Chapter 17.28.20 of the Riverside Municipal Code requires that no development or grading of any kind shall be permitted within 50 feet of the limits of the Alessandro Arroyo or its associated tributaries; however, the Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area¹⁵. Sensitivity shall be determined by such factors as the presence of riparian vegetation, habitat for rare or endangered species, significant rock outcroppings or other unique topographic features on the property proposed to be graded or in nearby segments of the same tributary.

The proposed Project would not result in any impacts to the Alessandro Arroyo or its associated tributary (Feature 1). However, approximately 175 square feet of grading impacts associated with the construction of storm drain and road improvements would occur within approximately 35-45 feet of Feature 1 [Exhibit 11] in areas containing Riversidean sage scrub. With the exception of Riversidean sage scrub, which is considered a sensitive habitat community, no impacts to other sensitive habitats, sensitive species, riparian/riverine resources, significant rock outcroppings, or other unique features would occur within these areas.

As noted in Sections 5.7 and 5.10 below, the Project is within the Western Riverside County MSHCP. The proposed Project would remove potential habitat for sensitive species. Given the low number of individuals potentially affected, the status of each species in Western Riverside County, and the small amount of potential habitat proposed for removal, the Project would not make a cumulatively considerable contribution to the regional decline of these species. All of these species are also fully covered under the MSHCP and any potential cumulative impacts would be mitigated through payment of fees and participation in the Plan. Regardless, since portions of the Project containing Riversidean sage scrub would encroach into the 50-foot grading setback imposed by the City, approval from the City’s Community & Economic Development Director will be required for compliance with Chapter 17.28.20 of the Riverside Municipal Code.

¹⁵ Municipal Code 17.28.020 - Hillside/arroyo grading.

5.7 Habitat Conservation Plans

Appendix G(f) of the State CEQA guidelines asks if a project is likely to “conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.”

As discussed throughout this report, the Project is within the Western Riverside County MSHCP. Section 7.0 of this report analyzes compliance of the Project with the Reserve Assembly and species/habitat requirements of the MSHCP. Impacts to species/habitats with MSHCP requirements are summarized here. Through compliance with the applicable requirements, the Project will not conflict with the provisions of the MSHCP.

5.7.1 Impacts to Burrowing Owl

No burrowing owls or physical evidence of burrowing owls were detected in the Project site during focused surveys. However, pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions, pre-construction owl surveys must be performed no more than 30 days prior to disturbance. If burrowing owls are detected during pre-construction surveys, then the owls must be relocated from the site outside of the breeding season following accepted protocols, and subject to the approval of the RCA, CDFW, and USFWS.

5.7.2 Impacts to MSHCP Riparian/Riverine Resources

As noted in Section 4.10, the Project contains the Alessandro Arroyo and Feature 1. No impacts to these MSHCP Riparian/Riverine areas will occur [Exhibit 7].

5.8 Jurisdictional Waters

As noted in Section 4.10, the Project contains the Alessandro Arroyo and Feature 1. No impacts to these Corps, CDFW, or Regional Board areas will occur [Exhibit 7].

5.9 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to native open space.

The Project is not expected to result in significant indirect impacts to special-status biological resources, with the implementation of measures pursuant to the MSHCP Urban/Wildlands Interface Guidelines (*Volume I, Section 6.1.4* of the MSHCP). These guidelines are intended to address indirect effects associated with locating projects (particularly development) in proximity to the MSHCP Conservation Area. To minimize potential edge effects, the guidelines are to be implemented in conjunction with review of individual public and private development projects in proximity to the MSHCP Conservation Area. The Project will implement measure consistent with the MSHCP guidelines to address the following:

- Drainage;
- Toxics;

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

The Project is not located adjacent to the MSHCP Conservation Area; therefore, it is not subject to the Urban/Wildland Interface Guidelines. Furthermore, the Project will not result in adverse indirect effects to special-status resources.

5.10 Cumulative Impacts to Biological Resources

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

Anticipated cumulative impacts are addressed by the MSHCP, which, as currently adopted, addresses 146 “Covered Species” that represent a broad range of habitats and geographical areas within Western Riverside County, including threatened and endangered species and regionally-or locally-sensitive species that have specific habitat requirements and conservation and management needs. The MSHCP addresses biological impacts for take of Covered Species within the MSHCP area. Impacts to Covered Species and establishment and implementation of a regional conservation strategy and other measures included in the MSHCP are intended to address the federal, state, and local requirements for these species and their habitats. Specifically, Section 4.4 of the MSHCP states that:

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

The proposed Project would remove potential habitat for coastal California gnatcatcher, loggerhead shrike, Swainson’s hawk, white-tailed kite, and San Diego black-tailed jackrabbit. Given the low number of individuals potentially affected, the status of each species in Western Riverside County, and the small amount of potential habitat proposed for removal, the Project would not make a cumulatively considerable contribution to the regional decline of these species. All of these species are also fully covered under the MSHCP and any potential cumulative impacts would be mitigated through payment of fees and participation in the Plan.

The Project site has the potential to support SKR; however, the Project site occurs within the SKR Habitat Conservation Plan (RCHCA 1996) and the associated SKR Fee Assessment Area. Impacts to SKR are covered with payment of the SKR fee without additional survey, conservation, and/or mitigation requirements.

No cumulative impacts would occur to state and federal waters and wetlands, MSHCP riparian/riverine or vernal pool resources, wildlife linkage/corridors, or wildlife nurseries.

6.0 CONDITIONS OF APPROVAL

The following discussion provides project-specific Conditions of Approval.

6.1 Burrowing Owl

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

- **Pre-Construction Survey.** A 30-day pre-construction survey for burrowing owls is required prior to future ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, etc.) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the Project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the RCA and the Wildlife Agencies and will need to coordinate in the future with the RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owls are found, the same coordination described above will be necessary.

6.2 Nesting Birds

The Project site contains vegetation with the potential to support native nesting birds. As discussed above, the California Fish and Game Code prohibits mortality of native birds, including eggs. The following measure is recommended to avoid mortality to nesting birds:

- As feasible, vegetation clearing should be conducted outside of the nesting season, which is generally identified as February 1 through August 31. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

6.3 Local Policies/Ordinances

As noted in Sections 4.11 and 5.6 above, GLA mapped the physical limits of the Alessandro Arroyo and Feature 1 based on flow sign indicators, the presence of bed and bank, and associated riparian habitat. The proposed Project would not result in any impacts to the Alessandro Arroyo or its associated tributary (Feature 1). However, approximately 175 square feet of grading impacts associated with the construction of storm drain and road improvements would occur within approximately 35-45 feet of Feature 1 in areas containing Riversidean sage scrub. No additional Project components would encroach into the 50-foot grading setback.

7.0 MSHCP CONSISTENCY ANALYSIS

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

7.1 Project Relationship to Reserve Assembly

The Project site is not located within the MSHCP Criteria Area [Exhibit 4 – MSHCP Overlay]. As such, the proposed Project has not been identified by the MSHCP for Reserve Assembly and is not subject to the HANS process or the JPR process.

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

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

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

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

As noted in Section 4.10, the Project contains the Alessandro Arroyo and Feature 1. Based on the above, no impacts to these MSHCP Riparian/Riverine areas will occur.

The Project site does not contain MSHCP vernal pools or other habitat with the potential to support listed fairy shrimp.

7.3 Protection of Narrow Endemic Plants

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species will be required for all public and private projects where appropriate soils and habitat are present. The Project site does not occur within the NEPSSA. As such, focused surveys are not required by the MSHCP for NEPSSA species, and the proposed Project is consistent with *Volume I, Section 6.1.3* of the MSHCP.

7.4 Guidelines Pertaining to the Urban/Wildland Interface

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

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasive species;
- Barriers;
- Grading/Land Development.

As discussed in Section 5.0 of this report, the proposed Project does not occur adjacent to or near the MSHCP Conservation Area, and therefore the Urban/Wildland Interface Guidelines do not apply to the Project.

7.5 Additional Survey Needs and Procedures

Volume I, Section 6.3.2 of the MSHCP identifies that in addition to the Narrow Endemic Plant Species addressed in Section 6.1.3 of the MSHCP, additional surveys may be needed for other certain plant and animal species in conjunction with MSHCP implementation in order to achieve full coverage for these species. Within areas of suitable habitat, focused surveys are required if a Project occurs within a designated CAPSSA, or special animal species survey area (i.e., burrowing owl, amphibians, and mammals). The Project site occurs within the burrowing owl survey area but does not occur within the amphibian or mammal survey areas, or within the CAPSSA. Focused burrowing owl surveys were conducted for the proposed Project site, and no burrowing owls were detected. As indicated in Section 6.0 of this report, pre-construction burrowing owl surveys will occur within the 30 days of site disturbance in conjunction with MSHCP requirements. The proposed Project will be consistent with MSHCP Volume I, Section 6.3.2.

7.6 Conclusion of MSHCP Consistency

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

8.0 REFERENCES

- American Ornithologists' Union (AOU). 2009. Checklist of North American Birds, (7th Edition; 1998-2009).
- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. The Jepson Manual: Vascular Plants of California. University of California Press. 1,568 pp.
- Bent, A. C. 1937. Life histories of North American birds of prey. Part 1. U.S. Natl. Mus. Bull. 167. 409pp.
- Bildstein, K. L. 1988. Northern Harrier. Pp. 251-303 in R. S. Parmer, ed. Handbook of North American birds. Vol. 4: diurnal raptors, part 1. Yale Univ. Press, New Haven, CT.
- Brown, L., and D. Amadon. 1968. Eagles, hawks and falcons of the world. 2 Vols. Country Life Books, London. 945pp.
- Brylski, P., L. Barkley, B. McKernan, S.J. Montgomery, R. Minnich, and M. Price. 1993. Proceedings of the Biology and Management of Rodents in Southern California Symposium. San Bernardino County Museum, Redlands, California, June 26, 1993. Presented by the Southern California Chapter of the Wildlife Society.
- California Department of Fish and Wildlife. 2008. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Dated September 2008.
- [CDFG] California Department of Fish and Game. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. State of California, California Natural Resources Agency, Department of Fish and Game. Dated November 24, 2009.
- [CDFW] California Department of Fish and Wildlife. 2020/2021. Special Animals. State of California Resources Agency, Sacramento, California.
- California Department of Fish and Wildlife. 2020/2021. State and Federally Listed Endangered and Threatened Animals of California. State of California Resources Agency. Sacramento, California.
- [CDFW] California Department of Fish and Wildlife. 2020/2021. California Natural Diversity Database: RareFind 5. Records of occurrence for U.S.G.S. 7.5- minute Quadrangle maps: Sunnymead and surrounding quadrangles. California Department of Fish and Wildlife, State of California Resources Agency. Sacramento, California. December 12, 2019.
- [Cal-IPC] California Invasive Plant Council. California Invasive Plant Inventory Database. Website: <http://cal-ipc.org/paf/>. [accessed December 12, 2019]

- [CNPS] California Native Plant Society. 2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA. x + 388pp.
- [CNPS] California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed December 12, 2019].
- Collins, Joseph T. and Travis W. Taggart. 2009. Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians. Sixth Edition. Publication of The Center For North American Herpetology, Lawrence. iv+44p.
- [Dudek] Dudek & Associates. 2003. Western Riverside County Multiple Species Habitat Conservation Plan. Volumes 1 – 5. Prepared for the Transportation and Land Management Agency, County of Riverside, California as part of the Riverside County Integrated Project. Adopted June 2003, currently available at <http://www.rcip.org/conservation.htm>.
- Dunk, J. R. 1995. White-tailed kite (*Elanus leucurus*). In The Birds of North America, No. 178 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.
- Grinnell, J. 1933. Review of the recent mammal fauna of California. University of California Publications in Zoology 40:1-124.
- Haug, E. A., B. A. Millsap, and M. S. Martell. 1993. Burrowing Owl (*Speotyto cunicularia*). In The Birds of North America, No. 130 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Wildlife.
- Jameson, E.W. Jr. and H.J. Peters. 1988. *California Mammals*. University of California Berkeley Press. 403 pp.
- Munz, P.A. 1974. A Flora of Southern California. University of California Press. 1,086 pp.
- Nelson, J. 1984. Rare plant survey guidelines. In: Inventory of rare and endangered vascular plants of California. J. Smith and R. York (eds.). Special Publication No. 1. California Native Plant Society.
- [NRCS] Natural Resources Conservation Service. 2020/2021. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: <https://websoilsurvey.sc.egov.usda.gov/>.

Patten, M.A., S. J. Myers, C. McGaugh, and J.R. Easton. ca 1992. Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). Unpublished report by Tierra Madre Consultants, Riverside, California.

[RCHCA] Riverside County Habitat Conservation Agency. 1996. Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California. Riverside, CA: Riverside County Habitat Conservation Agency.

Sawyer, J.O, T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation. Second Edition. California Native Plant Society Press. Sacramento, California. 1,300 pp.

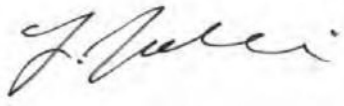
Unitt, P. 1984. The birds of San Diego County. San Diego Society of Natural History: Memoir 13, San Diego, California. 276pp.

[USFWS] U.S. Fish and Wildlife Service. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Sacramento, CA: U.S. Fish and Wildlife Service. Unpublished memorandum, dated January 2000.

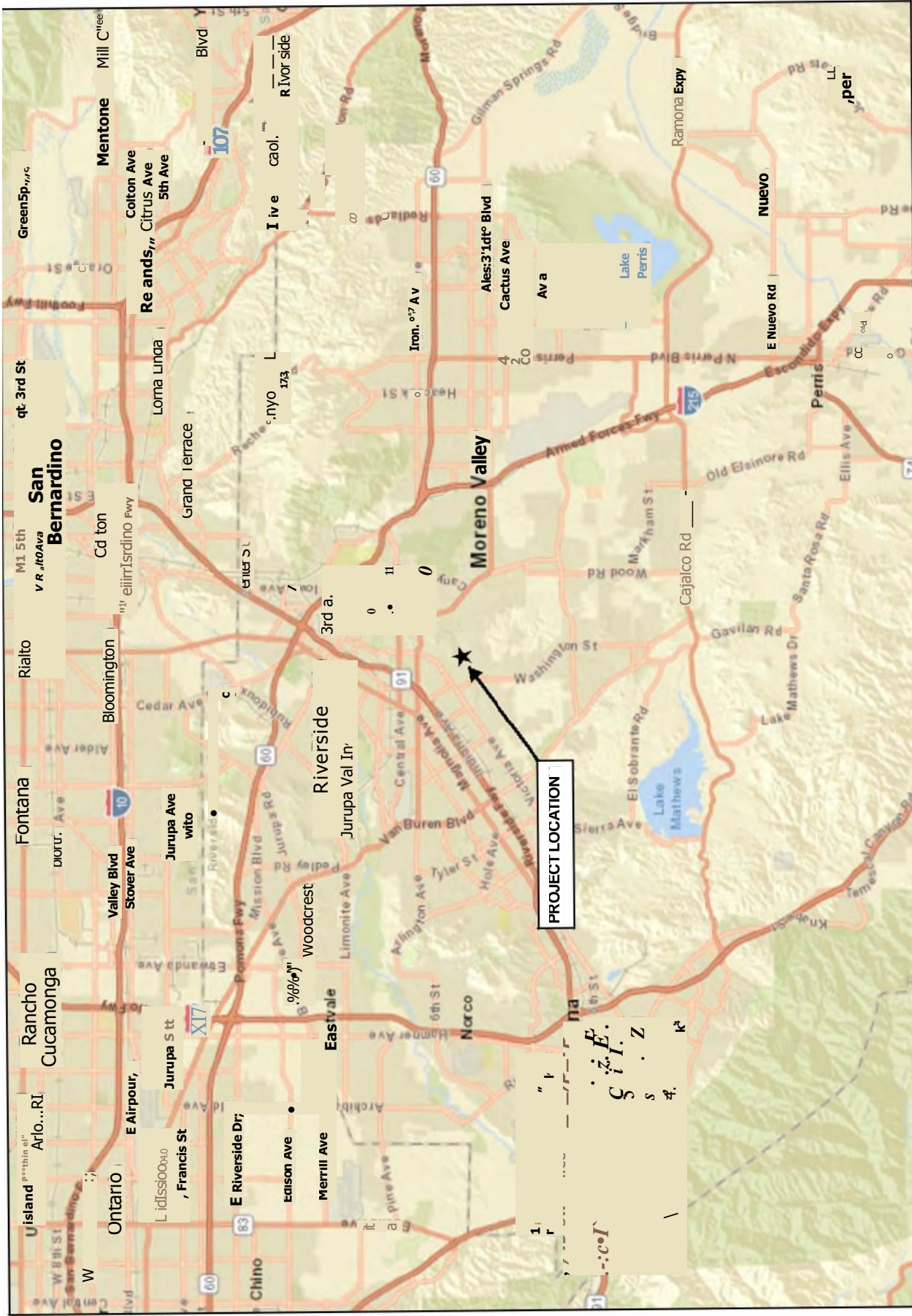
Yosef, R. 1996. Loggerhead shrike (*Lanius ludovicianus*). In *The Birds of North America*, No. 231 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

9.0 CERTIFICATION

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

Signed:  Date: October 2, 2023

p:1404-4d.bio.MSHCP.docx

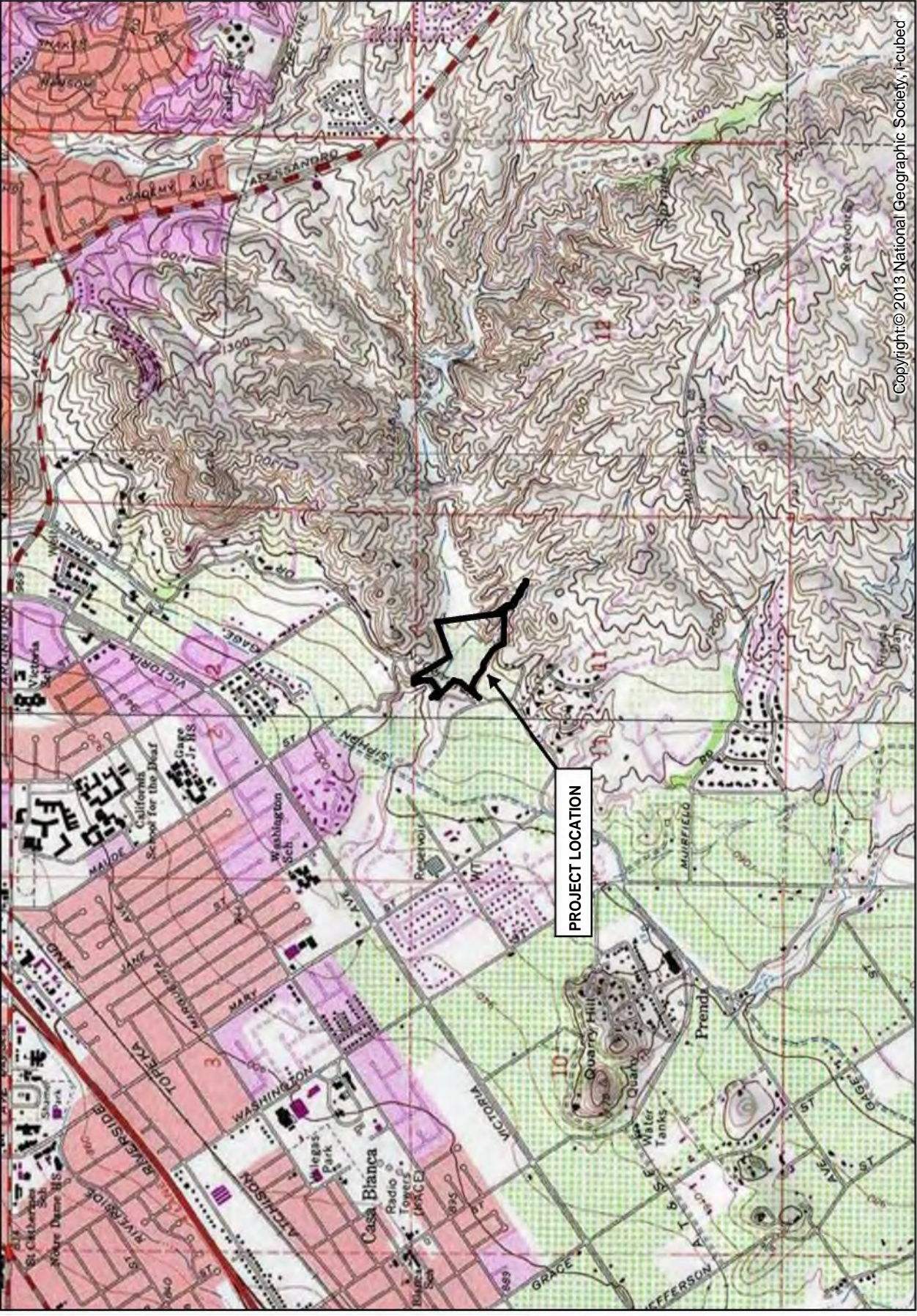


GLENN LUKOS ASSOCIATES

Exhibit 1

WYNDHAM HILLS DRIVE DEVELOPMENT PROJECT

Regional Map



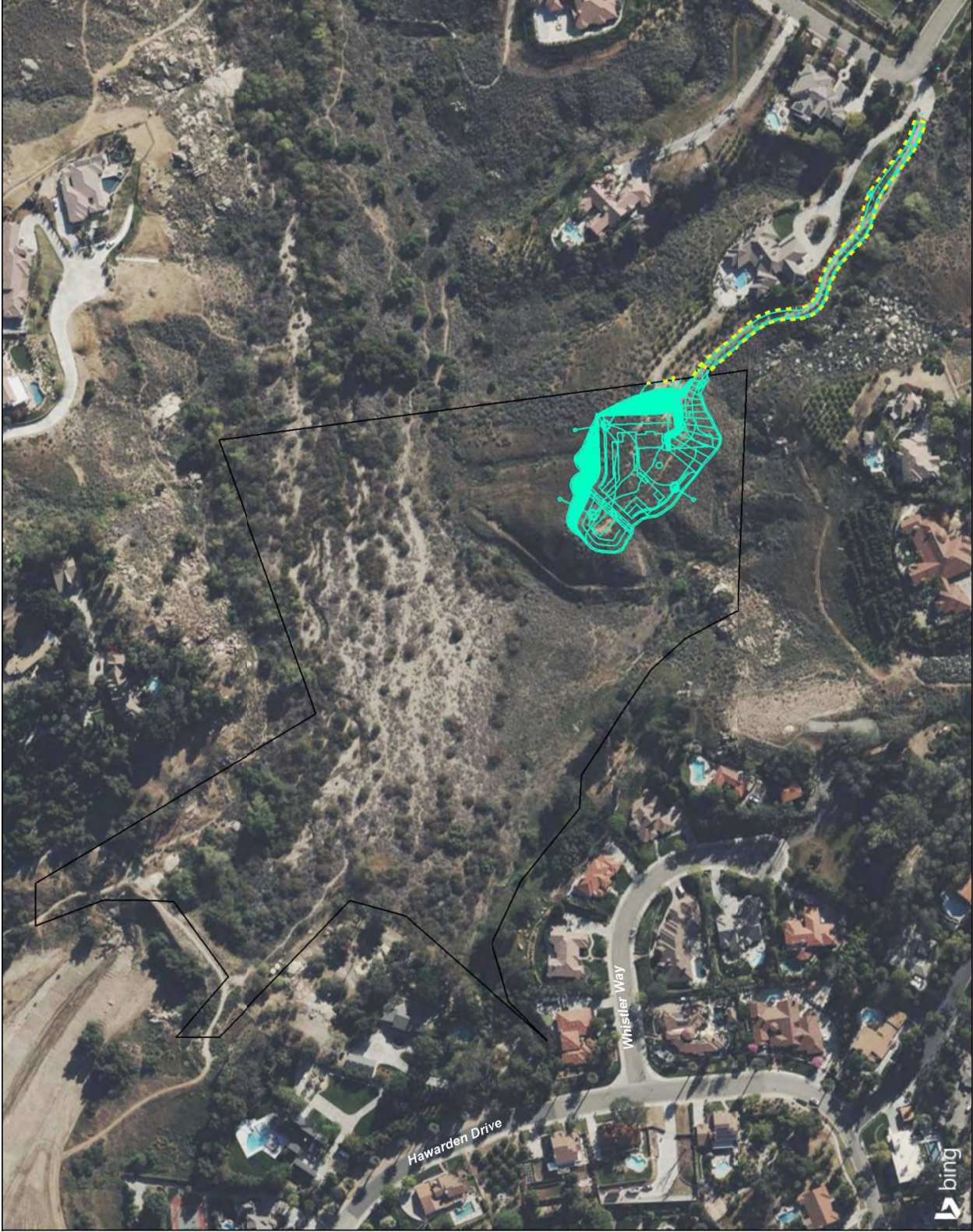
Copyright © 2013 National Geographic Society, Inc.

**WYNDHAM HILLS DRIVE
DEVELOPMENT PROJECT**
Vicinity Map



GLENN LUKOS ASSOCIATES

Exhibit 2



- Project - Onsite
- Project - Offsite
- Project Site Plan



1 inch = 175 feet

Coordinate System: State Plane 6 NAD
83 Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Karinen, GLA
Date Prepared: October 06, 2021




WYNDHAM HILLS DRIVE DEVELOPMENT PROJECT

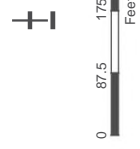
Site Plan Map

GLENN LUKOS ASSOCIATES

Exhibit 3




-  Project – Onsite
-  Project – Offsite
-  Burrowing Owl Survey Area



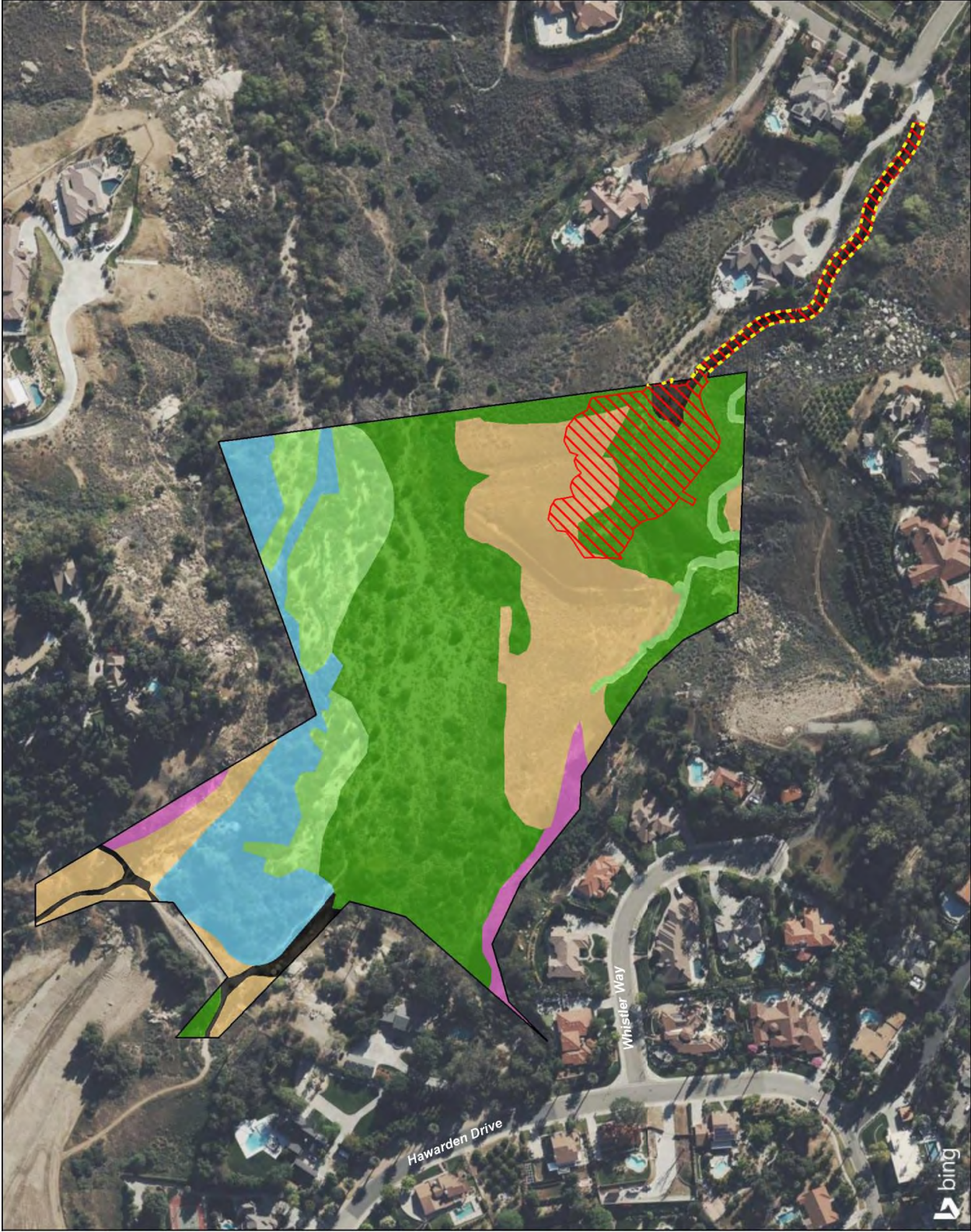
1 inch = 175 feet










Coordinate System: State Plane 6 NAD
 83 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: October 06, 2021

**WYNDHAM HILLS DRIVE
 DEVELOPMENT PROJECT**
 MSHCP Overlay Map



GLENN LUKOS ASSOCIATES
 Exhibit 4




-  Project – Onsite
-  Project – Offsite
-  Project Footprint
-  Disturbed/Developed
-  Mulefat Scrub Non-
-  Native Grassland
-  Ornamental
-  Riversidean Sage Scrub
-  Southern Willow Scrub



1 inch = 175 feet

Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: K. Karinen, GLA
 Date Prepared: October 06, 2021

**WYNDHAM HILLS DRIVE
 DEVELOPMENT PROJECT**
 Vegetation/Impact Map



GLENN LUKOS ASSOCIATES
 Exhibit 5



Photograph 1: View depicting disturbed/developed conditions within offsite portion of Project site facing southeast from existing access easement.



Photograph 2: Overview of existing conditions within proposed development footprint facing northwest. Photo taken from disturbed areas facing transition to Riversidean sage scrub habitat.



Photograph 3: Additional view of proposed development area facing north.



Photograph 4: Overview of non-native grassland habitat looking north/northeast towards arroyo. Photo taken from top of slope in avoided uplands.





Photograph 5: View of the Project site facing approximately northwest depicting the transition from Riversidian sage scrub on the hill (right foreground), to non-native grassland downslope (middleground), to Riversidian alluvial fan sage scrub and Feature 1 (left background).



Photograph 7: View of the Project site facing approximately west depicting the low-flow channel of Alessandro Arroyo (Feature 1) and associated mullefat scrub. Note the terraces visible in the background.









Photograph 6: View of the Project site facing approximately west depicting mullefat-dominant Riversidian alluvial fan sage scrub.

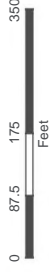


Photograph 8: View of the Project site facing approximately southeast depicting Riversidian sage scrub (left), non-native grassland (foreground and right) and Feature 2 (middleground).





-  Project - Onsite
-  Project - Offsite
-  Project Footprint
-  MSHCP Riparian/CDFW Riparian
-  MSHCP Riverine/
CDFW Non-Riparian Streambed
-  50' Buffer of
MSHCP Riparian/Riverine

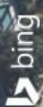


1 inch = 175 feet





Coordinate System: State Plane 6 NAD
83 Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Karunen, GLA
Date Prepared: October 06, 2021

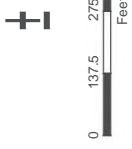
**WYNDHAM HILLS DRIVE
DEVELOPMENT PROJECT**
MSHCP Riparian/Riverine Areas Map

GLENN LUKOS ASSOCIATES
Exhibit 7






-  Project – Onsite
-  Project – Offsite
-  500-foot Visual Survey Buffer
-  Transect



Coordinate System: State Plane 6 NAD
 83 Projection; Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: K. Karinen, GLA
 Date Prepared: October 06, 2021

**WYNDHAM HILLS DRIVE
 DEVELOPMENT PROJECT**
 BUOW Survey Area Map



GLENN LUKOS ASSOCIATES
 Exhibit 8



- Project – Onsite
- Project – Offsite
- ApB - Arlington loam, 2 to 5 percent slopes
- CKF2 - Cienega rocky sandy loam, 15 to 50 percent slopes, eroded
- GkD - Gorgonio loamy sand, channeled, 2 to 15 percent slopes
- HcC - Hanford coarse sandy loam, 2 to 8 percent slopes
- TeG - Terrace escarpments




1 inch = 175 feet

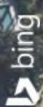
Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: K. Kartunen, GLA
 Date Prepared: October 06, 2021

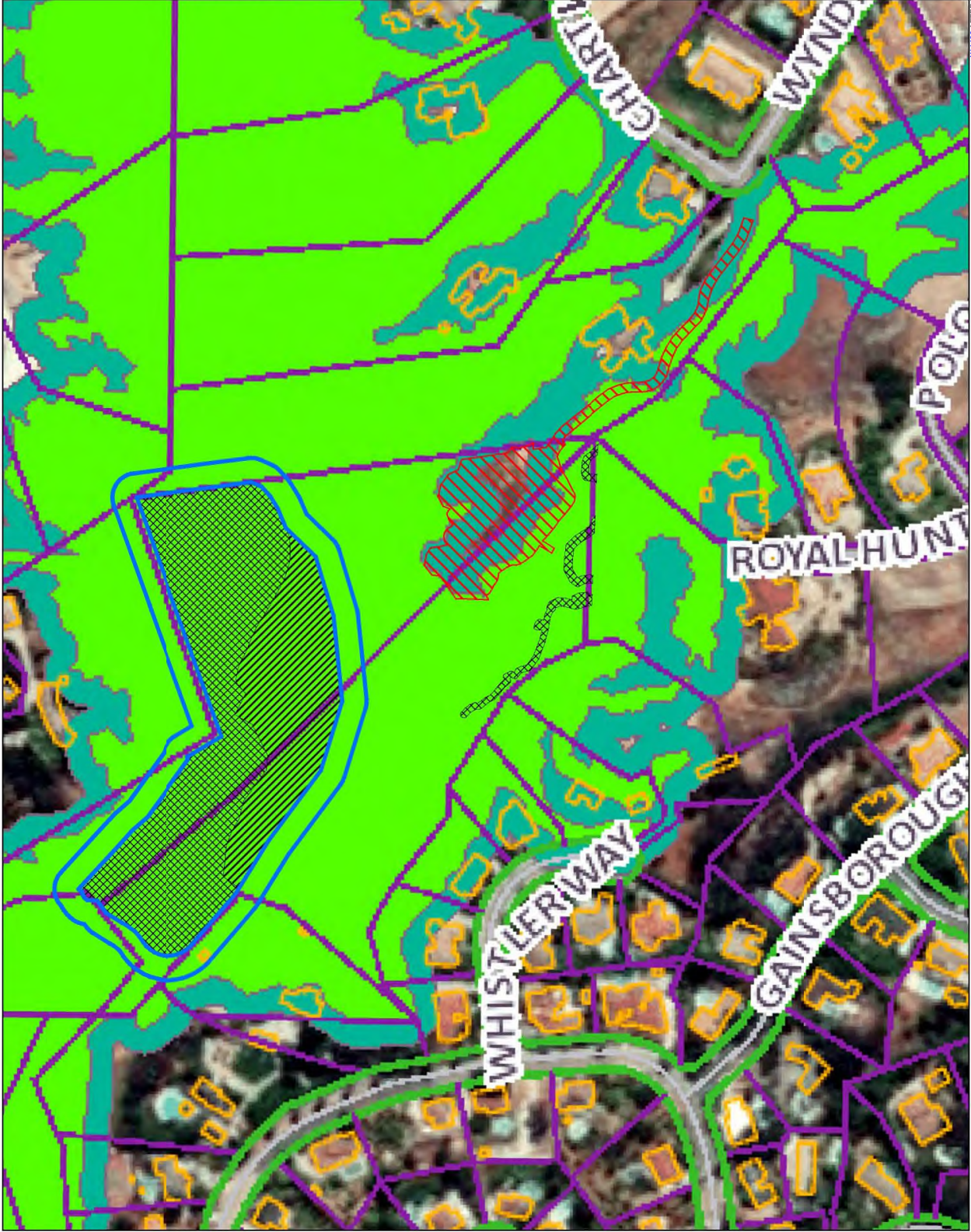
**WYNDHAM HILLS DRIVE
 DEVELOPMENT PROJECT**

Soils Map



GLENN LUKOS ASSOCIATES
 Exhibit 9





- Study Area (GLA)
- Project Footprint (GLA)
- MSHCP Riparian (GLA)
- MSHCP Riverine (GLA)
- 50' Buffer of Alessandro Arroyo (GLA)
- Arroyo* (City of Riverside)
- Arroyo 50ft Buffer Zone* (City of Riverside)

*Arroyo data presented on GeoTiff
<https://map.riverside.ca.gov/>
https://map.riverside.ca.gov/arcgis/rest/info/index.html?viewers=Public_Viewer_City_Viewer



1 inch = 200 feet

Coordinate System: State Plane 6 NAD
 83 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: K. Kentunen, GLA
 Date Prepared: April 1, 2020

**WYNDHAM HILLS DRIVE
 DEVELOPMENT PROJECT**
 Arroyo Comparison Map

GLENN LUKOS ASSOCIATES
 Exhibit 10

EXHIBIT 11

EXHIBIT C
Hawarden Fire







