

## ARANTINE HILLS SPECIFIC PLAN

### INFORMATION SUMMARY

- A. **Report Date:** November 9, 2010
- B. **Report Title:** General Biological Report
- C. **Project Site Location:** The Arantine Hills Specific Plan is located in the City of Corona; Riverside County, California; Sections 16, 17, and 20 of Township 4 South, Range 6 West, of the Corona South USGS 7.5" Quadrangle Map.
- D. **Assessor's Parcel Numbers:** 279-190-045, 279-240-018, 282-030-003, -004, -005, -006, and -008
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### G. **Report Summary**

The study area for the project consists of the Arantine Hills Specific Plan and additional off-site buffer areas (Project Study Area) consisting of approximately 301 acres located within the City of Corona, Riverside County, California. The Project Study Area is located within the Temescal Canyon Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The Arantine Hills Specific Plan proposes to create a master-planned community comprised of balanced residential, commercial, and mixed-use development, as well as open

space/recreation uses. The Arantine Hills Specific Plan consists of the following land use mix: residential development, providing detached and attached single-family homes and multi-family dwellings; general commercial land uses, providing retail, office, entertainment, lodging and employment opportunities; mixed-use development, including Mixed-Use I (commercial/residential) and Mixed-Use II (industrial/commercial); open space, including natural open space, land associated with Bedford Canyon Wash; two water quality basins; and park land, including four parks.

As noted above, the Project Study Area is located within the Temescal Canyon Area Plan of the MSHCP. The Project Study Area is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. In addition, portions of the Project Study Area are located within MSHCP survey areas for Narrow Endemic Plants (Survey Area Number 7) pursuant to Section 6.1.3 of the MSHCP and the western burrowing owl (*Athene cunicularia hypugaea*) pursuant to Section 6.3.2 of the MSHCP. The Project Study Area is not located within MSHCP survey areas for Criteria Area Plant Species, Amphibians, Mammals, or Special Linkage Areas.

During vegetation mapping conducted for the Project Study Area, eleven (11) different vegetation/land use types were documented, the majority of which support ruderal vegetation, disturbed/developed, ornamental/exotic, and non-native grassland, which are all dominated by non-native vegetation. Native vegetation types documented within the Project Study Area includes Riversidian sage scrub, disturbed Riversidian sage scrub, encelia dominated scrub, Riversidian sage scrub/chaparral, mulefat scrub, willow trees, and unvegetated streambed. Focused plant surveys were conducted in 2009 and 2010. One special-status plant was detected on site, Coulter's matilija poppy (*Romneya coulteri*). Coulter's matilija poppy is designated as a MSHCP Riparian/Riverine species listed in Section 6.1.2: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools. None of the MSHCP Narrow Endemic Plant Species were detected within the Project Study Area.

During general and focused biological surveys, seven (7) special-status animals were identified within the Project Study Area or immediately adjacent to the Project Study Area, including the bobcat (*Lynx rufus*), California horned lark (*Eremophila alpestris actia*), coastal western whiptail (*Aspidoscelis tigris multiscutatus*), Cooper's hawk (*Accipiter cooperi*), northern harrier (*Circus cyaneus*), San Diego desert woodrat (*Neotoma lepida intermedia*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). No burrowing owls were observed within the Project Study Area or within the 150-meter buffer area. In general, the loss of habitat for special-status animals is mitigated for through participation in the MSHCP and the conservation of lands within the Project Study Area, including 40.65 acres of native habitats located within and adjacent to Bedford Canyon Wash. The riparian/riverine habitat within the Project Study Area does not support suitable habitat for the least Bell's vireo, southwestern willow flycatcher, or the western yellow-billed cuckoo. Therefore, no additional surveys for riparian/riverine species are required. The Project Study Area does not contain any vernal pools, seasonal pools or features that have the potential to support vernal pool species, including listed fairy shrimp.

The Project Study Area was assessed for MSHCP riparian/riverine areas and vernal pools pursuant to Section 6.1.2 of the MSHCP. The Project Study Area contains MSHCP

riparian/riverine features, the majority of which is associated with Bedford Canyon Wash. Permanent impacts to MSHCP riparian/riverine areas are associated with a single road crossing of Bedford Canyon Wash which is designed to allow residents and visitors safe and efficient movement from the I-15/Cajalco Road interchange and Eagle Glen Parkway into the commercial center and the mixed-use and residential areas in Arantine Hills and the outfall structure associated with a water quality basin. The Project Study Area would result in unavoidable permanent impacts to 0.41 acre of MSHCP riparian/riverine areas, none of which consists of vegetated riparian habitat, and temporarily impact 1.46 acres of MSHCP riparian/riverine areas, of which less than 0.01 acre consists of vegetated riparian habitat. Therefore, the proposed Arantine Hills Specific Plan would avoid 71 percent of the MSHCP riparian/riverine areas and post-construction would result in the preservation of 95 percent of the MSHCP riparian/riverine areas. Impacts to MSHCP riparian/riverine areas will require submittal of a Determination of Biologically Equivalent or Superior Preservation (DBESP) report to the City of Corona and would be subject to review by the Wildlife Agencies.

The proposed Arantine Hills Specific Plan would result in permanent impacts to approximately 0.41 acre of U.S. Army Corps of Engineers (Corps) jurisdiction, none of which consists of jurisdictional wetlands, and temporarily impact approximately 1.46 acres of Corps jurisdiction, none of which consists of jurisdictional wetlands. Additionally, the proposed Arantine Hills Specific Plan would result in permanent impacts to approximately 0.41 acre of California Department of Fish and Game (CDFG) jurisdiction, none of which consists of vegetated riparian habitat, and temporarily impact approximately 1.46 acres, of which less than 0.01 acre consists of vegetated riparian habitat.

The Arantine Hills Specific Plan will require a Section 404 permit for impacts to Corps jurisdiction, a Section 401 Water Quality Certification from the Santa Ana Regional Water Quality Control Board (Regional Board), and a Section 1602 Streambed Alteration Agreement for impacts to CDFG jurisdiction. To offset the impacts to jurisdictional waters, the Arantine Hills Specific Plan will restore all temporary impacts, and will mitigate permanent impacts through a one-time in-lieu fee payment to purchase habitat mitigation credits from a Corps and CDFG-approved mitigation bank and/or in-lieu fee program.

As noted above, the Project Study Area is located within the Temescal Canyon Area Plan of the MSHCP. The Project Study Area is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. Therefore, Section 6.1.4 (Urban/Wildlands Interface) of the MSHCP is not applicable to the Arantine Hills Specific Plan.

Overall, the Arantine Hills Specific Plan would be compliant with the biological requirements of the MSHCP, including *Sections 6.1.2, Section 6.1.3, Section 6.1.4, and Section 6.3.2*. In addition, the Arantine Hills Specific Plan would be compliant with the biological requirements of the California Environmental Quality Act (CEQA).

**H. Individuals Conducting Fieldwork:**

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## 1.0 INTRODUCTION

### 1.1 Report Purpose

This document provides the results of habitat assessments, general biological surveys and focused surveys for special-status plants and wildlife species as well as the results of a jurisdictional delineation for the approximately 301-acre Project Study Area located in the City of Corona, Riverside County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Arantine Hills Specific Plan, and the relationship of the Arantine Hills Specific Plan to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), California Environmental Quality Act (CEQA), Endangered Species Act (ESA), Clean Water Act (CWA), California Department of Fish and Game (CDFG) regulations and codes, and the Regional Water Quality Control Board (Regional Board) regulations and codes.

Specifically, the scope of this report includes a discussion of existing conditions for the Project Study Area, all methods employed regarding general and focused surveys, the documentation of botanical and wildlife resources identified (including special-status species), an analysis of impacts to biological resources, and proposed mitigation measures to offset resource impacts pursuant to the MSHCP, CEQA, U.S. Army Corps of Engineers (Corps), Regional Board, and CDFG. This report also discusses the relationship of the proposed Arantine Hills Specific Plan with the MSHCP, including the presence/absence of covered species, and consistency with the biological requirements of the MSHCP, specifically the requirements as outlined in *Sections 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools)*, *6.1.3 (Protection of Narrow Endemic Plant Species)*, *6.1.4 (Urban/Wildlands Interface)*, and *6.3.2 (Additional Survey Needs and Procedures)* of the MSHCP document.

### 1.2 Project Study Area Location

The Project Study Area consists of the Arantine Hills Specific Plan and off-site buffer areas (Project Study Area). These buffer areas were evaluated as a precautionary measure for potential off-site impacts. The Project Study Area is located in the City of Corona, Riverside County, California [Exhibit 1: Regional Map]. The Project Study Area is depicted on the United States Geological Survey (USGS) 7.5' Corona South, California (dated 1967, photorevised in 1988 [Exhibit 2: Vicinity Map]), and is located within Sections 16, 17, and 20 of Township 4 South, and Range 6 West. The Project Study Area is located south of Cajalco Road/Eagle Glen Parkway, east of Castlepeak Drive/Driving Range Road, west of Interstate 15, and north of Glenn Road/Weirick Road. The Project Study Area consists of portions of seven assessor parcel numbers (APNs): 279-190-045, 279-240-018, 282-030-003, -004, -005, -006, and, -008.

The Project Study Area is located within the Temescal Canyon Area Plan of the Western Riverside County MSHCP. The Project Study Area is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. In addition, portions of the Project Study Area are located within MSHCP survey areas for Narrow Endemic Plants (Survey Area Number 7) pursuant to Section 6.1.3 of the MSHCP and the western burrowing owl (*Athene cunicularia hypugaea*)



pursuant to Section 6.3.2 of the MSHCP. The Project Study Area is not located within MSHCP survey areas for Criteria Area Plant Species, Amphibians, Mammals, or Special Linkage Areas.

### **1.3 Arantine Hills Specific Plan Description**

The Arantine Hills Specific Plan proposes to create a master-planned community comprised of balanced residential, commercial, and mixed-use development, as well as open space/recreation uses. The Arantine Hills Specific Plan consists of the following land use mix: residential development, providing detached and attached single-family homes and multi-family dwellings; general commercial land uses, providing retail, office, entertainment, lodging and employment opportunities; mixed-use development, including Mixed-Use I (commercial/residential) and Mixed-Use II (industrial/commercial); open space, including natural open space, land associated with Bedford Canyon Wash; two water quality basins; and park land, including four parks.

### **1.4 Scope and Methodology**

Biologists/Regulatory Specialists from Glenn Lukos Associates, Inc. (GLA) conducted site-specific surveys at the Project Study Area from March to July 2010 and have been conducting site-specific surveys for the Project Study Area and surrounding areas since March 2002. The scope of this report includes a discussion of existing conditions for the Project Study Area, all methods employed regarding general and focused surveys, the documentation of botanical and wildlife resources identified (including special-status species), an analysis of impacts to biological resources, and proposed mitigation measures to offset resource impacts pursuant to the MSHCP and CEQA. Methods of study included a review of relevant literature, general and focused 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), CDFG, the California Native Plant Society (CNPS), and the Western Riverside County MSHCP. This report also discusses the relationship of the proposed Arantine Hills Specific Plan to the MSHCP, including the presence/absence of covered species, and compliance with provisions of the MSHCP, including requirements as outlined in *Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2* of the MSHCP document.

Field studies included an updated jurisdictional delineation to determine the limits of Corps jurisdiction pursuant to Section 404 of the CWA, and CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the California Fish and Game Code.

The field studies focused on a number of primary objectives that would satisfy the special provisions of the MSHCP and also comply with CEQA requirements, including: (1) general reconnaissance surveys and vegetation mapping; (2) general wildlife surveys; (3) habitat assessments and focused surveys for special-status plants (including Narrow Endemic Plants and Criteria Area Plants as designated by MSHCP survey area); (4) habitat assessments and focused biological surveys for special-status animals (including species designated by MSHCP survey areas); (5) wildlife movement analysis; (6) assessments of riparian/riverine areas and vernal pool habitats; and (7) delineation of areas subject to the jurisdiction of the Corps and CDFG.

Observations of plant and wildlife species were recorded during each of the above mentioned survey efforts.

## **1.5 Existing Conditions**

The majority of the Project Study Area (approximately 76 percent) consists of ruderal vegetation (remnant agricultural land), disturbed/developed, ornamental/exotic, and non-native grassland. The remainder of the Project Study Area consists of native habitat (approximately 24 percent) consisting of Riversidian sage scrub, disturbed Riversidian sage scrub, encelia dominated scrub, Riversidian sage scrub/chaparral, mulefat scrub, willow trees, and unvegetated streambed.

The Project Study Area comprises approximately 301 acres of ruderal vegetation (a flat remnant agricultural operation), Bedford Canyon Wash, and one canyon feature which support a variety of native and non-native habitat types/land uses including: Riversidean sage scrub, encelia dominated scrub, disturbed Riversidean sage scrub, Riversidean sage scrub/chaparral eco-tone, disturbed/developed, exotic/ornamental, willow trees, and unvegetated streambed. The Project Study Area elevations range from 940-1,200 feet above mean sea level (MSL). The remnant agricultural operation has reverted to ruderal vegetation, which is trimmed on an annual basis. In addition, the Project Study Area contains a portion of Bedford Canyon Wash, and the majority of a small un-named tributary to Bedford Canyon Wash. Surrounding land uses include rural residential and Interstate 15 to the east, residential and commercial to the north, residential development and the Eagle Glen Golf Course to the west, and undeveloped lands associated with the Santa Ana Mountains located to the south. A vegetation/land use map is enclosed as Exhibit 3 and site photographs are enclosed as Exhibit 4.

## **1.6 Relationship of the Arantine Hills Specific Plan to the MSHCP**

### **1.6.1 MSHCP Background**

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

Through agreements with USFWS and CDFG, the MSHCP designates approximately 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, the MSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to CEQA.

Of the species designated as covered by the MSHCP, some of these species have additional 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,

as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animals species identified by Survey Areas (burrowing owl, mammals, amphibians); species associated with riparian/riverine areas and vernal pool habitats, including the least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and listed fairy shrimp; and an additional 28 species (*Table 9.3 of the MSHCP document*) not yet adequately conserved.

If portions of a property occur within Criteria Areas (areas that may be needed for inclusion in the MSHCP Conservation Area), development of the property is subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process of the MSHCP. Through the HANS process, the County of Riverside will determine whether the portions of the subject property within the Criteria Areas will be acquired for the MSHCP Conservation Area.

### **1.6.2 Relationship of the Project Study Area to the MSHCP**

The Project Study Area is located within the Temescal Canyon Area Plan of the Western Riverside County MSHCP. The Project Study Area is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits [Exhibit 5: MSHCP Overlay]. Therefore, the Arantine Hills Specific Plan is not subject to review under the HANS process.

#### **Species Survey Areas**

Portions of the Project Study Area are located within MSHCP surveys areas for Narrow Endemic Plants, and the burrowing owl (*Athene cunicularia*). Within 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 are met. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met.

Regarding sensitive plants, the portions of the Project Study Area are located within the NEPSSA Survey Area Number 7, which include the following target species:

#### ***Narrow Endemic Plants***

- San Diego ambrosia (*Ambrosia pumila*);
- Brand's phacelia (*Phacelia stellaris*); and
- San Miguel savory (*Satureja chandleri*).

The NEPSSA coincides with the northeastern corner of the Project Study Area, adjacent to Interstate 15, mapped as ruderal vegetation (remnant agricultural land) and the burrowing owl survey area covers the entire Project [Exhibit 5: MSHCP Overlay].

## 2.0 METHODOLOGY

GLA conducted biological studies in three main components in order to identify and evaluate actual or potential impacts to biological resources associated with the Arantine Hills Specific Plan. These include the following:

- Performance of vegetation mapping;
- Performance of site-specific biological surveys to evaluate the presence/absence of special-status species (or potentially suitable habitat) to the satisfaction of the MSHCP, CEQA, and Federal and State regulations;
- Delineation of aquatic resources (including wetlands/riparian habitat) subject to the jurisdiction of the Corps and CDFG.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the California Natural Diversity Database (CNDDDB) [CDFG 2010], CNPS Inventory of Rare and Endangered Plants of California (CNPS 2010), MSHCP species and habitat maps, MSHCP sensitive soil maps and the Natural Resource Conservation Service's (NRCS) soil data, other pertinent literature, and knowledge of the region. Site-specific general and focused surveys were conducted for all areas that support potentially suitable habitat for each target plant or animal species. The Project Study Area was surveyed on foot and the vegetation mapped directly onto a 200-scale color aerial photograph based on the Holland (1986) Classification System. A jurisdictional delineation was conducted within the Project Study Area to identify the presence/absence of waters of the United States, including wetlands (Corps jurisdiction); stream/lakes, including riparian vegetation (CDFG jurisdiction); and MSHCP riparian/riverine areas and vernal pools.

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

- Listing through the Federal and/or State ESA;
- Occurrence in the CNPS Rare Plant Inventory (List 1B, 2, 3, or 4);
- CNDDDB Global/State Rankings; and/or
- Evaluation and coverage under the MSHCP.

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

- Listing through the Federal and/or State ESA;
- Designation by the State as a Species of Special Concern (SSC) or California Fully-Protected Species (CFP);
- CNDDDB Global/State Rankings; and/or
- Evaluation and coverage under the MSHCP.

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 CDFG (see Section 3.2.2 below for further explanation); and Riparian habitat.

The CNDDDB ranks species and communities based on their assigned state and global rankings of the degree of rarity. The ranking provides a shorthand formula about how rare a species/community is, and is based on the best information available from multiple sources. State and global rankings are used to prioritize conservation and protection efforts so that the rarest species/communities receive immediate attention. In both cases, the lower ranking (i.e., G1 or S1) indicates extreme rarity. If the exact global/state ranking is undetermined, a range is generally provided. For example, a global ranking of “G1G3” indicates that a species/community global rarity is between G1 and G3. If the animal being considered is a subspecies of a broader species, a “T” ranking is attached to the global ranking.

As mentioned above, the Project Study Area is located within the planning area for the western Riverside County MSHCP (Temescal Canyon Area Plan), but is not located within any Criteria Cells, Cell Groups, or Subunits. Portions of the Project Study Area are located within the NEPSSA Survey Area Number 7, as well as the survey areas for the burrowing owl (*Athene cunicularia*). Where potentially suitable habitat was present for species designated by the survey areas, focused surveys were specifically conducted for these species to satisfy the requirements of the MSHCP. Altogether, assessments and surveys were conducted to ensure project compliance with *Sections 6.1.2, 6.1.3, and 6.3.2* of the MSHCP, as well as to satisfy the requirements of CEQA.

## **2.1 Summary of Surveys**

Site-specific surveys were conducted for the entire Project Study Area. The field studies focused on a number of primary objectives that would satisfy the special provisions of the MSHCP and also comply with CEQA requirements: (1) general reconnaissance surveys and vegetation mapping based on the Holland Classification System; (2) general wildlife surveys; (3) habitat assessments and focused surveys for special-status plants, including Narrow Endemic Plants and Criteria Area Plants as designated by the corresponding MSHCP survey area; (4) habitat assessments and focused surveys for special-status animals (including species designated by *Sections 6.1.2 and 6.3.2* of the MSHCP document); (5) wildlife movement analysis; (6) assessments of MSCHP riparian/riverine areas and vernal pool habitats; and (7) jurisdictional delineation to determine the presence/absence of areas subject to the jurisdiction of the Corps and CDFG. Observations of all plant and animal species were recorded during each of the above-mentioned survey efforts [Appendix A: Floral Compendium and Appendix B: Faunal Compendium]. Table 2-1 provides a summary list of survey dates for 2010, survey types and personnel.

**Table 2-1. Summary of Biological Surveys**

<b>Survey Date</b>	<b>Survey Type</b>	<b>Surveying Biologist</b>
April 8, 2010	Focused Plant Survey; Jurisdictional Delineation	JM, PS MR
April 27, 2010	Jurisdictional Delineation	EH, MR
May 26, 2010	Focused Plant Survey	BS
July 2, 2010	Burrowing Owl Habitat Assessment & Burrow Survey	JM

BS – Ben Smith; EH – Edward Hennigan; JM – Justin Meyer; MR – Martin Rasnick; PS – Paul Schwartz

## **2.2 Botanical Resources**

A site-specific survey program was designed to accurately document the botanical resources within the Project Study Area, and consisted of six components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur on site; (3) general field reconnaissance surveys; (4) vegetation mapping based on the Holland Classification System; (5) focused surveys for special-status plants; and (6) preparation of a vegetation map, including the location of any sensitive vegetation communities found on site.

### **2.2.1 Literature Search**

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included, but were not limited to, the following:

- CNPS *Inventory of Rare and Endangered Plants of California* (Seventh Edition) [CNPS 2010];
- CNDDDB for the Corona South, and surrounding USGS quadrangle maps (CNDDDB 2010); and
- MSHCP Document, including *Sections 6.1.2, 6.1.3, and 6.3; Table 9.3* (Riverside County Integrated Project 2003).

### **2.2.2 Vegetation Mapping**

Vegetation communities were mapped based on the Holland Classification System (Holland 1986). Where necessary, deviations were made when areas did not fit into exact habitat descriptions provided by Holland. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph. Exhibit 3 [Vegetation/Land Use Map] provides vegetation mapping for the Project Study Area. Exhibit 4 provides representative photographs of site conditions.

### **2.2.3 Special-Status Plant Species Evaluated**

The CNDDDB and MSHCP were initially consulted to determine known occurrences of special-status plants in the region. Other sources used to develop a list of target species for the survey program included the CNPS Inventory (CNPS 2010). Based on this information, a list of

sensitive plant species and habitats that could occur within the Project Study Area were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floral compendium; and (3) document the distribution and abundance of any special-status plant species within the Project Study Area. Section 4.0 of this document provides a list of all special-status plants evaluated for the Project Study Area.

#### **2.2.4 Habitat Assessments and Focused Surveys for Special-Status Plants**

General surveys were conducted to identify potential sensitive plant habitats, and to establish the accuracy of the data identified from the literature. To satisfy the requirements of the MSHCP, habitat assessments for special-status plants included the target species for the corresponding NEPSSA survey areas. Initial habitat assessments were conducted prior to the initiation of the 2009 surveys and have not changed. An aerial photograph and topographic map were used to determine the community types and other physical features that may support sensitive species or communities within the Project Study Area. The reconnaissance surveys also took into account the guidelines adopted by CNPS and CDFG (Nelson 1984, CNPS 2001).

Within areas of suitable habitat, focused surveys were conducted for the Project Study Area to determine the presence/absence of special status plants, including MSHCP Covered Species with special survey requirements. Where potentially suitable habitat was present, focused plant surveys included those MSHCP Covered Species identified by the NEPSSA Survey Area Number 7. Within the Project Study Area, biologists traversed each of the target habitats on foot to provide adequate coverage for surveys. All plant species encountered during the field surveys were identified and recorded following the guidelines adopted by CNPS (2001) and CDFG by Nelson (1984). A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Hickman (1993), Munz (1974), and Roberts et al (2004).

#### **2.3 Wildlife Resources**

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the Project Study Area by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during each visit. A complete list of wildlife species observed within the Project Study Area is provided in Appendix B. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians 6<sup>th</sup> Edition, Collins and Taggart (2009) for amphibians and reptiles, and the AOU Checklist (2010) for birds. The methodology (including any applicable survey protocols) utilized to conduct the focused surveys or the habitat assessments for special-status animals are included below.

### **2.3.1 General Biological Surveys**

#### **Reptiles and Amphibians**

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

#### **Birds**

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

#### **Mammals**

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

### **2.3.2 Special-Status Animal Species Evaluated**

The CNDDDB and MSHCP were initially consulted to determine known occurrences of special-status animals in the region. Based on this information, a list of target animal species (including their suitable habitats) was developed and incorporated into a survey program to achieve the following goals: (1) prepare a detailed faunal compendium; and (2) implement general reconnaissance field work and focused surveys to document the distribution and abundance of the special-status animal species within the Project Study Area.

### **2.3.3 Focused Surveys for the Burrowing Owl**

The entire Project Study Area is located within the MSCHP Survey Area for the burrowing owl (*Athene cunicularia*). The Project Study Area was evaluated for suitable burrowing owl habitat, and where present, focused surveys were conducted for the burrowing owl to satisfy the requirements of the MSHCP and CEQA. Pursuant to the MSHCP, if a site occurs within the burrowing owl survey area, and suitable habitat is present, then focused surveys are to be conducted following the 2006 MSHCP Burrowing Owl Survey Instructions. The Burrowing Owl Survey Instructions are divided into two steps, including the habitat assessment (Step I) and locating burrows and burrowing owls (Step II).

Step I of the MSHCP Survey Instructions requires that an assessment be conducted to determine the presence of suitable habitat for the burrowing owl. Habitat for the burrowing owl is varied, including short-grass 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). Burrowing owls require large open expanses of sparsely vegetated



areas on gently rolling or level terrain with an abundance of active small mammal burrows (e.g., ground squirrels, rabbits, etc.). As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrow in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. In the case of nesting owls, one burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

The MSHCP Survey Instructions acknowledge that the presence of suitable burrows is not the deciding factor on whether a site contains suitable habitat for burrowing owls. The presence/absence of suitable burrows is to be determined during Step II of the Survey Instructions (focused burrow surveys), once it has been determined that a site contains suitable habitat for the burrowing owl. The Project Study Area contains agricultural lands, non-native grasslands, ruderal vegetation areas, and unvegetated disturbed areas, many of which exhibit some basic suitability for burrowing owls. As such, a focused burrow survey (Step II) was required for the Project.

The 2010 focused burrow survey was conducted within suitable habitat of the Project Study Area. Focused burrow surveys were conducted on July 2, 2010. Focused burrow surveys were conducted by walking pedestrian transects within areas of suitable habitat in order to map suitable burrows. The transects were spaced no more than 30 meters apart in order effectively cover 100 percent of the ground surface. As suitable burrows were identified, the burrows were mapped using a portable Global Positioning System (GPS) unit. Burrows were also inspected for the presence of diagnostic owl sign; including “whitewash” (owl excrement), regurgitated pellets, bones, feathers, etc. Portions of the Project Study Area were excluded from focused burrow surveys based on a lack of suitable habitat, including those areas that contained areas of dense tree, shrub, and/or herbaceous vegetation cover.

Since no potential burrowing owl burrows were located within the Project Study Area, focused burrowing owl surveys are not required pursuant to Section 6.3.2 of the MSHCP. Table 2-2 includes a summary of survey times and weather conditions for the burrow survey visit. Appendix C consists of a separate report documenting the 2010 focused burrowing owl survey.

**Table 2-2. Survey Data for 2010 Focused Burrow Owl Survey.**

Survey Date	Start Time	Weather Conditions	Surveying Biologist
7/2/10	6:00 am	Temp 55°F, Clear Skies, Wind 0-2 mph	JM

Surveying Biologist  
JM – Justin Meyer

### 2.3.4 Raptor Use

The majority of the Project Study Area consists of lowlands containing ruderal (remnant agricultural) areas, non-native grasslands, and other disturbed areas that provide suitable habitat for raptors, including a few special-status species. These areas serve as actual and potential

foraging habitat for a variety of raptor species, and also contain ornamental trees with the potential to support roosting and/or nesting raptors. During general and focused biological surveys, raptor use within the Project Study Area was documented to identify species using the property for foraging habitat, as well as to identify locations of nesting raptors. The general and focused biological surveys were conducted during the breeding season in order to document species that have the potential to breed within the Project Study Area. Surveys were conducted from a variety of fixed locations using binoculars. In addition, potential nesting areas were observed in order to identify raptor nests. Where observed, nesting locations were recorded on the field map.

### **2.3.5 Wildlife Movement Analysis**

In order to evaluate direct, indirect, and cumulative impacts of the proposed Arantine Hills Specific Plan on wildlife movement, an analysis of wildlife use/movement was conducted for the Project Study Area. The analysis considered the movement and use of large mammals (i.e., mountain lion and mule deer), medium-sized mammals (mesocarnivores), and other wildlife such as small mammals, birds, reptiles, and amphibians. Methods utilized for the wildlife analysis included a review of existing information on wildlife use (including the MSHCP), general and focused biological surveys to document the presence/absence of wildlife, opportunistic observations of mammal tracks and scat, and the use of scented track stations. The analysis considered the Project Study Area, but with particular focus on Bedford Canyon Wash.

#### **Bedford Canyon Wash**

The easternmost portion of the Project Study Area contains the Bedford Canyon Wash, which has not been identified as an important regional wildlife corridor connecting the Santa Ana Mountains to other MSHCP Core Areas. Bedford Canyon Wash continues through the Project Study Area (under Interstate 15) where it has been improved with concrete bed, bank, and channel, and connects to Temescal Creek. The portion of Bedford Canyon Wash where it has been improved and contains concrete bed, bank, and channel, does not provide for any wildlife movement to Temescal Creek. The Arantine Hills Specific Plan would preserve the existing Bedford Canyon Wash, which would provide the existing wildlife movement corridor through the proposed development. Wildlife use within this portion of the Project Study Area was documented through the course of general and focused biological studies, and this data was used to analyze the impact of the Arantine Hills Specific Plan on wildlife movement along Bedford Canyon Wash. However, track stations and/or remote-sensing cameras were not utilized in this location to document wildlife use since the wildlife movement corridor is to be preserved, it was determined that this level of study was unwarranted.

### **2.4 Jurisdictional Delineation**

The Project Study Area was evaluated to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the CWA; (2) CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code; and (3) MSHCP riparian/riverine areas and vernal pools. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated

using the methodology set forth in Corps 1987 Wetland Delineation Manual<sup>1</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region Version 2.0 (Arid West Supplement).<sup>2</sup> While in the field the limits of Corps and CDFG jurisdiction were recorded onto a 200-scale color aerial photograph using visible landmarks. Enclosed is a 550-scale map [Exhibit 3 of Appendix D], which depicts the areas of Corps and CDFG jurisdiction identified within the Project Study Area.

#### 2.4.1 Corps Jurisdiction

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

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
  - (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
  - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
  - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

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

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<sup>1</sup> Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

<sup>2</sup> U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-08-28. September 2008. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- (8) *Waters of the United States do not include prior converted cropland.*<sup>3</sup>  
*Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

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

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

1. ***Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.***

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “waters of the United States” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the CWA.

The written opinion notes that the court’s previous support of the Corps’ expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

*In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

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<sup>3</sup> The term “prior converted cropland” is defined in the Corps’ Regulatory Guidance Letter 90-7 (dated September 26, 1990) as “wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season....” [Emphasis added.]

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

## 2. *Rapanos v. United States and Carabell v. United States*

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*. For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps. The information pertaining to isolated waters is also included on the *Approved Jurisdictional Determination Form*.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

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

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

### **3. 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 National List of Plant Species that Occur in Wetlands<sup>4</sup>);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

#### **2.4.2 Regional Water Quality Control Board**

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.<sup>5</sup> The memorandum states:

*California’s right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from*

<sup>4</sup> Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

<sup>5</sup> Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

*the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...*

*The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....*

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

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

*"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.*

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the CWA may require authorization

pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

### **2.4.3 California Department of Fish and Game – Requirements for CDFG Jurisdiction**

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code, the CDFG 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. Section 1602 states:

An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake or deposit or dispose of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream or lake,...

CDFG's jurisdiction is limited to lakes, rivers and streams. CDFG regulations do not define the term "lake." However, according to CDFG's *Memorandum, Jurisdictional Issues in the Application of Fish and Game Code Sections 1601 and 1603* (July 2, 1990) (Memorandum), CDFG considers a feature's size, i.e. whether it is large, in the context of other local water bodies. The Memorandum cites as an example, but does not adopt, the following definition of a lake:

"[a] considerable body of standing water in a depression of land or expanded part of a closed basin serving to drain surrounding country; or a body of considerable size surrounded by land; a widened portion of a river or a lagoon." (quoting *Wood v. Maitland*, 169 Misc. 484, 8 N.Y.S.2d 146, 150.)

CDFG's Field Guide also notes that lakes include "natural lakes and man-made reservoirs." The origin of the water body is not as significant as the topographic situation and the physical attributes of the water body. Jurisdiction over a man-made water body is based upon the value of the water body to fish and wildlife. An artificial water body that acquires naturalized physical attributes and are viewed by the community as natural features, are treated as natural waterways by CDFG. However, artificial waterways without the attributes of natural waterways are not generally subject to Section 1602 jurisdiction.

### **2.4.4 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 MSCHP 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 MSCHP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the affect 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.

The Project Study Area was evaluated for the presence/absence of MSHCP riparian/riverine areas and vernal pools. With respect to riparian habitat (as covered through evaluations for special-status species in this report), the Project Study Area was evaluated for the potential habitat to support the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii traillii*), the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), listed fairy shrimp, and other species identified in Section 6.1.2 of the MSHCP.

### **3.0 REGULATORY SETTING**

The Arantine Hills Specific Plan is subject to state and federal 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; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

#### **3.1 State and/or Federally Listed Plants or Animals**

##### **3.1.1 State of 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 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 for Listed Species**

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

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of

an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan .

- Sections 2090-2097 of the CESA require that the state lead agency consult with CDFG on projects with potential impacts on state-listed species. These provisions also require CDFG to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFG 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 (USFWS and CDFG) and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species.

Through agreements with the USFWS and CDFG, the MSHCP designates approximately 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, the MSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to CEQA. Beyond the fully covered species, there are species with additional survey/ conservation requirements. These included Narrow Endemic Plant Species, as identified by the NEPSSA; Criteria Area Plant Species identified by the CASSA; animals species as identified by survey area; plant and animal species associated with riparian/riverine areas and vernal pool habitats (*Volume I, Section 6.1.2* of the MSHCP document); and an additional 28 species (*Table 9.3 of the MSHCP document*) not yet adequately conserved.

## **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, CDFG 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. CDFG also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

### **3.2.2 Special-Status Plants and Animals 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. 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 California Fully Protected (CFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. State Species of Special Concern (SSC) are species 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 CDFG'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
- CFP California Fully Protected
- CP California Protected
- SSC State Species of Special Concern

### **CNDDDB Global/State Rankings**

The CNDDDB provides global and state rankings for species and communities based on a system developed by The Nature Conservancy to measure rarity of a species. The ranking provides a shorthand formula about how rare a species/community is, and is based on the best information available from multiple sources, including State and Federally listings, and other groups that recognize species as sensitive (e.g., Bureau of Land Management, Audubon Society, etc.). State and global rankings are used to prioritize conservation and protection efforts so that the rarest species/communities receive immediate attention. In both cases, the lower ranking (i.e., G1 or S1) indicates extreme rarity. Rare species are given a ranking from 1 to 3. Species with a ranking of 4 or 5 is considered to be common. If the exact global/state ranking is undetermined, a range is generally provided. For example, a global ranking of “G1G3” indicates that a species/community global rarity is between G1 and G3. If the animal being considered is a subspecies of a broader species, a “T” ranking is attached to the global ranking. The following are descriptions of global and state rankings:

#### ***Global Rankings***

- G1 – Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or because of some factor(s) making it especially vulnerable to extinction.
- G2 – Imperiled globally because of rarity (6-20 occurrences), or because of some other factor(s) making it very vulnerable to extinction throughout its range.
- G3 – Either very rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g., a physiographic region), or because of some other factor(s) making it vulnerable to extinction throughout its range.

#### ***State Rankings***

- S1 – Extremely rare; typically 5 or fewer known occurrences in the state; or only a few remaining individuals; may be especially vulnerable to extirpation.
- S2 – Very rare; typically between 6 and 20 known occurrences; may be susceptible to becoming extirpated.
- S3 – Rare to uncommon; typically 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed.

## 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 Sixth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. 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 (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFG. CNPS has developed five categories of rarity that are summarized in Table 3-1.

**Table 3-1. CNPS Lists 1, 2, 3, & 4.**

<b>CNPS List</b>	<b>Comments</b>
List 1A – Presumed Extinct in California	Thought to be extinct in California based on a lack of observation or detection for many years.
List 1B – Rare 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.
List 2 - Rare or Endangered in California, More Common Elsewhere	Species that are rare in California but more common outside of California
List 3 – Need More Information	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 list. In addition, many of the List 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
List 4 – Plants of Limited Distribution	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 List 3 species above, CNPS lacks survey data to accurately determine status in California. Many species have been placed on List 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.

**Table 3-2. CNPS Threat Code Extensions**

<b>Extension Code</b>	<b>Comment</b>
0.1	Seriously endangered in California
0.2	Fairly endangered in California
0.3	Not very endangered in California

## 4.0 RESULTS

This section discusses the results of general reconnaissance; vegetation mapping; focused surveys and habitat assessments for special-status plants and wildlife, including MSHCP covered

species with special survey requirements; wildlife movement/use analysis; and a jurisdictional delineation for waters of the United States (including wetlands) subject to the jurisdiction of the Corps; streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFG; and MSHCP riparian/riverine areas and vernal pools.

#### 4.1 General Reconnaissance

The Project Study Area comprises approximately 301 acres of ruderal vegetation (a flat remnant agricultural operation), Bedford Canyon Wash, and one canyon feature which support a variety of native and non-native habitat types/land uses including; Riversidean sage scrub, encelia dominated scrub, disturbed Riversidean sage scrub, Riversidean sage scrub/chaparral eco-tone, disturbed/developed, exotic/ornamental, willow trees, and unvegetated streambed. The Project Study Area elevations range from 940-1,200 feet above mean sea level (MSL). The remnant agricultural operation has reverted to ruderal vegetation, which is trimmed on an annual basis. In addition, the Project Study Area contains a portion of Bedford Canyon Wash, and the majority of a small un-named tributary to Bedford Canyon Wash. Surrounding land uses include rural residential and Interstate 15 to the east, residential and commercial to the north, residential development and the Eagle Glen Golf Course to the west, and undeveloped lands associated with the Santa Ana Mountains located to the south.

#### 4.2 Vegetation/Land Use

During vegetation mapping for the Project Study Area, eleven (11) different vegetation/land use types were identified. Table 4-1 provides a summary of vegetation types/land uses and the corresponding acreage. Detailed descriptions of each type follow the table. A vegetation/land use map is attached as Exhibit 3. Site photographs depicting the various vegetation types and land uses are attached as Exhibit 4.

**Table 4-1. Summary of Vegetation/Land Use Types**

<b>Vegetation/Land Use Type</b>	<b>Area (Acres)</b>
Disturbed/Developed	11.15
Disturbed Riversidian Sage Scrub	7.25
Encelia Dominated Scrub	1.94
Mulefat Scrub	0.54
Non-Native Grassland	6.05
Ornamental/Exotic	2.93
Riversidian Sage Scrub	26.70
Riversidian Sage Scrub/Chaparral	31.52
Ruderal Vegetation	207.42
Unvegetated Streambed	5.49
Willow Trees	0.15
<b>Total Vegetation/Land Use Acreage</b>	<b>301.14</b>

#### 4.2.1 Disturbed/Developed

Approximately 11.15 acres of existing structures/graded dirt roads were mapped within the Project Study Area. The majority of the existing structures/graded dirt roads are located in the western portion of the Project Study Area west of Bedford Canyon Wash.

#### 4.2.2 Disturbed Riversidean Sage Scrub

Approximately 7.25 acres of the Project Study Area is composed of disturbed Riversidean sage scrub. This vegetation sub-association is predominately located on the flat mesa area located in the southeastern portion of the Project Study Area. This sub-association is chiefly dominated by non-native forbs and grasses but also includes scattered individuals and clumps of native vegetation indicative of Riversidean sage scrub. Dominant non-native plant species in this vegetation sub association include red brome (*Bromus madritensis* subsp. *rubens*), rat-tail fescue (*Vulpia myuros*), tocolote (*Centauria melitensis*), riggut brome (*Bromus diandrus*), and summer mustard (*Hersfeldia incana*). Native plant species in this sub-association include California sagebrush (*Artemisia californica*), tarragon (*Artemisia dracuncululus*), sacapellote (*Acourtia microcephala*), Coulter's matilija poppy (*Romneya coulteri*), laurel sumac (*Malosma laurina*), black sage (*Salvia mellifera*), giant wild rye (*Leymus condensatus*), wild hyacinth (*Dichelostemma capitatum*) and splendid mariposa lily (*Calochortus splendens*).

Disturbed Riversidean sage scrub is designated as a special status vegetation community by the CDFG. CDFG ranks this vegetation community as G3:S3.1. Section 3.2.2 above describes the G and S rankings. The G3 ranking is the overall global ranking and means that this is a "Species or natural community with less than 21-100 element occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres remaining world-wide". The S3.1 ranking is specific to the State of California and means that this is a "Species or community that is rare to uncommon; typically 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed."

#### 4.2.3 Encelia Dominated Scrub

Approximately 1.94 acres of the Project Study Area is comprised of encelia dominated scrub. Areas mapped as encelia dominated scrub are predominately located on the steep east facing slopes above Bedford Canyon Wash and its on site tributaries. This vegetation sub-association is chiefly composed of brittlebush (*Encelia farinosa*). Additional species observed sporadically in this sub association include black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and California sagebrush (*Artemisia californica*). The dominant grass and forb species in this area include red brome (*Bromus madritensis* subsp. *rubens*), rat-tail fescue (*Vulpia myuros*), prickly sow-thistle (*Sonchus asper*), and summer mustard (*Hersfeldia incana*).

#### 4.2.4 Mule Fat Scrub

Approximately 0.54 acre of the Project Study Area supports mulefat scrub. This area is dominated by the shrub mulefat (*Baccharis salicifolia*). This area is located in a tributary to Bedford Canyon Wash in the southeastern portion of the Project Study Area.



Mulefat scrub is designated as a special status vegetation community by the CDFG. CDFG ranks this vegetation community as G4:S4. Section 3.2.2 above describes the G and S rankings. The G4 ranking is the overall global ranking and means that this is a "Species or natural community that is uncommon but not rare; some cause for long-term concern due to declines or other factors." The S4 ranking is specific to the State of California and means that this is a "Species or community that is uncommon but not rare; some cause for long-term concern due to declines or other factors."

#### 4.2.5 Non-Native Grassland

Approximately 6.05 acres of the Project Study Area is comprised of a non-native grassland habitat association. This vegetation community is located interspersed within the triangular patch of Riversidian sage scrub/chaparral located directly west and north of Bedford Canyon Wash. The non-native grassland habitat is dominated with grass and forb species including rat-tail fescue (*Vulpia myuros*), rancher's fireweed (*Amsinckia menziesii* var. *intermedia*), summer mustard (*Hersfeldia incana*), common cryptantha (*Cryptantha intermedia*), red brome (*Bromus madritensis* subsp. *rubens*), ripgut brome (*Bromus diandrus*), wild hyacinth (*Dichelostemma capitatum*), bicolor lupine (*Lupinus bicolor*), and California goldfields (*Laesthenia californica*).

#### 4.2.6 Ornamental/Exotic

Approximately 2.93 acres of the Project Study Area was mapped as ornamental/exotic vegetation. This includes scattered Eucalyptus trees (*Eucalyptus* sp.) located in the southern portion of the Project Study Area, and a long linear patch of giant reed (*Arundo donax*) located on the western edge of Bedford Canyon Wash.

#### 4.2.7 Riversidian Sage Scrub

Approximately 26.70 acres of the Project Study Area is comprised of Riversidian Sage Scrub (RSS). The RSS on site is located in the southeastern portion of the Project Study Area and is predominately associated with the steep slopes on the eastern side of Bedford Canyon Wash.

The dominant vegetation within the RSS on site includes California sagebrush (*Artemisia californica*), California encelia (*Encelia californica*), brittlebush (*Encelia farinosa*), white sage (*Salvia apiana*), yellow bush penstemon (*Keckiella antirrhinoides*), sticky-leaf monkey flower (*Mimulus aurantiacus*), spiny red-berry (*Rhamnus crocea*), Mexican elderberry (*Sambucus mexicana*), chaparral nightshade (*Solanum xanthii*), tree tobacco (*Nicotiana glauca*), Coulter's matilija poppy (*Romneya coulteri*), and scattered individuals of toyon (*Heteromeles arbutifolia*) and laurel sumac (*Malosma laurina*).

The typical understory consists of non-native grasses, and native/non-native forbs. The understory includes but is not limited to rat-tail fescue (*Vulpia myuros*), red brome (*Bromus madritensis* ssp. *rubens*), wishbone bush (*Mirabilis laevis*), common woolly sunflower (*Eriophyllum confertiflorum*), slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), fascicled tarplant (*Hemizonia fasciculata*), rancher's fireweed (*Amsinckia menziesii* var. *intermedia*), bicolor lupine (*Lupinus bicolor*), arroyo lupine (*Lupinus succulentus*), slender-

leaved malacothrix (*Malacothrix saxitilis*), lanceolate-leaved dudleya (*Dudleya lanceolata*), tocolote (*Centauria melitensis*), wild hyacinth (*Dichelostemma capitatum*), splendid mariposa lily (*Calochortus splendens*), blue fiesta flower (*Pholistoma auritum*), caterpillar phacelia (*Phacelia cicutaria*), California aster (*Lessingia filagnifolia*), California goldfields (*Laesthenia californica*) and early onion (*Allium praecox*).

Riversidian sage scrub is designated as a special status vegetation community by the CDFG. CDFG ranks this vegetation community as G3:S3.1. Section 3.2.2 above describes the G and S rankings. The G3 ranking is the overall global ranking and indicates that this is a “Species or natural community with less than 21-100 element occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres remaining world-wide”. The S3.1 ranking is specific to the State of California and indicates that this is a “Species or community that is rare to uncommon; typically 21 to 50 known occurrences; S3 ranked species are not yet susceptible to becoming extirpated in the state but may be if additional populations are destroyed.”

#### 4.2.8 Riversidian Sage Scrub/Chaparral

Approximately 31.52 acres of the Project Study Area is comprised of a Riversidian sage scrub/chaparral habitat association. This vegetation community is located within a tributary to Bedford Canyon Wash in the southeastern portion of the Project Study Area and a triangular patch of vegetation located directly west and north of Bedford Canyon Wash and is bordered on the north, west, and south by ruderal vegetation establishing within the remnant agricultural operation. The Riversidian sage scrub/chaparral habitat is dominated by shrubs such as California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), sacapellote (*Acourtia microcephala*), giant wild rye (*Leymus condensatus*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), brittlebush (*Encelia farinosa*), Mexican elderberry (*Sambucus mexicana*), castor bean (*Ricinus communis*), deerweed (*Lotus scoparius*), yellow bush penstemon (*Keckiella antirrhinoides*), hairy yerba mansa (*Eriodycton trichocalyx*), Coulter’s matilija poppy (*Romneya coulteri*)<sup>6</sup>, cotton thorn (*Tetradymia comosa*), scale broom (*Lepidospartum squamatum*), giant reed (*Arundo donax*), virgin’s bower (*Clematis ligusticifolia*), sugarbush (*Rhus ovata*), wild cucumber (*Marah macrocarpus*), California buckwheat (*Eriogonum fasciculatum*), tarragon (*Artemisia dracuncululus*), California wishbone bush (*Mirabilis laevis*) and small scattered areas of mulefat (*Baccharis salicifolia*).

The understory of this vegetation type is composed chiefly of non-native grass species which include rat-tail fescue (*Vulpia myuros*), red brome (*Bromus madritensis* subsp. *rubens*), and rigput brome (*Bromus diandrus*) but also includes native forbs of wild hyacinth (*Dichelostemma capitatum*), rancher’s fireweed (*Amsinckia menziesii* var. *intermedia*), common cryptantha (*Cryptantha intermedia*), bicolor lupine (*Lupinus bicolor*), and California goldfields (*Laesthenia californica*), and non-native forbs including tocolote (*Centauria melitensis*) and summer mustard (*Hershfeldia incana*).

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<sup>6</sup> *Romneya coulteri* is designated by the California Native Plant Society as a List 4 species.

#### 4.2.9 Ruderal Vegetation

Approximately 207.42 acres of the Project Study Area contains ruderal vegetation. This area is a remnant citrus operation that is maintained (trimmed) annually. Vegetation within this area is comprised of ruderal species which includes; Russian thistle (*Salsola tragus*), tumbling pigweed (*Amaranthus albus*), rat-tail fescue (*Vulpia myuros*), red brome (*Bromus madritensis* subsp. *rubens*), ripgut brome (*Bromus diandrus*), tocolote (*Centauria melitensis*), summer mustard (*Hersfeldia incana*), tree tobacco (*Nicotiana glauca*), Wallace's tobacco (*Nicotiana quadrivalvis*), prickly lettuce (*Lactuca serriola*), whispering bells (*Emmenanthe penduliflora*), chaparral nightshade (*Solanum xantii*), Douglas's nightshade (*Solanum douglasii*), artichoke thistle (*Cynara cardunculus*) and horehound (*Marrubium vulgare*).

#### 4.2.10 Unvegetated Streambed

Approximately 5.49 acres of the Project Study Area is composed of unvegetated streambed associated with Bedford Canyon Wash. This sandy wash does contain some scattered areas containing woody vegetation such as limited areas of individual mulefat (*Baccharis salicifolia*), and scalebroom (*Lepidospartum squamatum*), tree tobacco (*Nicotiana glauca*), brittlebush (*Encelia farinosa*) and California buckwheat (*Eriogonum fasciculatum*); however, the majority of the vegetation within the wash is comprised of forbs and grasses. Forbs and grasses commonly observed in this vegetation type consist of red brome (*Bromus madritensis* subsp. *rubens*), tocolote (*Centauria melitensis*), deerweed (*Lotus scoparius*), castor bean (*Ricinus communis*), jimson weed (*Datura wrightii*), and southern woolly lotus (*Lotus heermannii*).

#### 4.2.11 Willow Trees

Approximately 0.15 acre of the Project Study Area is composed of willow trees. This area is dominated by a few individuals of arroyo willow (*Salix lasiolepis*) that are located in the eastern portion of the Project Study Area associated with a small man-made remnant pond. This small man-made pond was used historically for agricultural irrigation at the adjacent agricultural fields. When the pond was constructed, it was lined with asphalt or tar, which is still present, along with sediment that has entered the depressional area from adjacent upper areas. Therefore, the willow trees are considered artificially created.

### 4.3 Special-Status Vegetation Types

The following 12 special-status vegetation communities, as designated by the CDFG, were reported in the CNDDDB for the Corona South and surrounding eight USGS topographic quadrangles: California walnut woodland, canyon live oak ravine forest, Riversidian alluvial fan sage scrub, Southern California arroyo chub/Santa Ana sucker stream, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern interior cypress forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, southern willow scrub, and valley needlegrass grassland. The Project Study Area does not contain any of the special-status vegetation types listed above by the CNDDDB.

#### 4.4 Special-Status Plants

Table 4-2 provides a list of special-status plants evaluated for the Project Study Area through habitat assessments and focused surveys, including MSHCP covered species with special survey/conservation requirements. Species were evaluated 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 property, 2) MSHCP species survey areas for which the property occurs within, 3) planning species identified by Temescal Canyon Area Plan, and 4) any other special-status plants that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

**Table 4-2. Special-Status Plants Evaluated.**

<b>Federal</b>	<b>State</b>
FE - Federally Endangered	SE - State Endangered
FT - Federally Threatened	ST - State Threatened
FC - Federal candidate species	

**CNPS**

- List 1B - Plants rare, threatened, or endangered in California and elsewhere.
- List 2 - Plants rare, threatened, or endangered in California, but more common elsewhere.
- List 3 -- Plants about which more information is needed.
- List 4-- Plants of limited distribution (a watch list).

**CNPS Threat Code Extensions**

- .1 - Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- .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**

NEPSSA – Narrow Endemic Plant Species Survey Area  
 Section 6.1.2 – Riparian/Riverine Areas and Vernal Pools Conservation Species

Species	Status	Habitat	Occurrence On Site
Allen's pentachaeta <i>Pentachaeta aurea</i> ssp. <i>allenii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Annual herb found in openings in scrub and grassland and southern oak woodlands. Blooms from April through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Brand's phacelia <i>Phacelia stellaris</i>	Federal: FC State: None CNPS: List 1B.1 MSHCP: NEPSSA 7	Annual herb found within coastal sage scrub in sandy openings on benches, dunes, washes, and floodplains. Known from 5 to 400 meters (20 to 1,300 feet) MSL. Blooms March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Braunton's milk-vetch <i>Astragalus brauntonii</i>	Federal: FE State: None CNPS: List 1B.1 MSHCP: Not Covered	Perennial herb considered a limestone endemic. Typically found in fire dependent chaparral habitats. Known from below 640 meters (< 3,000 feet) MSL. Blooms June through October.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
California beardtongue <i>Penstemon californicus</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered	Perennial herb of sandy or granitic soils on stony slopes or shrubby openings of chaparral, lower montane coniferous forests, and pinyon-juniper woodlands. Known from 1,160 to 2,320 meters (3,800 to 7,600 feet) MSL. Blooms May through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
California black walnut <i>Juglans californica</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland and coastal scrub from 50 to 900 meters (165 to 2,952 feet) MSL. Known to occur in Santa Barbara, Ventura, Los Angeles, Riverside, San Bernardino, Orange and San Diego Counties. Blooms from March through August, identifiable year-round.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
California Orcutt grass <i>Orcuttia californica</i>	Federal: FE State: SE CNPS: List 1B.1 MSHCP: Covered	Well-established vernal pools. Known from 10 to 600 meters (30 to 1,970 feet) MSL.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
California screw moss <i>Tortula californica</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not covered	Chenopod scrub and sandy soils in valley and foothill grassland. Known from 10 to 1,460 meters (30 to 4,790 feet) MSL.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Chaparral sand verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not covered	Annual herb of sandy areas in chaparral and coastal sage scrub. Known from 80 to 1,600 meters (300 to 5,300 feet) MSL. Identifiable January through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered	Marshes, playas, and vernal pools; usually alkaline soils. Known from below 1,500 meters (< 4,900 feet) MSL. Blooms March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species Specific Objective	Found in dry washes and canyons in association with coastal sage scrub, and chaparral. This species is known to occur in disturbed areas especially after fires. Known from below 1,220 meters (< 4,000 feet) MSL. Identifiable year round.	Observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Coulter's saltbush <i>Atriplex coulteri</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Perennial herb of alkaline or clay soils on ocean bluffs, ridge-tops, and low alkaline areas in coastal bluff scrub, coastal dunes, coastal sage scrub, and valley and foothill grasslands below 460 meters (< 1,500 feet) MSL. Blooms from March through October.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Alkaline soils in coastal bluff scrub and coastal scrub. Known from 10 to 200 meters (30 to 700 feet) MSL. Identifiable April through October.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Engelmann oak <i>Quercus engelmannii</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland, riparian woodland and valley and foothill grasslands from 50 to 1,300 meters (165 to 4,265 feet) MSL. Known to occur from Los Angeles, Orange, Riverside, and San Diego Counties as well as on Catalina Island and in Baja California. Bloom from March through June, identifiable year round.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Felt-leaved monardella <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not covered	Found in chaparral and woodland. Known from 300 to 1,190 meters (1,000 to 3,900 feet) MSL. Blooms June through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishiae</i>	Federal: None State: None CNPS: List 4.3 MSHCP: Species-Specific Objectives	Occurs in chaparral, cismontane woodland and riparian woodlands from 100 to 1,000 meters (328 to 3,280 feet) MSL. Known to occur from Santa Barbara, Ventura, Los Angeles, Orange, Riverside and San Diego Counties as well as Baja California. Blooms from May through January.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongata</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species-Specific Objectives	Occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands and vernal pools from 60 to 1,100 meters (197 to 3,609 feet) MSL. Known to occur from Orange, Riverside and San Diego Counties. Blooms from May through November.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Halls monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	Federal: None State: None CNPS: List 1B.3 MSHCP: Covered	Openings of broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Usually on dry slopes and ridges. Known from 700 to 2,200 meters (2,300 to 7,200 feet) MSL. Blooms June through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Hammitt's clay-cress <i>Sibaropsis hammittii</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Occurs in chaparral and valley and foothill grasslands from 720 to 1,065 meters (2,360 to 3,493 feet) MSL. Known to occur from Riverside and San Diego Counties. Blooms from March through April.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered	Closed-cone coniferous forest, chaparral, and cismontane woodland. Known from 550 to 1,370 meters (1,800 to 4,500 feet) MSL. Active April through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Species-Specific Objective	Chaparral, coastal scrub, and valley and foothill grassland. Known from 180 to 850 meters (600 to 2,800 feet) MSL. Identifiable June through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Johnston's rockcress <i>Arabis johnstonii</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Occurs in chaparral, lower montane coniferous forest from 1,350 to 2,150 meters (4,428 to 7,052 feet) MSL and is often associated with eroded clay soils. Known to be endemic to Riverside County. Blooms from February through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Lemon lily <i>Lilium parryi</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered, Section 6.1.2	Occurs in lower and upper montane coniferous forest, meadows and seeps and riparian forests from 1,220 to 2,745 meters (4,000 to 9,000 feet) MSL. This species is known to occur from Los Angeles, Riverside, Orange and San Diego counties in Southern California. Blooms from July through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	Federal: None State: None CNPS: List 3.1 MSHCP: Covered	Valley and foothill grassland and vernal pools with alkaline soils. Known from 20 to 640 meters (70 to 2,100 feet) MSL. Identifiable March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Chaparral, coastal scrub, meadows, seeps, and valley and foothill grassland. Known from 30 to 1,450 meters (100 to 4,800 feet) MSL. Active April through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Malibu baccharis <i>Baccharis malibuensis</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Deciduous shrub of conejo volcanic soils (often roadsides), in coastal sage scrub, chaparral, or cismontane woodlands. Known from 150 to 260 meters (490 to 850 feet) MSL. Blooms in August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Many-stemmed dudleya <i>Dudleya multicaulus</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Chaparral, coastal scrub, and valley and foothill grassland. Often found on clay soils or granitic outcrops. Known from below 800 meters (< 2,600 feet) MSL. Blooms May through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Not Covered	Sandy or gravelly soils in chaparral and coastal scrub. Known from 70 to 825 meters (200 to 2,700 feet) MSL. Identifiable February through September.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Mojave tarplant <i>Deinandra mohaviensis</i>	Federal: None State: SE CNPS: List 1B.3 MSHCP: Species-Specific Objectives	Occurs in chaparral, coastal scrub and riparian scrub from 640 to 1,600 meters (2,100 to 5,428 feet) MSL. Known to occur from Kern Riverside, San Bernardino and San Diego Counties. Blooms from June through January.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Moran's navarretia [Spreading navarretia] <i>Navarretia fossalis</i>	Federal: FT State: None CNPS: List 1B.1 MSHCP: Covered	Vernal pools, chenopod scrub, marshes ditches and playas. Known to occur from 30 to 1,310 meters (100 to 4,300 feet) MSL. Identifiable April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Mud nama <i>Nama stenocarpum</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Covered	Annual or perennial herb of lakeshores, riverbanks, and other intermittently wet areas. Known to occur from 5 to 500 meters (20 to 1,600 feet) MSL. Identifiable January through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Munz's mariposa lily <i>Calochortus palmeri</i> var. <i>munzii</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Covered	Occurs in chaparral, lower montane coniferous forest and meadows and seeps from 1,200 to 2,200 meters (3,935 to 7,216 feet) MSL. Known to be endemic to Riverside County. Blooms from June through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Munz's onion <i>Allium munzii</i>	Federal: FE State: ST CNPS: List 1B.1 MSHCP: Covered	Clay soils supporting chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland. Known from 300 to 1,070 meters (1,000 to 3,500 feet) MSL. Active March through May.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Nevin's barberry <i>Berberis nevii</i>	Federal: FE State: FE CNPS: List 1B.1 MSHCP: Covered	Occurs in chaparral, cismontane woodland, coastal scrub and riparian scrub with gravelly substrates from 275 to 825 meters (900 to 2,705 feet) MSL. Known to occur from Los Angeles, San Bernardino, Riverside and San Diego Counties. Blooms from March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.



Species	Status	Habitat	Occurrence On Site
Ocellated Humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Not Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane woodland and riparian woodlands from 30 to 1,800 meters (98 to 5,904 feet) MSL. Known to occur from San Luis Obispo, Santa Barbara, Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties as well as several of the Channel Islands. Blooms from March through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Orcutt's brodiaea <i>Brodiaea orcuttii</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered, Section 6.1.2	Clay and serpentine soils in with grasslands, woodlands, chaparral and coniferous forest associated with streams or vernal pools. Known to occur below 1,615 meters (5,300 feet) MSL. Active May through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Palmer's grapplinghook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: 4.2 MSHCP: Covered	Clay soils within chaparral, coastal scrub and valley and foothill grassland. Known from 20 to 955 meters (65 to 3,132 feet) MSL. Active March through May.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Paniculate tarplant <i>Dienandra paniculata</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Not covered	Coastal scrub and valley and foothill grassland/usually vernal mesic. Known from 25 to 9540 meters (80 to 3,085 feet) MSL. Identifiable from April through November.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Parish's brittlescale <i>Atriplex parishii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered	Annual herb known to occur in alkaline meadows, vernal pools, chenopod scrub and drying alkaline flats with fine soils. Known from below 100 meters (330 feet) MSL. Identifiable June through October.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Parish's meadowfoam <i>Limnanthes gracilis</i> ssp. <i>parishii</i>	Federal: None State: SE CNPS: List 1B.2 MSHCP: Covered, Section 6.1.2	Occurs in lower montane coniferous forest, meadows and seeps and vernal pools from 600 to 2,000 feet (1,968 to 6,560 feet) MSL. Known to occur from Riverside and San Diego Counties. Blooms from April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Species-Specific Objectives	Dry sometimes sandy soils in chaparral and coastal scrub. Known from 40 to 1,750 meters (100 to 5,700 feet) MSL. Active April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Payson's jewelflower <i>Caulanthus simulans</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered	Occurs in recently burned or disturbed areas within chaparral, coastal sage scrub and grasslands. Known from 60 to 2,200 meters (200 to 7,200 feet) MSL. Identifiable March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Peninsular nolina <i>Nolina cismontana</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Inhabits chaparral, and coastal sage scrub with sandstone or gabbro substrates. Known from 140 to 1,275 meters (500 to 4,200 feet) MSL. Identifiable year-round.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Peninsular spineflower <i>Chorizanthe leptotheca</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species-Specific Objectives	Occurs in chaparral, coastal scrub and within granitic or alluvial areas of lower montane coniferous forest from 300 to 1,900 meters (985 to 6,230 feet) MSL. Known to occur from Riverside, San Bernardino and San Diego counties as well as Baja California. Blooms from May through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Species-Specific Objectives	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. Known from 100 to 1,700 meters (300 to 5,600 feet) MSL. Blooms May through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered, Section 6.1.2	Occurs in coastal scrub, meadows and seeps, alkaline valley and foothill grasslands and vernal pools from 15 to 700 meters (50 to 2,296 feet) MSL. Known to occur from several counties in Southern California including San Luis Obispo, Los Angeles, Orange, Riverside and San Bernardino. Blooms from April through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not covered	Dry soils in chaparral and coastal scrub. Known from below 500 meters (< 1,600 feet) MSL. Active January through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Round-leaved filaree <i>Californica macrophyllum</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered	Clay soils supporting cismontane woodland and valley and foothill grassland. Known from 15 to 1,200 meters (50 to 3,900 feet) MSL. Active March through May.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Not covered	Alkaline seeps, springs, and marshes. Known from below 1,500 meters (< 5,000 feet) MSL. Blooms March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Bernardino aster <i>Symphyotrichum defoliatum</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not covered	Vernally moist sites; ie. ditches, seeps, streams, within a variety of plant communities. Known from below 2,050 meters (< 6,700 feet) MSL. Blooms July through November.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CNPS: List 1B.1 MSHCP: NEPSSA 7	Open areas with coarse substrates near drainages or upland clay slopes, or the dry margins of vernal pools. Known from 20 to 420 meters (70 to 1,400 feet) MSL. Identifiable June through September.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Diego button celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Covered, Section 6.1.2	Vernal pools. Known from Riverside and San Diego Counties as well as Baja California. Known from 15 to 620 meters (50 to 2,000 feet) MSL. Active April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	Federal: Candidate State: SE CNPS: List 1B.1 MSHCP: Not Covered	Annual herb found in sandy soils in coastal sage scrub. Known from below 1,200 meters (< 4,000 feet) MSL. Blooms April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Jacinto Mountains bedstraw <i>Galium angustifolium</i> ssp. <i>jacinticum</i>	Federal: None State: None CNPS: List 1B.3 MSHCP: Covered	Occurs in lower coniferous montane forests from 1,350 to 2,100 meters (4,430 to 6,888 feet) MSL. Known to occur from Riverside County. Blooms from June through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Jacinto Valley crownscale <i>Atriplex coronata</i> var. <i>notatior</i>	Federal: FE State: None CNPS: List 1B.1 MSHCP: Covered, Section 6.1.2	Playas, chenopod scrub, valley and foothill grassland (mesic) and vernal pools in the San Jacinto River Valley. Known from 370 to 520 meters (1,200 to 1,700 feet) MSL. Identifiable April through August.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
San Miguel savory <i>Satureja chandleri</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: NEPSSA 7	Rocky areas in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Known from 110 to 1,210 meters (400 to 4,000 feet) MSL. Identifiable year round.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Covered	Found in sandy soils of floodplains and terraced fluvial deposits of the Santa Ana River and larger tributaries. Known from 120 to 625 meters (400 to 4,100 feet) MSL. Blooms from June through September.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Santa Monica dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	Federal: FT State: None CNPS: List 1B.2 MSHCP: Not covered	Found in cracks and crevices of north facing rock outcrops and cliff faces in canyons associated with chaparral and coastal scrub. Known from 150-1,700 meters (500 to 5,500 feet) MSL. Blooms March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Santiago Peak phacelia <i>Phacelia suaveolens</i> ssp. <i>keckii</i>	Federal: None State: None CNPS: 1B.3 MSHCP: Not Covered	Closed cone coniferous forest and chaparral. Known from 550 to 1,600 meters (1,800 to 5,200 feet) MSL. Blooms May through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: List 1B.1 MSHCP: Covered	Mature undisturbed floodplain terraces and benches with overbank deposits every 50 to 100 years from large washes and rivers. Known from 200 to 770 meters (600 to 2,500 feet) MSL. Blooms April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Small-flowered microseris <i>Microseris douglasii</i> sp. <i>platycarpa</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species-Specific Objectives	Occurs in cismontane woodland, coastal scrub, valley and foothill grasslands and vernal pools from 15 to 1,070 meters (50 to 3,510 feet) MSL. Known to occur from Los Angeles, Orange, Riverside and San Diego Counties as well as a number of Channel Islands and Baja California. Blooms from March through May.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Small-flowered morning-glory <i>Convolvulus simulans</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered	Occurs in chaparral, coastal scrub and valley and foothill grasslands from 30 to 700 meters (98 to 2,296 feet) MSL. Known to occur from Contra Costa, Fresno, Kern, Santa Barbara, Los Angeles and Orange Counties as well as several of the Channel Islands in California. Blooms from March through July.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered, Section 6.1.2	Alkaline areas in chenopod scrub, meadows and seeps, ditches, playas, riparian woodland, and valley and foothill grassland. Known from below 480 meters (1,600 feet) MSL. Active April through Sept.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Tecate cypress <i>Callitropsis forbesii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Closed-cone coniferous forest and chaparral. Known from 250 to 1,500 meters (800 to 4,900 feet) MSL. Identifiable year-round.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: List 1B.1 MSHCP: Covered	Clay, loamy sand or alkaline soils in grasslands at edges of vernal pools or floodplains. Known from below 1,220 meters (< 4,000 feet) MSL. Identifiable April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Vail Lake ceanothus <i>Ceanothus ophiochilus</i>	Federal: FT State: SE CNPS: List 1B.1 MSHCP: Covered	Occurs in chaparral with gabbroic or pyroxenite rich substrates from 580 to 1,065 meters (1,902 to 3,495 feet) MSL. Known to be endemic to Riverside County. Blooms from February through March.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

Species	Status	Habitat	Occurrence On Site
Vernal barley <i>Hordeum intercedens</i>	Federal: None State: None CNPS: List 3.2 MSHCP: Covered	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools. Known from below 1,000 meters (< 3,300 feet) MSL. Active March through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
White-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Mojavean desert scrub and pinyon and juniper woodland. Known from 300 to 1,200 meters (900 to 4,000 feet) MSL. Blooms April through June.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Not Covered	Found in riparian woodland, cis-montane woodland, coastal sage scrub, and chaparral. Known from below 2,100 meters (< 6,890 feet) MSL. Blooms July through November.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Federal: None State: None CNPS: List 2.1 MSHCP: Covered	Alkaline soils supporting alkali vernal plains, alkali playa and vernal pool habitats. Known from below 460 meters (1,500 feet) MSL. Blooms May through September.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.
Yucaipa onion <i>Allium marvinii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Covered	Occurs in clay openings within chaparral from 760 to 1,065 meters (2,492 to 3,493 feet) MSL. Known to occur from the Beaumont and Yucaipa areas of Riverside County. Blooms from April through May.	Does not occur on site. Not observed during 2008 and 2010 focused surveys.

#### 4.4.1 Habitat Suitability for MSHCP Target Plant Species

The following is a discussion of habitat suitability for each of the target Narrow Endemic Plants for the Project Study Area. Habitat discussions for each species are taken from *Volume II* of the MSHCP document.

##### Narrow Endemic Plants

**Brand's phacelia (*Phacelia stellaris*)** – Brand's phacelia is a member of the waterleaf family (HYDROPHYLLACEAE) and is designated as a federal candidate species and a CNPS List 1B.1 species. This annual herb is known to occur in coastal dunes and coastal scrub below 400 meters (1,310 feet) MSL from Los Angeles County south to San Diego County, California. This species typically occurs in sandy openings, sandy benches, dunes, sandy washes, or flood plains of rivers. Brand's phacelia is known to bloom from March through June. The Riversidian sage scrub/chaparral area located adjacent to Bedford Canyon Wash offers some habitat suitability for the Brand's phacelia. However, the Brand's phacelia was not observed during 2008 and 2010 focused plant surveys of the Project Study Area; and therefore, does not occur within the Project Study Area.

**San Diego ambrosia (*Ambrosia pumila*)** – San Diego ambrosia is a rhizomatous herb that is Federally listed as Endangered, and that is designated as a CNPS List 1B.1 species. San Diego ambrosia occurs in open floodplain terraces or on in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse non-native grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas. The extant Riverside County localities are found on Garretson gravelly fine sandy loams when in association with floodplains, and on Las Posas loam in close proximity to silty, alkaline soils of the Willows series at Skunk Hollow. The blooming period for the species is April to October. The Project Study Area does not support suitable habitat for the San Diego ambrosia due to the lack of coarse substrates near drainages or upland clay slopes, and the lack of vernal pools. The San Diego ambrosia was not observed during 2008 and 2010 focused plant surveys of the Project Study Area, and therefore, does not occur within the Project Study Area.

**San Miguel savory (*Satureja chandleri*)** – The San Miguel savory is a member of the mint family (LAMIACEAE) that is designated as a CNPS List 1B.2 species but is not a state or federal listed species. This perennial shrub is known to occur in chaparral, cismontane woodland, coastal scrub, riparian woodland and valley and foothill grasslands from 120 to 1,075 meters (394 to 3,526 feet) MSL. San Miguel savory is known to occur from Orange, Riverside and San Diego Counties as well as Baja California and is known to bloom from March through July. The Riversidian sage scrub/chaparral area located adjacent to Bedford Canyon Wash offers some habitat suitability for the San Miguel savory. However, the San Miguel savory was not observed during 2008 and 2010 focused plant surveys of the Project Study Area; and therefore, does not occur within the Project Study Area.

#### **4.4.2 MSHCP Criteria Area Plant Species**

The Project Study Area is not located within the Criteria Area Plant Species Survey Area. None of the Criteria Area Plant Species were detected during rare plant surveys in 2008 or 2010.

#### **4.4.3 Special-Status Plants Observed**

**Coulter's matilija poppy (*Romneya coulteri*)** – Coulter's matilija poppy is a member of the poppy family (PAPAVERACEAE) that is designated as a CNPS LIST 4.2 species but is not a federal or state listed species. This perennial herb is known to occur in chaparral and coastal scrub from 20 to 1,200 meters (66 to 3,940 feet) MSL and is known as a fire follower species. Coulter's matilija poppy is known from Los Angeles, Orange, Riverside and San Diego counties and is known to bloom from March through July. Approximately 75 individuals of Coulter's matilija poppy were observed within the Riversidian sage scrub/chaparral habitats and cliff faces located on the Project Study Area. Approximately 25 individuals of Coulter's matilija poppy were observed throughout and above the cliff areas located on the southern side of Bedford Canyon Wash, and approximately 50 individuals were observed within the Riversidian sage scrub/chaparral. Due to the relatively low sensitivity ranking of Coulter's matilija poppy, specific individuals were not mapped, however, the general extent of the population within the Project Study Area was mapped in the field and is depicted on Exhibit 3: Vegetation/Land Use Map.

#### 4.4.4 Additional Special-Status Plants Evaluated (But Not Observed)

In addition to the special-status plants detected on site during focused surveys, and in addition to the MSHCP target species discussed above, other plant species were evaluated based on the presence of suitable habitat on site, and/or that are known from the vicinity of the site. These included the chaparral sand verbena, intermediate mariposa lily, long-spined spineflower, mesa horkelia, paniculate tarplant, Parry's spineflower, Payson's jewelflower, Robinson's peppergrass, and white-rabbit tobacco. Although there is some potential for these species to occur within the Project Study Area, none of these species were observed during focused surveys in 2008 and 2010, which had an above-average rainfall year. Therefore, these species do not occur within the Project Study Area.

#### 4.5 Special-Status Animals

Table 4-3 provides a list of special-status animals evaluated for the Project Study Area through habitat assessments and focused surveys (where suitable habitat was present), including MSHCP Covered Species with additional survey requirements. Species were evaluated 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 property, 2) MSHCP species survey areas for which the property occurs within, 3) planning species identified by Temescal Canyon Area Plan, and 4) any other special-status animals that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

**Table 4-3. Special-Status Animals Evaluated.**

- |                           |                                     |
|---------------------------|-------------------------------------|
| <b>Federal</b>            | <b>State</b>                        |
| FE - Federally Endangered | SE - State Endangered               |
| FT - Federally Threatened | ST - State Threatened               |
| FC - Federal Candidate    | SCE - State Candidate Endangered    |
|                           | SSC - California Species of Concern |
|                           | CFP - Fully Protected               |
|                           | WL - Watch List                     |

**Western Bat Working Group (WBWG)**

- H - High Priority
- LM - Low-Medium Priority
- M - Medium Priority
- MH - Medium-High Priority

**MSHCP**

- BOSA - Burrowing Owl Survey Area

Species Name	Status	Habitat Requirements	Occurrence On Site
Arroyo chub <i>Gila orcutti</i>	Federal: None State: SSC MSHCP: Covered	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur on site due to a lack of suitable habitat. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Arroyo toad <i>Anaxyrus californica</i>	Federal: FE State: SSC MSHCP: Covered	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravely terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Does not occur on site due to a lack of breeding pools, aquatic habitats, adjacent banks, and riparian canopy. Not observed during habitat assessments or biological surveys.
Bald eagle (nesting & wintering) <i>Haliaeetus leucocephalus</i>	Federal: Delisted 2007 State: SE & CFP MSHCP: Covered	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur on site due to a lack of seacoasts, rivers, swamps, and large lakes. Not observed during habitat assessments or biological surveys.
Bell's sage sparrow (nesting) <i>Amphispiza belli belli</i>	Federal: None State: WL MSHCP: Covered	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys and in the lower foothills of local mountains.	Low potential to occur within areas of Riversidian sage scrub. Not observed during habitat assessments or biological surveys.
Bobcat <i>Lynx rufus</i>	Federal: None State: None MSHCP: Covered	Widespread throughout western Riverside County, but most closely associated with rocky and brushy areas near springs or other perennial water sources, primarily in foothills comprised of chaparral habitats.	Observed within Bedford Canyon Wash.
Burrowing owl (burrow sites & some wintering sites) <i>Athene cunicularia</i>	Federal: None State: SSC MSHCP: BOSA	Short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors and some artificial open areas as a yearlong resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Not expected to occur within the Project due to the lack of suitable burrows. No burrowing owls or burrowing owl sign was observed during the habitat assessments or biological surveys.
California horned lark <i>Eremophila alpestris actia</i>	Federal: None State: WL MSHCP: Covered	Occupies a variety of open habitats, usually where trees and large shrubs are absent.	Observed within the ruderal areas (remnant agricultural areas).
California mountain kingsnake (San Diego population) <i>Lampropeltis zonata pulchra</i>	Federal: None State: SSC MSHCP: MOU with Forest Service	Restricted to the San Jacinto and San Gabriel Mountains in Southern California. Inhabits a variety of habitats including valley and foothill hardwood, coniferous, chaparral, riparian, and wet meadows.	Not expected to occur on site as the site is located outside of the known range of the species. Not observed during habitat assessments or biological surveys.



Species Name	Status	Habitat Requirements	Occurrence On Site
California red-legged frog <i>Rana draytonii</i>	Federal: FT State: SSC MSHCP: Covered	Quiet pools of streams, marshes, and occasionally ponds.	Does not occur on site due to a lack of streams, marshes, and ponds. Not observed during habitat assessments or biological surveys.
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i> (San Diego & Orange Counties only)	Federal: None State: SSC MSHCP: Not Covered	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Does not occur on site due to a lack of cactus dominated coastal sage scrub. Not observed during habitat assessments or biological surveys.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	Federal: FT State: SSC MSHCP: Covered	Low elevation coastal sage scrub and coastal bluff scrub.	Low potential to occur within Riversidean sage scrub areas. Not observed during habitat assessments or biological surveys.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	Federal: None State: None MSHCP: Covered	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Observed within the Project.
Coast horned lizard <i>Phrynosoma blainvillei</i>	Federal: None State: SSC MSHCP: Covered	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland and riparian woodlands.	Low potential to occur within Riversidean sage scrub areas. Not observed during habitat assessments or biological surveys.
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	Federal: None State: SSC MSHCP: Not Covered	Brushy or shrubby vegetation in coastal Southern California. Requires small mammal burrows for refuge and overwintering sites.	Low potential to occur within Riversidean sage scrub areas. Not observed during habitat assessments or biological surveys.
Coast Range Newt <i>Taricha torosa torosa</i>	Federal: None State: SSC MSHCP: Covered	Wet forests, oak forests, chaparral and rolling grasslands.	Does not occur on site due to a lack of wet forests, oak forests, chaparral, and rolling grasslands. Not observed during habitat assessments or biological surveys.
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	Federal: None State: WL MSHCP: Covered	Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial.	Observed within the Project.
Delhi Sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	Federal: FE State: None MSHCP: Covered	Found only in areas of the Delhi Sands formation in southwestern San Bernardino and Northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.	Does not occur on site due to a lack of Delhi Sands and consolidated dunes. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Downy woodpecker <i>Picoides pubescens</i>	Federal: None State: None MSHCP: Covered	Within Southern California, the species generally nests in deciduous (often willow) woodlands, deciduous growth/oak woodlands, orchards, suburban plantings, and occasionally in conifers	Does not occur on site due to a lack of deciduous woodlands, deciduous growth/oak woodlands, orchards, and suburban plantings. Not observed during habitat assessments or biological surveys.
Earthquake Merriam's [Aguanga] kangaroo rat <i>Dipodomys merriami collinus</i>	Federal: None State: None MSHCP: Covered	Inhabits a variety of habitats including Riverside sage scrub, chaparral, redshank chaparral, and non-native grassland	Not expected to occur on site given that the site is located outside of the known range of the species. Not observed during habitat assessments or biological surveys.
Ferruginous hawk (wintering) <i>Buteo regalis</i>	Federal: None State: WL MSHCP: Covered	Open, dry country, perching on trees, posts, and mounds. In California, wintering habitat consists of open terrain and grasslands of the plains and foothills.	Low potential to occur on site within ruderal areas (remnant agricultural land). Not observed during habitat assessments or biological surveys.
Golden eagle (nesting & wintering) <i>Aquila chrysaetos</i>	Federal: None State: CFP MSHCP: Covered	In Southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	The Project site occurs within potential foraging areas, but would not support breeding golden eagles.
Grasshopper sparrow (nesting) <i>Ammodramus savannarum</i>	Federal: None State: SSC MSHCP: Species-Specific Objectives	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs, and scattered shrubs. Loosely colonial when nesting.	Not expected to occur on site due to a lack of grasslands for nesting. Not observed during habitat assessments or biological surveys.
Least Bell's vireo <i>Vireo bellii pusillus</i>	Federal: FE State: SE MSHCP: Covered, Section 6.1.2	Dense riparian habitats with a stratified canopy, including Southern Willow Scrub, mulefat scrub and riparian forest.	Does not occur on site due to lack of dense riparian vegetation. Not observed during habitat assessments or biological surveys.
Loggerhead shrike (nesting) <i>Lanius ludovicianus</i>	Federal: None State: SSC MSHCP: Covered	Broken woodlands, savannah, pinyon-juniper woodlands, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Does not occur on site due to lack of Broken woodlands, savannah, pinyon-juniper woodlands, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Long-eared owl (nesting) <i>Asio otus</i>	Federal: None State: SSC MSHCP: Not Covered	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Not expected to occur on site due to the lack of riparian habitat, oak thickets, and dense stands of trees. Not observed during habitat assessments or biological surveys.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC MSHCP: Covered	Prefers sandy soil for burrowing. Also known to occur on gravel washes and in rocky soils. Associated with coastal scrub.	Low potential to occur within Riversidian sage scrub areas. Not observed during habitat assessments or biological surveys.
Mountain lion <i>Puma concolor</i>	Federal: None State: None MSHCP: Covered	Rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral, as well as riparian areas that provide protective habitat connections for movement between fragmented core habitat.	Not expected to occur on site due to a general lack of suitable habitat. Not observed during habitat assessments or biological surveys.
Northern harrier (nesting) <i>Circus cyaneus</i>	Federal: None State: SSC MSHCP: Covered	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands and croplands.	Observed within the Project.
Northern leopard frog <i>Lithobates pipiens</i> (native populations only)	Federal: None State: SSC MSHCP: Not Covered	Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats. Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	Not expected to occur on site due to the lack of aquatic habitats and that the site is located outside of the known range of the species. Not observed during habitat assessments or biological surveys.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: SSC MSHCP: Covered	Coastal sage scrub, sage scrub / grassland ecotones and chaparral.	Low potential to occur within Riversidian sage scrub areas. Not observed during habitat assessments or biological surveys.
Orangethroat whiptail <i>Aspidoscelis hyperythra</i>	Federal: None State: SSC MSHCP: Covered	Chaparral, coastal sage scrub, juniper woodland and oak woodlands.	Moderate potential to occur on site within Riversidian sage scrub areas. Not observed during habitat assessments or biological surveys.
Pallid bat <i>Antrozous pallidus</i>	Federal: None State: SSC WBWG: H MSHCP: Not Covered	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Not expected to occur on site due to a lack of rocky areas for roosting. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Peregrine falcon <i>Falco peregrinus anatum</i>	Federal: Delisted State: SE & CFP MSHCP: Not Covered	Although part of its historic breeding range, this species does not breed in Southern California. In the west, breeding habitat consists of high cliffs along the coast.	Not expected to occur on site due to the lack of high cliffs and marshes, lake shores, river mouths, etc. Not observed during habitat assessments or biological surveys.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: SSC WBWG: M MSHCP: Not Covered	Inhabits a variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian. Roosts in rocky areas with high cliffs.	Not expected to occur on site due to the lack of woodlands, desert scrub, palm oasis, desert wash, and desert riparian areas. Not observed during habitat assessments or biological surveys.
Red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: CSC MSHCP: Covered	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Low potential to occur on site within Riversidean sage scrub areas. Not observed during habitat assessments or biological surveys.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Federal: FE State: None MSHCP: Covered	Deep seasonal vernal pools, vernal pool-like ephemeral ponds and human modified ponds such as stock ponds.	Not expected to occur on site due to a lack of suitable vernal pool habitat.
Rosy boa <i>Charina trivirgata</i>	Federal: None State: None MSHCP: Not Covered	In rocky areas in chaparral, scrub habitats, rocky riparian areas or immediately adjacent to oak woodland. Nocturnal.	Low potential to occur on site within Riversidean sage scrub areas. Not observed during habitat assessments or biological surveys.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: SSC MSHCP: Covered	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 on site due to the lack of Riversidean alluvial fan sage scrub and floodplains and that the site is located outside of the known range of the species. Not observed during habitat assessments or biological surveys.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	Federal: None State: None MSHCP: Covered	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub and open sand dunes.	Not expected to occur on site due to the lack of cismontane chaparral, desert scrub, and open sand dunes. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: SSC MSHCP: Covered	Occupies a variety of habitats, but is most common among short-grass habitats. Also occurs in sage scrub but needs open habitats.	Low potential to occur on site. Not observed during habitat assessments or biological surveys.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: SSC MSHCP: Covered	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti or areas of dense undergrowth.	Observed within the Project.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	Federal: FE State: None MSHCP: Not Covered	Endemic to San Diego and Orange County mesas with vernal pools.	Does not occur on site due to a lack of vernal pools. Not observed during habitat assessments or biological surveys.
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp.3	Federal: None State: SSC MSHCP: Not Covered	Headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures 17°-20°C. Usually inhabits shallow cobble and gravel riffle.	Does not occur on site due to a lack of permanent streams. Not observed during habitat assessments or biological surveys.
Santa Ana sucker <i>Catostomus santaanae</i>	Federal: FT State: SSC MSHCP: Covered	Found in permanent streams with substrates that are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae.	Does not occur on site due to a lack of permanent streams. Not observed during habitat assessments or biological surveys.
Sierra Madre [Mountain] yellow-legged frog <i>Rana muscosa</i>	Federal: FE State: SSC MSHCP: Covered	Inhabits ponds, tams, lakes, and streams at moderate to high elevations.	Does not occur on site due to a lack of ponds, tams, lakes, and streams. Not observed during habitat assessments or biological surveys.
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	Federal: None State: WL MSHCP: Covered	Grass covered hillsides, coastal sage scrub and chaparral.	Observed within the Project.
Southwestern pond turtle <i>Actinemys marmorata pallida</i>	Federal: None State: SSC MSHCP: Covered	Inhabits permanent or nearly permanent water below 1,830 meters (6,000 feet) throughout California, west of the Sierra Cascade.	Not expected to occur on site due a lack of permanent or nearly permanent water. Not observed during habitat assessments or biological surveys.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Federal: FE State: SE MSHCP: Covered	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Not expected to occur on site due a lack of riparian woodlands. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST MSHCP: Covered	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Not expected to occur on site due to the lack of open grassland or open shrublands. Not observed during habitat assessments or biological surveys.
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	Federal: None State: SSC MSHCP: Covered	Colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat composed of grassland, woodland, or agricultural cropland.	Does not occur on site due to a lack of water resources required for nesting. Not observed during habitat assessments or biological surveys.
Two-striped garter snake <i>Thamnophis hammondi</i>	Federal: None State: SSC MSHCP: Not Covered	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur on site due to a lack of wetland habitats, streams, creeks, and pools. Not observed during habitat assessments or biological surveys.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Federal: FT State: None MSHCP: Covered	Restricted to seasonal vernal pools.	Does not occur on site due to a lack of seasonal pools.
Western mastiff bat <i>Eumops perotis caliornicus</i>	Federal: None State: SSC WBWG: H MSHCP: Not Covered	Rocky areas and cliff faces. Roosts in cliff crevices and buildings.	Low potential to occur on site due to the cliff faces of Bedford Canyon Wash. Not observed during habitat assessments or biological surveys.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	Federal: FT State: SSC MSHCP: Not Covered	Inhabits beaches, dry mud or salt flats, sandy shores of rivers, lakes, and ponds.	Does not occur on site due to a lack of beaches, mud and salt flats, sandy shores of rivers, lakes, and ponds. Not observed during habitat assessments or biological surveys.
Western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC MSHCP: Covered	Grasslands and occasionally hardwood woodlands. Requires vernal or seasonal pools that pond longer than three weeks for breeding. Burrows in loose soil during dry season.	Not expected to occur on site due to a lack of seasonal/vernal pools. Not observed during habitat assessments or biological surveys.
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC WBWG: H MSHCP: Not Covered	Roost in trees, hanging from the underside of a leaf. Commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees and have also been documented roosting in cottonwood trees.	Not expected to occur on site due to a lack of palm trees and cottonwood trees. Not observed during habitat assessments or biological surveys.

Species Name	Status	Habitat Requirements	Occurrence On Site
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Federal: FC State: SE MSHCP: Covered	Occurs in a variety of habitats including open woodland, parks, and riparian woodland with densely foliated, deciduous trees and shrubs, especially willows which are required for roost and nest sites.	Does not occur on site due to a lack of dense riparian woodlands associated with large river systems. Not observed during habitat assessments or biological surveys.
White-faced ibis (rookery sites) <i>Plegadis chihi</i>	Federal: None State: None MSHCP: Covered	Occurs in mainly shallow marshes with islands of emergent vegetation.	Does not occur on site due to a lack of shallow marshes. Not observed during habitat assessments or biological surveys.
White-tailed kite (nesting) <i>Elanus leucurus</i>	Federal: None State: CFP MSHCP: Covered	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands and oak woodlands. Dense canopies used for nesting and cover.	Not expected to breed on site due to a general lack of suitable habitat. Not observed during habitat assessments or biological surveys.
Yellow-breasted chat (nesting) <i>Icteria virens</i>	Federal: None State: SSC MSHCP: Covered	Summer resident. Inhabits riparian thickets of willows and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, and wild grape.	Does not occur on site due to a lack of riparian woodlands. Not observed during habitat assessments or biological surveys.
Yellow warbler (nesting) <i>Dendroica petechia brewsteri</i>	Federal: None State: SSC MSHCP: Covered	Breeds 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 on site due to the isolated, limited area of riparian vegetation. Not observed during habitat assessments or biological surveys.
Yuma myotis <i>Myotis yumanensis</i>	Federal: None State: None WBWG: LM MSHCP: Not Covered	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings, or crevices.	Not expected to occur on site due to the lack of aquatic resources. Not observed during habitat assessments or biological surveys.

#### 4.5.1 Habitat Suitability for the Burrowing Owl

The Project Study Area is located within the survey area for the burrowing owl. The following is a discussion of habitat suitability for the burrowing owl for the Project Study Area. Habitat discussions are taken from *Volume II* of the MSHCP document.

**Burrowing Owl (*Athene cunicularia*)** - The burrowing owl is designated as a State Species of Special Concern. 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 (e.g., ground squirrels, rabbits, etc.). As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrow in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. In the case of nesting owls, one burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

No burrowing owls, potential burrows, or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls were observed within the Project Study Area or the 150 meter buffer area during the focused burrow survey conducted in 2009 and 2010. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed at two areas of the off-site hillslopes to the west within the 150 meter buffer area. However, these burrows are actively utilized by California ground squirrels and contained no burrowing owls or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls. Therefore, focused burrowing owl surveys (Step II part B) are not required pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions dated March 29, 2006. A copy of the nesting season focused burrowing owl survey report is enclosed as Appendix D.

Based on the 2009 and 2010 burrowing owl surveys, it was determined that burrowing owls are not currently utilizing the Project Study Area for foraging or nesting, although suitable habitat does exist for future use.

#### **4.5.2 Special-Status Animals Observed**

During general and focused biological surveys for the Project Study Area, seven (7) special-status animals were identified within the Project Study Area or immediately adjacent to the Project Study Area, including the bobcat (*Lynx rufus*), California horned lark (*Eremophila alpestris actia*), coastal western whiptail (*Aspidoscelis tigris multiscutatus*), Cooper's hawk (*Accipiter cooperi*), northern harrier (*Circus cyaneus*), San Diego desert woodrat (*Neotoma lepida intermedia*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Each of these species is discussed below.

**Bobcat (*Lynx rufus*)** – The bobcat is not Federally or State listed, and is not granted any other special status by the State. However, the bobcat is evaluated by the MSHCP and is designated as a Planning Species for various MSHCP Core Areas, Habitat Blocks, Linkages, etc. The bobcat is widespread throughout the Plan Area. The bobcat is designated as a MSHCP Covered Species adequately conserved. This species requires large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources. In addition to needing large habitat blocks, a key factor for conservation of the bobcat in the Plan Area is the provision of adequate dispersal and movement habitat, especially at potential bottleneck areas. The bobcat was observed within the Bedford Canyon Wash near the off-site golf course leading up to the Santa Ana Mountains. The bobcat would be expected to infrequently move back and forth between the Project Study Area and the Santa Ana Mountains.



**California Horned Lark (*Eremophila alpestris actia*)** - The California horned lark is designated as a State Watch list species. The California horned lark is designated as a MSHCP Covered Species adequately conserved. The horned lark is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent (Zeiner, et al. 1990). Range-wide, California horned larks breed in level or gently sloping shortgrass prairie, montane meadows, "bald" hills, opens coastal plains, fallow grain fields, and alkali flats (Grinnell and Miller 1944). Within Southern California, horned larks breed primarily in open fields, (short) grasslands, and rangelands (Garrett and Dunn 1981). During general and focused surveys at the Project Study Area, the horned lark was observed in groups foraging throughout the flat agricultural and disturbed areas. Although not observed nesting on site, horned larks have the potential to nest within the Project Study Area, particularly within ruderal (remnant agricultural) areas.

**Coastal Whiptail (*Aspidoscelis tigris stejnegeri*)** - The coastal western whiptail does not have any Federal or State designation, however, the coastal western whiptail is evaluated by the MSHCP. The coastal western whiptail is designated as a MSHCP Covered Species adequately conserved. The western whiptail can be found in open, often rocky areas with little vegetation or sunny microhabitats within shrub or grassland associations (Benes, 1969). The coastal western whiptail was observed within the Riversidian sage scrub areas of the Project Study Area during general and focused biological surveys.

**Cooper's Hawk (*Accipiter cooperi*)** - The Cooper's hawk is designated as a State Watch list species, when nesting. Otherwise, a Cooper's hawk that utilizes a property other than for nesting (i.e., foraging, roosting, etc.) is not assigned any special-status. The Cooper's hawk is designated as a MSHCP Covered Species adequately conserved. The Cooper's hawk breeds primarily in riparian areas and oak woodlands and apparently is most common in montane canyons (Garrett and Dunn 1981). Within the range in California, it most frequently uses dense stands of live oak, riparian deciduous, or other forest habitats near water (Zeiner, et al. 1990). The Cooper's hawk tends to nest in stands with lower densities of taller and larger trees and a greater proportion of hardwood cover than conifer species when compared to other accipiters (Trexel, et al. 1999). The Cooper's hawk was observed foraging within the within the Riversidian sage scrub areas of the Project Study Area, adjacent to the ornamental trees, during general and focused biological surveys.

**Northern Harrier (*Circus cyaneus*)** - The northern harrier is designated as a State Species of Special Concern, when nesting. The northern harrier is designated as a MSHCP Covered Species adequately conserved. The northern harrier frequents open wetlands, wet and lightly grazed pastures, old fields, dry uplands, upland prairies, mesic grasslands, drained marshlands, croplands, shrub-steppe, meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; it is seldom found in wooded areas (Bent 1937; MacWhirter and Bildstein 1996). During general and focused surveys conducted for the Project Study Area, the northern harrier was observed during the breeding season. The species was observed foraging within the Riversidian sage scrub/chaparral areas within the Project Study Area. The northern harrier does not nest on site due to a lack of suitable nesting habitat.

**San Diego Desert Woodrat (*Neotoma lepida intermedia*)** - The San Diego desert woodrat is designated as a State Species of Special Concern. The San Diego desert woodrat is designated as a MSHCP Covered Species adequately conserved. Desert woodrats are found in a variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown et al. 1972; Cameron and Rainy 1972; Thompson 1982). The San Diego desert woodrat (nest) was observed within the Riversidian sage scrub/chaparral areas within the Project Study Area.

**Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)** - The Southern California rufous-crowned sparrow is designated as a State Watch List species. The Southern California rufous-crowned sparrow is designated as a MSHCP Covered Species adequately conserved. The rufous-crowned sparrow is a common resident of sparse, mixed chaparral and coastal sage scrub habitats. The species frequents relatively steep, often rocky hillsides with grass and forb patches; also grassy slopes without shrubs, if rock outcrops are present. The Southern California rufous-crowned sparrow was observed within the Riversidian sage scrub areas of the Project Study Area during general and focused biological surveys.

#### **4.5.3 Additional Special-Status Animals Evaluated (But Not Observed)**

In addition to the MSHCP target species discussed above and the special-status animals detected on site during general and focused surveys, other animal species were evaluated based on the presence of suitable habitat on site, and/or that are known from the vicinity of the site. These species are discussed below in more detail.

**Bell's Sage Sparrow (*Amphispiza belli belli*)** - Bell's sage sparrow is designated as a State Species of Special Concern, when nesting. Bell's sage sparrow is designated as a MSHCP Covered Species adequately conserved. Bell's sage sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains. Bell's sage sparrow was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Coastal California Gnatcatcher (*Polioptila californica californica*)** - The coastal California gnatcatcher is Federally listed as Threatened, is designated as a State Species of Special Concern. The gnatcatcher is designated as a MSHCP Covered Species adequately conserved without additional survey/conservation requirements. The only restrictions on the incidental take of the gnatcatchers are from Condition 5b of the MSHCP Federal Fish and Wildlife incidental take permit. Specifically, Condition 5b states that the "clearing of occupied habitat within PQP lands and the Criteria Area between March 1 and August 15 is prohibited." If the clearing of potentially suitable scrub habitats are to be conducted during the nesting season, focused surveys should be conducted immediately prior to that season to determine if the habitat is occupied by the gnatcatcher, and if so, the occupied areas would need to be avoided until August 15 of that year. Beyond the seasonal vegetation clearing constraints, impacts to gnatcatcher occupied habitat is covered and adequately mitigated for by the MSHCP.

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. The coastal California gnatcatcher was not detected within the Project Study Area during general and focused biological surveys, although suitable habitat exists within the Riversidean sage scrub and Riversidean sage scrub/chaparral areas of the Project Study Area.

**Coast Horned Lizard (*Phrynosoma blainvillei*)** - The coast horned lizard is designated as a State Species of Special Concern. The coast horned lizard is designated as a MSHCP Covered Species adequately conserved. The species is found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest (Klauber, 1939; Stebbins, 1954). The coast horned lizard was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidean sage scrub and Riversidean sage scrub/chaparral areas within the Project Study Area.

**Coast Patch-Nosed Snake (*Salvadora hexalepis virgulata*)** - The coast patch-nosed snake is designated as a State Species of Special Concern. The coast patch-nosed snake is not designated as a MSHCP Covered Species adequately conserved. The patch-nosed snake occupies desert scrub, coastal chaparral, washes, sandy flats, and rocky areas. The coast patch-nosed snake was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidean sage scrub and Riversidean sage scrub/chaparral areas within the Project Study Area.

**Ferruginous Hawk (*Buteo regalis*)** - The ferruginous hawk is designated as a State Watch List species, when wintering. The ferruginous hawk is designated as a MSHCP Covered Species adequately conserved. The ferruginous hawk is an occupant of open dry country and will perch on badger mounds or hillocks when trees or posts are not available. There are no breeding records from California. Wintering habitat consists of open areas, but the hawk may also occur in areas of mixed grassy glades and pineries (Brown and Amadon 1968). Range-wide, within California, ferruginous hawks winter in open terrain and grasslands of plains and foothills (Grinnell and Miller 1944). Within Southern California, including the MSHCP planning area, ferruginous hawks typically winter in open fields, grasslands, and agricultural areas. The ferruginous hawk was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the ruderal (remnant agricultural) areas within the Project Study Area.

**Golden Eagle (*Aquila chrysaetos*)** - The golden eagle is designated as a State Fully-Protected Species. The golden eagle is designated as a MSHCP Covered Species adequately conserved. Range-wide, golden eagles occur locally in open country (e.g., tundra, open coniferous forest, desert, barren areas), especially in hills and mountainous regions (AOU 1998). Within southern California, the species occurs in grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nesting is primarily restricted to rugged, mountainous country (Garrett and Dunn 1981). Golden eagles do not nest within the Project due to a lack of suitable habitat. The golden eagle was not observed within the Project Study Area during general and

focused biological surveys, although it has a low potential to forage only within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)** - The Los Angeles pocket mouse (LAPM) is designated as a State Species of Special Concern. The LAPM is designated as a MSHCP Covered Species adequately conserved. Habitat of the LAPM has never been specifically defined, although Grinnell (1933) indicated that the subspecies "inhabits open ground of fine sandy composition" (cited in Brylski *et al.* 1993). This observation is supported by others who also state that the LAPM prefers fine, sandy soils and may utilize these soil types for burrowing (*e.g.*, Jameson and Peters 1988). The subspecies may be restricted to lower elevation grassland and coastal sage scrub (Patten *et al.* 1992). The habitat associated with the MSHCP database records for which precision codes are level 1 or 2 include non-native grassland, Riversidean sage scrub, Riversidean alluvial fan sage scrub, chaparral and redshank chaparral. The LAPM was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)** - The northwestern San Diego pocket mouse is designated as a State Species of Special Concern. The northwestern San Diego pocket mouse is designated as a MSHCP Covered Species adequately conserved. The northwestern San Diego pocket mouse inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. In western Riverside County, the northwestern San Diego pocket mouse is found in disturbed grassland and open sage scrub vegetation with sandy-loam to loam soils. The northwestern San Diego pocket mouse was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Orangethroat Whiptail (*Aspidoscelis hyperythra*)** - The orangethroat whiptail is designated as a State Species of Special Concern. The orangethroat whiptail is designated as a MSHCP Covered Species adequately conserved. Habitat types include chaparral, non-native grassland, (Riversidian) coastal sage scrub, juniper woodland and oak woodland. The orangethroat whiptail was not observed within the Project Study Area during general and focused biological surveys, although it has a moderate potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Red-Diamond Rattlesnake (*Crotalus ruber*)** - The red-diamond rattlesnake is designated as a State Species of Special Concern. The red-diamond rattlesnake is designated as a MSHCP Covered Species adequately conserved. From an ecological standpoint, the rattlesnake has a wide tolerance for varying environments. The species is known from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders (Klauber, 1972). Dense chaparral in the foothills, cactus or boulders associated coastal sage scrub (Stebbins, 1954, 1985; Fitch, 1970), and desert slope scrub associations are known to carry populations of *Crotalus ruber*, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for

this species than other habitats (Jennings and Hayes, 1994). The red-diamond rattlesnake was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**Rosy Boa (*Charina trivirgata*)** - The rosy boa does not have any Federal or State designation, but is considered to be a locally rare species. The rosy boa is not designated as a MSHCP Covered Species adequately conserved. According to Zeiner et al. (1988), in coastal areas, the rosy boa occurs in rocky chaparral-covered hillsides and canyons, while in the desert it occurs on scrub flats with good cover. Holland and Goodman (1998) add that it is known from a variety of desert and semi-desert habitats, however it is absent from grasslands but may occur in oak woodlands if it interdigitates with scrub or chaparral habitats. The rosy boa was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas within the Project Study Area.

**San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*)** - The San Diego black-tailed jackrabbit is designated as a State Species of Special Concern. The San Diego black-tailed jackrabbit is designated as a MSHCP Covered Species adequately conserved. The black-tailed jackrabbit occupies many diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Jackrabbits are common in grasslands that are overgrazed by cattle and they are well adapted to using low-intensity agricultural habitats (Lechleitner 1959). In Riverside County, black-tailed jackrabbits are found in most areas that support annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat, and agriculture. Black-tailed-jackrabbits typically do not burrow, but take shelter at the base of shrubs in shallow depressions called forms. The San Diego black-tailed jackrabbit was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Project Study Area.

**Western Mastiff Bat (*Eumops perotis californicus*)** - The western mastiff bat is designated as a State Species of Special Concern and a Western Bat Working Group (WBWG) high priority. The western mastiff bat is not designated as a MSHCP Covered Species adequately conserved. The western mastiff bat ranges from central California southeastward to southern Nevada, central Arizona, and west Texas, and south through northern Baja California, northern Sinaloa, and Zacatecas. The western mastiff bat is apparently a permanent resident in the U.S. The western mastiff bat is found in arid and semiarid, rocky canyon country habitats in the Chihuahuan Desert; roosts in crevices and shallow caves on the sides of cliffs and rock walls, and occasionally buildings. Roosts are usually high above the ground with unobstructed approach. Most roosts are not used throughout the year and may alternate between different day roosts. The western mastiff bat was not observed within the Project Study Area during general and focused biological surveys, although it has a low potential to occur within the Project Study Area due to the cliff faces located along Bedford Canyon Wash.

#### **4.5.4 Critical Habitat Areas**

The Project Study Area is not located within any lands designated as critical habitat for wildlife species by the USFWS.

#### **4.6 Raptor Use**

During general and focused biological surveys conducted for the Project Study Area, five (5) different raptor species were observed in some manner on site and/or adjacent to the Project Study Area, including the red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperi*), northern harrier (*Circus cyaneus*), great-horned owl (*Bubo virginianus*), and American kestrel (*Falco sparverius*). Additional raptor species have some potential to forage only within the Project Study Area, including the ferruginous hawk (*Buteo regalis*) and golden eagle (*Aquila chrysaetos*).

The majority of raptor use observed consisted of general foraging and roosting. Species commonly observed foraging throughout the Project Study Area included red-tailed hawk, great horned owl, and American kestrel. Special-status raptors, which were less commonly observed, were only detected foraging within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas along Bedford Canyon Wash. These species included the Cooper's hawk and northern harrier.

One great horned owl nest was observed in the cliff face of Bedford Canyon Wash within the Project Study Area. In addition, there is the potential for nesting raptors within the ornamental trees located within the Project Study Area and off-site of the Project Study Area within larger areas of ornamental trees associated with rural residential housing.

#### **4.7 Nesting Birds**

The Project Study Area contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds, including raptors as discussed above. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.<sup>7</sup>

#### **4.8 Wildlife Movement/Use**

##### **4.8.1 General Wildlife Observations**

A variety of wildlife was detected throughout the site, with the greatest concentrations and diversity occurring within the Riversidian sage scrub and Riversidian sage scrub/chaparral areas of the Project Study Area. More species have the potential to occur on site based on the presence of suitable habitat. Coyotes, one bobcat, and desert cottontails were the only mammals detected within the Project Study Area, with California ground squirrels observed just off-site to the west.

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<sup>7</sup> The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, 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.

#### **4.8.2 Analysis of Wildlife Movement/Use**

Based on the wildlife detected at the site and general knowledge of animal ecology and observations of the area, Bedford Canyon Wash does not provide a substantial live-in habitat and regional movement opportunity for small to medium-sized mammals. The easternmost portion of the Project Study Area contains Bedford Canyon Wash, which has not been identified as an important regional wildlife corridor connecting the Santa Ana Mountains to other MSHCP Core Areas. Bedford Canyon Wash continues through the Project Study Area (under Interstate 15) where it has been improved with concrete bed, bank, and channel, and connects to Temescal Creek. The portion of Bedford Canyon Wash where it has been improved and contains concrete bed, bank, and channel, does not provide for any wildlife movement to Temescal Creek.

Due to the proximity of the Project Study Area and the Santa Ana Mountains, it is expected that local wildlife movement would occur between areas of the Project Study Area and the Santa Ana Mountains; however, there is no connection to any larger areas of undeveloped land in the surrounding area for regional wildlife movement.

#### **4.9 Soils Mapping**

The Soil Conservation Service's (SCS)<sup>8</sup> Soil Survey for Western Riverside Area California maps four soil types (series) for the Project Study Area [Exhibit 6]. The following soil types as occurring (currently or historically) within the Project Study Area include:

##### **4.9.1 Arbuckle**

Soils of the Arbuckle series consist of well-drained soils and have slopes of two to 25 percent. These soils occur on alluvial fans and developed in alluvium from metasedimentary rocks. Arbuckle soils are not designated as a sensitive soil type by the MSHCP. Arbuckle soils are mapped within the eastern portion of the Project Study Area.

##### **4.9.2 Cortina**

The Cortina series consists of somewhat excessively drained and excessively drained soils on alluvial fans and in valley fills. These soils formed in alluvium from metasedimentary rocks. Cortina soils are not designated as a sensitive soil type by the MSHCP. Cortina soils are mapped within the majority of the Project Study Area.

##### **4.9.3 Garretson**

The Garretson series consists of well-drained soils on alluvial fans. These soils formed in alluvium made up chiefly of metasedimentary materials. Garretson soils are not designated as a sensitive soil type by the MSHCP. Garretson soils are mapped within the northern portion of the Project Study Area.

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<sup>8</sup> SCS is now known as the National Resource Conservation Service or NRCS.

#### **4.9.4 Terrace Escarpments**

Terrace escarpments consist of variable alluvium on terraces and barrancas. Small areas of recently deposited alluvium may be near the bottom of the escarpments. This land is unaltered alluvial outwash derived from granite, gabbro, metamorphosed sandstone, sandstone, or mica-schist. Terrace escarpments are not designated as a sensitive soil type by the MSHCP. Terrace escarpments are mapped within the central/eastern portion of the Project Study Area.

#### **4.10 Jurisdictional Delineation**

##### **4.10.1 Corps Jurisdiction**

The following discussion of Corps jurisdiction is based on regulatory guidance set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual<sup>9</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 (Arid West Supplement). The Project Study Area is located within the Santa Ana River watershed, an intrastate waterway that is tributary to the Pacific Ocean. The Corps retains jurisdiction of this watershed because its final destination (i.e. the Pacific Ocean) is a traditionally navigable water.

Corps jurisdiction associated with the Project Study Area totals approximately 5.87 acres, none of which consists of jurisdictional wetlands. The boundaries of Corps jurisdiction are depicted on the enclosed map provided as Exhibit 3 within Appendix D. Five drainages on site were identified that exhibit an ordinary high water mark (OHWM) with several characteristics of stream flow including destruction of terrestrial vegetation, terracing, change in soil characteristics, debris wrack, and/or water marks. All of the onsite drainages are ephemeral and flow only during, and for a short duration after, precipitation events. Groundwater is not a source of water for these ephemeral streams. Table 4-4 below depicts the total Corps jurisdictional acreages, followed by a description of each drainage. There are no wetlands onsite.

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<sup>9</sup> Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.



**Table 4-4: Summary of Corps Jurisdiction.**

<b>Drainage</b>	<b>Total Corps Jurisdiction (acres)</b>	<b>Total Wetlands (acres)</b>	<b>Drainage Length (ft)</b>	<b>Drainage Width (ft)</b>
Bedford Wash	5.58	0.00	5,659	27 to 69
Tributary A	0.10	0.00	1,605	2 to 4
Tributary B	0.06	0.00	1,325	2
Tributary C	0.03	0.00	348	2 to 8
Ditch A	0.10	0.00	1,220	2 to 5
<b>TOTAL</b>	<b>5.87</b>	<b>0.00</b>	<b>10,157</b>	

**Bedford Wash**

Corps jurisdiction associated with Bedford Wash totals 5.58 acres, none of which consists of jurisdictional wetlands. This blue-line ephemeral tributary to Temescal Creek enters the property in the southeastern corner and meanders on- and offsite in a northeasterly direction for approximately 5,659 feet [Exhibit 3 of Appendix D]. The length associated with the onsite portions of Bedford Wash totals 3,620 feet. The channel is mostly shallow and occasionally incised with a substrate of sand, silt, and cobble. Bedford Wash has been historically disturbed by (i) past and on going agricultural activities, including construction of an elevated berm to protect the adjacent agricultural groves and (ii) soil deposition within the wash. In addition, the adjacent southern cliff face appears to be consistently sloughing off, or sliding, into the drainage and obscuring the bed, bank, and OHWM within the drainage. Bedford Wash exhibits an OHWM ranging in width from 27 feet to 69 feet and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Bedford Wash supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), scalebroom (*Lepidospartum latisquamum*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), deerweed (*Lotus scoparius*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), and castor bean (*Ricinus communis*, FACU). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Scattered throughout Bedford Wash are individuals of mule fat (*Baccharis salicifolia*, FACW) and tree tobacco (*Nicotiana glauca*, FAC), and a small area of vegetation near the confluence with Tributary A consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands.

**Tributary A**

Corps jurisdiction associated with Tributary A totals 0.10 acre, none of which consists of jurisdictional wetlands. The ephemeral channel is incised with a substrate of sand, silt, and cobble. Tributary A flows south to north through a steep canyon complex consisting of scattered

residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,605 feet before its confluence with Bedford Wash [Exhibit 3 of Appendix D]. The OHWM varies from two to four feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary A supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), and castor bean (*Ricinus communis*, FACU). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. A small patch of native riparian vegetation consists of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC), and a small area of non-native riparian vegetation consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands present.

### **Tributary B**

Corps jurisdiction associated with Tributary B totals 0.06 acre, none of which consists of jurisdictional wetlands. This blue-line ephemeral tributary to Bedford Wash is incised with a substrate of sand, silt, and cobble. Tributary B flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,325 feet before its confluence with Bedford Wash [Exhibit 3 of Appendix D]. The OHWM averages two feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary B supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), California brittlebush (*Encelia californica*, UPL), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Limited areas of riparian vegetation consist of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

### **Tributary C**

Corps jurisdiction associated with Tributary C totals 0.03 acre, none of which consists of jurisdictional wetlands. The ephemeral tributary to Bedford Wash is shallow with a substrate of sand, silt, and cobble. Tributary C accepts offsite flows from rural residential development to the

south and traverses the southeastern corner of the site in a northerly direction through a gently sloping agricultural field for approximately 348 feet before flowing offsite and into the storm drain system, which ultimately discharges into Temescal Creek [Exhibit 3 of Appendix D]. The OHWM varies from two to eight feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary C supports areas of upland vegetation including cheeseweed (*Malva parviflora*, UPL), Russian thistle (*Salsola tragus*, UPL), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI) and summer mustard (*Hirschfeldia incana*, UPL) were also present. The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

#### **Ditch A**

Corps jurisdiction associated with Ditch A totals approximately 0.10 acre, none of which consists of jurisdictional wetlands. The southerly reach of this ephemeral ditch appears as a blue-line stream and is incised with a substrate of sand and silt. The northerly reach is shallow with a substrate of sand and silt. Ditch A enters the property in the southeastern portion of the site and flows in a northeasterly direction along the property's eastern boundary for approximately 1,017 feet onsite, then meanders offsite for approximately 2,009 feet, and returns onsite for approximately 203 feet before its confluence with a concrete v-ditch, which ultimately drains to Temescal Creek [Exhibit 3 of Appendix D]. The OHWM varies from two to five feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the ditch.

Ditch A supports castor bean (*Ricinus communis*, FACU), Russian thistle (*Salsola tragus*, UPL), and tree tobacco (*Nicotiana glauca*, FAC). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

#### **Non-Jurisdictional Isolated Remnant Agricultural Pond**

A small isolated remnant irrigation pond occurs on the property. This feature was used historically for agricultural irrigation at the adjacent agricultural fields. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. Because this feature was originally constructed in uplands and is an artificial irrigation pond, it is not jurisdictional.

#### **4.10.2 CDFG Jurisdiction**

CDFG jurisdiction associated with the Project Study Area totals approximately 6.32 acres, of which 0.46 acre consists of vegetated riparian habitat. The boundaries of CDFG jurisdiction are depicted on the enclosed map provided as Exhibit 3 within Appendix D. Five drainages onsite were identified that exhibit a defined channel with bed and bank. All of the onsite drainages are ephemeral and flow only during, and for a short duration after, precipitation events. Table 4-5

below depicts the total CDFG jurisdictional acreages, and the acreages of associated riparian vegetation for each drainage, followed by a description of each drainage.

**Table 4-5: Summary of CDFG Jurisdiction.**

<b>Drainage</b>	<b>Total CDFG Unvegetated Streambed (acres)</b>	<b>Total Riparian Vegetation (acres)</b>	<b>Total CDFG Jurisdiction (acres)</b>	<b>Drainage Length (ft)</b>	<b>Drainage Width (ft)</b>
Bedford Wash	5.56	0.02	5.58	5,659	27 to 69
Tributary A	0.09	0.11	0.20	1,605	2 to 13
Tributary B	0.08	0.33	0.41	1,325	2 to 22
Tributary C	0.03	0.00	0.03	348	2 to 8
Ditch A	0.10	0.00	0.10	1,220	2 to 5
<b>TOTAL</b>	<b>5.86</b>	<b>0.46</b>	<b>6.32</b>	<b>10,157</b>	

### **Bedford Wash**

CDFG jurisdiction associated with Bedford Wash totals 5.58 acres, of which 0.02 acre consists of vegetated riparian habitat. This blue-line ephemeral tributary to Temescal Creek enters the property in the southeastern corner and meanders on- and offsite in a northeasterly direction for approximately 5,659 feet. The length associated with the onsite portions of Bedford Wash totals 3,620 feet [Exhibit 3 of Appendix D]. The channel is mostly shallow and occasionally incised with a substrate of sand, silt, and cobble. Bedford Wash has been historically disturbed by (i) past and on going agricultural activities, including construction of an elevated berm to protect the adjacent agricultural groves and (ii) soil deposition within the wash. In addition, the adjacent southern cliff face appears to be consistently sloughing off, or sliding, into the drainage and obscuring the bed, bank, and OHWM within the drainage. Bedford Wash varies in width from 27 to 69 feet.

Bedford Wash supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), scalebroom (*Lepidospartum latisquamum*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), deerweed (*Lotus scoparius*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), and castor bean (*Ricinus communis*, FACU). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Scattered throughout Bedford Wash are individuals of mule fat (*Baccharis salicifolia*, FACW) and tree tobacco (*Nicotiana glauca*, FAC), and a small area of vegetation near the confluence with Tributary A consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW).

### **Tributary A**

CDFG jurisdiction associated with Tributary A totals 0.20 acre, of which 0.11 acre consists of vegetated riparian habitat. The ephemeral channel is incised with a substrate of sand, silt, and cobble. Tributary A flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,605 feet before its confluence with Bedford Wash [Exhibit 3 of Appendix D]. This drainage varies from two to 13 feet in width.

The banks and bed support vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), and castor bean (*Ricinus communis*, FACU). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. A small patch of native riparian vegetation consists of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC), and a small area of non-native riparian vegetation consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW).

### **Tributary B**

CDFG jurisdiction associated with Tributary B totals 0.41 acre, of which 0.33 acre consists of vegetated riparian habitat. This ephemeral tributary to Bedford Wash is incised with a substrate of sand, silt, and cobble. Tributary B flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,325 feet before its confluence with Bedford Wash [Exhibit 3 of Appendix D]. This drainage varies from two to 22 feet in width.

The banks and bed support vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), California brittlebush (*Encelia californica*, UPL) and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Limited areas of riparian vegetation consist of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC).

### **Tributary C**

CDFG jurisdiction associated with Tributary C totals 0.03 acre, none of which consists of vegetated riparian habitat. This blue-line ephemeral tributary to Bedford Wash is shallow with a substrate of sand, silt, and cobble. Tributary C accepts offsite flows from rural residential

development to the south and traverses the southeastern corner of the site in a northerly direction through a gently sloping agricultural field for approximately 348 feet before flowing offsite and into the storm drain system, which ultimately discharges to Temescal Creek [Exhibit 3 of Appendix D]. This drainage varies from two to eight feet in width.

Tributary C supports areas of upland vegetation including cheeseweed (*Malva parviflora*, UPL), Russian thistle (*Salsola tragus*, UPL), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI) and summer mustard (*Hirschfeldia incana*, UPL) were also present.

### **Ditch A**

CDFG jurisdiction associated with Ditch A totals 0.10 acre, none of which consists of vegetated riparian habitat. The southerly reach of this ephemeral ditch appears as a blue-line stream and is incised with a substrate of sand and silt. The northerly reach is shallow with a substrate of sand and silt. Ditch A enters the property in the southeastern portion of the site and flows in a northeasterly direction along the property's eastern boundary for approximately 1,017 feet onsite, then meanders offsite for approximately 2,009 feet, and returns onsite for approximately 203 feet before its confluence with a concrete v-ditch, which ultimately drains into Temescal Creek [Exhibit 3 of Appendix D]. This drainage varies from two to five feet in width.

Ditch A supports castor bean (*Ricinus communis*, FACU), Russian thistle (*Salsola tragus*, UPL), and tree tobacco (*Nicotiana glauca*, FAC). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present.

### **Non-Jurisdictional Isolated Remnant Agricultural Pond**

A small remnant man-made irrigation pond occurs on the property. This feature was constructed for the purpose of storing irrigation water for the agricultural fields. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. The pond has no contributing watershed and only holds water that is pumped into it for irrigation purposes. As such, this pond has historically only been used for agricultural irrigation and has been abandoned. Because this feature is not a "considerable" body of standing water and because its primary hydrological input is from water pumped into the feature, it cannot be considered a "lake" pursuant to Section 1602. For all of these reasons, it does not fall under CDFG's jurisdiction and it is not jurisdictional under Section 1602 of the California Fish & Game Code.

## **4.11 Riparian/Riverine and Vernal Pool Assessment**

### **4.11.1 Riparian/Riverine Areas**

*Section 6.1.2 of the MSHCP defines Riparian/Riverine Areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur*

*close to or which depend upon soil moisture from a nearby fresh water source, or areas with fresh water flow during all or a portion of the year.”*

The MSHCP does not consider artificially created drainage features (including wetlands) to be “Riparian/Riverine”. *Section 6.1.2 (Page 6-22) of the MSHCP states the following regarding artificially created features: 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 [in MHSCP definitions for Riparian Riverine Areas and Vernal Pools] which are artificially created are not included in these definitions.*

The Project Study Area includes Bedford Wash, three tributaries, and an ephemeral ditch which totals approximately 6.32 acres of MSHCP riparian/riverine areas, 0.46 acre of which meet the definition of vegetated riparian habitat. The locations of MSHCP riparian/riverine areas detected on site are provided on Exhibit 3 [Vegetation/Land Use Map]. The portions of drainage features occurring within the boundaries of the Project Study Area consist of ephemeral (only flow during and immediately after rainfall) streams. The flows from these drainage features connect to Temescal Creek, contributing to the overall hydrology of the Santa Ana River and associated floodplain. These drainage features are considered to be MSHCP riverine features, since they have freshwater flow during a portion of the year.

#### **4.11.2 Vernal Pools**

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.*” The Project does not contain any vernal pools.

A small remnant man-made irrigation pond occurs within the Project. This feature was constructed for the purpose of storing irrigation water for the agricultural fields. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. The pond has no contributing watershed and only holds water that is pumped into it for irrigation purposes. As such, this pond has historically only been used for agricultural irrigation and has been abandoned. The primary hydrological input for this feature is from pumped water, therefore it is considered an artificial feature and not a MSHCP Riparian/riverine or vernal pool feature.

## **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 Arantine Hills Specific Plan. Project-related impacts can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or

wildlife, 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 have the potential to occur along the urban/wildland interface of a proposed project. Indirect impacts involve the effects of increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on site. Indirect impacts may be associated with the subsequent day-to-day activities associated with project build-out, such as increased traffic use, permanent concrete barrier walls or chain-link fences, exotic ornamental plantings that provide a local source of seed, etc., which 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 exotics, and changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Potentially significant adverse effects, either directly or through habitat modifications, on any special-status plant, animal, or habitat that could occur as a result of the Arantine Hills Specific Plan, is discussed below.

## **5.1 California Environmental Quality Act (CEQA)**

### **5.1.1 Thresholds of Significance**

Environmental impacts relative 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 mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

### **5.1.2 Criteria for Determining Significance Pursuant to CEQA**

Appendix G of the 1998 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

## **5.2 Direct Impacts to Biological Resources**

The Arantine Hills Specific Plan will result in direct impacts to sensitive biological resources, including the loss of habitat for special-status plants and animals. An analysis of direct impacts is provided below.

### 5.2.1 Vegetation Community/Land Use Impacts

The Project Study Area comprises approximately 301 acres, of which 52.34 acres (post-construction) consist of proposed conservation areas, including 5.20 acres of unvegetated streambed within Bedford Canyon Wash and 34.32 acres of Riversidian sage scrub, disturbed Riversidian sage scrub, and Riversidian sage scrub/chaparral located adjacent to Bedford Canyon Wash. Approximately 1.46 acres of unvegetated streambed within Bedford Canyon Wash will be subject to grading for the purpose of flood control and infrastructural improvements. The remainder of the Project Study Area will be subject to grading for the construction of residential development, landscaping, etc. Table 5-1 provides a breakdown of vegetation/land use types for the development footprint and proposed conservation areas.

**Table 5-1. Proposed Vegetation/Land Use Impacts.**

<b>Vegetation/Land Use Type</b>	<b>Development Footprint (acres)</b>	<b>Conservation (acres)</b>
Disturbed/Developed	9.09	2.06
Disturbed Riversidian Sage Scrub	0.27	6.98
Encelia Dominated Scrub	0.00	1.94
Mulefat Scrub	0.00	0.54
Non-Native Grassland	4.43	1.62
Ornamental/Exotic	1.85	1.08
Riversidian Sage Scrub	1.78	24.92
Riversidian Sage Scrub/Chaparral	29.10	2.42
Ruderal Vegetation	201.95	5.47
Unvegetated Streambed*	1.75	3.74
Willow Trees	0.04	0.11
<b>Totals</b>	<b>250.26</b>	<b>50.88</b>

\* Approximately 1.46 acres of temporary streambed within Bedford Canyon Wash will be restored after construction. Therefore, post-construction conditions would reduce impacts to unvegetated streambed to 0.41 acre and would increase the preservation of unvegetated streambed to 5.20 acres.

### 5.2.2 Impacts to Special-Status Vegetation Types

The Project Study Area does not contain any of the special-status vegetation types listed by the CNDDDB. Therefore, no impacts to special-status vegetation types are associated with the Arantine Hills Specific Plan.

### 5.2.3 Impacts to Native Vegetation Types

The proposed Arantine Hills Specific Plan, including fuel modification, would result in permanent impacts to approximately 31.60 acres of native vegetation types, including disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, unvegetated streambed, and willow trees. Approximately 1.46 acres of temporary streambed within Bedford Canyon Wash will be restored after construction.

### **Disturbed Riversidian Sage Scrub**

The proposed Arantine Hills Specific Plan would result in direct impacts to 0.27 acre of disturbed Riversidian sage scrub, all of which is associated with grading. These impacts would be less than significant. Furthermore, all remaining areas of disturbed Riversidian sage scrub associated with the Project Study Area (6.98 acres) are located within the proposed conservation area.

Impacts to disturbed Riversidean sage scrub would be potentially significant prior to mitigation. The Arantine Hills Specific Plan has been designed to reduce impacts to disturbed Riversidean sage scrub, and is avoiding approximately 6.98 acres of disturbed Riversidean sage scrub adjacent to Bedford Canyon Wash. The majority of the habitat to be conserved represents moderate quality habitat for a variety of special-status animals and plants. Impacts to sage scrub communities are covered and mitigated for through the MSHCP. With coverage/mitigation afforded by the MSHCP and with the conservation of the additional scrub habitat, impacts to disturbed Riversidean sage scrub would be mitigated to below a level of significance.

### **Riversidean sage scrub**

The proposed Arantine Hills Specific Plan would result in direct impacts to 1.78 acres of Riversidian sage scrub, all of which is associated with grading. These impacts would be less than significant. Furthermore, all remaining areas of Riversidian sage scrub associated with the Project Study Area (24.92 acres) is located within the proposed conservation area.

Impacts to Riversidean sage scrub would be potentially significant prior to mitigation. The Arantine Hills Specific Plan has been designed to reduce impacts to Riversidean sage scrub, and is avoiding approximately 24.92 acres of Riversidean sage scrub adjacent to Bedford Canyon Wash. The majority of the habitat to be conserved represents high quality habitat for a variety of special-status animals and plants. Impacts to sage scrub communities are covered and mitigated for through the MSHCP. With coverage/mitigation afforded by the MSHCP and with the conservation of the additional scrub habitat, impacts to Riversidean sage scrub would be mitigated to below a level of significance.

### **Riversidian Sage Scrub/Chaparral**

The proposed Arantine Hills Specific Plan would result in direct impacts to 29.10 acres of Riversidian sage scrub/chaparral, all of which is associated with grading. These impacts would be less than significant. The remaining area of Riversidian sage scrub/chaparral associated with the Project Study Area (2.42 acres) is located within the proposed conservation area adjacent to Bedford Canyon Wash. With coverage/mitigation afforded by the MSHCP and with the conservation of the additional scrub habitat, impacts to Riversidian sage scrub/chaparral would be mitigated to below a level of significance.

### **Unvegetated Streambed**

The proposed Arantine Hills Specific Plan would result in permanent impacts to 0.41 acre of unvegetated streambed and temporary impacts to 1.46 acres of unvegetated streambed, all of which is associated with grading. These impacts would be considered significant prior to mitigation. The Arantine Hills Specific Plan will be required to obtain a Corps Section 404 Permit, Santa Ana Regional Water Quality Control Board Section 401 Water Quality Certification, CDFG Section 1602 Streambed Alteration Agreement, and prepare a DBESP that is approved by the City of Corona. Mitigation will require the replacement of impacts at a minimum of a 1:1 ratio. The remaining area of unvegetated streambed associated with the Project Study Area (5.20 acres post-construction) is located within the proposed conservation area of Bedford Canyon Wash. With the proposed mitigation, impacts to unvegetated streambed would be mitigated to below a level of significance.

### **Willow Trees**

The proposed Arantine Hills Specific Plan would result in direct impacts to 0.04 acre of willow trees. A few individuals of arroyo willow (*Salix lasiolepis*) are located in the eastern portion of the Project study area associated with a small man-made pond. This small man-made pond was used historically for agricultural irrigation at the adjacent agricultural fields. When the pond was constructed, it was lined with asphalt or tar, which is still present, along with sediment that has entered the depressional area from adjacent upper areas. Therefore, the willow trees are considered artificially created. Impacts to the willow trees would be considered less than significant.

#### **5.2.4 Special-Status Plants**

The proposed Arantine Hills Specific Plan would result in direct impacts to one special-status plant species: Coulter's matilija poppy (*Romneya coulteri*).

### **Coulter's Matilija Poppy**

The Arantine Hills Specific Plan would result in impacts to approximately 50 individuals of Coulter's matilija poppy located within the within the Riversidian sage scrub/chaparral areas of the Project Study Area. The Coulter's matilija poppy is not a Covered Species pursuant to the MSHCP and contains the following species-specific goals: 1) include within the MSHCP Conservation Area 65,350 acres of chaparral and 5,300 acres of coastal sage scrub below 1,200 feet on Forest Service and Public/Quasi-Public Lands within the Santa Ana Mountains Bioregion, and 2) within the MSHCP Conservation Area, confirm 30 localities (locality in this sense is not smaller than one quarter section).

The Project Study Area is not located within or adjacent to any MSHCP Conservation Area, the area supporting the Coulter's matilija poppy to be impacted is less than one quarter section, and due to the low sensitivity of this species, any impacts to the Coulter's matilija poppy would be considered less than significant and would not cause the loss of long-term conservation value for the species. No mitigation is proposed or required.

### **5.2.5 Special-Status Animals**

The Arantine Hills Specific Plan will result in the loss of habitat for a number of special-status wildlife species. These species include bobcat, California horned lark, coastal western whiptail, Cooper's hawk, northern harrier, San Diego desert woodrat, and Southern California rufous-crowned sparrow. Additional special-status animals for which impacts would be less than significant are summarized below.

#### **Bobcat**

The proposed Arantine Hills Specific Plan would result in the loss of habitat for the bobcat, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The bobcat is a Covered Species adequately conserved under the MSHCP. Altogether, the Project would directly impact approximately 31.60 acres of native scrub habitats, within which the bobcat has been observed. Bedford Canyon Wash has not been identified as an important regional wildlife corridor connecting the Santa Ana Mountains to other MSHCP Core Areas. As such, the Arantine Hills Specific Plan has the potential to indirectly affect the bobcat along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded through participation in the MSHCP, impacts to the bobcat would be considered less than significant.

#### **California Horned Lark**

The proposed Arantine Hills Specific Plan would result in the loss of foraging and breeding habitat for the California horned lark, particularly through grading and fuel modification that would remove ruderal vegetation located upland of Bedford Canyon Wash. The California horned lark is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 201.95 acres of ruderal habitat within which the California horned lark has been observed. With the coverage afforded through participation in the MSHCP, impacts to the California horned lark would be considered less than significant.

#### **Coastal Western Whiptail**

The proposed Arantine Hills Specific Plan would result in the loss of foraging and breeding habitat for the coastal western whiptail, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The coastal western whiptail is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 31.60 acres of native scrub and riparian/riverine habitats, within which the coastal western whiptail has been observed. As such, the Arantine Hills Specific Plan has the potential to directly affect the coastal western whiptail along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded

through participation in the MSHCP, impacts to the coastal western whiptail would be considered less than significant.

### **Cooper's hawk**

The proposed Arantine Hills Specific Plan would result in the loss of foraging habitat for the Cooper's hawk, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The Cooper's hawk is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 31.60 acres of native scrub foraging habitats, within which the Cooper's hawk has been observed foraging. As such, the Arantine Hills Specific Plan has the potential to indirectly affect the Cooper's hawk along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded through participation in the MSHCP, impacts to Cooper's hawk foraging habitat would be considered less than significant.

### **Northern Harrier**

The proposed Arantine Hills Specific Plan would result in the loss of foraging habitat for the northern harrier, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The northern harrier is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 31.60 acres of native scrub habitats, within which the northern harrier has been observed foraging. As such, the Arantine Hills Specific Plan has the potential to indirectly affect the northern harrier along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded through participation in the MSHCP, impacts to northern harrier foraging habitat would be considered less than significant.

### **San Diego Desert Woodrat**

The proposed Arantine Hills Specific Plan would result in the loss of habitat for the San Diego desert woodrat, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The San Diego desert woodrat is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 31.60 acres of native scrub habitats, within which the San Diego desert woodrat has been observed. As such, the Arantine Hills Specific Plan has the potential to indirectly affect the San Diego desert woodrat along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded through participation in the MSHCP, impacts to the San Diego desert woodrat would be considered less than significant.

### **Southern California Rufous-Crowned Sparrow**

The proposed Arantine Hills Specific Plan would result in the loss of foraging and breeding habitat for the Southern California rufous-crowned sparrow, particularly through grading and fuel modification that would remove disturbed Riversidian sage scrub, Riversidean sage scrub, Riversidian sage scrub/chaparral, and unvegetated streambed adjacent to Bedford Canyon Wash. The Southern California rufous-crowned sparrow is a Covered Species adequately conserved under the MSHCP. Altogether, the Arantine Hills Specific Plan would directly impact approximately 31.60 acres of native scrub habitats, within which the Southern California rufous-crowned sparrow has been observed foraging. As such, the Arantine Hills Specific Plan has the potential to indirectly affect the Southern California rufous-crowned sparrow along the interface between development and open space. With the conservation of approximately 42.11 acres of native scrub and riparian/riverine habitats, and coverage afforded through participation in the MSHCP, impacts Southern California rufous-crowned sparrow foraging and breeding habitat would be considered less than significant.

### **Additional Special-Status Animals with Actual or Potential Impact**

In addition to the species discussed above, the proposed Arantine Hills Specific Plan will result in the actual or potential impact to other special-status animals. Actual or potential impacts include the loss of foraging and/or breeding habitat. Impacts to these species would be less than significant prior to mitigation. Nearly all of these species are summarized below in Table 5-2 below. One species, the coastal California gnatcatcher, warrants a more detailed discussion as follows:

#### ***Coastal California Gnatcatcher***

Although the coastal California gnatcatcher was not detected on site during general biological surveys, potentially suitable habitat occurs within the Riversidian sage scrub and Riversidian sage scrub/chaparral portions of the Project Study Area. The gnatcatcher is designated as a Covered Species Adequately Conserved under the MSHCP without additional conservation requirements. However, the MSHCP does impose restrictions on clearing of occupied habitat during the nesting season. Condition 5b of the MSHCP Federal Fish and Wildlife take permit states that the "clearing of occupied habitat within PQP lands and the Criteria Area between March 1 and August 15 is prohibited." Although the take of gnatcatchers is covered under the MSHCP, the purpose of this condition is to allow for the successful reproduction of gnatcatchers during the nesting season and to prevent the take of active nests. Measures to insure compliance with Condition 5b are included in Section 6.0 of this document.

**Table 5-2. Additional Special-Status Animals with Actual or Potential Direct Impacts**

Species	Extent of Impact	Significance of Impact
Bell's sage sparrow MSHCP: Covered Species	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.
Coast horned lizard MSHCP: Covered Species	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.
Coast patch-nosed snake	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.
Ferruginous hawk (wintering) MSHCP: Covered Species	Loss of winter foraging habitat, representing the majority of the Project Study Area (agricultural lands, ruderal, disturbed areas, grassland).	Less than significant impact.
Golden eagle (nesting and wintering) MSHCP: Covered Species	Loss of winter foraging habitat, representing the majority of the Project Study Area (agricultural lands, ruderal, disturbed areas, grassland).	Less than significant impact.
Los Angeles pocket mouse MSHCP: Covered Species	Loss of habitat. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat occurs within proposed conservation areas.	Less than significant impact.
Red diamond rattlesnake MSHCP: Covered Species	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.
Northwestern San Diego pocket mouse MSHCP: Covered Species	Loss of habitat. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat occurs within proposed conservation areas.	Less than significant impact.
Orangethroat whiptail MSHCP: Covered Species	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.



Species	Extent of Impact	Significance of Impact
Rosy boa	Loss of habitat, representing 43 percent of all potential habitat within the Project Study Area. Limited areas of native scrub vegetation adjacent to Bedford Canyon Wash. The majority of habitat associated with the Project Study Area occurs within proposed conservation areas.	Less than significant impact.
San Diego black-tailed jackrabbit MSHCP: Covered Species	Loss of habitat, representing the majority of the Project Study Area (agricultural lands, disturbed, and ruderal areas).	Less than significant impact.
Western mastiff bat	Loss of potential habitat, including roosting areas along the cliffs of Bedford Canyon Wash. The Arantine Hills Specific Plan will conserve all of the cliffs along Bedford Canyon Wash and native areas with the potential to support bats.	Less than significant impact.

### 5.2.6 Raptor Foraging Habitat

The proposed Arantine Hills Specific Plan would result in the direct loss of foraging habitat for a number of special-status and common raptors, including the American kestrel, Cooper's hawk, ferruginous hawk, golden eagle, northern harrier, and red-tailed hawk. The majority of the Arantine Hills Specific Plan to be impacted includes at least moderate quality foraging habitat for the various raptor species, including the agricultural areas and rural residential areas. The greatest concentrations (and diversity) of raptors were observed along Bedford Canyon Wash, although raptors were observed throughout the Project Study Area.

Impacts to raptor foraging habitat would be considered less than significant. The Arantine Hills Specific Plan will provide conservation lands and other open space south of Bedford Canyon Wash, and including Bedford Canyon Wash, which will provide continued foraging habitat for raptors, as well as some breeding habitat. Habitat within the conserved areas of the Project Study Area will offer both foraging habitat and potential breeding habitat for some raptor species. Furthermore, the MSHCP conserves foraging habitat for raptors through the various Core areas, Habitat Blocks, and Linkages. With participation in the MSHCP and with additional habitat avoidance provided by the Arantine Hills Specific Plan, the loss of raptor foraging habitat would be considered less than significant.

### 5.2.7 Wildlife Movement

The easternmost portion of the Project Study Area contains Bedford Canyon Wash, which has not been identified as an important regional wildlife corridor connecting the Santa Ana Mountains to other MSHCP Core Areas. Through the conservation of 42.11 acres of native scrub and riparian/riverine habitats within and adjacent to Bedford Canyon Wash, which constitutes approximately 57 percent of the native habitats within Project Study Area, the Arantine Hills Specific Plan is preserving local movement and live-in habitat within and adjacent to Bedford Canyon Wash and the Santa Ana Mountains. By developing the lowland, ruderal areas of the Project Study Area, the Arantine Hills Specific Plan will impact some local wildlife movement, represented by the more opportunistic mammals (e.g., coyote, raccoon, etc.) that

forage in the agricultural and rural areas. However, impacts to this type of local movement will be considered less than significant. Wildlife movement associated with the bobcat would be least affected, as bobcats are less likely to forage among the rural residential and agricultural areas. With the conservation of Bedford Canyon Wash and adjacent uplands, the existing local connectivity between the Project Study Area and Santa Ana Mountains will remain and impacts to local movement would be considered less than significant with the participation in the MSHCP.

### 5.2.8 Nesting Birds

The proposed Arantine Hills Specific Plan will remove vegetation (i.e., trees, shrubs, and ground cover) suitable for nesting migratory birds, including raptors. Impacts to such species are prohibited under the MBTA and California Fish and Game Code.<sup>10</sup> Mitigation measures, including seasonal avoidance of vegetation removal and/or nesting bird surveys will ensure that migratory birds (and their nests) will not be directly harmed. Condition 5b of the MSHCP Federal Fish and Wildlife permit specifically notes that the MSHCP does not authorize the impacts to nesting birds in lieu of the MBTA. The proposed Arantine Hills Specific Plan will not directly impact or impede the use of any recognized wildlife nursery sites.

### 5.2.9 Jurisdictional Waters

#### Waters of the United States (Corps Jurisdiction)

The proposed Arantine Hills Specific Plan would permanently impact approximately 0.41 acre of Corps jurisdiction, none of which consists of jurisdictional wetlands and temporarily impact approximately 1.46 acres of Corps jurisdiction, none of which consists of jurisdictional wetlands. Table 5-3 and 5-4 provides a summary of impacts to Corps jurisdiction.

**Table 5-3. Permanent Impacts to Corps Jurisdiction.**

<b>Drainage Feature</b>	<b>Non-Wetland Waters (Acres)</b>	<b>Wetlands (Acres)</b>	<b>Total Corps Jurisdiction (Acres)</b>
Bedford Wash	0.29	0.00	0.29
Tributary A	0.10	0.00	0.10
Tributary B	0.00	0.00	0.00
Tributary C	0.02	0.00	0.02
Ditch A	0.00	0.00	0.00
<b>Total Jurisdiction</b>	<b>0.41</b>	<b>0.00</b>	<b>0.41</b>

<sup>10</sup> The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, 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.

**Table 5-4. Temporary Impacts to Corps Jurisdiction.**

<b>Drainage Feature</b>	<b>Non-Wetland Waters (Acres)</b>	<b>Wetlands (Acres)</b>	<b>Total Corps Jurisdiction (Acres)</b>
Bedford Wash	1.46	0.00	1.46
<b>Total Jurisdiction</b>	<b>1.46</b>	<b>0.00</b>	<b>1.46</b>

Impacts to waters of the United States will require a permit from the Corps pursuant to Section 404 of CWA. In addition, impacts to waters of the United States will also require a Section 401 Water Quality Certification from the Regional Board. Impacts to Corps jurisdiction will require mitigation at a minimum 1:1 ratio for impacts.

**Jurisdictional Streams (CDFG Jurisdiction)**

The proposed Arantine Hills Specific Plan would permanently impact approximately 0.41 acre of CDFG jurisdiction, none of which consists of vegetated riparian habitat, and temporarily impact approximately 1.46 acres of CDFG jurisdiction, of which less than 0.01 acre consists of vegetated riparian habitat. Table 5-5 and 5-6 provides a summary of impacts to CDFG jurisdiction.

**Table 5-5. Permanent Impacts to CDFG Jurisdiction.**

<b>Drainage Feature</b>	<b>Unvegetated Streambed (Acres)</b>	<b>Vegetated Riparian Habitat (Acres)</b>	<b>Total CDFG Jurisdiction (Acres)</b>
Bedford Wash	0.29	0.00	0.29
Tributary A	0.10	0.00	0.10
Tributary B	0.00	0.00	0.00
Tributary C	0.02	0.00	0.02
Ditch A	0.00	0.00	0.00
<b>Total Jurisdiction</b>	<b>0.41</b>	<b>0.00</b>	<b>0.41</b>

**Table 5-6. Temporary Impacts to CDFG Jurisdiction.**

<b>Drainage Feature</b>	<b>Unvegetated Streambed (Acres)</b>	<b>Vegetated Riparian Habitat (Acres)</b>	<b>Total CDFG Jurisdiction (Acres)</b>
Bedford Wash	1.46	<0.01	1.46
<b>Total Jurisdiction</b>	<b>1.46</b>	<b>&lt;0.01</b>	<b>1.46</b>

Impacts to CDFG jurisdiction would require a Streambed Alteration pursuant to Section 1602 of the California Fish and Game Code, and mitigation at a minimum 1:1 ratio.

## 5.2.10 MSHCP Riparian/Riverine Areas and Vernal Pools

### Riparian/Riverine Areas

The Arantine Hills Specific Plan will result in unavoidable permanent impacts to 0.41 acre of unvegetated streambed and temporary impacts to 1.46 acres of unvegetated streambed and less than 0.01 acre of vegetated riparian habitat, which meets the definition of MSHCP riparian/riverine areas. Table 5-7 and 5-8 below summarizes the impacts to MSHCP riparian/riverine areas. For unavoidable permanent impacts to MSHCP riparian/riverine areas, *Section 6.1.2* of the MSHCP requires that the Permittee (i.e., City of Corona) approve a DBESP to ensure the replacement of any lost functions and values of habitat as it relates to Covered Species.

**Table 5-7. Permanent Impacts to MSHCP Riverine Areas.**

<b>Drainage Feature</b>	<b>Unvegetated Streambed (Acres)</b>	<b>Vegetated Riparian Habitat (Acres)</b>	<b>Total MSHCP Riparian/Riverine Areas (Acres)</b>
Bedford Wash	0.29	0.00	0.29
Tributary A	0.10	0.00	0.10
Tributary B	0.00	0.00	0.00
Tributary C	0.02	0.00	0.02
Ditch A	0.00	0.00	0.00
<b>Total Jurisdiction</b>	<b>0.41</b>	<b>0.00</b>	<b>0.41</b>

**Table 5-8. Temporary Impacts to MSHCP Riverine Areas.**

<b>Drainage Feature</b>	<b>Unvegetated Streambed (Acres)</b>	<b>Vegetated Riparian Habitat (Acres)</b>	<b>Total MSHCP Riparian/Riverine Areas (Acres)</b>
Bedford Wash	1.46	<0.01	1.46
<b>Total Jurisdiction</b>	<b>1.46</b>	<b>&lt;0.01</b>	<b>1.46</b>

The Project Study Area does not contain suitable habitat for any of the riparian/riverine and vernal pool species listed in *Section 6.1.2* of the MSHCP, including listed fairy shrimp. Therefore, no impacts to those species listed in *Section 6.1.2* of the MSHCP are associated with the Arantine Hills Specific Plan.

The purpose of the MSHCP *Section 6.1.2* procedures is to ensure that the biological functions and values of the riparian/riverine areas are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained. The unvegetated riverine features to be affected by the Arantine Hills Specific Plan lack habitat value for riparian resources, and they also lack other functions associated with vegetated areas. However, along with the overall watershed, the unvegetated features do provide hydrologic function to aquatic resources supported in downstream receiving waters. Regardless, the Arantine Hills Specific Plan will not result in a loss of this hydrologic function. The Arantine Hills Specific Plan's drainage plan will maintain

flows across the property, such that flows to Temescal Creek will be maintained. The Arantine Hills Specific Plan will be designed to match (or nearly so) the pre-Project conditions pertaining to hydrology and flow rates.

In addition to maintaining the hydrology within the Arantine Hills Specific Plan, the implementation of a Water Quality Management Plan (WQMP) and Best Management Practices (BMPs) will not only ensure that the Arantine Hills Specific Plan will not have any adverse water quality impacts within the Project Study Area or to any downstream resources, but will actually improve water quality compared with existing conditions in regards to pollutants of concern. Currently the Project Study Area and surrounding areas contain agriculture and other land uses that add pollutants to the downstream waters. The proposed Arantine Hills Specific Plan will remove some of the existing land uses and will construct facilities to treat existing and post-construction flows.

### **Vernal Pools**

The Project Study Area does not contain any vernal pools or suitable habitat for listed fairy shrimp; therefore, the Arantine Hills Specific Plan will not result in any impacts to MSHCP vernal pools or listed fairy shrimp.

### **5.3 Indirect Impacts to Biological Resources**

In addition to direct impacts, the Arantine Hills Specific Plan has the potential for indirect impacts to biological resources, including sensitive resources. Potential for indirect impacts are greatest at the proposed open spaced boundary, which includes Bedford Canyon Wash and adjacent uplands. The proposed conservation area has the potential to support sensitive plants and wildlife that are susceptible to indirect development affects. These species include Coulter's matilija poppy, Bell's sage sparrow, bobcat, California horned lark, coastal western whiptail, coast horned lizard, coast patch-nosed snake, Cooper's hawk, Ferruginous hawk, golden eagle Los Angeles pocket mouse, northern harrier, northwestern San Diego pocket mouse, orangethroat whiptail, red diamond rattlesnake, rosy boa, San Diego black-tailed jackrabbit, San Diego desert woodrat, Southern California rufous-crowned sparrow, and western mastiff bat.

Through the MSHCP Urban/Wildlands Interface Guidelines, projects located adjacent to the MSHCP Conservation Area are required to implement measures to address indirect effects to plants and wildlife located within adjacent Conservation Areas. As stated previously, the Project Study Area is located within the Temescal Canyon Area Plan of the MSHCP. The Project Study Area is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. Therefore, the MSHCP Urban/Wildlands Interface Guidelines are not applicable to the Arantine Hills Specific Plan.

### **5.4 Cumulative Impacts to Biological Resources**

Cumulatively, the impacts to species and habitats are mitigated for through participation in the MSHCP, project-specific mitigation pursuant to MSHCP, and other mitigation requirements.

Examples of cumulative impacts include the loss of raptor foraging habitat, impacts to jurisdictional waters, and impacts to local wildlife movement. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats. The MSHCP will result in an MSHCP Conservation Area in excess of 500,000 acres and focuses on the conservation of 146 species. The MSHCP Conservation Area includes approximately 347,000 acres on existing Public/Quasi-Public Lands and approximately 153,000 acres of Additional Reserve Land.

As stated in Section 5.1.1 of the MSHCP Final EIR/EIS, *“implementation of the MSHCP and Covered Projects will not result in a cumulative adverse effect, either directly or through habitat modifications, on any of the Covered Species, including the 31 species that are currently listed as threatened or endangered and the one species that is currently proposed for listing. Implementation of the MSHCP will benefit the Covered Species by preserving their habitat in order to address their life cycle needs. Thus, based on the features of the Plan itself, impacts to Covered Species are mitigated below a level of significance.”*

As such, with the Arantine Hills Specific Plan’s participation in the MSHCP, and with project-specific mitigation measures, cumulative impacts to biological resources as a result of the Arantine Hills Specific Plan would be mitigated to below a level of significance.

## **6.0 MITIGATION**

The following discusses actual or potential impacts to sensitive resources that would be considered potentially significant prior to mitigation. As applicable, specific mitigation measures are provided to ensure that impacts to sensitive biological resources as a result of the Arantine Hills Specific Plan are less than significant. In addition to these specific measures, the project mitigates for impacts to sensitive resources through its participation in the MSHCP.

### **6.1 Coastal California Gnatcatcher**

The coastal California gnatcatcher was not detected on site during general biological surveys in 2010, although potentially suitable habitat occurs within the eastern portions of the Project Study Area. The gnatcatcher is designated as a Covered Species Adequately Conserved under the MSHCP without additional conservation requirements. However, the MSHCP does impose restrictions on clearing of occupied habitat during the nesting season. Condition 5b of the MSHCP Federal Fish and Wildlife take permit states that the “clearing of occupied habitat within PQP lands and the Criteria Area between March 1 and August 15 is prohibited.” Although the take of gnatcatchers are covered under the MSHCP, the purpose of this condition is allow for the successful reproduction of gnatcatchers during the nesting season and to prevent the take of active nests. The following mitigation measure will ensure compliance with Condition 5b:

- If habitat suitable to support the coastal California gnatcatcher is to be removed between March 1 and August 15, focused surveys should first be conducted to determine if the

habitat is occupied by gnatcatcher. If gnatcatchers are present and are determined to be nesting, the occupied areas will be avoided until after August 15.

## **6.2 Raptor Foraging Habitat**

As noted in Section 5.0 of this report, the proposed Arantine Hills Specific Plan would result in the loss of foraging habitat for numerous raptor species, including approximately 301.95 acres of ruderal/agricultural lands. The Arantine Hills Specific Plan will provide 50.88 acres of conservation lands and other open space within and adjacent to Bedford Canyon Wash, which will provide continued foraging habitat for raptors, as well as some breeding habitat. Habitat within the conserved areas will offer both foraging habitat and breeding habitat for some raptor species. Furthermore, the MSHCP conserves foraging habitat for raptors through the various Core areas, Habitat Blocks, and Linkages. With the Arantine Hills Specific Plan's participation in the MSHCP, and with the proposed conservation area, impacts to raptor foraging habitat will be mitigated to below a level of significance.

## **6.3 Nesting Birds**

As noted in Section 5.0 of this report, the Arantine Hills Specific Plan has the potential to impact nesting birds. The following mitigation measure shall be implemented to ensure that the Arantine Hills Specific Plan will not result in impacts to nesting birds:

- The removal of potential nesting vegetation will be conducted outside of the nesting season (February 1 to August 31) to the extent that this is feasible. If vegetation must be removed during the nesting season, a qualified biologist will conduct a nesting bird survey of potentially suitable nesting vegetation prior to removal. Surveys will be conducted no more than three (3) days prior to scheduled removals. If active nests are identified, the biologist will establish buffers around the vegetation containing the active nest (500 feet for raptors and 200 feet for non raptors). The vegetation containing the active nest will not be removed, and no grading will occur within the established buffer, until a qualified biologist has determined that the nest is no longer active (i.e., the juveniles are surviving independent from the nest). If clearing is not conducted within three days of a negative survey, the nesting survey must be repeated to confirm the absence of nesting birds.

## **6.4 Wildlife Movement**

As noted in Section 5.0 of this report, the Arantine Hills Specific Plan has the potential to impact local wildlife movement. By preserving approximately 50.88 acres within and adjacent to Bedford Canyon Wash, the Arantine Hills Specific Plan is preserving high quality, contiguous live-in and movement habitat for wildlife. With the proposed conservation areas, impacts to local movement will be less than significant.

## 6.5 Jurisdictional Waters

The following mitigation measures shall be applied to impacts to jurisdictional waters:

- Prior to the issuance of a grading permit, individual projects will obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters. Authorizations may include, but are not limited to, a Section 404 permit from the Corps, a Section 401 Water Quality Certification from the Regional Board, and a Section 1602 Streambed Alteration Agreement from CDFG.
- Project-specific impacts to jurisdictional waters will be mitigated at a minimum 1:1 ratio in a manner to be determined by the Arantine Hills Specific Plan proponent and to be approved by the Corps, CDFG, and the Regional Board through the permitting process.

## 6.6 Riparian/Riverine and Vernal Pool Areas

The Arantine Hills Specific Plan will result in unavoidable permanent impacts to 0.41 acre of unvegetated streambed and temporary impacts to 1.46 acres of unvegetated streambed and less than 0.01 acre of vegetated riparian habitat, which meets the definition of a MSHCP riparian/riverine areas.

To mitigate for the permanent loss of 0.41 acre of MSHCP riparian/riverine areas, the applicant shall pay a one-time in-lieu fee to a Corps and/or CDFG-approved mitigation bank and/or in-lieu fee program, such as the Santa Ana Watershed Association (SAWA) In-Lieu Fee Wetland Creation Program or the Riverside County Regional Park and Open Space District Santa Ana River Mitigation Bank (SARMB), for the purchase of no less than 0.82 acre of vegetated riparian and/or wetland habitat creation, a 2:1 mitigation-to-impact ratio.

The SAWA in-lieu fee program involves replanting currently disturbed areas with native species following the removal of non-wetland plants from a place in the Santa Ana River floodplain where wetland hydrology and soils exist. The SARMB is a Corps certified mitigation bank that removes exotic vegetation such as giant reed (*Arundo donax*) and tamarisk (*Tamarix ramosissima*) from existing wetlands, to allow native vegetation such as willows and cottonwoods to re-establish themselves.

With the proposed mitigation and approval of a DBESP, impacts to MSHCP riparian/riverine areas will be reduced to a less than significant level.


## 6.7 Level of Significance After Mitigation

With the Arantine Hills Specific Plan's participation and compliance with the Western Riverside County MSHCP, with coverage afforded by the MSHCP, and with the mitigation measures as described above, direct and cumulative impacts to biological resources will be mitigated below a level of significance.



7.0 CERTIFICATION

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

SIGNED: 

DATE: 11/9/10

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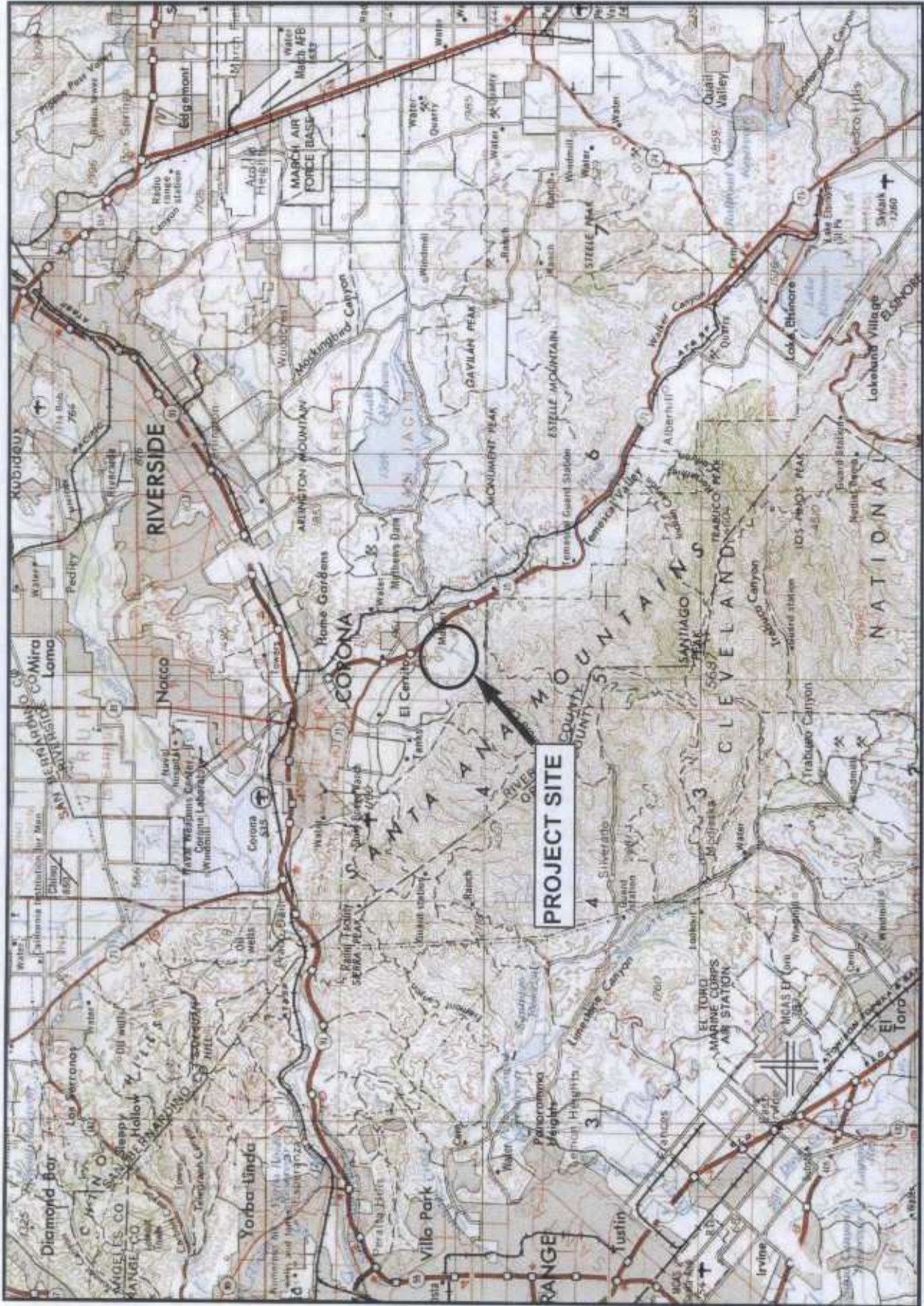
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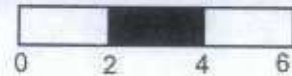
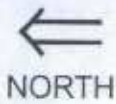
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Adapted from USGS Santa Ana quadrangle



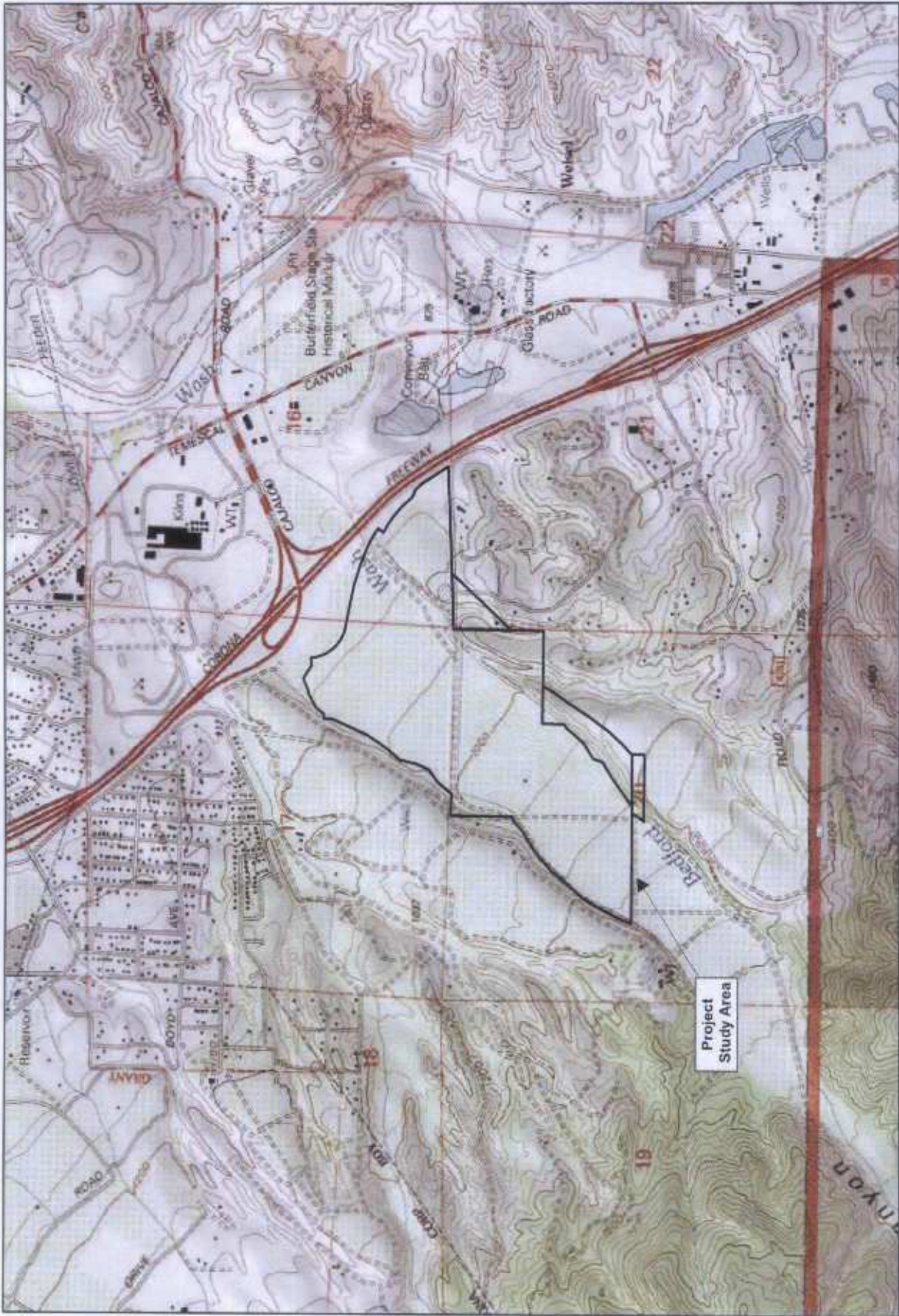
MILES



GLENN LUKOS ASSOCIATES

Exhibit 1

**ARANTINE HILLS**  
Regional Map



Adapted from USGS Corona South, CA quadrangle



GLENN LUKOS ASSOCIATES

Exhibit 2

**ARANTINE HILLS**  
 Vicinity Map



**Legend**

- Project Study Area
- Disturbed Riverside Sage Scrub
- Disturbed/Developed
- Encelia Dominated Scrub
- Mulefat Scrub
- Non-native Grassland
- Ornamental/Exotic
- Riverside Sage Scrub
- Riverside Sage Scrub/Chaparral
- Ruderal
- Unvegetated Streambed
- Willow



**ARANTINE HILLS**  
Vegetation Map

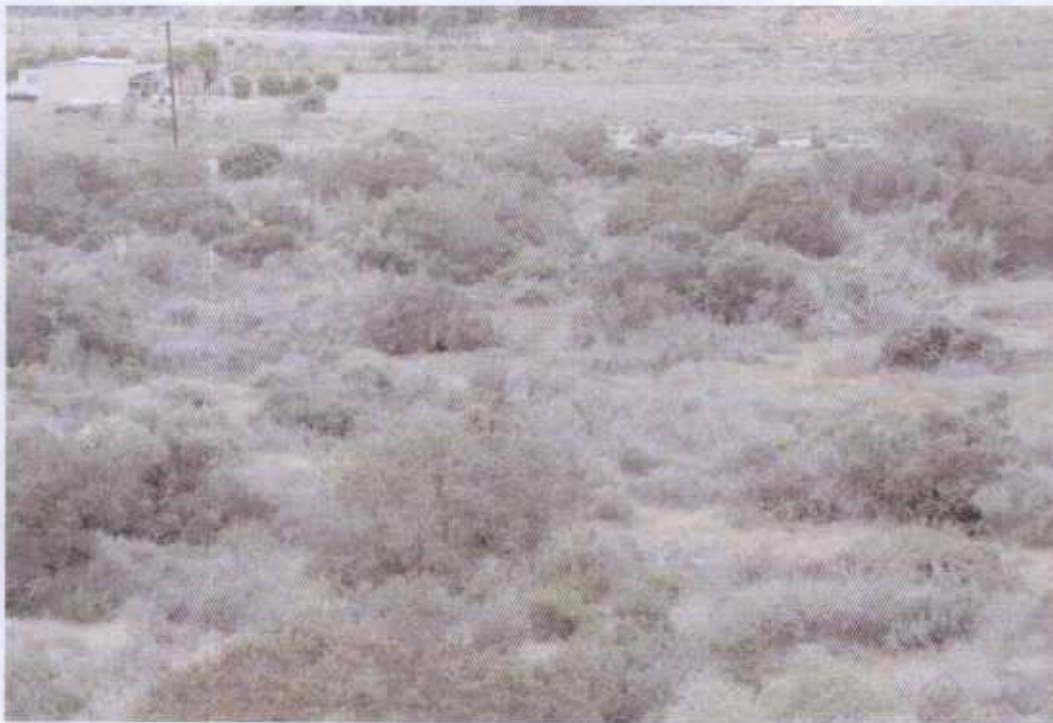
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**GLENN LUKOS ASSOCIATES**  
Exhibit 3





Photograph 1 depicts the ruderal/remnant agricultural land that dominates the Project Site.



Photograph 2 depicts the Riversidian Sage Scrub/Chaparral area located adjacent to Bedford Canyon Wash.



GLENN LUKOS ASSOCIATES

Exhibit 4

ARANTINE HILLS

Site Photographs



Photograph 3 depicts the Riversidian Sage Scrub located on the eastern cliff of Bedford Canyon Wash.



Photograph 4 depicts the predominantly unvegetated streambed within Bedford Canyon Wash.



GLENN LUKOS ASSOCIATES

Exhibit 4

ARANTINE HILLS

Site Photographs





**Legend**

- Project Study Area
- A1C, Archaic gravelly loam, 2 to 8 percent slopes
- A1D, Archaic gravelly loam, 8 to 15 percent slopes
- C1mC, Conifer sobby loamy sand, 2 to 8 percent slopes
- G1C, Conifer gravelly very fine sandy loam, 2 to 8 percent slopes
- S1F2, Soper sobby loam, 25 to 50 percent slopes, eroded
- TeG, Terrace escarpments



**ARANTINE HILLS**

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 6



# FLORAL COMPENDIUM

The floral compendium lists species identified on the Project Site. Taxonomy generally follows the *Jepson Manual* (Hickman 1993), *Jepson Online Interchange For California Floristics*, and the *Flora of North America* (FNA 1993+) and for sensitive species, the California Native Plant Society's Rare Plant Inventory (Tibor 2001). Common plant names are taken from Hickman (1993), Munz (1974), and Roberts (2008). An asterisk (\*) denotes a non-native species.

## SCIENTIFIC NAME

## COMMON NAME

### PTERIDOPHYTES

### FERNS AND FERN ALLIES

### POLYPODIOPHYTA

### FERNS

#### PTERIDACEAE

*Pentagramma triangularis* ssp. *triangularis*

#### Lip Fern Family

golden-back fern

### MAGNOLIOPHYTA

### FLOWERING PLANTS

### ANGIOSPERMS

### MAGNOLIIDS-CLADE

### DICOTYLEDONS

### DICOTS

#### ADOXACEAE (formerly in CAPRIFOLIACEAE)

*Sambucus nigra* ssp. *caerulea*  
(*Sambucus mexicana*)

#### Elderberry Family

blue elderberry

#### AMARANTHACEAE

- \* *Amaranthus albus*
- Amaranthus blitoides*
- \* *Atriplex semibaccata*
- \* *Atriplex suberecta*
- \* *Bassia hyssopifolia*
- \* *Chenopodium album* (formerly in CHENOPODIACEAE)
- Chenopodium californicum*
- \* *Salsola tragus* (formerly in CHENOPODIACEAE)

#### Amaranth Family

tumbling pigweed  
prostrate pigweed  
Australian saltbush  
sprawling saltbush  
five-hook bassia  
lamb's quarters  
California goosefoot  
Russian-thistle

#### ANACARDIACEAE

- Malosma laurina*
- Rhus ovata*
- Rhus trilobata*
- \* *Schinus molle*

#### Sumac Family

laurel sumac  
sugar bush  
squaw bush  
Peruvian pepper tree

## APIACEAE

- \* *Anthriscus caucalis*
- Apiastrum angustifolium*
- Daucus pusillus*

## ASCLEPIADACEAE

- Funastrum cyanchoides* ssp. *hartwegii*

## ASTERACEAE

- Acourtia microcephala*
- Ambrosia acanthicarpa*
- Artemisia californica*
- Artemisia dracunculus*
- Baccharis emoryi*
- Baccharis salicifolia*
- Bebbia juncea*
- \* *Carduus pycnocephalus*
- \* *Centaurea melitensis*
- Chaenactis glabriuscula* var. *glabriuscula*
- \* *Chamomilla suaveolens*
- Cirsium occidentale*
- \* *Conyza bonariensis*
- Conyza canadensis*
- Corethrogyne filaginifolia*
- Deinandra fasciculata*
- Encelia californica*
- Encelia farinosa*
- Ericameria palmeri* var. *pachylepis*
- Erigeron foliosus* var. *foliosus*
- Eriophyllum confertiflorum*
- \* *Filago gallica*
- Gutierrezia californica*
- Helianthus annuus*
- Helianthus gracilentus*
- Heterotheca grandiflora*
- Isocoma menziesii*
- \* *Lactuca serriola*
- Lasthenia californica*
- Lepidospartum squamatum*
- Malacothrix saxatilis*
- Pseudognaphalium biolettii*  
(*Gnaphalium bicolor*)
- Pseudognaphalium californicum*  
(*Gnaphalium californicum*)
- Pseudognaphalium canescens microcephalum*  
(*Gnaphalium canescens* ssp. *microcephalum*)

## Carrot Family

- bur-chervil
- mock parsley
- rattlesnake weed

## Milkweed Family

- Hartweg's milkvine

## Sunflower Family

- sacapellote
- annual bur-sage
- California sagebrush
- tarragon
- Emory baccharis
- mulefat
- sweetbush
- Italian thistle
- totalote
- yellow pincushion
- pineapple weed
- cobweb thistle
- flax-leaved horseweed
- common horseweed
- virgate sand aster
- fascicled tarplant
- California encelia
- brittlebush
- box springs goldenbush
- leafy daisy
- long-stemmed golden yarrow
- narrow-leaved filago
- California matchweed
- western sunflower
- slender sunflower
- telegraph weed
- goldenbush
- prickly lettuce
- California goldfields
- scale-broom
- slender-leaved malacothrix
- bicolored cudweed
  
- California everlasting
  
- white everlasting

- \* *Pseudognaphalium luteoalbum*  
(*Gnaphalium luteoalbum*) weedy cudweed
- Rafinesquia californica* California chicory
- \* *Senecio vulgaris* common groundsel
- \* *Silybum marianum* milk thistle
- \* *Sonchus asper* ssp. *asper* prickly sow-thistle
- \* *Sonchus oleraceus* common sow-thistle
- Stephanomeria exigua* ssp. *deanei* Dean's wreath-plant
- Stylocline gnaphalioides* everlasting nest-straw
- Tetradymia comosa* cotton-thorn
- Xanthium strumarium* common cocklebur

### BORAGINACEAE

- Amsinckia menziesii* var. *intermedia*
- Cryptantha intermedia*
- Cryptantha micrantha*
- Emmenanthe penduliflora* var. *penduliflora*
- Eucrypta chrysanthemifolia*
- Nemophila menziesii*
- Pectocarya penicillata*
- Phacelia cicutaria*
- Phacelia distans*
- Pholistoma auritum*

### Borage Family

- common fiddleneck
- common cryptantha
- purple root cryptantha
- whispering bells
- common eucrypta
- baby blue-eyes
- winged pectocarya
- caterpillar phacelia
- common phacelia
- blue-fiesta flower

### BRASSICACEAE

- \* *Brassica geniculata* (*Hirschfeldia incana*)
- \* *Brassica nigra*
- Lepidium nitidum* var. *nitidum*
- \* *Silybum marianum*
- \* *Sisymbrium irio*
- Thysanocarpus laciniatus*

### Mustard Family

- summer mustard
- black mustard
- shining peppergrass
- milk thistle
- London rocket
- southern fringe-pod

### CACTACEAE

- Cylindropuntia californica* (*Opuntia parryi*)
- \* *Opuntia ficus-indicus*
- Opuntia littoralis*

### Cactus Family

- valley cholla
- Indian fig
- coastal prickly pear

### CARYOPHYLLACEAE

- Silene* sp.

### Pink Family

- catchfly

### CONVOLVULACEAE

- Calystegia macrostegia*
- Cuscuta californica* (formerly in CUSCUTACEAE)

### Morning-Glory Family

- finger-leaved morning-glory
- California dodder

### CRASSULACEAE

- Crassula connata*
- Dudleya lanceolata*

### Stonecrop Family

- sand pygmy stonecrop
- lance-leaved dudleya

**CUCURBITACEAE**

*Marah macrocarpus*

**Gourd Family**

wild cucumber

**EUPHORBIACEAE**

*Croton setigerus*

*Croton californicus*

*Euphorbia albomarginata*

\* *Ricinis communis*

**Spurge Family**

doveweed

California croton

rattlesnake spurge

castor bean

**FABACEAE**

*Astragalus tricopodus* var. *tricopodus*

*Lotus heermannii*

*Lotus scoparius* var. *scoparius*

*Lotus strigosus*

*Lupinus bicolor*

*Lupinus hirsutissima*

*Lupinus succulentus*

\* *Medicago polymorpha*

\* *Melilotus indica*

*Trifolium wormskioldii*

**Legume Family**

Southern California locoweed

wooly lotus

coastal deerweed

strigose lotus

miniature lupine

stinging lupine

arroyo lupine

bur-clover

yellow sweetclover

cow clover

**FAGACEAE**

*Quercus berberidifolia*

**Beech Family**

California scrub oak

**GERANIACEAE**

\* *Erodium cicutarium*

**Geranium Family**

red-stemmed filaree

**HYACINTHACEAE**

*Chlorogalum pomeridianum*

**Soap Plant Family**

wavy-leaved soap plant

**LAMIACEAE**

\* *Marrubium vulgare*

*Salvia apiana*

*Salvia columbariae*

*Salvia mellifera*

**Mint Family**

common horehound

white sage

chia

black sage

**MALVACEAE**

*Malacothammus fasciculatus*

\* *Malva parviflora*

**Mallow Family**

chaparral bush mallow

cheeseweed

**MYRSINACEAE**

\* *Anagalis arvensis*

**Myrsine Family**

scarlet pimpernel

**NYCTAGINACEAE**

*Mirabilis laevis* var. *crassifolia* (*Mirabilis californica*)

**Four-O'Clock Family**

California wishbone bush



**ONAGRACEAE**

*Camissonia bistorta*  
*Camissonia californica*  
*Camissonia micrantha*  
*Clarkia purpurea* ssp. *quadrivulnera*  
*Epilobium canum* subsp. *canum*

**Evening Primrose Family**

California suncup  
California suncup  
small primrose  
four-spot clarkia  
narrow-leaved fuchsia

**PAPAVERACEAE**

*Eschscholzia californica*  
*Romneya coulteri*

**Poppy Family**

California poppy  
Matilija poppy

**PHRYMACEAE** (formerly of SCROPHULARIACEAE)

*Mimulus aurantiacus*

**Monkeyflower Family**

bush monkey flower

**PLANTAGINACEAE**

(some members formerly of SCROPHULARIACEAE)

*Antirrhinum nuttallianum*  
*Collinsia parryi*  
*Keckiella antirrhinoides*  
*Penstemon spectabilis*

**Plantain Family**

Nuttall's snapdragon  
Parry's blue-eyed Mary  
yellow-bush penstemon  
royal penstemon

**PLATANACEAE**

*Platanus racemosa*

**Sycamore Family**

western sycamore

**POLEMONIACEAE**

*Eriastrum sapphirinum*  
*Gilia* sp.  
*Navarretia atractyloides*

**Phlox Family**

sapphire woolly-star  
gilia  
holly-leaved skunkweed

**POLYGONACEAE**

*Eriogonum fasciculatum*  
*Pterostegia drymarioides*

**Buckwheat Family**

California buckwheat  
granny's hairnet

**PORTULACACEAE**

*Calandrinia ciliata*  
*Claytonia perfoliata* var. *perfoliata*

**Purslane Family**

red-maids  
common miner's lettuce

**RANUNCULACEAE**

*Clematis ligusticifolia*  
*Delphinium cardinale*

**Buttercup Family**

western virgin's bower  
scarlet larkspur

**RHAMNACEAE**

*Rhamnus crocea*

**Buckthorn Family**

spiny redberry

**ROSACEAE**

*Adenostoma fasciculatum*  
*Heteromeles arbutifolia*

**Rose Family**

chamise  
toyon

*Prunus ilicifolia*

holly-leaved cherry

**RUBIACEAE**

*Galium angustifolium* ssp. *angustifolium*

**Madder Family**

narrow-leaved bedstraw

**RUTACEAE**

\* *Citrus* sp.

**Rue Family**

citrus tree

**SALICACEAE**

*Populus fremontii* ssp. *fremontii*

*Salix gooddingii*

*Salix lasiolepis*

**Willow Family**

western cottonwood

Gooding's black willow

arroyo willow

**SCROPHULARIACEAE**

*Scrophularia californica*

**Figwort Family**

California figwort

**SOLANACEAE**

\* *Datura stramonium*

*Datura wrightii*

\* *Nicotiana glauca*

*Nicotiana quadrivalis*

*Solanum douglasii*

*Solanum xanti*

**Nightshade Family**

thorn-apple

jimsonweed

tree tobacco

indian tobacco

Douglas' nightshade

chaparral nightshade

**TAMARICACEAE**

\* *Tamarix ramosissima*

**Tamarisk Family**

Mediterranean tamarisk

**URTICACEAE**

*Parietaria hespera*

*Urtica dioica* ssp. *holosericea*

\* *Urtica urens*

**Nettle Family**

California pellitory

hoary nettle

dwarf nettle

**VIOLACEAE**

*Viola pedunculata*

**Violet Family**

Johnny jump-ups

**MONOCOTYLEDONS**

**AGAVACEAE**

*Hesperoyucca whipplei*

**MONOCOTS**

**Agave Family**

our Lord's candle

**ALLIACEAE**

*Allium haematochiton*

**Onion Family**

red-skinned onion

**ARECACEAE**

\* *Washingtonia filifera*

**Palm Family**

California fan palm

**LILIACEAE**

*Calochortus splendens*

**Lily Family**

splendid mariposa lily

**POACEAE**

- \* *Arundo donax*
- \* *Avena barbata*
- \* *Avena fatua*
- \* *Bromus diandrus*
- \* *Bromus hordeaceus*
- \* *Bromus madritensis* ssp. *rubens*
- Distichlis spicata*
- Elymus condensatus* (*Leymus condensatus*)
- \* *Hordeum vulgare*
- \* *Lamarckian aurea*
- Melica imperfecta*
- Nassella lepida*
- \* *Poa annua*
- \* *Polypogon monspeliensis*
- \* *Schismus barbatus*
- \* *Vulpia myuros* var. *myuros*

**Grass Family**

giant reed  
slender wild oat  
wild oat  
rip-gut brome  
soft chess  
foxtail chess  
saltgrass  
giant wildrye  
cultivated barley  
goldentop  
small-flowered melic grass  
foothill needlegrass  
annual bluegrass  
rabbitfoot grass  
Mediterranean schismus  
rattail fescue

**THEMIDACEAE**

*Bloomeria crocea*  
*Dichelostemma capitatum*  
(formerly in LILIACEAE)

**Brodiaea Family**

common golden stars  
wild hyacinth

# FAUNAL COMPENDIUM

Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2006), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians 6<sup>th</sup> Edition, Collins and Taggart (2009) for amphibians and reptiles, and the AOU Checklist (2009) for birds. An asterisk (\*) denotes a non-native species.

## SCIENTIFIC NAME

## COMMON NAME

### FROGS AND TOADS

#### BUFONIDAE

*Anaxyrus boreas halophilus*

#### Nearctic Toads

Southern California toad

### LIZARDS

#### ANGUIDAE

*Elgaria multicarinata*

#### Alligator Lizards and Relatives

Southern alligator lizard

#### PHRYNOSOMATIDAE

*Sceloporus occidentalis*

*Uta stansburiana*

#### North American Spiny Lizards

Western fence lizard

Side-blotched lizard

#### TEIIDAE

*Aspidoscelis tigris stejnegeri*

#### North American Whiptails and Racerunner

coastal whiptail

### SNAKES

#### COLUBRIDAE

*Pituophis catenifer*

#### Egg-Laying Snakes

Gopher snake

### BIRDS

#### ODONTOPHORIDAE

*Callipepla californica*

#### New World Quail

California quail

#### CATHARTIDAE

*Cathartes aura*

#### New World Vultures

Turkey vulture

**ACCIPITRIDAE**

*Accipiter cooperii*  
*Buteo jamaicensis*  
*Circus cyaneus*

**Hawks, Old World Vultures and Harriers**

Cooper's hawk  
Red-tailed hawk  
Northern harrier

**FALCONIDAE**

*Falco sparverius*

**Caracac and Falcons**

American kestrel

**CHARADRIIDAE**

*Charadrius vociferous*

**Plovers and Relatives**

Killdeer

**COLUMBIDAE**

\* *Columbia livia*  
*Zenaida macroura*

**Pigeons and Doves**

Rock pigeon  
Mourning dove

**CUCULIDAE**

*Geococcyx californianus*

**Cuckoos, Roadrunners, Anis**

greater roadrunner

**STRIGIDAE**

*Bubo virginianus*

**Typical Owls**

Great horned owl

**APODIDAE**

*Aeronautes saxatilis*

**Swifts**

White-throated swift

**TROCHILIDAE**

*Calypte anna*  
*Calypte coastae*  
*Selasphorus sasin*

**Hummingbirds**

Anna's hummingbird  
Costa's hummingbird  
Allen's hummingbird

**PICIDAE**

*Colaptes auratus*  
*Picoides nuttallii*

**Woodpeckers and Wrynecks**

Northern flicker  
Nuttall's woodpecker

**TYRANNIDAE**

*Myiarchus cinerascens*  
*Sayornis nigricans*  
*Sayornis saya*  
*Tyrannus verticalis*

**Tyrant Flycatchers**

Ash-throated flycatcher  
Black phoebe  
Say's phoebe  
Western kingbird

**CORVIDAE**

*Aphelocoma californica*  
*Corvus brachyrhynchos*  
*Corvus corax*

**Jays, Magpies and Crows**

Western scrub-jay  
American crow  
Common raven

**ALAUDIDAE**

*Eremophila alpestris*

**Larks**

California horned lark

**HIRUNDINIDAE**

*Petrochelidon pyrrhonota*  
*Stelgidopteryx serripennis*

**Swallows**

Cliff swallow  
Northern rough-winged swallow

**AEGITHALIDAE**

*Psaltriparus minimus*

**Bushtit**

Bushtit

**TROGLODYTIDAE**

*Thryomanes bewickii*  
*Troglodytes aedon*

**Wrens**

Bewick's wren  
House wren

**SYLVIIDAE**

*Polioptila caerulea*

**Old World Warblers and Gnatcatchers**

Blue-gray gnatcatcher

**TURDIDAE**

*Sialia mexicana*

**Thrushes**

Western bluebird

**TIMALIDAE**

*Chamaea fasciata*

**Babblers**

Wrentit

**MIMIDAE**

*Mimus polyglottos*  
*Toxostoma redivivum*

**Mockingbirds and Thrashers**

Northern mockingbird  
California thrasher

**STURNIDAE**

\* *Sturnus vulgaris*

**Starlings and Allies**

European starling

**PTILOGONATIDAE**

*Phainopepla nitens*

**Silky Flycatchers**

Phainopepla

**EMBERIZIDAE**

*Aimophila ruficeps canescens*  
*Chondestes grammacus*  
*Pipilo maculatus*  
*Pipilo crissalis*  
*Melospiza melodia*  
*Zonotrichia atricapilla*  
*Zonotrichia leucophrys*

**Emberizines**

Southern California rufous-crowned sparrow  
Lark sparrow  
Spotted towhee  
California towhee  
Song sparrow  
Golden-crowned sparrow  
White-crowned sparrow

**ICTERIDAE**

*Agelaius phoeniceus*  
*Icterus cucullatus*  
*Sturnella neglecta*

**Blackbirds, Orioles, and Allies**

Red-winged blackbird  
Hooded oriole  
Western meadowlark

**FRINGILLIDAE**

*Carpodacus mexicanus*  
*Spinus psaltria*  
*Spinus tristis*

**PASSERIDAE**

\* *Passer domesticus*

**Finches**

House finch  
Lesser goldfinch  
American goldfinch

**Old World Sparrows**

House sparrow

**MAMMALS****DIDELPHIDAE**

\* *Didelphis virginiana*

**Opposums**

Virginia opossum

**LEPORIDAE**

*Sylvilagus audubonii*

**Hares and Rabbits**

Desert cottontail

**MURIDAE**

*Neotoma lepida intermedia*

**Mice, Rats and Voles**

San Diego desert woodrat

**CANIDAE**

\* *Canis familiaris*  
*Canis latrans*

**Foxes, Wolves and Relatives**

Domestic dog  
Coyote

**PROCYONIDAE**

*Procyon lotor*

**Raccoons, Ringtails, and Coatis**

Raccoon

**MEPHITIDAE**

*Mephitis mephitis*

**Skunks**

Striped skunk

**FELIDAE**

\* *Felis catus*  
*Lynx rufus*

**Cats**

Feral cat  
Bobcat

**RESULTS OF NESTING SEASON FOCUSED BURROWING OWL  
(*Athene cunicularia*) SURVEYS FOR THE 301-ACRE ARANTINE  
HILLS PROJECT STUDY AREA,  
CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA**

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August 11, 2010



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### EXHIBITS

Exhibit 1	Regional Map
Exhibit 2	Vicinity Map
Exhibit 3	Transect and Burrow Location Map
Exhibit 4	Site Photographs

## 1.0 INTRODUCTION

This report documents the results of nesting season focused protocol surveys conducted for the burrowing owl (*Athene cunicularia*) within the study area for the project which consists of the Arantine Hills Specific Plan and additional off-site buffer areas (Project Study Area) consisting of approximately 301 acres located within the City of Corona, Riverside County, California. The Project Study Area is located in the City of Corona, Riverside County, California and is included in the Temescal Canyon Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The entire Project Study Area is located within the Burrowing Owl Survey Area according to the Geographic Information System (GIS) data for *Section 6.3.2* of the MSHCP.

Biologists from Glenn Lukos Associates, Inc. (GLA), conducted focused protocol surveys for the burrowing owl on July 2, 2010 following the March 29, 2006 MSHCP Burrowing Owl Survey Instructions. No burrowing owls, potential burrows, or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls were observed within the Project Study Area or the 150 meter buffer area.

### 1.1 Site Location and Description

The Project Study Area is located in the City of Corona, Riverside County, California [Exhibit 1: Regional Map], south of Cajalco Road/Eagle Glen Parkway, east of Castlepeak Drive/Driving Range Road, west of Temescal Canyon Road, and north of Glenn Road/Weirick Road and Bedford Canyon Wash [Exhibit 2: Vicinity Map]. The approximately 301-acre Project Study Area is located within Sections 16, 17, and 20, Township 4S, Range 6W of the USGS 7.5" Corona South Quadrangle dated 1967 (Photorevised 1988).

The Project Study Area encompasses approximately 301 acres. The Project Study Area is dominated by the remains of a citrus orchard that contains ruderal non-native plant species, but also includes disturbed developed lands, Riversidean sage scrub, Riversidean sage scrub/chaparral, and a portion of Bedford Canyon Wash. Elevations on site range from approximately 1,000 to 1,200 feet (305 to 366 meters) above Mean Sea Level (MSL). Adjacent land uses include residential development, agriculture, rural residential housing, commercial development, and undeveloped land.

### 1.2 Biology and Distribution of the Burrowing Owl

The burrowing owl (*Athene cunicularia*) is designated as a State Species of Special Concern. The burrowing owl has a broad distribution, breeding from southern Canada (nearly extirpated in some areas), and south through eastern Washington, central Oregon, and California to Baja California, east to western Minnesota, northwestern Iowa, eastern Nebraska, central Kansas, Oklahoma, eastern Texas, Louisiana, and south to central Mexico (AOU 1998). This winter range is much the same as the breeding range, except

that most burrowing owls apparently vacate the northern areas of the Great Plains and Great Basin (Haug et al. 1993).

In California, the burrowing owl is a yearlong resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains (Zeiner et al. 1990). It is present on the larger offshore islands and is found as high as 5,300 feet in Lassen County. Generally, burrowing owls occur in the Central Valley extending from Redding south to the Grapevine, east through the Mojave desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Francisco, and also in the Sonoran desert (Grinnell and Miller 1944). The owl is also a resident in the open areas of the lowlands over much of the Southern California region (Garrett and Dunn 1981).

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrubland characterized by low-growing vegetation (Zarn 1974). Suitable habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat: both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981). Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures, such as cement culverts; debris piles of cement, asphalt, or wood; or openings beneath cement or asphalt pavement. Burrowing owls may also use a variety of developed areas including golf courses, cemeteries, airports, vacant lots, abandoned buildings, and irrigation ditches (Haug et al 1993). Occasionally owls may dig their own burrow in soft, friable soil (Robertson 1929). Owls will modify and enlarge the mammal burrows for their use. One burrow is typically selected for use as a nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992).

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement (whitewash) at or near a burrow entrance.

The burrowing owl is a crepuscular hunter (active during the dawn and dusk hours) with a prey base including invertebrates and small vertebrates (Thomsen 1971). They may hunt by using short flights, running along the ground, hovering or by using an elevated perch from where prey is spotted. Burrowing owls are relatively opportunistic foragers (Haug et al. 1993). Their diet is composed of a variety of foods, mainly including insects and small mammals, although they may also take reptiles, other birds, and carrion.

### 1.3 MSHCP Survey Requirements for the Burrowing Owl

The Project Study Area occurs within the MSHCP burrowing owl survey area. The burrowing owl is designated as a "Covered Species Adequately Conserved" under the MSHCP, but with specific survey/conservation requirements as described in *Volume I, Section 6.3.2* of the MSHCP and species-specific objectives for the burrowing owl described in *Volume II, Section B* of the MSHCP.

Pursuant to the MSHCP, if a site occurs within the burrowing owl survey area, and suitable habitat is present, then focused surveys are to be conducted following the 2006 MSHCP Burrowing Owl Survey Instructions. The Burrowing Owl Survey Instructions are divided into two steps, including the habitat assessment (Step I) and locating burrows and burrowing owls (Step II).

Step I of the MSHCP Survey Instructions requires that an assessment be conducted to determine the presence of suitable habitat for the burrowing owl. Habitat assessments must be conducted by walking the subject property. If suitable habitat is found on site, then, if feasible, a 150-meter (500 foot) buffer zone should also be walked around the property. Buffer zones should only be evaluated if permission to walk the property can be obtained by adjacent landowners. Habitat for the burrowing owl is varied, including short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, et al. 1993). Burrowing owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows (e.g., ground squirrels, etc.). As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrows in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. In the case of nesting owls, one burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

The Burrowing Owl Survey Instructions acknowledge that the presence of suitable burrows is not the deciding factor on whether a site contains suitable habitat for burrowing owls. Once the basis for suitability for burrowing owls is determined, the presence/absence of suitable burrows is to be determined during Step II of the Survey Instructions. Step II surveys must be conducted during the breeding season (March 1 to August 31). All surveys are to be conducted during weather conditions that are conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys shall not be conducted during rain, high winds (>20 mph), dense fog, or temperatures exceeding 90 °F.

Step II surveys are separated into two parts. Part A consists of a detailed focused burrow survey, which consists of a systematic survey for burrows that are suitable to support burrowing owls. This includes natural burrows and/or other suitable man-made structures

(e.g., pipes, debris piles, etc.). The focused burrow survey is conducted by walking pedestrian transects throughout suitable habitat. Pedestrian transects are to be adequately spaced to allow 100 percent visual coverage of the ground surface, with transect center lines to be spaced no more than 30 meters (100 feet) apart. In cases with more complex topography, dense vegetation, etc., transects should be spaced closer together to ensure adequate ground coverage. During Part-A surveys, the locations of all suitable habitat, potential owl burrows, burrowing owl sign (i.e., whitewash, pellets, bones, feathers, etc), and owls should be mapped and recorded. If no suitable burrows are identified, then focused burrowing owl surveys (Part B) are not necessary.

If suitable burrows are identified, then focused burrowing owl surveys are required for those areas. Focused burrowing owl surveys consist of four visits conducted on separate days. The first survey visit can be conducted concurrent with the focused burrow survey. Prior to initiating pedestrian transects, suitable areas should first be scanned with binoculars to identify owls. Pedestrian transects should then be conducted in a manner similar to conducting focused burrow surveys, focusing on areas where suitable burrows were previously mapped. As feasible, the focused burrowing owl surveys should include a 150-meter buffer area. If the buffer area cannot be accessed, then the off site areas should at least be scanned with binoculars to determine if owls are present adjacent to the site. Any owls and/or diagnostic sign observed should be mapped during the survey.

## **2.0 METHODOLOGY**

GLA biologists conducted habitat assessments and focused burrow surveys pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions dated March 29, 2006. Habitat assessments and focused burrow surveys were conducted on July 2, 2010 during the burrowing owl nesting season. The entire Project Study Area was walked to determine the presence/absence of suitable habitat and potential burrows.

### **2.1 Focused Burrow Surveys**

Step II focused burrow surveys were conducted on July 2, 2010. Consistent with the Burrowing Owl Survey Instructions, pedestrian transects were walked throughout suitable habitat areas, and were appropriately spaced to allow for 100 percent visual coverage of the ground surface. Where multiple transects were necessary within a given area, transects were spaced anywhere from 10 to 30 meters apart.

Upon arrival at the site, GLA biologists scanned the site using binoculars to observe for burrowing owls. Following the initial site scan, GLA biologists walked the Project Study Area to survey for potential burrows. The focused burrow surveys were conducted by thoroughly traversing the areas of suitable habitat on foot to identify all natural burrows and/or artificial openings, whether or not they had the potential to support the burrowing owl. In addition, GLA biologists looked for physical sign around burrows that are used to identify the presence/absence of the burrowing owl (e.g., excrement at or near a burrow

entrance, cast pellets, molted feathers, prey remains, etc.). A map showing the location of transects walked is provided as Exhibit 3 [Transects and Burrow Locations Map]. Site photographs are included as Exhibit 4.

In addition to the on-site survey, the focused burrow survey included surveying off site areas containing suitable habitat within approximately 150 meters of the site with the use of binoculars to assist in the detection of burrowing owls and/or burrows since permission was not obtained to survey these areas on foot.

## **2.2 Focused Burrowing Owl Survey**

No potential suitable burrowing owl burrows were observed within the Project Study Area or the 150 meter buffer area; therefore, focused burrowing owl surveys were not required according to Step II, Part A of the Burrowing Owl Survey Instructions.

## **3.0 RESULTS**

No burrowing owls, potential burrows, or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls were observed within the Project Study Area or the 150 meter buffer area. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed at two areas of the off-site hillslopes to the west within the 150 meter buffer area. However, these burrows are actively utilized by California ground squirrels and contained no burrowing owls or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls. Therefore, focused burrowing owl surveys (Step II part B) are not required pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions dated March 29, 2006.

Additional birds species observed at the property include red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), California horned lark (*Eremophila alpestris actia*), hooded oriole (*Icterus cucullatus*), cliff swallow (*Hirundo pyrrhonota*), lark sparrow (*Chondestes grammacus*), turkey vulture (*Cathartes aura*), rock pigeon (*Columba livia*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), and wrenit (*Chamaea fasciata*).

Mammals observed on site include Audubon's cottontail (*Sylvilagus audubonii*) and mammals observed off-site include California ground squirrel (*Spermophilus beecheyi*).

Reptiles observed on site include western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*).

#### 4.0 DISCUSSION

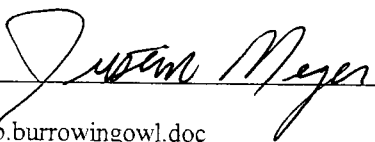
The majority of the Project Study Area supports suitable habitat for the burrowing owl; however, no burrowing owls, potential burrows, or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls were observed within the Project Study Area. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed at two areas of the off-site hillslopes to the west within the 150 meter buffer area. However, these burrows are actively utilized by California ground squirrels and contained no burrowing owls or diagnostic signs (i.e., whitewash, pellets, bones, feathers, etc.) of burrowing owls. Therefore, focused burrowing owl surveys (Step II part B) are not required pursuant to the 2006 MSHCP Burrowing Owl Survey Instructions dated March 29, 2006.

The project will be required to conduct a 30-day pre-construction survey for the burrowing owl according to *MSHCP Volume II, Birds, Burrowing Owl, Conservation Objective 6*:

“Pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one way doors and collapse of burrows) will occur when owls are present outside the nesting season.”

#### 5.0 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: 

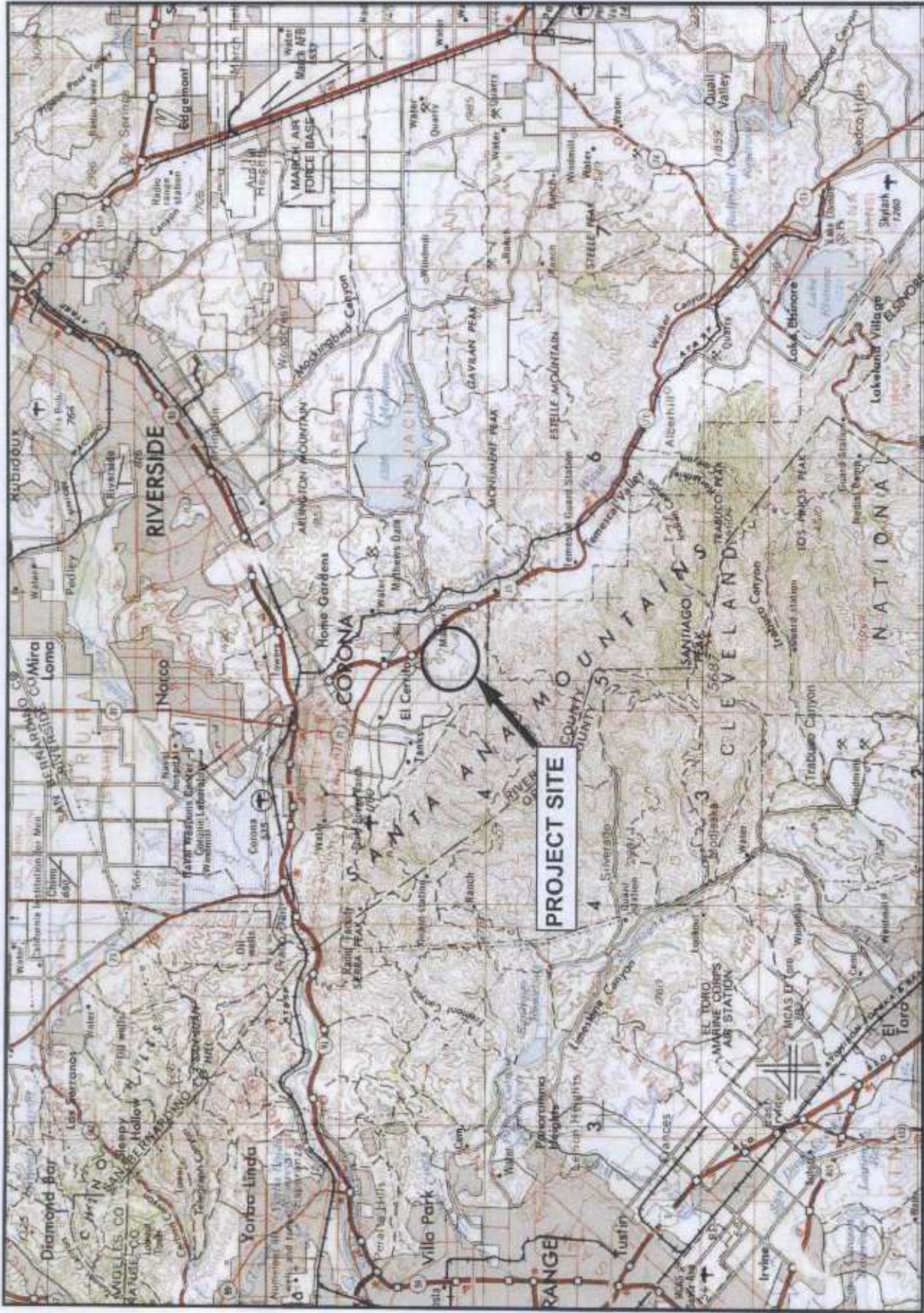
Date: 8/11/10

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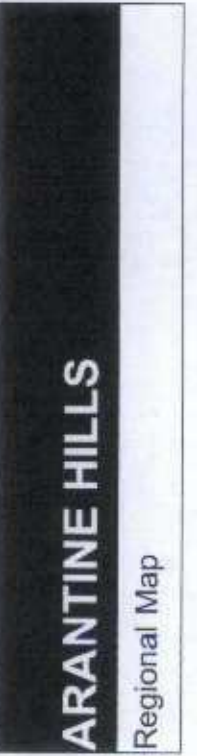


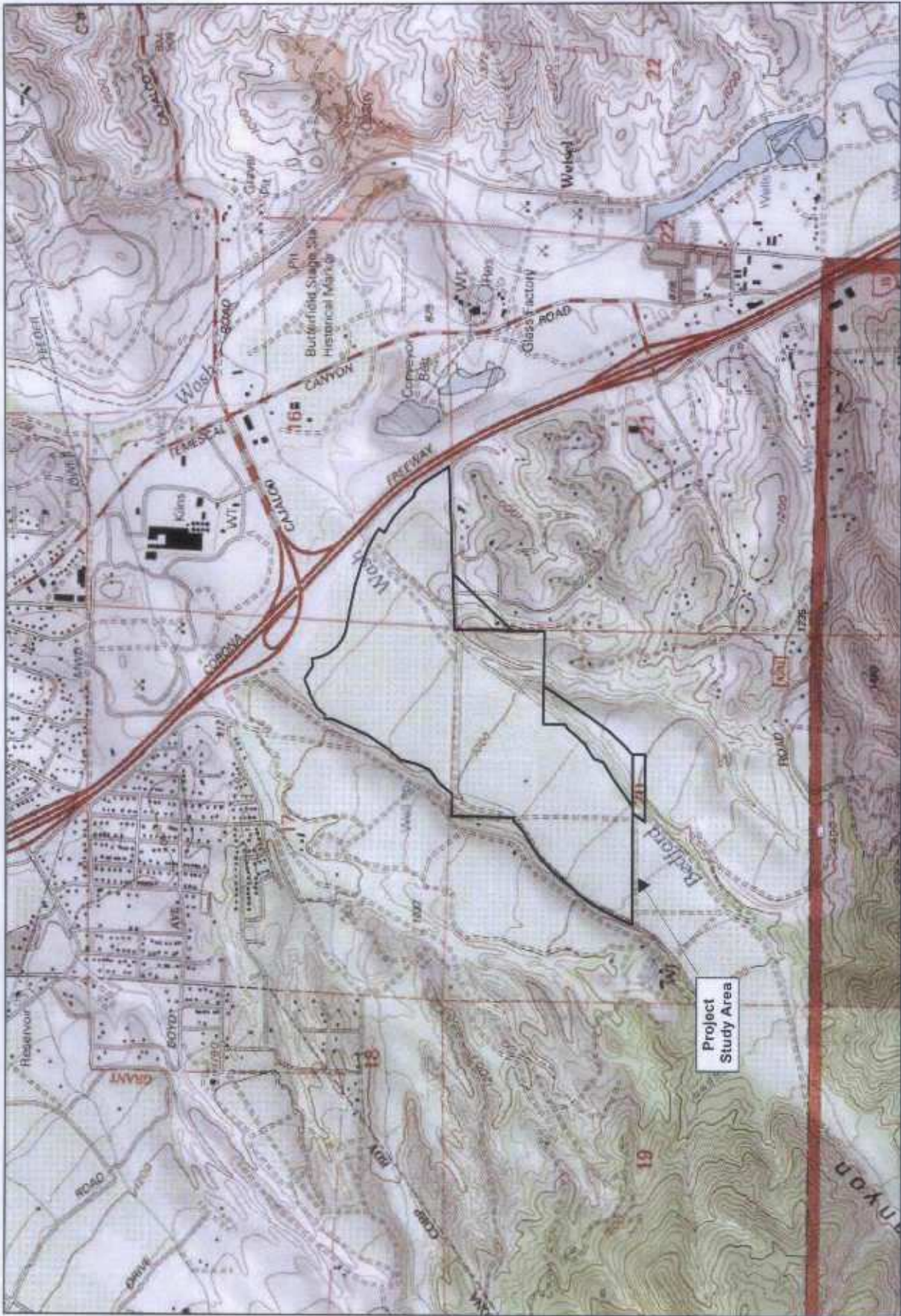
Adapted from USGS Santa Ana quadrangle



GLENN LUKOS ASSOCIATES

Exhibit 1





Adapted from USGS Corona South, CA quadrangle



GLENN LUKOS ASSOCIATES

Exhibit 2

**ARANTINE HILLS**  
 Vicinity Map



**Legend**

- Project Study Area
- Transect



**ARANTINE HILLS**

Transect and Burrow Location Map

**GLENN LUKOS ASSOCIATES**

Exhibit 3





Photograph 1 depicts the recently removed citrus orchard which dominates the Project Site.



Photograph 2 depicts the recently removed citrus orchard which dominates the Project Site.



**GLENN LUKOS ASSOCIATES**

Exhibit 4

**ARANTINE HILLS**

Site Photographs



Photograph 3 depicts ruderal vegetation located adjacent to Bedford Wash.



Photograph 4 depicts ruderal vegetation and Riversidean sage scrub located within the Project Site.



GLENN LUKOS ASSOCIATES

Exhibit 4

ARANTINE HILLS

Site Photographs



Photograph 5 depicts ruderal vegetation and Riversidean sage scrub located adjacent to Bedford Wash.



Photograph 6 depicts the remnant alluvial sage scrub located adjacent to Bedford Wash.



GLENN LUKOS ASSOCIATES

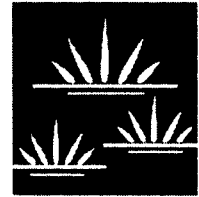
Exhibit 4

ARANTINE HILLS

Site Photographs

# GLENN LUKOS ASSOCIATES

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October 14, 2010

Mike Kerr  
Bluestone Communities  
4100 Newport Place  
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SUBJECT: Jurisdictional Delineation of the 274.8-Acre Arantine Hills Project Site, Located in the City of Corona, Riverside County, California

Dear Mr. Kerr:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.<sup>1</sup> This letter report has been prepared for in-house planning purposes only and should not routinely be submitted to regulatory or resource agencies. If it is necessary to submit a written jurisdictional delineation to one of the agencies, we will prepare an abridged version of this letter report.

The project study area consists of the Arantine Hills Specific Plan and off-site buffer areas (Project Study Area). These buffer areas were evaluated as a precautionary measure for potential off-site impacts. The Project Study Area in the City of Corona, Riverside County [Exhibit 1], comprises approximately 275 acres and contains three blue-line drainages (as depicted on the U.S. Geological Survey (USGS) topographic map Corona South, California (dated 1997) [Exhibit 2]), one of which appeared as a purple-line revision to the 1967 USGS map (photorevised 1988) and was adopted as a blue-line on the 1997 USGS map. However, a majority of that blue-line is actually a farm road that bisects the property and is not subject to Corps and CDFG jurisdiction. In addition, none of the drainages within the Project Study Area support flowing water and do not exhibit characteristics of intermittent or perennial streams. Therefore, all on site drainages are ephemeral. On March 12, 2009 and April 8, 2010, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project Study Area to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, and (2)

---

<sup>1</sup> This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

Mike Kerr  
Bluestone Communities  
October 14, 2010  
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CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed is a 550-scale map [Exhibit 3] that depicts the areas of Corps and CDFG jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4.

Corps jurisdiction at the site totals approximately 5.87 acres, none of which consist of jurisdictional wetlands. A Corps *Preliminary Jurisdictional Delineation Form* in accordance with the guidance outlined in Regulatory Guidance Letter 08-02 is attached as Appendix A.

CDFG jurisdiction at the site totals approximately 6.32 acres, of which approximately 0.46-acre consists of vegetated riparian habitat.

## I. METHODOLOGY

Prior to beginning the field delineation a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFG jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual<sup>2</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 (Arid West Supplement).<sup>3</sup> While in the field the limits of CDFG jurisdiction were recorded onto a 200-scale color aerial photograph using visible landmarks.

The Soil Conservation Service (SCS)<sup>4</sup> has mapped the following soil types as occurring in the general vicinity of the Project Study Area [Exhibit 5: Soils Map]:

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<sup>2</sup> Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

<sup>3</sup> U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-08-28. September 2008. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

<sup>4</sup> SCS is now known as the National Resource Conservation Service or NRCS.



Mike Kerr  
Bluestone Communities  
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Page 3

### **Arbuckle Gravelly Loam, 2 to 8 Percent Slopes (A1C) and Arbuckle Gravelly Loam, 8 to 15 Percent Slopes (A1D)**

Soils of the Arbuckle series consist of well-drained soils and have slopes of two to 25 percent. These soils occur on alluvial fans and developed in alluvium from metasedimentary rocks. The upper 12 inches consist of brown (10YR 5/3) gravelly loam and pale-brown (10YR 6/3) gravelly very fine sandy loam when dry and dark grayish brown (10YR 4/2) gravelly loam and brown (10YR 4/3) gravelly very fine sandy loam when moist. Arbuckle soils are used for dryland grain, irrigated citrus, alfalfa, melons, and grain.

### **Cortina Cobbly Loamy Sand, 2 to 8 Percent Slopes (CmC)**

The Cortina series consists of somewhat excessively drained and excessively drained soils on alluvial fans and in valley fills. These soils formed in alluvium from metasedimentary rocks. The upper ten inches consist of grayish brown (YR 5/2) gravelly coarse sandy loam when dry and very dark grayish brown (10YR 3/2) gravelly coarse sandy loam when moist. The Cortina soils are used for dryland pasture, grain, range, irrigated citrus, and for homesites.

### **Garretson Gravelly Very Fine Sandy Loam, 2 to 8 Percent Slopes (GdC)**

The Garretson series consists of well-drained soils on alluvial fans. These soils formed in alluvium made up chiefly of metasedimentary materials. The upper ten inches consist of grayish brown (10YR 5/3) gravelly very fine sandy loam when dry and very dark brown (10YR 3/3) gravelly very fine sandy loam when moist. The Garretson soils are used for dryland grain and pasture, irrigated citrus, truck crops, alfalfa, grain, and for homesites.

### **Terrace Escarpments (TeG)**

Terrace escarpments consist of variable alluvium on terraces and barrancas. Slopes range from 30 to 75 percent. Small areas of recently deposited alluvium may be near the bottom of the escarpments. Approximately one-fourth of the acreage is made up of eroded spots and active gullies that head toward the terrace top. This land is unaltered alluvial outwash derived from granite, gabbro, metamorphosed sandstone, sandstone, or mica-schist. The soil material consists of light grayish brown to brown in color. This land provides habitat for small game, such as rabbits, doves, and quail, when associated with tilled fields.

None of these soil units were identified as hydric in the SCS's publication, Hydric Soils of the United States<sup>5</sup>. A component of one soil unit, Cortina cobbly loamy sand, 2 to 8 percent slopes, is identified as hydric in the local hydric soils list for Western Riverside County. Riverwash is the minor (10-percent) component of this soil unit which is considered hydric if it is poorly drained or very poorly drained and supports a water table at less than one-half foot from the surface for a significant period (usually more than two weeks) during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches of the surface. Although this soil unit is sometimes hydric, the disturbed nature of the site and the cobbly, rocky soils present within the top 20 inches do not exhibit hydric soil characteristics.

It is important to note that under the Corps' Arid West Supplement, the presence of mapped hydric soils is no longer dispositive for the presence of hydric soils. Rather, the presence of hydric soils must now be confirmed in the field.

## II. JURISDICTION

### A. 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) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
  - (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*

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<sup>5</sup> United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

- (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
- (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

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

- (8) *Waters of the United States do not include prior converted cropland.<sup>6</sup> Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

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

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

**1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.**

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the

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<sup>6</sup> The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season...." [Emphasis added.]

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interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of “waters of the United States” in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court’s previous support of the Corps’ expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

*In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, we believe that the court’s opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

## **2. Rapanos v. United States and Carabell v. United States**

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (“Rapanos”). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*.

For “isolated” waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps. The information pertaining to isolated waters is also included on the *Approved Jurisdictional Determination Form*.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

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

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

### **3. 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 National List of Plant Species that Occur in Wetlands<sup>7</sup>);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

#### **B. Regional Water Quality Control Board**

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.<sup>8</sup> The memorandum states:

*California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...*

<sup>7</sup> Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

<sup>8</sup> Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

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*The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....*

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

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

*"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.*

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the

state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

C. **California Department of Fish and Game – Requirements for CDFG Jurisdiction**

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code, the CDFG 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. Section 1602 states:

An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake or deposit or dispose of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream or lake,...

CDFG's jurisdiction is limited to lakes, rivers and streams. CDFG regulations do not define the term "lake." However, according to CDFG's *Memorandum, Jurisdictional Issues in the Application of Fish and Game Code Sections 1601 and 1603* (July 2, 1990) (Memorandum), CDFG considers a feature's size, i.e. whether it is large, in the context of other local water bodies. The Memorandum cites as an example, but does not adopt, the following definition of a lake:

"[a] considerable body of standing water in a depression of land or expanded part of a closed basin serving to drain surrounding country; or a body of considerable size surrounded by land; a widened portion of a river or a lagoon." (quoting *Wood v. Maitland*, 169 Misc. 484, 8 N.Y.S.2d 146, 150.)

CDFG's Field Guide also notes that lakes include "natural lakes and man-made reservoirs." The origin of the water body is not as significant as the topographic situation and the physical attributes of the water body. Jurisdiction over a man-made water body is based upon the value of the water body to fish and wildlife. An artificial water body that acquires naturalized physical attributes and are viewed by the community as natural features, are treated as natural waterways by CDFG. However, artificial waterways without the attributes of natural waterways are not generally subject to Section 1602 jurisdiction.



### III. RESULTS

#### A. Corps Jurisdiction

The Project Study Area is located within the Santa Ana River watershed, an intrastate waterway that is tributary to the Pacific Ocean. The Corps retains jurisdiction of this watershed because its final destination (i.e. the Pacific Ocean) is a traditionally navigable water.

Corps jurisdiction associated with the Project Study Area totals approximately 5.87 acres, none of which consists of jurisdictional wetlands.

The boundaries of Corps jurisdiction are depicted on the enclosed map provided as Exhibit 3. Five drainages on site were identified that exhibit an ordinary high water mark (OHWM) with several characteristics of stream flow including destruction of terrestrial vegetation, terracing, change in soil characteristics, debris wrack, and/or water marks. All of the onsite drainages are ephemeral and flow only during, and for a short duration after, precipitation events. Groundwater is not a source of water for these ephemeral streams. Table 1 below depicts the total Corps jurisdictional acreages, followed by a description of each drainage. There are no wetlands onsite.

**Table 1: Corps Jurisdictional Acreage on Site**

<b>Drainage</b>	<b>Total Corps Jurisdiction (acres)</b>	<b>Total Wetlands (acres)</b>	<b>Drainage Length (ft)</b>	<b>Drainage Width (ft)</b>
Bedford Wash	5.58	0.00	5,659	27 to 69
Tributary A	0.10	0.00	1,605	2 to 4
Tributary B	0.06	0.00	1,325	2
Tributary C	0.03	0.00	348	2 to 8
Ditch A	0.10	0.00	1,220	2 to 5
<b>TOTAL</b>	<b>5.87</b>	<b>0.00</b>	<b>10,157</b>	

#### 1. **Bedford Wash**

Corps jurisdiction associated with Bedford Wash totals 5.58 acres, none of which consists of jurisdictional wetlands. This blue-line ephemeral tributary to Temescal Creek enters the property in the southeastern corner and meanders on- and offsite in a northeasterly direction for approximately 5,659 feet [Exhibit 3]. The length associated with the onsite portions of Bedford Wash totals 3,620 feet. The channel is mostly shallow and occasionally incised with a substrate of sand, silt, and cobble. Bedford Wash has been historically disturbed by (i) past and on going

agricultural activities, including construction of an elevated berm to protect the adjacent agricultural groves and (ii) soil deposition within the wash. In addition, the adjacent southern cliff face appears to be consistently sloughing off, or sliding, into the drainage and obscuring the bed, bank, and OHWM within the drainage. Bedford Wash exhibits an OHWM ranging in width from 27 feet to 69 feet and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Bedford Wash supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), scalebroom (*Lepidospartum latisquamum*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), deerweed (*Lotus scoparius*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), and castor bean (*Ricinus communis*, FACU). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Scattered throughout Bedford Wash are individuals of mule fat (*Baccharis salicifolia*, FACW) and tree tobacco (*Nicotiana glauca*, FAC), and a small area of vegetation near the confluence with Tributary A consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands.

## 2. Tributary A

Corps jurisdiction associated with Tributary A totals 0.10 acre, none of which consists of jurisdictional wetlands. The ephemeral channel is incised with a substrate of sand, silt, and cobble. Tributary A flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,605 feet before its confluence with Bedford Wash [Exhibit 3]. The OHWM varies from two to four feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary A supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), and castor bean (*Ricinus communis*, FACU). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. A small patch of native riparian vegetation consists of mule fat (*Baccharis*

*salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC), and a small area of non-native riparian vegetation consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands present.

### 3. Tributary B

Corps jurisdiction associated with Tributary B totals 0.06 acre, none of which consists of jurisdictional wetlands. This blue-line ephemeral tributary to Bedford Wash is incised with a substrate of sand, silt, and cobble. Tributary B flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,325 feet before its confluence with Bedford Wash [Exhibit 3]. The OHWM averages two feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary B supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), California brittlebush (*Encelia californica*, UPL), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Limited areas of riparian vegetation consist of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC). The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

### 4. Tributary C

Corps jurisdiction associated with Tributary C totals 0.03 acre, none of which consists of jurisdictional wetlands. The ephemeral tributary to Bedford Wash is shallow with a substrate of sand, silt, and cobble. Tributary C accepts offsite flows from rural residential development to the south and traverses the southeastern corner of the site in a northerly direction through a gently sloping agricultural field for approximately 348 feet before flowing offsite and into the storm drain system, which ultimately discharges into Temescal Creek [Exhibit 3]. The OHWM varies from two to eight feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the streambed.

Tributary C supports areas of upland vegetation including cheeseweed (*Malva parviflora*, UPL), Russian thistle (*Salsola tragus*, UPL), and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI) and summer mustard (*Hirschfeldia incana*, UPL) were also present. The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

#### **5. Ditch A**

Corps jurisdiction associated with Ditch A totals approximately 0.10 acre, none of which consists of jurisdictional wetlands. The southerly reach of this ephemeral ditch appears as a blue-line stream and is incised with a substrate of sand and silt. The northerly reach is shallow with a substrate of sand and silt. Ditch A enters the property in the southeastern portion of the site and flows in a northeasterly direction along the property's eastern boundary for approximately 1,017 feet onsite, then meanders offsite for approximately 2,009 feet, and returns onsite for approximately 203 feet before its confluence with a concrete v-ditch, which ultimately drains to Temescal Creek [Exhibit 3]. The OHWM varies from two to five feet in width and supports evidence of water marks, debris wrack, and changes in soil characteristics within the ditch.

Ditch A supports castor bean (*Ricinus communis*, FACU), Russian thistle (*Salsola tragus*, UPL), and tree tobacco (*Nicotiana glauca*, FAC). Upland non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. The soils in this dry ephemeral drainage exhibit no hydric characteristics and no wetlands are present.

#### **6. Non-Jurisdictional Isolated Remnant Agricultural Pond**

A small isolated remnant irrigation pond occurs on the property [Exhibit 4, Photograph 6]. This feature was used historically for agricultural irrigation at the adjacent agricultural fields. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. Because this feature was originally constructed in uplands and is an artificial irrigation pond, it is not jurisdictional.

**B. Regional Water Quality Control Board Jurisdiction**

As none of the waters at the site were eliminated from Corps jurisdiction as being isolated, intrastate waters, all of the Corps' jurisdiction is considered to be within the Regional Board's jurisdiction pursuant to Section 401 of the Clean Water Act.

In addition, the remnant agricultural pond is not subject to Regional Board's jurisdiction because it does not support beneficial uses. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. The beneficial uses designated by the Santa Ana Basin Plan for hydrologic unit 801.32 – Bedford Canyon Creek, include the following intermittent beneficial uses: Groundwater Recharge, Contact Water Recreation, Non-Contact Water Recreation, Warm Freshwater Habitat, and Wildlife Habitat. None of these uses are present within this remnant feature. This hydrologic unit is excepted from Municipal Use.

**C. CDFG Jurisdiction**

CDFG jurisdiction associated with the Project Study Area totals approximately 6.32 acres, of which 0.46 acre consists of vegetated riparian habitat.

The boundaries of CDFG jurisdiction are depicted on the enclosed map provided as Exhibit 3. Five drainages onsite were identified that exhibit a defined channel with bed and bank. All of the onsite drainages are ephemeral and flow only during, and for a short duration after, precipitation events. Table 2 below depicts the total CDFG jurisdictional acreages, and the acreages of associated riparian vegetation for each drainage, followed by a description of each drainage.

**Table 2: CDFG Jurisdictional Acreage on Site**

<b>Drainage</b>	<b>Total CDFG Unvegetated Streambed (acres)</b>	<b>Total Riparian Vegetation (acres)</b>	<b>Total CDFG Jurisdiction (acres)</b>	<b>Drainage Length (ft)</b>	<b>Drainage Width (ft)</b>
Bedford Wash	5.56	0.02	5.58	5,659	27 to 69
Tributary A	0.09	0.11	0.20	1,605	2 to 13
Tributary B	0.08	0.33	0.41	1,325	2 to 22
Tributary C	0.03	0.00	0.03	348	2 to 8
Ditch A	0.10	0.00	0.10	1,220	2 to 5
<b>TOTAL</b>	<b>5.86</b>	<b>0.46</b>	<b>6.32</b>	<b>10,157</b>	

## 1. Bedford Wash

CDFG jurisdiction associated with Bedford Wash totals 5.58 acres, of which 0.02 acre consists of vegetated riparian habitat. This blue-line ephemeral tributary to Temescal Creek enters the property in the southeastern corner and meanders on- and offsite in a northeasterly direction for approximately 5,659 feet. The length associated with the onsite portions of Bedford Wash totals 3,620 feet [Exhibit 3]. The channel is mostly shallow and occasionally incised with a substrate of sand, silt, and cobble. Bedford Wash has been historically disturbed by (i) past and on going agricultural activities, including construction of an elevated berm to protect the adjacent agricultural groves and (ii) soil deposition within the wash. In addition, the adjacent southern cliff face appears to be consistently sloughing off, or sliding, into the drainage and obscuring the bed, bank, and OHWM within the drainage. Bedford Wash varies in width from 27 to 69 feet.

Bedford Wash supports areas of upland vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), scalebroom (*Lepidospartum latisquamum*, UPL), common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL), deerweed (*Lotus scoparius*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), and castor bean (*Ricinus communis*, FACU). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Scattered throughout Bedford Wash are individuals of mule fat (*Baccharis salicifolia*, FACW) and tree tobacco (*Nicotiana glauca*, FAC), and a small area of vegetation near the confluence with Tributary A consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW).

## 2. Tributary A

CDFG jurisdiction associated with Tributary A totals 0.20 acre, of which 0.11 acre consists of vegetated riparian habitat. The ephemeral channel is incised with a substrate of sand, silt, and cobble. Tributary A flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,605 feet before its confluence with Bedford Wash [Exhibit 3]. This drainage varies from two to 13 feet in width.

The banks and bed support vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), common fiddleneck

(*Amsinckia menziesii* var. *intermedia*, UPL), and castor bean (*Ricinus communis*, FACU). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. A small patch of native riparian vegetation consists of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC), and a small area of non-native riparian vegetation consists of salt cedar (*Tamarix chinensis*, FAC) and giant reed (*Arundo donax*, FACW).

### 3. Tributary B

CDFG jurisdiction associated with Tributary B totals 0.41 acre, of which 0.33 acre consists of vegetated riparian habitat. This ephemeral tributary to Bedford Wash is incised with a substrate of sand, silt, and cobble. Tributary B flows south to north through a steep canyon complex consisting of scattered residential housing and agricultural groves before entering the property in the south-central portion of the site and extending for approximately 1,325 feet before its confluence with Bedford Wash [Exhibit 3]. This drainage varies from two to 22 feet in width.

The banks and bed support vegetation consisting primarily of Riversidean sage scrub including California sagebrush (*Artemisia californica*, UPL), buckwheat (*Eriogonum fasciculatum*, UPL), laurel sumac (*Malosma laurina*, UPL), white sage (*Salvia apiana*, UPL), black sage (*Salvia mellifera*, UPL), bush mallow (*Malacothamnus fasciculatus*, UPL), California brittlebush (*Encelia californica*, UPL) and common fiddleneck (*Amsinckia menziesii* var. *intermedia*, UPL). Non-native grasses, such as red brome (*Bromus madritensis* ssp. *rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present. Limited areas of riparian vegetation consist of mule fat (*Baccharis salicifolia*, FACW) and Mexican elderberry (*Sambucus mexicana*, FAC).

### 4. Tributary C

CDFG jurisdiction associated with Tributary C totals 0.03 acre, none of which consists of vegetated riparian habitat. This blue-line ephemeral tributary to Bedford Wash is shallow with a substrate of sand, silt, and cobble. Tributary C accepts offsite flows from rural residential development to the south and traverses the southeastern corner of the site in a northerly direction through a gently sloping agricultural field for approximately 348 feet before flowing offsite and into the storm drain system, which ultimately discharges to Temescal Creek [Exhibit 3]. This drainage varies from two to eight feet in width.

Tributary C supports areas of upland vegetation including cheeseweed (*Malva parviflora*, UPL), Russian thistle (*Salsola tragus*, UPL), and common fiddleneck (*Amsinckia menziesii* var.

*intermedia*, UPL). Non-native grasses, such as red brome (*Bromus madritensis ssp. rubens*, NI) and summer mustard (*Hirschfeldia incana*, UPL) were also present.

#### **5. Ditch A**

CDFG jurisdiction associated with Ditch A totals 0.10 acre, none of which consists of vegetated riparian habitat. The southerly reach of this ephemeral ditch appears as a blue-line stream and is incised with a substrate of sand and silt. The northerly reach is shallow with a substrate of sand and silt. Ditch A enters the property in the southeastern portion of the site and flows in a northeasterly direction along the property's eastern boundary for approximately 1,017 feet onsite, then meanders offsite for approximately 2,009 feet, and returns onsite for approximately 203 feet before its confluence with a concrete v-ditch, which ultimately drains into Temescal Creek [Exhibit 3]. This drainage varies from two to five feet in width.

Ditch A supports castor bean (*Ricinus communis*, FACU), Russian thistle (*Salsola tragus*, UPL), and tree tobacco (*Nicotiana glauca*, FAC). Non-native grasses, such as red brome (*Bromus madritensis ssp. rubens*, NI), summer mustard (*Hirschfeldia incana*, UPL), and tocalote (*Centaurea melitensis*, UPL) were also present.

#### **6. Non-Jurisdictional Isolated Remnant Agricultural Pond**

A small remnant man-made irrigation pond occurs on the property [Exhibit 4, Photograph 6]. This feature was constructed for the purpose of storing irrigation water for the agricultural fields. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. The pond has no contributing watershed and only holds water that is pumped into it for irrigation purposes. As such, this pond has historically only been used for agricultural irrigation and has been abandoned. Because this feature is not a "considerable" body of standing water and because its primary hydrological input is from water pumped into the feature, it cannot be considered a "lake" pursuant to Section 1602. For all of these reasons, it does not fall under CDFG's jurisdiction and it is not jurisdictional under Section 1602 of the California Fish & Game Code.



#### IV. DISCUSSION

##### A. Impact Analysis

An analysis of impacts will be performed, based upon this delineation and the current project design (or design alternative) upon the client's request. This analysis will be provided as a separate memo and accompanying map.

##### B. Corps Regulations and Procedures

The discharge of dredged or fill material (temporarily or permanently) into waters of the United States requires prior authorization from the Corps pursuant to Section 404 of the Clean Water Act. Activities that usually involve a regulated discharge of dredged or fill materials include (but are not limited to) grading, placing of riprap for erosion control, pouring concrete, laying sod, preparing soil for planting (e.g., turning soil over, adding soil amendments<sup>9</sup>), stockpiling excavated material, mechanized removal of vegetation, and driving of piles for certain types of structures. Activities that do not involve a regulated discharge (if performed in a manner to avoid discharges) include excavation, placing a structure, driving pilings (for transportation structures), clearing of vegetation using hand held equipment and working above the ground surface, pumping water, and walking or driving vehicles.

Federal law recognizes wetlands and other waters of the United States as valuable natural resources. Therefore, federal agencies, principally the Corps, USFWS, and EPA strongly discourage activities within federal jurisdiction that alter aquatic habitats. In addition, Corps policy, derived from the National Environmental Policy Act, prohibits "piece-mealing," the submission of separate permit applications for discharges that are reasonably related to the same project

##### 1. Nationwide Permits

On March 12, 2007, the Corps published, in the *Federal Register*, a Reissuance of Nationwide Permits (NWP). With this notice (and effective March 19, 2007) the Corps has 49 NWPs that preauthorize specific minor discharges. Use of some NWPs does not require review by the Corps. Formulation of a project design in which all proposed discharges into waters of the United States are authorized under NWPs could significantly reduce federal permit processing time. The revised NWPs are more complicated than the previous NWPs and a number of new

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<sup>9</sup> Similar planting activities associated with on-going farming operations may be exempt from regulation by Section 404 of the Clean Water Act.

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conditions have been added to the NWP program. The following is only a summary of NWPs that may be applicable to the subject site or the work proposed at the subject site. You should not use any of the NWPs unless you have read and understood the entire text of the NWP and all of the conditions (national and regional) of the NWP program.

**NWP number 14** authorizes activities for the construction, expansion, modification, or improvement of linear transportation crossings<sup>10</sup> within waters of the United States. This nationwide permit differentiates between crossings occurring within non-tidal waters or tidal waters.

- For linear transportation projects in non-tidal waters, this NWP authorizes discharges that cause the permanent loss not more than 1/2 acre of waters of the United States.
- For linear transportation projects in tidal waters, this NWP authorizes discharges that cause the permanent loss of not more than 1/3 acre of waters of the United States.

Use of NWP number 14 requires a case-by-case approval by the Corps through the pre-construction notification process if (1) the discharge causes the loss of more than 1/10 acre of waters of the United States or (2) the discharge would occur within a special aquatic site (e.g., wetlands). The notification must include a compensatory mitigation proposal to offset permanent losses of waters of the United States and a statement describing how temporary losses of waters of the United States will be minimized. For discharges into wetlands, the notification must include a wetland delineation. The width of the fill must be limited to the minimum necessary for the actual crossing. The crossing must be a single and complete project. Note that some road fills may be eligible for an exemption from the need for a Section 404 permit altogether. These include some roads used for silviculture, farming, and mining.

**NWP number 29** authorizes discharge of dredged or fill material into non-tidal waters of the United States for the construction or expansion of residential developments. This NWP covers building foundations, building pads, and attendant features such as roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (where the golf course is an integral part of the residential development).

- The authorized discharge cannot cause the permanent loss of more than 1/2 acre of waters of the United States.

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<sup>10</sup> The term "linear transportation crossings" is defined to include highways, railways, trails, and airport runways and taxiways.

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- The authorized discharge cannot cause the loss of more than 300 linear feet of streambed (unless for intermittent and ephemeral streambeds this 300 linear foot limit is waived in writing by the district engineer).
- This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

a) Pre-construction Notification Process

Some NWPs require that the Corps approve each use of the NWP on a case-by-case basis. The process of obtaining this approval is called a pre-construction notification. Obtaining authorization through the pre-construction notification process is not automatic.

Notification to the Corps must include (1) the permittee's name, address, and telephone number; (2) location of the project; (3) description of the project, its purpose, its impacts (direct and indirect), (4) information about other Corps authorizations needed,<sup>11</sup> and (5) a delineation of special aquatic sites (if required by the NWP). Certain NWPs require specific additional information as outlined in condition number 13. The Corps has 30 days from receipt of the notification to determine whether or not the notification is complete. The Corps may request additional information only once; if the requested information is properly submitted, the Corps cannot make a request for yet more information. If the permittee has not received notice from the Corps within 45 days of the Corps' receipt of a complete application, the permittee may assume that authorization has been approved.<sup>12</sup> For pre-construction notifications for projects that would cause the loss of more than 1/2 acre of waters of the United States, the Corps must solicit input from USFWS, EPA, CDFG, State Historic Preservation Officer (SHPO), and National Marine Fisheries Service (NMFS).

b) Conditional Use of Nationwide Permits

All of the NWPs are conditioned by a set of general conditions published at 33 CFR 330 Appendix A, Section C. Special attention should be paid to ensure compliance with six of these conditions.

Endangered Species. Condition number 17 states that no activity is authorized under any NWP if that activity may affect a listed species or critical habitat unless Section 7 consultation addressing

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<sup>11</sup> Many Corps districts (including the Los Angeles District) have issued written policy clarifying that their intent is to receive a small version of an environmental assessment with each notification.

<sup>12</sup> If the notification, as originally submitted, is deemed complete, the 45-day clock starts from the date of the Corps' receipt of the notification, not after the 30-day review period has ended.

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the effects of the proposed activity has been completed. The district engineer is responsible for making the "may effect" determination. The district engineer may, at his option, complete the consultation and allow the activity to be authorized by NWP, or he may at any time take discretionary authority (i.e., require that an individual permit be obtained for the proposed activity). If any federally-listed (or proposed for listing) endangered or threatened species or critical habitat might be affected by the proposed project, or is in the vicinity of the project, the permittee must not commence work and must notify the Corps.

Cultural Resources. Condition number 18 states that no activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized until the Corps has complied with Section 106 of the National Historic Preservation Act. The permittee must notify the district engineer if the proposed activity may adversely affect historic properties that the National Park Service has listed, or determined eligible for listing, on the National Register of Historic Places.

Water Quality Certification. Condition number 21 states that an individual 401 water quality certification must be obtained or waived for the proposed activity if the State Water Quality Control Board has not already certified the NWP. On May 11, 2007 the State Water Resources Control Board conditionally certified NWP numbers 1, 4, 5, 6, 9, 10, 11, 20, 22, 24, 28, 29, 32, 34 and 38. Use of this "conditional certification" requires prior notification to the State Board and the appropriate Regional Board. If the applicant is not notified by the Regional Board within 30 days of the postmarked date of the notification, the applicant may assume that the project meets the conditions of the certification. Certification for all other NWPs must be obtained by application to the Regional Board on a case-by-case basis. The district engineer may require water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

Designated Critical Resource Waters. Condition number 19 prohibits the use of NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49 and 50 for any activity within or directly affecting critical resource waters, including wetlands adjacent to such waters. Critical resource waters include NOAA-designated marine sanctuaries, National Estuarine Research Reserves, coral reefs, state natural heritage sites, and outstanding national resource waters, or other waters officially designated by a state as having particular environmental or ecological significance and identified by the Corps.

Mitigation. Condition number 20 requires mitigation where necessary to ensure that the adverse effects to the aquatic environment are minimal. Compensatory mitigation will generally be required for wetland impacts greater than 0.10 acre at a minimum 1:1 ratio for all wetland impacts requiring a pre-construction notification; preservation will be allowed only in

exceptional circumstances. Vegetated buffers will be required adjacent to streams and other open waters<sup>13</sup> located on the property. The buffers will normally be 25 to 50 feet wide on each side of the waterbody, but wider buffers may be required. The wetland buffers (upland or wetland) may be counted as 1/3 of the total mitigation requirement beyond the initial 1:1 wetland replacement requirement. Consolidated mitigation approaches (such as mitigation banking) are the Corps' preferred method of providing compensatory mitigation. Impacts to wetland totaling less than 0.10 acre may not require compensatory mitigation. For losses below this threshold, district engineers will review PCNs to determine if compensatory mitigation is necessary to ensure that the work authorized by NWP results in minimal adverse effects on the aquatic environment, individually and cumulatively.

Regional Conditions. Each district office of the Corps is encouraged to develop regional conditions for use of NWPs within the district. The regional conditions may only further restrict the published NWPs and may not authorize additional activities. On May 18, 2007 the Los Angeles District issued a public notice issuing regional conditions within the District.

Regional Condition 3 requires that all projects proposed for authorization by nationwide or regional general permits where prior notification to the district engineer is required, applicants must provide color photographs or color photocopies of the project area taken from representative points documented on a site map. Pre-project photographs and the site map would be provided with the permit application. Photographs should represent conditions typical or indicative of the resources before impacts. None of the regional conditions would affect the authorization of the proposed project under a NWP.

c) Multiple Use of Nationwide Permits

Under the previous rules, the impact limit of each NWP used on a single and complete project was additive, that is, the impact for each NWP used could be added together to achieve a total impact in excess of that allowed by any one of the NWPs. Under the current rules, the total impact limit of multiple NWPs on a single project cannot exceed the impact limit of the NWP with the highest limit being used on the project.

d) Linear Projects

Corps regulations at 33 CFR 330.2(i) state that "for linear projects, the 'single and complete project'... will apply to each crossing of a separate water of the United States... at that location..."

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<sup>13</sup> For the purposes of the NWPs, the term "open waters" does not include ephemeral drainages, but does include any other water of the United States that exhibits an ordinary high water mark, including intermittent drainages.

The regulations go on to explain that for linear projects crossing the same waterbody at several separate and distinct locations, each crossing is considered a single and complete project and that individual channels in a braided stream or river are not separate water bodies.

e) Expiration of Nationwide Permits

Nationwide permits are issued for a period of 5 years. The new NWP's issued on March 12, 2007 (and which became effective on March 19, 2007) will expire on March 18, 2012. Corps regulations at 33 CFR 330.6(b) state that work that has started in reliance upon a NWP may continue for an additional year after expiration of the NWP.<sup>14</sup>

A letter of verification from the Corps, stating that the proposed work is authorized by a nationwide permit may be obtained for any nationwide permit, but must be obtained for those nationwide permits for which "notification" is required by condition number 13. For activities that have not been verified by the Corps, the project must commence or be under contract to commence by the expiration date of the NWP and the work must be completed within 12 months after such date. For activities that have been verified, the work must commence or be under contract to commence within the verification period and the work must be completed by the date determined by the Corps in the letter of verification. This completion date may extend beyond the date that the NWP's, themselves, expire. For projects that have been verified by the Corps, an extension of a Corps approved completion date may be requested.

**C. Regional Water Quality Control Board Procedures**

As none of the waters at the site were eliminated from Corps jurisdiction as being isolated, intrastate waters, all of the Corps' jurisdiction is considered to be within the Regional Board's jurisdiction pursuant to Section 401 of the Clean Water Act. Thus, before the Corps can finalize issuance of authorization pursuant to Section 404 of the Clean Water Act, the applicant must obtain 401 water quality certification from the Regional Board. A 401 application will not be accepted by the Regional Board until after an environmental impact report (EIR) or negative declaration has been certified. The Regional Board generally requires that any impacts to jurisdictional areas or to water quality be fully mitigated. Corps regulations allow 60 days for the Regional Board to process the 401 application; however, the Corps will rarely issue its permit if the Regional Board has not taken action, even if the allotted 60 days has passed.

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<sup>14</sup> The Corps has determined that being under contract prior to expiration of the NWP's to have work commence is equivalent to having started the work prior to expiration of the NWP's.

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**D. CDFG Regulations and Procedures**

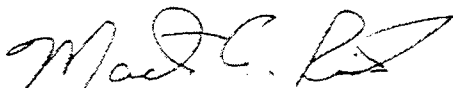
Unlike the Corps, CDFG regulates not only the discharge of dredged or fill material, but all activities that alter streams and lakes and their associated habitat. CDFG has no abbreviated permitting process comparable to the Corps nationwide permits. A CDFG 1602 agreement is required for all activities resulting in impacts to streambeds and their associated riparian habitats.

A 1602 notification (application) will not be accepted by the CDFG until after an environmental impact report (EIR) or negative declaration has been certified. CDFG generally requires that any impacts to streambeds and adjacent riparian habitats be fully mitigated. To ensure rapid and favorable action on a 1602 notification, a mitigation plan should be submitted with the notification package. It normally takes up to 90 days for the CDFG to process a 1602 notification and issue a draft agreement.

If you have any questions about this letter report, please contact me at (949) 837-0404, Ext. 20.

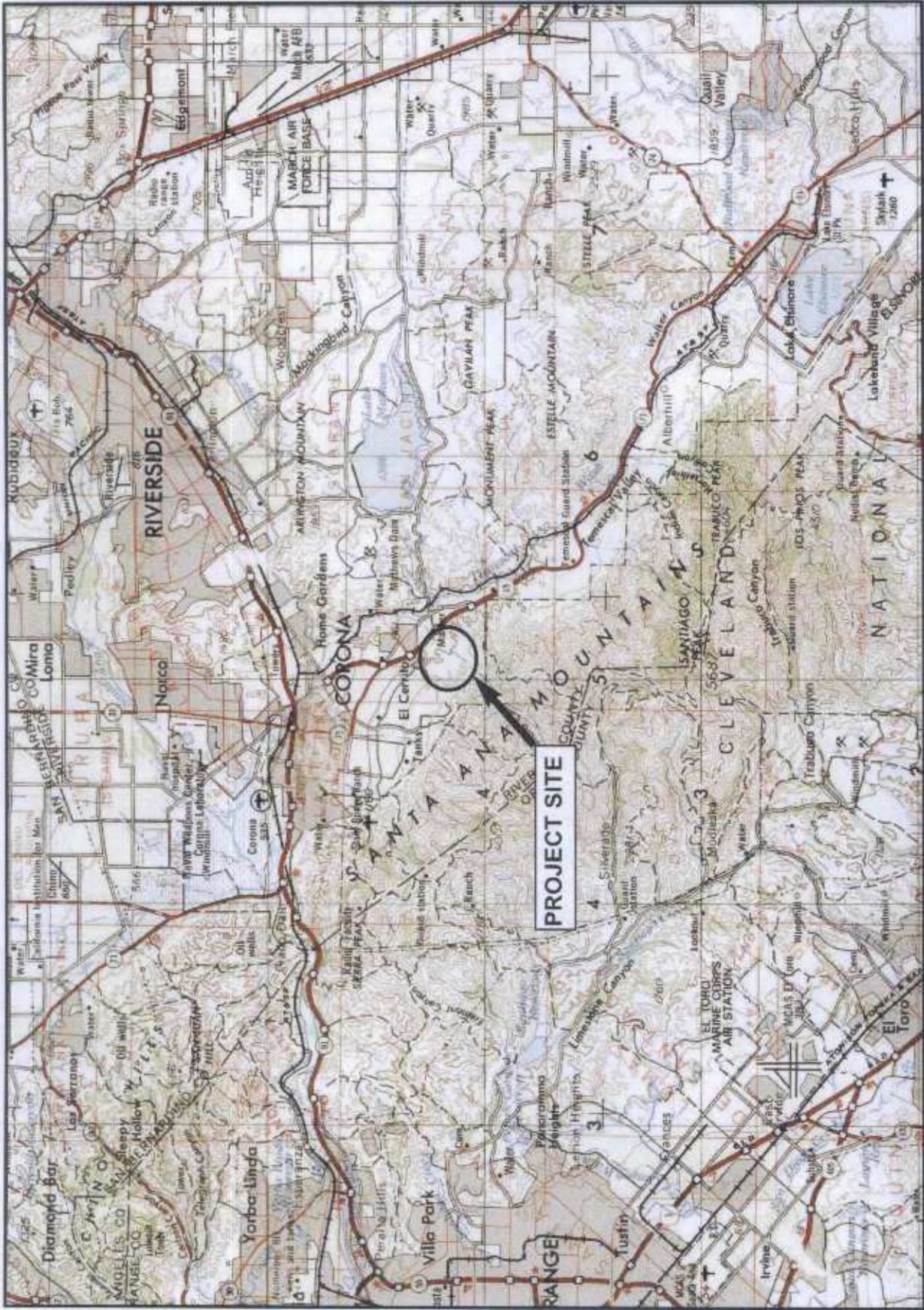
Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Martin Rasnick  
Regulatory Specialist

s:0374-10b.rpt



GLENN LUKOS ASSOCIATES

Exhibit 1



ARANTINE HILLS

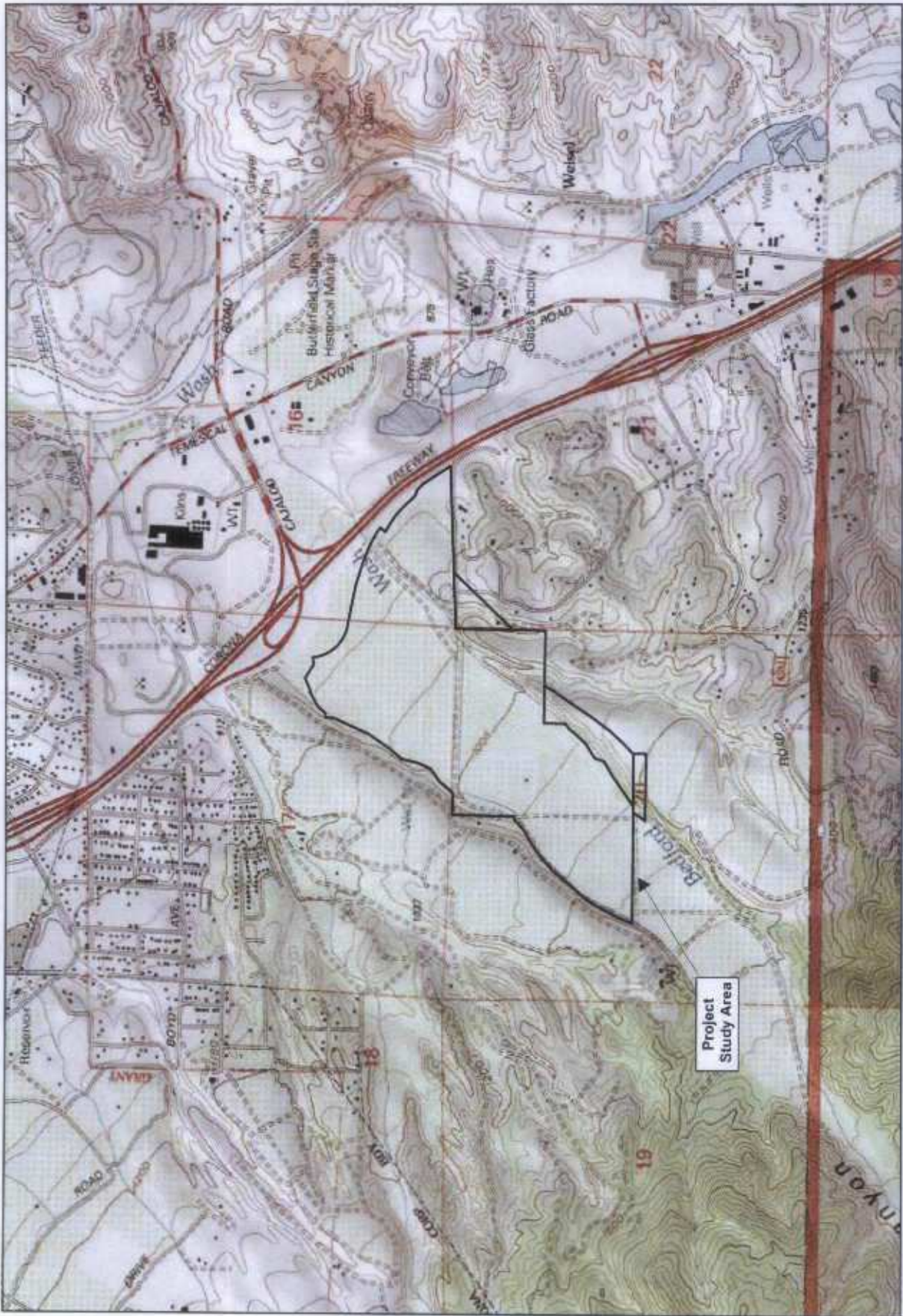
Regional Map

Adapted from USGS Santa Ana quadrangle



MILES





Adapted from USGS Corona South, CA quadrangle



GLENN LUKOS ASSOCIATES







Exhibit 2

ARANTINE HILLS

Vicinity Map



**Legend**

-  Project Study Area
-  Approximate Location of Non-Jurisdictional Isolated Remnant Agricultural Ponds
-  Corps Waters/CDFG Unvegetated Streambed
-  CDFG Unvegetated Streambed Only
-  CDFG Riparian Only
-  Width of Jurisdictional Feature in Feet



1 inch = 550 feet

**ARANTINE HILLS**  
 Jurisdictional Delineation Map



**GLENN LUKOS ASSOCIATES**  
 Exhibit 3



PHOTOGRAPH 1 - View facing southwest of slightly incised Bedford Wash. Note lack of vegetation and cobble bottom.



PHOTOGRAPH 2 - View facing northeast of incised Bedford Wash. Note lack of vegetation and cobble bottom.



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EXHIBIT 4 - Page 1

ARANTINE HILLS

Site Photographs



PHOTOGRAPH 3 - View facing south of Tributary A. A patch of mulefat (*Baccharis salicifolia*) is associated with this area of the drainage.



PHOTOGRAPH 4 - View facing southwest of cobbly Tributary B. Riversidean sage scrub/chaparral is present on the adjacent slopes.



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EXHIBIT 4 - Page 2

ARANTINE HILLS

Site Photographs



PHOTOGRAPH 5 - View facing northeast of Tributary C. Note lack of incision and sandy/silty bottom.



PHOTOGRAPH 6 - View facing north of non-jurisdictional isolated remnant agricultural pond. When the pond was constructed, it was lined with asphalt or tar which is still present, along with sediment that has entered the depressional area from adjacent upper areas. Riversidean sage scrub surrounds the edge.



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EXHIBIT 4 - Page 3

ARANTINE HILLS

Site Photographs



**Legend**

- Project Study Area
- A1C, Atubuckie gravelly loam, 2 to 8 percent slopes
- A1D, Atubuckie gravelly loam, 8 to 15 percent slopes
- Cx1C, Corvina cobbly loamy sand, 2 to 8 percent slopes
- G11C, Garrettsville gravelly very fine sandy loam, 2 to 8 percent slopes
- S1F2, Soper cobbly loam, 25 to 50 percent slopes, erodible
- TeG, Terrace escarpments



**ARANTINE HILLS**  
Soils Map

**GLENN LUKOS ASSOCIATES**  
Exhibit 5

## PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office	Los Angeles District	File/ORM #	PJD Date:
State	CA	City/County	Corona/Riverside
Nearest Waterbody:	Bedford Canyon Wash		
Location: TRS, LatLong or UTM:	31.812229 North Latitude -117.522926 West Longitude		
Name/Address of Person Requesting PJD	Mike Kerr Bluestone Communities 4100 Newport Place Newport Beach, California 92660		
Identify (Estimate) Amount of Waters in the Review Area:	Name of Any Water Bodies Tidal: _____		
Non-Wetland Waters:	on the Site Identified as _____		
Stream Flow:	Section 10 Waters: Non-Tidal: _____		
10.157 linear ft width 5.87 acres Ephemeral			
Wetlands: 0.00 acre(s) Cowardin Class: N A	<input type="checkbox"/> Office (Desk) Determination <input type="checkbox"/> Field Determination: _____ Date of Field Trip: _____		

**SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Jurisdictional Delineation Map
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps \_\_\_\_\_
- Corps navigable waters' study: \_\_\_\_\_
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite quad name: Corona South, California
- USDA Natural Resources Conservation Service Soil Survey. Citation: http://soils.usda.gov
- National wetlands inventory map(s). Cite name: \_\_\_\_\_
- State/Local wetland inventory map(s): \_\_\_\_\_
- FEMA/FIRM maps: 06085C1360G, 06085C1370G
- 100-year Floodplain Elevation is: 1,000 feet above MSL
- Photographs:
  - Aerial (Name & Date): http://seamless.usgs.gov-March 2008
  - Other (Name & Date): Site Photographs 6/24/09
- Previous determination(s). File no. and date of response letter: \_\_\_\_\_
- Other information (please specify): \_\_\_\_\_

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

Signature and Date of Regulatory Project Manager  
(REQUIRED)

Signature and Date of Person Requesting Preliminary JD  
(REQUIRED, unless obtaining the signature is impracticable)

**EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:**

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

