APPENDIX 7.0

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

HELIX Environmental Planning

The Commons at Hidden Springs Project

General Biological Resources Assessment-Final

January 28, 2020 | SLG-01

Prepared for:

Somar Land Group, Inc.
P.O. Box 120432
Chula Vista, CA 91912

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
APN	Assessor's Parcel Number
BUOW	Burrowing Owl
CASSA	Criteria Area Species Survey Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Riverside
City	City of Wildomar
CWA	Clean Water Act
Dudek	Dudek & Associates
FESA	Federal Endangered Species Act
HELIX	HELIX Environmental Planning, Inc.
LDMF	Local Development Mitigation Fee
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
NCCP	Natural Community Conservation Planning
NEPSSA	Narrow Endemic Plant Species Survey Area
NPPA	Native Plant Protection Act
Project	The Commons at Hidden Springs
RCA	Western Riverside County Regional Conservation Authority
RWQCB	Regional Water Quality Control Board
SKRHCP	Stephens' Kangaroo Rat Habitat Conservation Plan
TNW	Traditional Navigable Water
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UWIG	Urban/Wildlands Interface Guidelines

Report Date:	January 28, 2020
Title:	General Biological Resources Assessment for The Commons at Hidden Springs Project
Project Location:	The approximately 15.15-acre study area is located to northeast of the intersection of Clinton Keith Road and Stable Lanes Way in the City of Wildomar, Riverside County, California. The site is located within the U.S. Geological Survey (USGS) 7.5-minute Murrieta quadrangle map in Section 1, Township 7 South, Range 4 West
Assessor's Parcel Numbers:	380-110-003, -004, -007, -008, -009, -010, -014, and -016
Owner/Applicant:	Mr. Steve Macie Somar Land Group, Inc. P.O. Box 120432 Chula Vista, CA 91912
Principal Investigator:	HELIX Environmental Planning, Inc. 7578 El Cajon Blvd. La Mesa, CA 91942 (619) 462-1515
Report Summary:	The approximately 15.15-acre study area was surveyed for burrowing owl (*Athene cunicularia*) habitat, MSHCP Riparian/Riverine and Vernal Pool resources, rare plants, and jurisdictional features. No burrowing owls, riparian/riverine, vernal pools, or rare plants were observed on the study area.
Report Preparers:	Daniel Torres (949) 234-8770 Robert Hogenauer (565) 537-2426
Field Personnel:	Robert Hogenauer (565) 537-2426 Daniel Torres (949) 234-8770

1.0 INTRODUCTION

The Commons at Hidden Springs Project (project) is located in the City of Wildomar (City), Riverside County (County), California. The purpose of this report is (1) to document the results of a biological resources technical study and (2) analyze the potential impacts of the project pursuant to the requirements of the adopted Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003) and California Environmental Quality Act (CEQA).

1.1 PROJECT LOCATION

The approximately 15.15-acre study area is located northwest of the intersection of Clinton Keith Road and Hidden Spring Road in Wildomar, Riverside County, California (Figure 1, *Regional Location*). The study area is located within the U.S. Geological survey (USGS) 7.5-minute Murrieta quadrangle map in Section 1, Township 7 South, Range 4 West (Figure 2, *Project Vicinity [USGS Topography]*). The study area is surrounded by commercial development to the east and south, undeveloped land to the north, and a mixture of undeveloped land and residential uses to the west (Figure 3, *Project Vicinity [Aerial Photograph]*).

The study area is located within the Elsinore Area Plan of the MSHCP but is not within a criteria cell or group. The nearest criteria cell occurs approximately one mile to the northeast (Figure 4, *MSHCP Criteria*). The area plan subunits each have specific planning species and biological considerations. These items do not apply to the subject study area as it is not within a subunit. The study area occurs on Assessor's Parcel Numbers (APNs) 380-110-004, -007, -008, -009, -010, -014, -016, and a portion of 380-110-003. The main project area (described below) is proposed to occur on APNs 380-110-004, -009, −010, -014, and -016 totaling approximately nine acres. The study area includes adjacent APNs that may require grading to match the slope lines, temporary work areas, or similar activities.

1.2 PROJECT DESCRIPTION

The proposed project as currently designed consists of a commercial development with five commercial pads, five water quality/detention basins, parking lots, and associated infrastructure. The project would also include impacts for roadway improvements associated with turn lanes and improvements to Hidden Springs Road, Clinton Keith Road, and Stable Lanes Road. The configuration of the project is subject to change but will remain a commercial development with associated infrastructure. The drainage on site will be collected at Hidden Hills Road, placed into a culvert under the project and released on the western side of the project. The adjacent approved project south/west of Stable Lanes Road also proposes place the continuation of the drainage in an underground pipe and have an outfall structure at the riparian habitat approximately 300 feet southwest of Stable Lanes Road.

2.0 METHODS

Study area evaluation involved a literature review, vegetation mapping, a preliminary evaluation of potentially jurisdictional wetlands and waters, a Riparian/Riverine and Vernal Pool habitat assessment, a burrowing owl (*Athene cunicularia*; BUOW) habitat assessment and focused survey, and a general biological survey and habitat assessment for sensitive species to occur on the study area. The plant and animal species detected on the study area during field surveys are presented in Appendix A, *Plant*

Species Observed and Appendix B*, Animal Species Observed or Detected*, respectively. Appendix C, *Site Photographs* contains representative photographs of the study area. Appendix D, *Explanation of Status Codes for Plant and Animal Species* contains definitions of plant and animal species designations used throughout this document.

The project study area was modified after the field surveys had begun. This resulted in the need for additional site visits for jurisdictional delineation, Riparian/Riverine assessment, vegetation mapping, and burrowing owl surveys as noted below.

2.1 NOMENCLATURE AND LITERATURE REVIEW

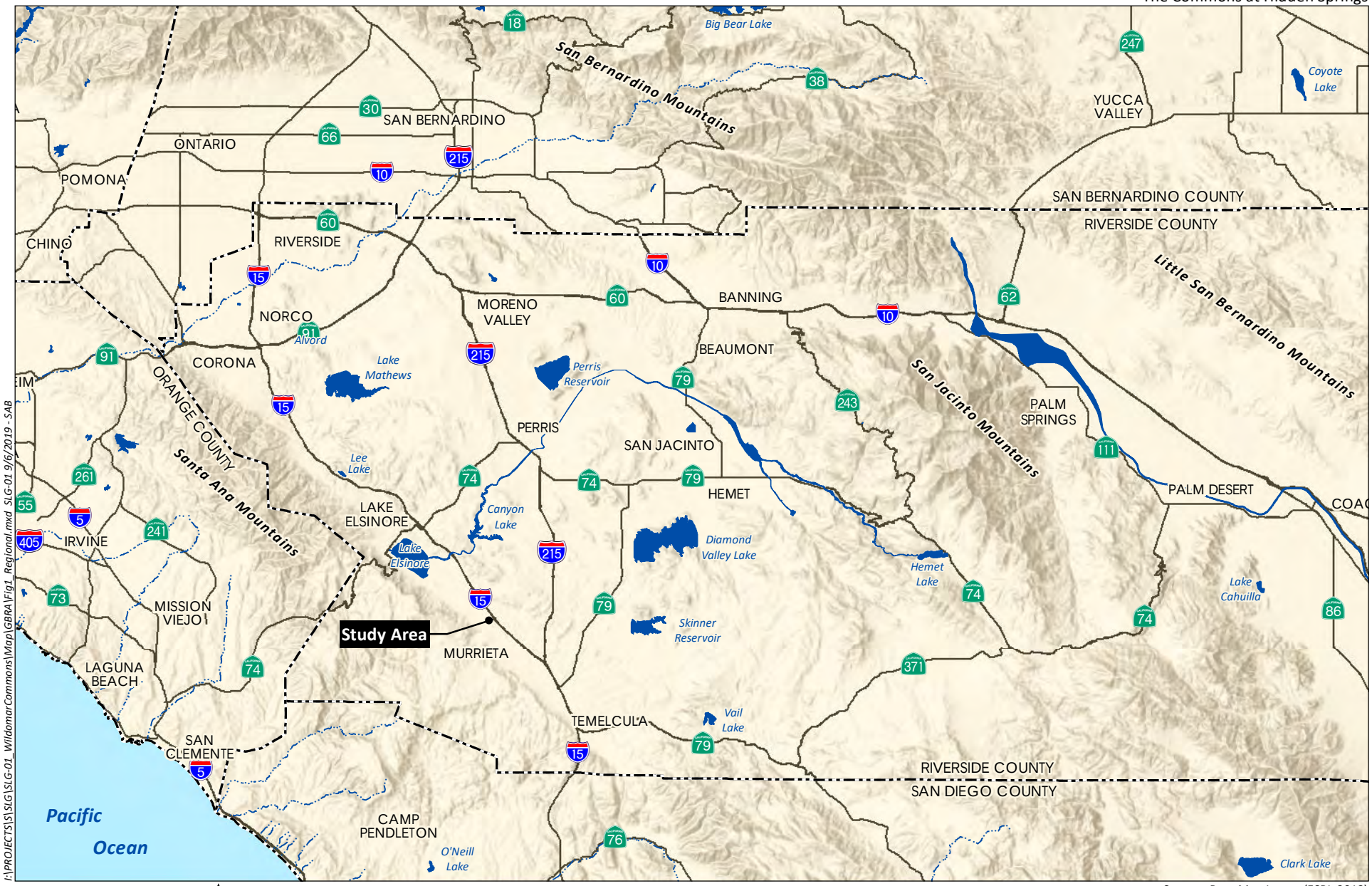
Nomenclature used in this report generally follows MSHCP conventions. Vegetation community classifications follow Holland (1986) and the MSHCP (Dudek 2003). Latin names of plants follow Baldwin et al. (2012), and common names follow the California Native Plant Society (CNPS; 2019). Sensitive plant and animal status are taken from the California Natural Diversity Database (CNDDB) of the California Department of Fish and Wildlife (CDFW; 2019a, b, c, and d) and CNPS (2019). Fauna nomenclature follows Emmel and Emmel (1973) for butterflies, Taggart (2014) for amphibians and reptiles, American Ornithologists' Union (2018) for birds, and Baker et al. (2003) for mammals.

HELIX Environmental Planning, Inc. (HELIX) reviewed regional planning documents, Google Earth aerials (2019), Web Soil Survey (U.S. Department of Agriculture 2019), and sensitive species database records, including the Inventory of Rare and Endangered Plants of California (CNPS 2019), CNDDB (CDFW 2019), U.S. Fish and Wildlife Service's (USFWS) critical habitat maps (2019a). A one-quadrangle database search was conducted on CNPS, which included the Murrieta quadrangle. A CNDDB search was conducted within a 2-mile radius of the study area. In addition, the MSHCP (Dudek 2003) and the Western Riverside County Regional Conservation Authority's (RCA) MSHCP Information Tool (2019) were consulted to determine project compliance with the MSHCP.

2.2 FIELD SURVEYS

2.2.1 Vegetation and Land Cover Mapping

The vegetation and land cover for the study area were mapped by HELIX biologist Daniel Torres on August 2, 2019 with additional vegetation mapping for the expanded study area conducted by HELIX biologist Rob Hogenauer on August 27, 2019. Mapping was performed directly in the field and on an aerial photograph (1-inch = 200-foot scale) map with an overlay of the proposed project. Mapping unit size was approximately 0.1 acre for upland communities and approximately 0.01 acre for riparian communities (if any). Field surveys conducted on the study area are summarized below in Table 1, *Biological Survey Information*.



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0 10 Miles

Source: Base Map Layers (ESRI, 2013)

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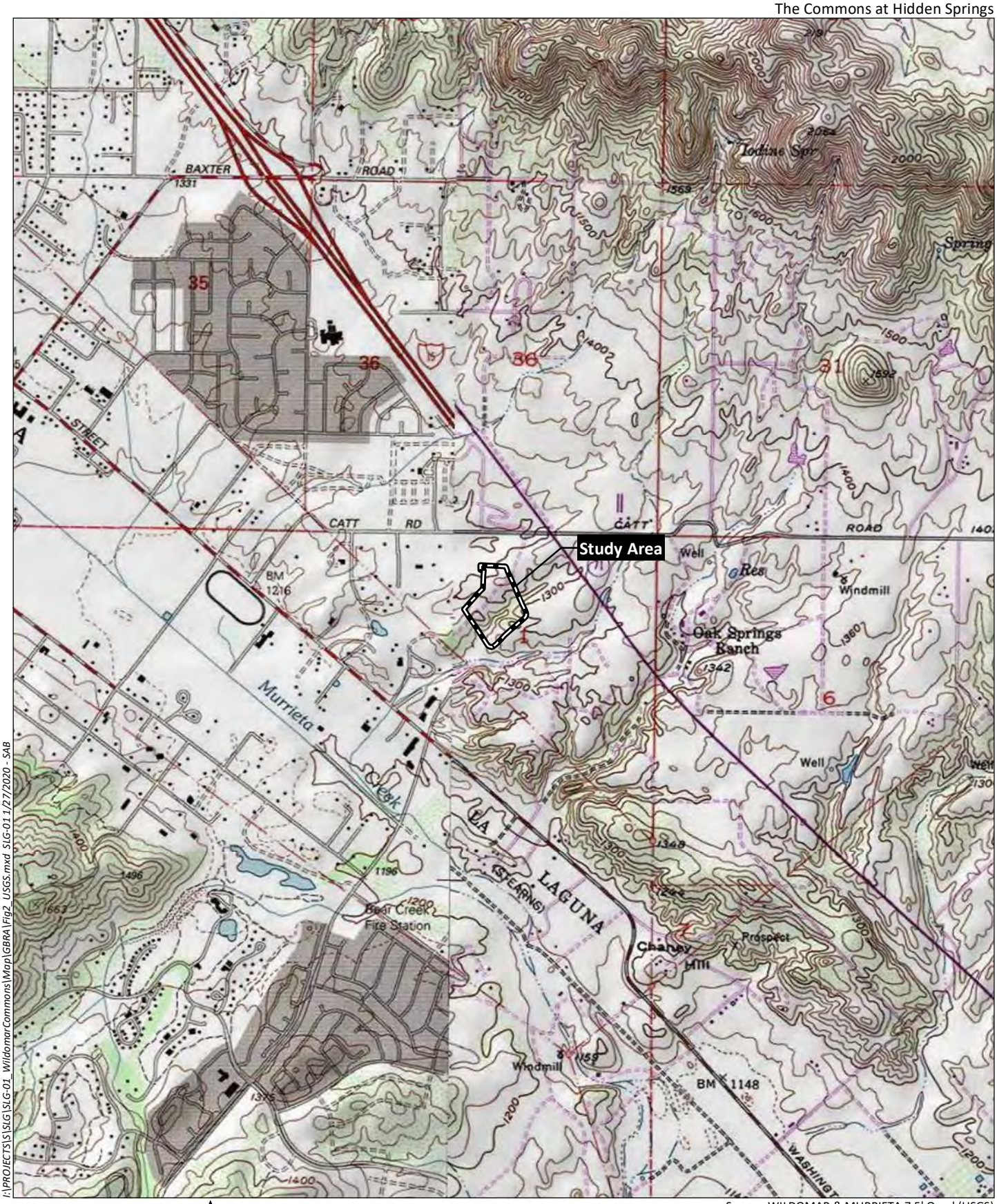
Regional Location

Figure 1



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0 2,000 Feet

Source: WILDOMAR & MURRIETA 7.5' Quad (USGS)

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Project Vicinity (USGS Topography)

Figure 2

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0 300 Feet

Source: Aerial (NearMap, 2019)

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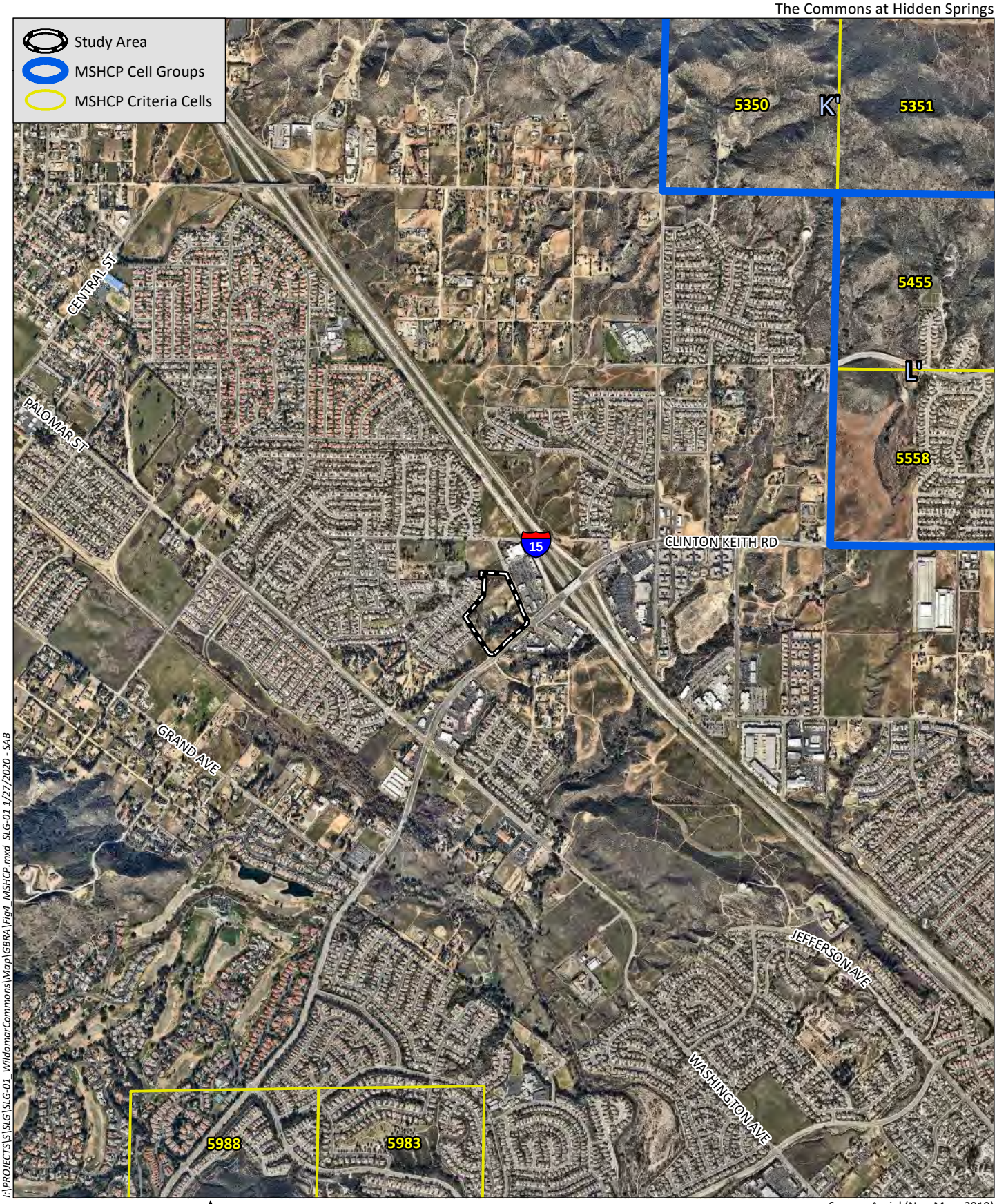
Project Vicinity (Aerial Photograph)

Figure 3



Source: Aerial (NearMap, 2019)

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MSHCP Criteria

Figure 4

Table 1
BIOLOGICAL SURVEY INFORMATION

Survey Date	Personnel	Purpose	Time	General Weather Condition
07/27/2019	Robert Hogenauer	Burrowing Owl Habitat Assessment and Survey #1	0600-0650	Clear
08/02/2019	Daniel Torres	Burrowing Owl Survey #2, General Biological Survey	0650-1030	Clear
08/08/2019	Robert Hogenauer	Burrowing Owl Survey #3	0620-0700	Clear
		Jurisdictional Delineation, and MSHCP Riparian/Riverine Assessment	0700-0800	
08/16/2019	Robert Hogenauer	Burrowing Owl Survey #4	0610-0650	Clear
		Jurisdictional Delineation	0650-0800	Clear
08/27/19	Robert Hogenauer	Burrowing Owl Survey #5	0640-0715	Clear
		General Biological Survey	0715-0800	
08/29/19	Robert Hogenauer	Burrowing Owl Survey #6	0630-0705	Clear
		Jurisdictional Delineation and MSHCP Riparian/Riverine Assessment	0705-0800	

2.2.2 Jurisdictional Assessment

Prior to beginning fieldwork, aerial photographs (1 inch = 150 feet), topographic maps (1 inch = 150 feet), USGS quadrangle maps, and National Wetland Inventory maps (USFWS 2019b) were reviewed to assist in determining the location of potential jurisdictional waters on the study area. HELIX biologist Robert Hogenauer conducted the jurisdictional delineation field work on August 8, 16, and 29, 2019 (Table 1). The effort was conducted to identify jurisdictional waters potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA, and streambed habitats potentially subject to CDFW jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game (CFG) Code. Data collection was targeted in areas that were deemed to have the potential to support jurisdictional resources, such as the presence of an ordinary high water mark, the presence of a bed/bank and streambed associated vegetation and/or other surface indications of streambed hydrology. Potential jurisdictional features were mapped at a scale of one-hundredth of an acre (0.01 acre).

2.2.3 Riparian/Riverine and Vernal Pool Habitat Assessment

The MSHCP defines Riparian/Riverine habitat "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 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 wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season" (Dudek 2003).

A Riparian/Riverine and Vernal Pool habitat assessment was conducted by Mr. Hogenauer during site visits on August 8 and 29, 2019 (Table 1). The assessment was conducted concurrently in the field with the jurisdictional assessment effort. The evaluation consisted of a directed search for field characteristics indicative of Riparian/Riverine or Vernal Pool habitats. Field indicators include presence of certain plant species, drainage courses, drainage patterns, ponded water, changes in soil character, changes in vegetation character, and deposits of water-borne debris. If Riparian/Riverine Areas and/or Vernal Pools are observed and project avoidance is not feasible, then a Determination of Biologically Equivalent Superior Preservation is required to quantify the impacts and establish mitigation.

Note that the MSHCP states that "areas demonstrating characteristics [of riparian/riverine habitat] which are artificially created are not included in these definitions" of riparian/riverine habitat. The identification of Riparian/Riverine and Vernal Pool habitats is based on the potential for the habitat to support Riparian/Riverine and Vernal Pool Covered Species, which are identified in Section 6.1.2 of the MSHCP. These species include least Bell's vireo (*Vireo bellii pusillus*) and a suite of other animals and plants outlined in Section 6.1.2 of the MSHCP. During the field survey, the study area was evaluated for habitat that could support animals and/or plants identified by the MSHCP as Riparian/Riverine and Vernal Pool species.

2.2.3.1 Riparian/Riverine and Vernal Pool Plants

The MSHCP lists 23 sensitive plant species that have potential to occur in Riparian/Riverine and Vernal Pool habitats. These species are as follows:

- Brand's phacelia (*Phacelia stellaris*),
- California black walnut (*Juglans californica*),
- California Orcutt grass (*Orcuttia californica*),
- Coulter's matilija poppy (*Romneya coulteri*),
- Engelmann oak (*Quercus engelmannii*),
- Fish's milkwort (*Polygala cornuta* var. *fishiae*),
- graceful tarplant (*Holocarpha virgata* ssp*. elongata*),
- lemon lily (*Lilium parryi*),
- Mojave tarplant (*Deinandra mohavensis*),
- mud nama (*Nama stenocarpum*),
- ocellated Humboldt lily (*L. humboldtii* ssp. *ocellatum*),
- Orcutt's brodiaea (*Brodiaea orcuttii*),
- Parish's meadowfoam (*Limnanthes gracilis* var. *parishii*),
- prostrate navarretia (*Navarretia prostrata*),
- San Diego button-celery (*Eryngium aristulatum* var*. parishii*),
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*),
- San Miguel savory (*Clinopodium chandleri*),
- Santa Ana River woolly-star (*Eriastrum densifolium* ssp*. sanctorum*),

- slender-horned spineflower (*Dodecahema leptoceras*),
- smooth tarplant (*Centromadia pungens* ssp*. laevis*),
- spreading navarretia (*Navarretia fossalis*),
- thread-leaved brodiaea (*Brodiaea filifolia*), and
- vernal barley (*Hordeum intercedens*).

Smooth tarplant and spreading navarretia were recorded in CNDDB within two miles of the study area.

2.2.3.2 Riparian Birds

The study area was assessed for habitat that could support sensitive riparian bird species, such as least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

2.2.3.3 Invertebrates – Vernal Pool Branchiopods

There are three species of sensitive fairy shrimp that occur in the western County, including Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). The study area was evaluated for suitable habitat, such as vernal pools or ephemeral ponds. Indicators of potential fairy shrimp habitat include, but are not limited to, mima-mound complexes, depressions, road ruts, algal/biotic crusts, and cracked soils.

2.2.3.4 Fish

The Santa Ana sucker (*Catostomus santaanae*) is the only fish included on the MSHCP Riparian/Riverine and Vernal Pool animal species list. The study area was searched for suitable aquatic habitat (i.e., perennial waterways) that could support this species.

2.2.3.5 Amphibians

The MSHCP includes three amphibians on the Riparian/Riverine and Vernal Pool animal species list: arroyo toad (*Anaxyrus californicus*), mountain yellow-legged frog (*Rana muscosa*), and California red-legged frog (*Rana aurora draytonii*). The study area was searched for suitable aquatic habitat (i.e., streams, ponds, reservoirs, etc.) that could support these species.

2.2.4 Narrow Endemic Plant Species Survey Area

Study area is not within a Narrow Endemic Plant Species Survey Area (NEPSSA) prescribed in the MSHCP. Therefore, surveys applicable to NEPSSA are not required and were not conducted.

2.2.5 Criteria Area Species Survey Area

The study area is not located within a Criteria Area Species Survey Area (CASSA) prescribed in the MSHCP. Therefore, surveys applicable to CASSA are not required and were not conducted.

2.2.6 Amphibian Species Survey Area

The study area is not located within the Amphibian Species Survey Area prescribed in the MSHCP. Therefore, surveys for sensitive amphibian species (arroyo toad, California red-legged frog, and mountain yellow-legged frog) are not required and were not conducted.

2.2.7 Burrowing Owl Survey Area

The study area is located within an MSHCP BUOW Survey Area; thus, MSHCP protocol surveys for BUOW are required. In accordance with the County's survey protocol, a Step I-Habitat Assessment for BUOW was conducted by Mr. Hogenauer on July 27, 2019 during which suitable habitat for BUOW was observed (Table 1). The Habitat Assessment included the study area and a 150-meter (approximately 500-foot) buffer zone surrounding the periphery of the study area (survey area; County of Riverside [County] 2006).

After completing the habitat assessment and in accordance with the survey protocol, Step II surveys were conducted (Table 2, *Burrowing Owl Survey Information*). Step II surveys typically consist of a focused burrow survey (Part A) and four focused BUOW surveys (Part B) to determine whether the survey area supports suitable burrows and/or BUOWs. The focused burrow survey was conducted concurrently with the first focused BUOW survey. Because suitable burrows were observed within the survey area, additional focused BUOW surveys were conducted. The survey was conducted over a period of six visits as the study area was expanded following the completions of surveys one and two. The biologists walked transects spaced no greater than 30 meters apart (approximately 100 feet) to allow for 100 percent visual coverage of all suitable habitat within the survey area. The biologists walked slowly and methodically, closely checking suitable habitat for suitable burrows, BUOW diagnostic sign (e.g., molted feathers, pellets/castings, or whitewash at or near a burrow entrance), and individual BUOWs. Inaccessible areas of the survey buffer area were visually assessed using binoculars. The focused burrow survey and six focused BUOW surveys were conducted by Mr. Hogenauer and Mr. Torres between July 27 and August 29, 2019. Additional information on the methods employed and survey results are documented in a separate focused survey report (Appendix E, *Burrowing Owl Focused Survey Report*).

Table 2
BURROWING OWL SURVEY INFORMATION

Date	Time	Conditions	Personnel
7/27/19	0600-0650	Start: 0 percent clouds, 66° F, wind 1-2 mph End: 0 percent clouds, 69° F, wind 1-2 mph	Rob Hogenauer
8/2/19	0650-0720	Start: 5 percent clouds, 66° F, wind 0-1 mph End: 5 percent clouds, 68° F, wind 0-1 mph	Daniel Torres
8/8/19	0620-0700	Start: 0 percent clouds, 61° F, wind 0-1 mph End: 0 percent clouds, 65° F, wind 0-1 mph	Rob Hogenauer
8/16/19	0610-0650	Start: 0 percent clouds, 59° F, wind 1-2 mph End: 0 percent clouds, 61° F, wind 1-2 mph	Rob Hogenauer
8/27/19	0640-0715	Start: 0 percent clouds, 64° F, wind 0-1 mph End: 0 percent clouds, 66° F, wind 0-1 mph	Rob Hogenauer
8/29/19	0630-0705	Start: 0 percent clouds, 64° F, wind 1-2 mph End: 0 percent clouds, 66° F, wind 0-1 mph	Rob Hogenauer

2.2.8 Mammal Species Survey Area

The study area is not located within a Mammal Species Survey Area prescribed in the MSHCP. Therefore, focused surveys for sensitive small mammal species (Aguanga kangaroo rat [*Dipodomys merriami collinus*], Los Angeles pocket mouse [*Perognathus longimembris brevinasus*], and San Bernardino kangaroo rat [*Dipodomys merriami parvus*]) are not required and were not conducted.

3.0 RESULTS

This section addresses the results of research and fieldwork conducted as part of the biological resources technical study, including discussions on the existing conditions and sensitive biological resources that occur or have potential to occur on the study area.

3.1 TOPOGRAPHY AND SOILS

The study area encompasses gently sloping terrain with a drainage oriented northeast to southwest in the center of the study area. Elevations range from approximately 1,266 feet (386 meters) above mean sea level (AMSL) within the drainage adjacent to the western boundary of the study area to a high of approximately 1,315 feet (401 meters) AMSL near the northern boundary of the study area.

The MSHCP lists nine sensitive soil types that occur within the Plan Area (Dudek 2003). None of the MSHCP sensitive soils occur on the study area. Three soil types are mapped on the study area: Ramona and Buren sandy loams (15 to 25 percent slopes, severely eroded), Placentia fine sandy loam (5 to 15 percent slopes), San Timoteo loam (8 to 25 percent slopes, eroded; U.S. Department of Agriculture [USDA] 2019).

3.2 VEGETATION COMMUNITIES AND LAND COVER TYPES

Nine vegetation communities and land cover types were identified within the study area, including southern willow scrub, oak woodland, Riversidean sage scrub, Riversidean sage scrub-disturbed, eucalyptus woodland, non-native grassland, ornamental/exotic, developed land, and disturbed land. The acreages mapped within the study area are provided in Table 3, *Vegetation Communities and Land Cover Types* below and the corresponding spatial locations are presented on Figure 5, *Vegetation and Land Cover Types*.

Table 3
VEGETATION COMMUNITIES AND LAND COVER TYPES

MSHCP Classification	Acres[1]
Southern Willow Scrub	0.24
Oak Woodland[2]	0.14
Riversidean Sage Scrub	1.14
Riversidean Sage Scrub-Disturbed	1.05
Eucalyptus Woodland	2.59
Non-native Grassland	0.40
Ornamental/Exotic	0.04
Developed Land	0.72
Disturbed Land	8.83
TOTAL	**15.15**

[1] Acreage rounded to nearest 0.01.

[2] A portion of the oak woodland is not associated with a stream and is, therefore, not included in the Riparian/Riverine or CDFW jurisdictional acreage.

3.2.1 Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* spp.) in association with mule fat and with scattered emergent Fremont cottonwood and western sycamores (*Platanus racemosa*). This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest.

The study area supports one patch of southern willow scrub located along the drainage, totaling 0.24 acre. Red willow (*Salix laevigata*) dominated the canopy with codominant species included Gooding's black willow (*Salix gooddingii*) and coast live oak. One large Fremont cottonwood was also present.

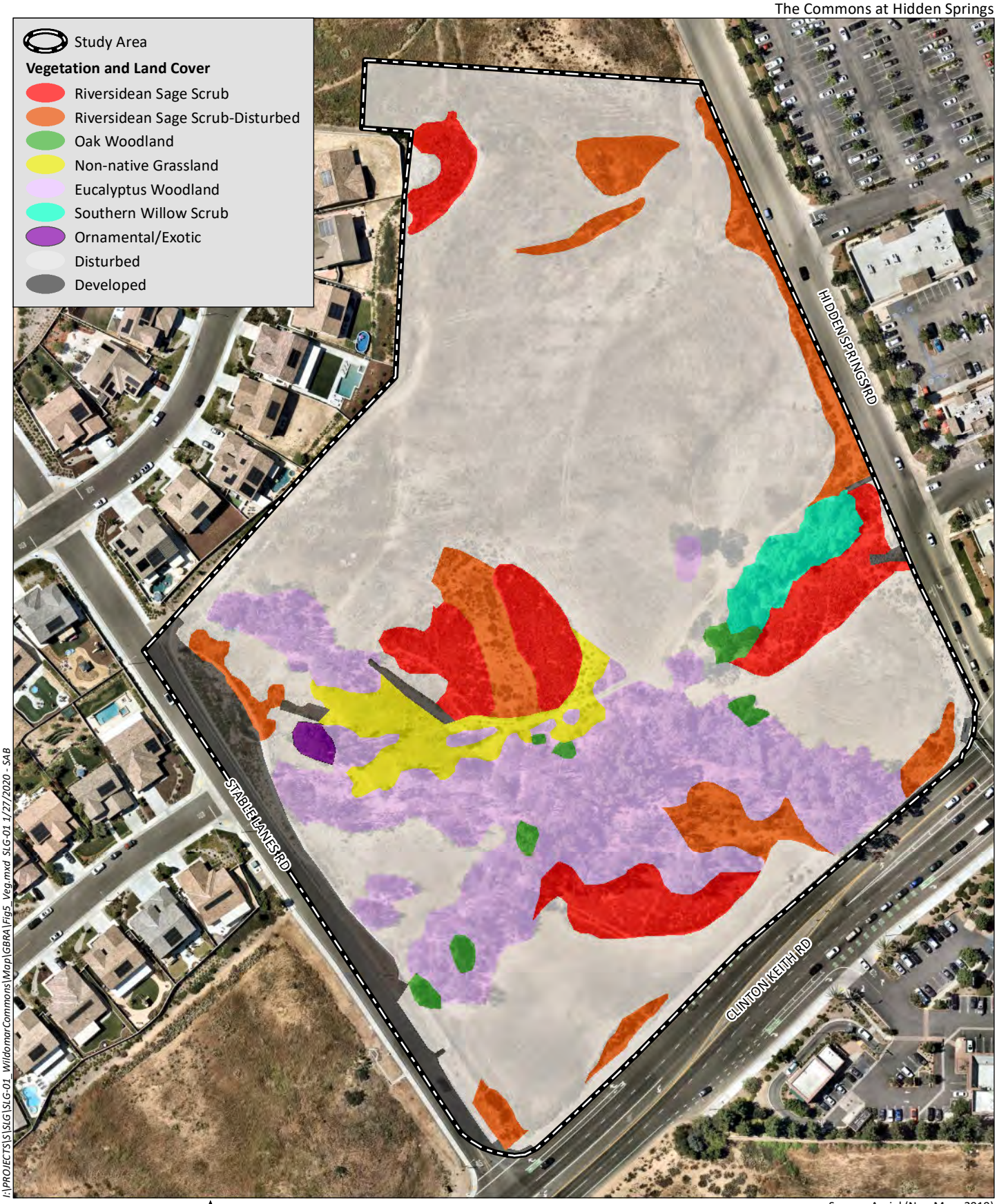
3.2.2 Oak Woodland

Oak woodland is an open-to-dense evergreen woodland or forest community dominated by coast live oak (*Quercus agrifolia*) trees, which may reach heights between 35 and 80 feet. Components of the shrub layer generally include toyon (*Heteromeles arbutifolia*) and blue elderberry (*Sambucus nigra* ssp. *caerulea*). This community occurs on coastal foothills of the Peninsular Ranges, typically on north-facing slopes and shaded ravines.

Oak woodland was observed within several patches throughout the study area, totaling 0.14 acre. Oak woodland within the study primarily consists of single or a few coast live oak. The understory of his plant community consisted of leaf litter and was mostly devoid of vegetation.

3.2.3 Riversidean Sage Scrub

Riversidean sage scrub is the most xeric expression of coastal sage scrub south of Point Conception, California. This community occupies xeric sites, such as steep slopes, severely drained soils, or clays that slowly release stored soil moisture. This community is dominated by subshrubs with leaves that are



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0 150 Feet

Source: Aerial (NearMap, 2019)

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Vegetation and Land Cover Types

Figure 5

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deciduous during drought, an adaptation that allows the habitat to withstand the prolonged drought period in the summer and fall. Sage scrub species have relatively shallow root systems and open canopies that allow for the occurrence of a substantial herbaceous (annual plant) component. Typical stands are fairly open and dominated by species such as California sagebrush, brittlebush (*Encelia farinosa*), and California buckwheat.

Several patches of Riversidean upland sage scrub were observed throughout the study area, totaling 1.14 acres. This plant community was dominated by California buckwheat. Other native species such as California sagebrush and deerweed (*Acmispon glaber*) were observed in trace amounts.

3.2.4 Riversidean Sage Scrub-Disturbed

This community is dominated by Riversidean sage scrub described in Section 3.2.3 below and is intermixed with disturbed land described in Section 3.2.9 below.

Riversidean Sage Scrub-Disturbed was observed adjacent to the northern, eastern, and western boundaries of the study areas, mostly associated with the Clinton Keith Road and Hidden Springs Road. There is also a patch of this plant community located in the southern portion of the study area, associated with heavy human foot traffic. Riversidean Sage Scrub-Disturbed totaled 1.05 acres. This community consisted of widely-spaced California buckwheat shrubs with non-native species such as red brome and tocalote in the interspaces. A patch of this habitat is bordered on 3 sides by eucalyptus woodland and has sapling eucalyptus mixed in the with the sage scrub species.

3.2.5 Eucalyptus Woodland

Eucalyptus woodland is a dominated by eucalyptus (*Eucalyptus* spp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus globulus*) or red river gum (*Eucalyptus camaldulensis*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and can reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, these woodlands provide excellent nesting sites for a variety of raptors. During winter migrations, a large variety of warblers may be found feeding on the insects that are attracted to the eucalyptus flowers.

Several patches of eucalyptus woodland were mapped in the southern portion of the study area, totaling 2.59 acres. The canopy of this plant community was dominated by red river gum. The understory consisted of leaf litter and was mostly devoid of vegetation. At several locations the edge of the eucalyptus woodland has an understory that includes Riversidean sage scrub species.

3.2.6 Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. Characteristic species include oats (*Avena* spp.), brome grasses (*Bromus* spp.), and mustards (*Brassica* spp., *Hirschfeldia incana*). Most of the annual introduced species within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. Intensive grazing and agricultural practices combined with severe droughts in California contributed to the successful invasion and establishment of

these species and the replacement of native grasslands with annual-dominated non-native grasslands (Jackson 1985).

Non-native grassland was observed in the central portion of the study area and totaled 0.40 acre. This plant community is similar in composition to the vegetated disturbed habitat but is dominated by red brome. Other species present include short-podded mustard, tocalote, Mediterranean grass, and common sandaster (*Corethrogyne filaginifolia*).

3.2.7 Ornamental/Exotic

The ornamental/exotic plant community is characterized as stands of naturalized trees and shrubs, many of which are also used in landscaping.

The ornamental/exotic plant community was observed in one patch in the southwestern portion of the study area, totaling 0.04 acre. This plant community is comprised of pine (Pinus sp.) associated with the structure previously present on the site.

3.2.8 Developed Land

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained.

Developed areas were found in the western portions of the study area, totaling 0.72 acre. Developed areas included concrete stairs and riprap adjacent to the drainage.

3.2.9 Disturbed Land

Disturbed land includes land cleared of vegetation (e.g., dirt roads), land dominated by non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed land is the predominant land cover in the study area, totaling 8.83 acres. Disturbed land in the southern portion of the study area was recently tilled at the time of the field visit and therefore was mostly unvegetated. The disturbed land in the northern portion of the study area was tilled less recently and supported more vegetation. In these areas, non-native species associated with disturbance where observed. The disturbed land in the northern portion of the study area was dominated by tocalote (*Centaurea melitensis*) and short-pod mustard (*Hirschfeldia incana*). Scattered native species tolerant of disturbance were also observed such as red brome (*Bromus madritensis* ssp. *rubens*), dove weed (*Croton setigerus*), and vinegarweed (*Trichostema lanceolatum*).

3.3 JURISDICTIONAL WATERS AND WETLANDS

3.3.1 Potential RWQCB Jurisdiction

Based on the results of the jurisdictional assessment, one jurisdictional feature (Drainage Complex 1) was observed on the study area (Figure 6 and Table 4, *RWQCB Jurisdictional Resources*). Segment 1 of this drainage complex originates from a culvert in the eastern portion of study area. This culvert drains

Source: Aerial (NearMap, 2019)

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USACE and RWQCB Jurisdictional Resources

Figure 6

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the existing commercial development and I-15 to the east. Segment 1.2 of this drainage complex originates from a culvert which also drains existing commercial development from the east. Segments 1.1 and 1.3 of this drainage complex are small ephemeral drainages which drain into Segment 1 in the center of the study area. Segment 1 then flows through the study area and terminates at a culvert in the western portion of the study area, along Stable Lanes Road. This culvert drains onto the adjacent property to the northwest of the intersection of Stable Lanes Road and Clinton Keith Road. No wetlands or other special aquatic sites occur within the study area.

Table 4
RWQCB JURISDICTIONAL AREAS

Drainage	Acre[1]	Linear Feet[2]
Drainage 1	.27	790.3
Drainage 1.1	.01	169.8
Drainage 1.2	.03	321.3
Drainage 1.3	<.01	148.3
TOTAL	**0.32**	**1,429.7**

1 Acreage rounded to nearest 0.01.
2 Linear feet rounded to the nearest tenth.

As documented by HELIX during the permitting process for the adjacent property, the flow from Drainage Complex 1 into the Stable Lanes culvert concentrates and collects directly adjacent to the culvert and was determined to not be USACE jurisdictional (pers. comm. 2018). There is evidence that a hydrologic connection in the form of sheet flow exists from the Stable Lanes culvert and USACE jurisdictional streambed in the southwestern corner of the adjacent property. However, there are no strong field indicators present that would indicate USACE jurisdiction. Therefore, Drainage Complex 1 observed on the study area is not considered USACE waters of the U.S. since it is not a traditional navigable water (TNW) or tributary to TNW. Although Drainage Complex 1 is not regulated by USACE, the drainage feature is considered non-federal isolated waters of the State and is subject to regulation by RWQCB pursuant to the State Porter-Cologne Water Quality Control Act and CDFW pursuant to CFG Code Section 1600 et seq.

The study area supports a total of 0.32 acre (1,429.7 linear feet) of RWQCB jurisdiction.

3.3.2 Potential CDFW Jurisdiction

Potential CDFW jurisdiction on the site consists of 0.24 acre of southern willow scrub, 0.12 acre of oak woodland, and 0.24 acre of streambed (Table 5, *CDFW Jurisdictional Areas*; Figure 7, *MSHCP Riparian/ Riverine and CDFW Jurisdictional Resources*). The study area included a couple erosional features that were determined to not be jurisdictional.

Table 5
CDFW JURISDICTIONAL AREAS

CDFW Jurisdiction	Acre[1]
Riparian Habitat	
Oak Woodland[2]	0.12
Southern Willow Scrub	0.24
Riverine Streambed	
Streambed	0.24
TOTAL	**0.60**

[1] Acreage rounded to nearest 0.01.
[2] A portion of the oak woodland is not associated with a stream and is, therefore, not included in the Riparian/Riverine or CDFW jurisdictional acreage.

3.4 RIPARIAN/RIVERINE AND VERNAL POOL HABITAT ASSESSMENT

The identification of Riparian/Riverine Areas is based on the potential for the habitat to support or contribute to downstream habitat that supports Species Associated with Riparian/Riverine Areas, as identified in MSHCP Section 6.1.2.

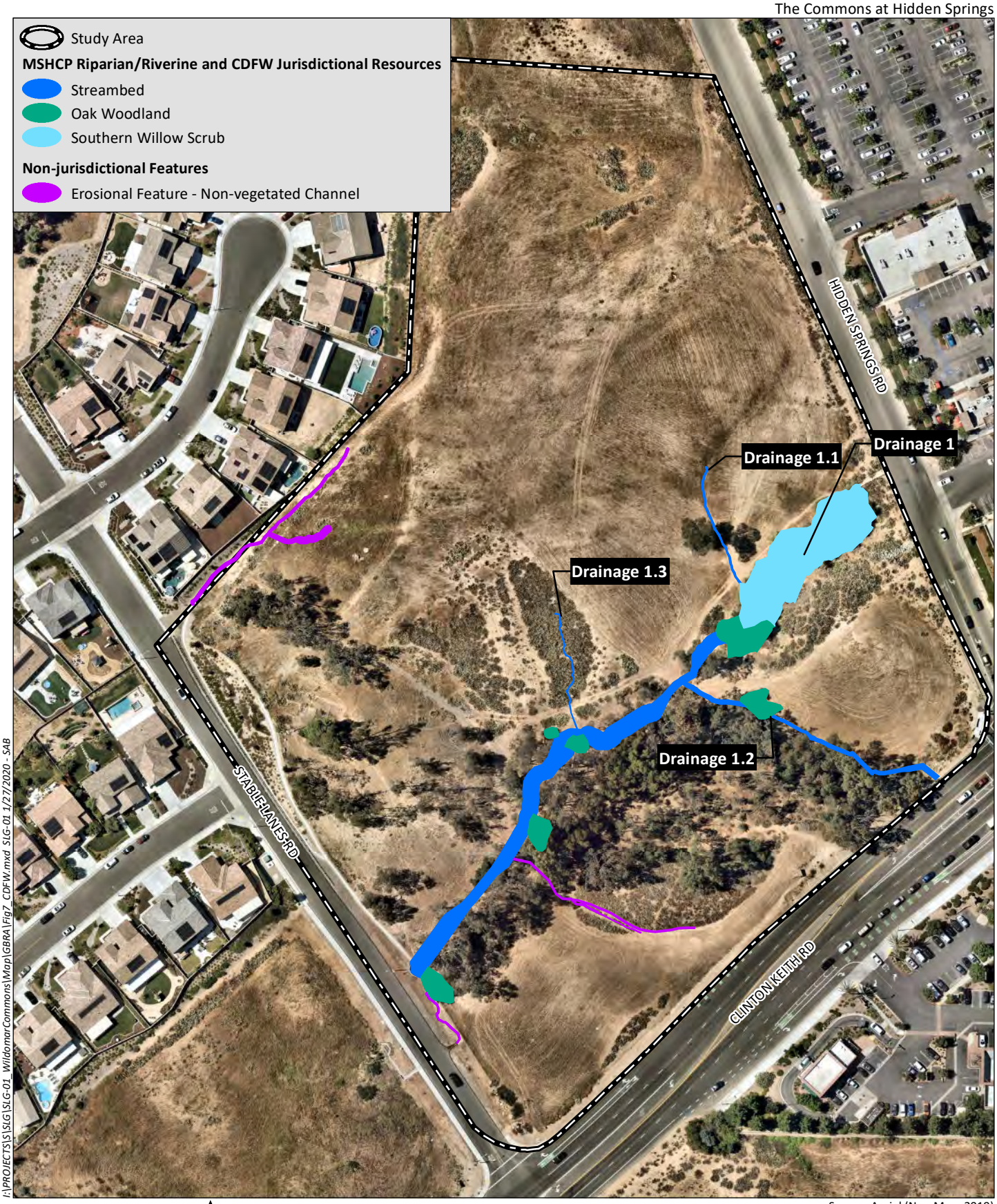
The Riparian/Riverine habitat assessment identified a total of 0.60 acre of Riparian/Riverside habitat on the study area. The habitat comprises approximately 0.12 acre of oak woodland and 0.24 acre of southern willow scrub (Table 6, *Riparian/Riverine Habitats*). The Riparian/Riverine habitats that meet the MSHCP definition mainly occur in the southern portion of the study area. Southern willow scrub is typically habitat for sensitive riparian birds but the habitat on site is small (0.24 acre) and of low quality. The habitat is regularly frequented by humans (homeless) camping under the canopy of the southern willow scrub. The southern willow scrub is comprised of a mix of willows and coast live oak that is not typical of habitats used by LBVI, WIFL, or YBCU. Additionally, the habitat lacks an understory that is preferred by the aforementioned riparian bird species. Therefore, the southern willow scrub does not have the potential to support LBVI, WIFL, or YBCU (Dudek 2003) and surveys for these sensitive riparian birds are not required.

Table 6
RIPARIAN/RIVERINE HABITATS

Habitat	Acre[1]
Riparian Habitat	
Oak Woodland[2]	0.12
Southern Willow Scrub	0.24
Riverine Streambed	
Streambed	0.24
TOTAL	**0.60**

[1] Acreage rounded to nearest 0.01.
[2] A portion of the oak woodland is not associated with a stream and is, therefore, not included in the Riparian/Riverine or CDFW jurisdictional acreage.

The majority of the Riparian/Riverine habitats are located in the southern portion of the study area where an unnamed drainage/streambed crosses the study area. The vegetation in and along this drainage includes the aforementioned southern willow scrub and oak woodland. The functions and services of the on-site reaches of the drainages are minimal, consisting of conveying small amounts of



I:\PROJECTS\S\SLG\SLG-01 WildomarCommons\Map\GBRA\Fig7_CDFW.mxd SLG-01 1/27/2020 - SAB

0 150 Feet

Source: Aerial (NearMap, 2019)

HELIX Environmental Planning

MSHCP Riparian/Riverine and CDFW Jurisdictional Resources

Figure 7

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water, sediment trapping and transport, toxicant trapping, and nutrient trapping and transport. This drainage is not hydrologically connected to any downstream resources with the potential to support species shown in Section 6.1.2 of the MSHCP.

Project impacts to this drainage will require a DBESP to be completed under a separate report. The measures outlined in the DBESP with demonstrate how the proposed project will provide for biologically equivalent or superior mitigation for the unavoidable impacts in accordance with the MSHCP.

3.4.1 Plants

The MSHCP lists 23 sensitive plant species that have potential to occurring in Riparian/Riverine and Vernal Pool habitats. These species are:

- California black walnut (*Juglans californica* var. *californica*),
- Engelmann oak (*Quercus engelmannii*),
- Coulter's matilija poppy (*Romneya coulteri*),
- San Miguel savory (*Clinopodium chandleri*),
- spreading navarretia (*Navarretia fossalis*),
- graceful tarplant (*Holocarpha virgata* ssp. *elongata*),
- California Orcutt grass (*Orcuttia californica*),
- prostrate navarretia (*Navarretia prostrata*),
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*),
- Orcutt's brodiaea (*Brodiaea orcuttii*),
- thread-leaved brodiaea (*Brodiaea filifolia*),
- Fish's milkwort (*Polygala cornuta* var. *fishiae*),
- lemon lily (*Lilium parryi*),
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*),
- ocellated Humboldt lily (*L. humboldtii ssp. ocellatum*),
- Mojave tarplant (*Deinandra mohavensis*),
- vernal barley (*Hordeum intercedens*),
- Parish's meadowfoam (*Limnanthes gracilis* var. *parishii*),
- slender-horned spineflower (*Dodecahema leptoceras*),
- Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*),
- Brand's phacelia (*Phacelia stellaris*),
- mud nama (*Nama stenocarpum*), and
- smooth tarplant (*Centromadia pungens* ssp. *laevis*)

The plant species associated with Riparian/Riverine and Vernal Pool areas were confirmed to be absent from the study area. A number of the species including California Orcutt grass, spreading navarretia, thread-leaved brodiaea, San Miguel savory, graceful tarplant, prostrate navarretia, San Diego button-celery, Orcutt's brodiaea, Fish's milkwort, lemon lily, San Jacinto Valley crownscale, Mojave tarplant, Brand's phacelia, Santa Ana River woolly-star, vernal barley, and Parish's meadowfoam occur in habitats that do not occur on the study area (e.g., vernal pools) or have distributions well outside of the study area. The remaining species have a distribution that includes the study area or occur in habitats found on the study area and are discussed in greater detail below.

Engelmann oak is a conspicuous tree species associated with alluvial fans and slopes with a mesic aspect. Coast live oak trees occur on the study area. No Engelmann oaks were observed and is presumed to be absent from the study area.

Mud nama is restricted to muddy embankments of marshes and swamps and within lake margins and riverbanks (CNPS 2016). Three populations are known from Riverside County, with two occurring along the San Jacinto River (Dudek 2003). This species was not observed and is presumed to be absent from the study area.

Smooth tarplant is found in southwestern California and northwestern Baja California, Mexico (Baja), and occurs in San Bernardino, Riverside, and San Diego counties. This species occurs in open spaces within a variety of habitats, including alkali scrub and playas, riparian woodland, watercourses, and grasslands with alkaline affinities (Dudek 2003; CNPS 2016). This species was not observed and is presumed to be absent from the study area.

Coulter's Matilija poppy occurs in dry washes and canyons below 3,600 feet. It often occurs within sage scrub and chaparral habitats. Dense shrub cover may limit expansion of this species (Dudek 2003). This species is easily detected when present. It was not observed and is presumed absent from the study area.

Ocellated Humboldt lily is associated with riparian corridors in coniferous forest and chaparral habitats. Within Western Riverside County, ocellated Humboldt lily is restricted to canyons along the east slope of the Santa Ana Mountains and the north slope of the Palomar Mountains. The riparian habitat on site is not associated with coniferous forest. This species was not observed and is presumed to be absent from the study area.

Slender-horned spineflower is typically found in mature alluvial scrub with sandy soils but is also found in rocky soils and open chamise chaparral. Ideal habitat is thought to be benches or terraces that receive overbank flow every 50 to 100 years. Habitat for this species does not occur on the study area. This species was not observed and is presumed to be absent from the study area.

None of the 23 MSHCP Riparian/Riverine and Vernal pool plant species were observed on the study area and none are expected to occur within the study area. A list of plant species observed during the field surveys are provided as Appendix A.

3.4.2 Birds

The least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo are found in southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, and arroyo willow riparian forest habitats that typically feature dense cover. The study area includes 0.24 acre of

southern willow scrub. This habitat is limited in size and is not expected to support least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo. These species were not heard or observed during the other surveys conducted on the study area.

3.4.3 Invertebrates

There are three sensitive fairy shrimp species that occur in the MSHCP Plan Area, including Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Vernal pool fairy shrimp occurs throughout the Central Valley and in several disjunct populations in Riverside County. This species exists in vernal pools and other ephemeral basins often located in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral. Riverside fairy shrimp occurs in Riverside, Orange, and San Diego Counties as well as in northern Baja California, Mexico. This species is typically found in deeper vernal pools and other ephemeral basins that hold water for long periods of time (30 or more days). Santa Rosa Plateau fairy shrimp is limited to the Santa Rosa Plateau in Riverside County.

The MSHCP requires focused surveys to be conducted for projects that propose impacts to suitable habitat for the three sensitive fairy shrimp species discussed above. The study area does not support suitable fairy shrimp habitat and therefore no focused surveys were not required.

3.4.4 Fish

The Santa Ana sucker is restricted to the Santa Ana River watershed with year-round flows. This species generally lives is small shallow streams less than seven meters wide with various current strengths. They require permanent streams with a gravel bottom preferred. They prefer cool, clear water but can tolerate turbid waters. Habitat for this species is not present on the study area; thus, this species is not expected to occur.

3.4.5 Amphibians

Arroyo toad occur in streams that have breeding pools that are shallow with minimal current. Requirements also include sandy banks with areas of minimal vegetative cover. A minimal amount of streambed does occur on the study area. However, it is of limited size and of poor quality. Mountain yellow-legged frog and California red-legged frog are not known to occur on or adjacent to the study area. The mountain yellow-legged frog occurs in mountain streams and is currently only known within the County in the San Jacinto Mountains. The California red-legged frog is only known within the County on the Santa Rosa Plateau. It requires deep water with adjacent uplands to move between breeding sites. Habitat for these species does not occur on the study area; thus, none of the MSHCP sensitive amphibian species are expected to occur.

3.5 MULTIPLE SPECIES HABITAT CONSERVATION PLAN FOCUSED SURVEYS

3.5.1 Narrow Endemic Plant Species

The study area is not within a NEPSSA; therefore, focused surveys were not required.

3.5.2 Criteria Area Species

The study area is not within a CASSA; therefore, focused surveys were not required.

3.5.3 Amphibian Species

The study area is not located within the Amphibian Species Survey Area; therefore, focused surveys were not required.

3.5.4 Burrowing Owl

Because the study area is located within the BUOW Survey Area, focused BUOW surveys were performed. The BUOW surveys were conducted for the project in accordance with the County's protocol between July 27 and August 29, 2019, as described above in Section 2.2.6 of this report. No BUOWs or BUOW signs were observed on the study area during the focused surveys (Appendix E).

3.5.5 Mammal Species

The study area is not within the Mammal Species Survey Area.

3.6 OTHER SENSITIVE SPECIES

A CNDDB and USFWS sensitive species query within a two-mile radius of the project was conducted along with 1-quadrangle search on CNPS for sensitive plants (CNDDB 2019a, CNPS 2019). A list of plant and animal species observed or detected on the study area during the field survey is included as Appendix A and B, respectively. Below are discussions of the sensitive plants and animals from the database search.

3.6.1 Sensitive Plants

Based on the database searches, a total of 21 sensitive plant species were analyzed for their potential to occur on the study area (Table 7, *Special-status Plant Species Potential to Occur*). Of these 21 species evaluated, fifteen species were considered to have no potential to occur based on geographical range, elevation range, and/or lack of suitable habitat on the study area. Six species, intermediate mariposa lily [*Calochortus weedii* var. *intermedius*], mesa horkelia [*Horkelia cuneata* var. *puberula*], San Diego ambrosia [*Ambrosia pumila*, smooth tarplant [*Centromadia pungens* ssp. *laevis*], Parry's spineflower [*Chorizanthe parryi* var. *parryi*], and white rabbit-tobacco [*Pseudognaphalium leucocephalum]*) were determined to have a low to moderate potential to occur on the study area. San Diego ambrosia is a CRPR 1B.1 and is Federally Endangered. Intermediate mariposa lily is a CRPR 1B.2, smooth tarplant is a CRPR 1B.1, and Parry's spineflower is a CRPR 1B.1. These four species are conditionally covered under the MSHCP. Chaparral sand verbena is a CRPR 1B.1, mesa horkelia is a 1B.1, and white-rabbit tobacco is a CRPR 2B.2. These three species are not covered under the MSCHP. None of these species were observed during the field surveys conducted on the study area.

Table 7
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status or Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	CRPR 1B.1	Small annual herb. Occurs on sandy floodplains or flats in generally inland, arid areas of sage scrub and open chaparral. Elevation range 0-1,600 meters. Flowering period Mar-Aug.	**None.** The study area supports sandy soils but the habitat is heavily disturbed and slopes restrict the floodplain.
Ambrosia pumila	San Diego ambrosia	FE CRPR 1B.1 MSHCP Conditionally Covered Species[2]	Small perennial herb. Occurs on clay, sandy loam, and sometimes alkaline soils. Found in grasslands, valley bottoms, and dry drainages. Can occur on slopes, disturbed places, in coastal sage scrub and chaparral. Elevation range 50-600 meters. Flowering period Apr-Jul.	**Low.** The study area supports limited habitat within the drainage and Riversidean sage scrub habitat. The nearest occurrence of this species was recorded in CNDDB in 2014, approximately 8.25 miles to the southeast of the study area.
Arctostaphylos rainbowensis	rainbow manzanita	CRPR 1B.1 MSHCP Conditionally Covered Species[3]	Large conspicuous shrub. Southern mixed chaparral is preferred habitat with a relatively dense canopy from 6 to 8 feet. Elevation range 150-800 meters. Flowering period Jan-Feb.	**None.** The study area does not support southern mixed chaparral habitat.
Brodiaea orcuttii	Orcutt's brodiaea	CRPR 1B.1 MSHCP Covered Species	Perennial herb. Occurs in vernally moist grasslands, mima mound topography, and vernal pool periphery are preferred habitat. Occasionally will grow on streamside embankments in clay soils. Elevation range 0-1,600 meters. Flowering period Apr-Jul.	**None.** The study area does not support vernally moist areas.
Brodiaea santarosae	Santa Rosa basalt brodiaea	CRPR 1B.2	Small perennial herb. Occurs in soils derived from Santa Rosa Basalt within grassland habitat. Elevation range 580-1045 meters. Flowering period May-Jun.	**None.** The study area is below the elevation range for this species.

Table 7 (cont.)
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status or Potential to Occur
Calochortus weedii var. intermedius	intermediate mariposa lily	CRPR 1B.2 MSHCP Covered Species	Medium perennial herb. Occurs on dry, rocky slopes within openings in chaparral, coastal scrub, and grassland habitats. Elevation range 0-680 meters. Flowering period Jun-Jul.	**Moderate.** The study area supports a limited amount of suitable habitat for this species within the Riversidean sage scrub.
Centromadia pungens ssp. *laevis*	smooth tarplant	CRPR 1B.1 MSHCP Conditionally Covered[4]	Annual herb. Occurs within valley and foothill grasslands, particularly near alkaline locales. Elevation range 50-880 meters. Flowering Apr-Sep.	**None.** The study area does not support suitable alkaline soils.
Chorizanthe parryi var. *parryi*	Parry's spineflower	CRPR 1B.1 MSHCP Conditionally Covered[3]	Annual herb. Occurs in sandy or rocky openings within chaparral and coastal sage scrub. Elevation range 90-800 meters. Flowering May-Jun.	**Moderate.** The study area supports suitable sandy soils and Riversidean sage scrub habitats.
Chorizanthe polygonoides var. longispina	long-spined spineflower	CRPR 1B.2 MSHCP Covered Species	Small annual herb. Occurs within clay lenses largely devoid of shrubs. Can be occasionally seen on vernal pool and even montane meadows peripheries near vernal seeps. Elevation range 30-1,500 meters. Flowering period Apr-Jun.	**None.** The study area does not support clay lenses.
Clinopodium chandleri	San Miguel savory	CRPR 1B.2 MSHCP Covered Species[2]	Medium perennial herb. Occurs on Gabbro and metavolcanic soils in interior foothills, chaparral, and oak woodland. Elevation range 0-1,100 meters. Flowering period Mar-Jul.	**None.** The study area does not support suitable habitat for this species.
Eryngium aristulatum var. parishii	San Diego button-celery	FE/SE CRPR 1B.1 MSHCP Covered Species	Small annual or perennial herb. Occurs in vernal pools or mima mound areas with vernally moist conditions are preferred habitat. Elevation range 0-705 meters. Flowering period May-Jun.	**None.** The study area does not support vernally moist areas.

Table 7 (cont.)
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status or Potential to Occur
Hordeum intercedens	vernal barley	CRPR 3.2 MSHCP Covered Species	Small annual grass. Saline flats and depressions in grasslands or in vernal pool basins. Elevation range 5-1,000 meters. Flowering period Mar-Jun.	**None.** The study area does not support saline soils or vernally moist areas.
Horkelia cuneata var. puberula	mesa horkelia	CRPR 1B.1	Medium perennial herb. Occurs in sandy or gravelly areas within chaparral, coastal sage scrub, and coastal mesas. Elevation range 70-870 meters. Flowering period Mar-Jul.	**Moderate.** The study area supports a limited amount of suitable habitat for this species within the Riversidean sage scrub.
Juncus luciensis	Santa Lucia dwarf rush	CRPR 1B.2	Small annual grass-like herb. Occurs in chaparral and lower montane coniferous forest on mesic sandy soils within seeps, meadows, vernal pools, streams, and roadsides. Elevation 300-1,900 meters. Flowering period Apr-Jul.	**None.** The study area does not support suitable habitat for this species.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	CRPR 1B.1 MSHCP Conditionally Covered[4]	Medium annual herb. Occurs in coastal salt marsh, upper end of tidal inundation areas, and vernal pools. Elevation range 0-1,000 meters. Flowering period Apr-May.	**None.** The study area does not support salt marsh or vernal pool habitat.
Myosurus minimus ssp. *apus*	little mousetail	CRPR 3.1 MSHCP Conditionally Covered[4]	Small annual herb. Vernal pools and alkaline marshes. This cryptic species typically grows in the deeper portions of vernal pool basins, sprouting immediately after the surface water has evaporated. Elevation range 20-640 meters. Flowering period Mar-Jun.	**None.** The study area does not support vernal pool habitat.

Table 7 (cont.)
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status or Potential to Occur
Navarretia fossalis	spreading navarretia	FT/-- CRPR 1B.1 MSHCP Conditionally Covered[2]	Small annual herb. Occurs in vernal pools, vernal swales, or roadside depressions. Population size is strongly correlated with rainfall. Depth of pool appears to be a significant factor as this species is rarely found in shallow pools. Elevation range 30-1,300 meters. Flowering period Apr-Jun.	**None.** The study area does not support vernal pool habitat or roadside depressions.
Navarretia prostrata	prostrate navarretia	CRPR 1B.1 MSHCP Conditionally Covered Species[4]	Small annual herb. Occurs in alkaline floodplain, meadows, seeps, and vernal pools within coastal scrub and valley and foothill grassland. Elevation range below 700 meters. Flowering period Apr-Jul.	**None.** The study area does not support alkaline soils or vernal pool habitat.
Orcuttia californica	California Orcutt grass	FE/SE CRPR 1B.1 MSHCP Conditionally Covered Species[2]	Small annual herb. Occurs in or near vernal pools. This species tends to grow in wetter portions of the vernal pool basin but does not show much growth until the basins become somewhat desiccated. Elevation range 0-700 meters. Flowering period Apr-Aug.	**None.** The study area does not support vernal pool habitat.
Pseudognaphalium leucocephalum	white rabbit-tobacco	CRPR 2B.2	Medium biennial or short-lived perennial herb. Occurs in sandy and gravelly benches, dry stream and canyon bottoms within woodland, coastal scrub, and chaparral. Elevation range below 500 meters. Flowering period Jul-Oct.	**Moderate.** The study area supports a limited amount of suitable habitat for this species within the drainage.

Table 7 (cont.)
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status or Potential to Occur
Symphyotrichum defoliatum	San Bernardino aster	CRPR 1B.2	Large perennial herb. Occurs in vernally mesic soils within cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, grasslands, streams, springs, and disturbed ditches. Elevation range 0-2,050 meters. Flowering period Jul-Nov.	**None.** The study area does not support vernally mesic soils.

1 Refer to Appendix D for an explanation of MSHCP designation and sensitivity status codes.
2 Surveys may be required for these species within Narrow Endemic Plant Species Survey Area (MSHCP Section 6.1.3).
3 These species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met (MSHCP Table 9-3).
4 Surveys may be required for these species within Criteria Area Species Survey Area (MSHCP 6.3.2).

3.6.2 Sensitive Animals

A total of thirteen sensitive animal species were analyzed for their potential to occur within the study area (Table 8, *Special-status Animal Species Potential to Occur*). Four species (quino checkerspot butterfly [*Euphydryas editha quino*], Riverside fairy shrimp [*Streptocephalus woottoni*], San Diego fairy shrimp [*Branchinecta sandiegonensis*], and western pond turtle [*Emys marmorata*]) were considered to have no potential to occur on the study area due to lack of suitable habitat.

The other nine species were determined to have a low or moderate potential to occur but were not observed during the various surveys. These species include California glossy snake (*Arizona elegans occidentalis*), coastal California gnatcatcher (*Polioptila californica californica*), orange-throated whiptail (*Aspidoscelis hyperythra*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Stephens' kangaroo rat (*Dipodomys stephensi*), California horned lark (*Eremophila alpestris actia*) and western spadefoot (*Spea hammondii*). The BUOW is presumed absent from the study area due to negative focused surveys. All but three of the thirteen species listed above are fully covered species under the MSHCP. The BUOW and Riverside fairy shrimp are conditionally covered species while the San Diego fairy shrimp is not covered on the MSHCP.

Table 8
SPECIAL-STATUS ANIMAL SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status on Study area
INVERTEBRATES				
Crustaceans				
Brachinecta sandiegoensis	San Diego fairy shrimp	FT	Most commonly found in swale, earth slump, or depression pools in unplowed grasslands. Requires cool-water pools.	**None.** The study area does not support vernal pools.
Streptocephalus woottoni	Riverside fairy shrimp	FE MSHCP Conditionally Covered Species[2]	Typically deep vernal pools and seasonal wetlands at least 30 centimeters deep.	**None.** The study area does not support vernal pools.
Insects				
Euphydryas editha quino	Quino checkerspot butterfly	FE MSHCP Covered Species	Primary larval host plants in San Diego are dwarf plantain (*Plantago erecta*) at lower elevations, woolly plantain (*P. patagonica*) and white snapdragon (*Antirrhinum coulterianum*) at higher elevations. Owl's clover (*Castilleja exserta*) is considered a secondary host plant if primary host plants have senesced. Potential habitat includes vegetation communities with areas of low-growing and sparse vegetation. These habitats include open stands of sage scrub and chaparral, adjacent open meadows, old foot trails and dirt roads.	**None.** The study area does not support this species' host plant.

Table 8 (cont.)
SPECIAL-STATUS ANIMAL SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status on Study area
VERTEBRATES				
Amphibians				
Spea hammondii	western spadefoot	SSC MSHCP Covered Species	Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; require temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* spp.)	**Moderate.** The study area supports a limited amount of suitable sandy wash habitat.
Reptiles				
Arizona elegans occidentalis	California glossy snake	--/SSC	Most common in desert habitats, but also occurs in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grassland. Associated with sandy open areas with sparse shrub cover, but can also occur in rocky habitats.	**Low.** The study area does not support chaparral, forest, or grassland habitats. However, the study area supports sandy soils as well as a few small patches of Riversidean sage scrub that could provide low-quality habitat. This species was recorded in CNDDB in 1946, approximately 1.5 miles northwest of the study area.
Aspidoscelis hyperythra	orange-throated whiptail	--/WL MSHCP Covered Species	Chaparral, sage scrub, grassland, woodland, and riparian areas.	**Moderate.** The study area supports a limited amount of suitable Riversidean sage scrub and riparian habitats for this species. This species was recorded in CNDDB in 1998, approximately 1.25 miles northeast of the study area.

Table 8 (cont.)
SPECIAL-STATUS ANIMAL SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status on Study area
Reptiles (cont.)				
Emys marmorata	western pond turtle	SSC MSHCP Covered Species	Almost entirely aquatic; occurs in freshwater marshes, creeks, ponds, rivers and streams, particularly where basking sites, deep water retreats, and egg laying areas are readily available.	**None.** The study area does not support stream, ponds, or other aquatic habitats with standing or flowing water.
Birds				
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	--/WL MSHCP Covered Species	Hillsides, with grassland, sage scrub, or chaparral.	**Low.** The study area supports a limited amount of suitable habitat for this species.
Athene cunicularia	burrowing owl	--/SSC MSHCP Conditionally Covered[3]	Grasslands, fallow agriculture, or areas of sparse perennial cover with burrows (preferably from fossorial mammals).	**Presumed Absent.** Although the study area supports suitable habitat and burrows, no burrowing owls were observed during focused surveys conducted for the project in 2019.
Eremophila apestris actia	California horned lark	--/WL MSHCP Covered Species	Grassland, agricultural fields, and disturbed fields.	**Moderate.** The study area supports suitable habitat for this species. This species was not observed during field surveys.
Polioptila californica	coastal California gnatcatcher	FT/SSC MSHCP Covered Species	Mature coastal sage and other scrub varieties.	**Low.** The study area supports a limited amount of suitable habitat for this species.
Mammals				
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST MSHCP Covered Species	Open grassland and scrub areas with sparse perennial cover and loose soil.	**Low**. The Riversidean sage scrub provides a limited amount of suitable habitat for this species. This species was recorded in CNDDB in 1998, approximately 2.5 miles northeast of the study area.

Table 8 (cont.)
SPECIAL-STATUS ANIMAL SPECIES POTENTIAL TO OCCUR

Scientific Name	Common Name	Sensitivity Status[1]	Habitat	Status on Study area
Mammals (cont.)				
Lepus californicus bennettii	San Diego black-tailed jackrabbit	--/SSC MSHCP Covered Species	Grassland, agriculture with nearby shrubs for cover.	**Moderate.** The disturbed areas provide foraging habitat for this species and the adjacent Riversidean sage scrub provides a limited amount of habitat for cover. This species was recorded in CNDDB in 1998, in a nonspecific area less than .25 mile to the northeast of the study area.

[1] Please refer to Appendix D for an explanation of MSHCP designation and sensitivity status codes.
[2] Surveys may be required for these species as part of wetlands mapping (MSHCP Section 6.1.2).
[3] Surveys may be required for these species within locations shown on survey maps (MSHCP Section 6.3.2).

4.0 REGULATORY CONTEXT

4.1 FEDERAL REGULATIONS

Administered by the USFWS, the Federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d), 7, and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of Biological Opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation is required when there is a nexus between federally listed species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows the issuance of permits for "incidental" take of endangered or threatened species. The term "incidental" applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. The MSHCP includes a Section 10(a) permit for this portion of the County, including the subject study area.

All migratory bird species that are native to the United States or its territories are protected under the Migratory Bird Treaty Act (MBTA), as amended under the MBTA of 2004 (Federal Register [FR] Doc. 05 5127). This law is generally protective of migratory birds from the direct physical take of the species.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. (including wetlands and vernal pools) is overseen by the USACE under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. A CWA Section 401 Water Quality Certification, which is administered by the RWQCB, must be issued prior to any 404 Permit. Impacts to waters of the U.S. would result in a need for both a USACE 404 permit and a RWQCB 401 certification.

The RWQCB asserts regulatory jurisdiction over activities affecting wetland and non-wetland waters of the State pursuant to Section 401 of the CWA and the State Porter-Cologne Water Quality Control Act. Potential RWQCB jurisdiction found within the study area follows the boundaries of potential USACE jurisdiction for WUS. In the absence of federally regulated WUS, isolated drainage features may be regulated by the RWQCB pursuant to a Report of Waste Discharge (ROWD) authorization pursuant to the State Porter-Cologne Water Quality Control Act.

4.2 STATE REGULATIONS

The California Endangered Species Act (CESA) is similar to the FESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the CESA authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes. The MSHCP is the regional 2081 for this portion of the County, including the subject property.

State Fully Protected species may not be taken or possessed at any time and no state licenses or permits may be issued for their take except for collecting these species necessary for scientific research and relocation of the bird species for the protection of livestock (CFG Code Sections 3511, 4700, 5050, and 5515).

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates the collection, transport, and commerce of listed plants.

The CESA follows the NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated threatened under the CESA.

CFG Code Sections 1600 et seq. requires an agreement with CDFW for projects affecting riparian and wetland habitats through the issuance of a Streambed Alteration Agreement. The CFG Code Sections 3503, 3503.5, and 3800 prohibit the take or possession of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a take. Such a take would also violate federal law protecting migratory birds. Incidental Take Permits are required from the CDFW for projects that may result in the incidental take of species listed by the state as endangered, threatened, or candidate species. The wildlife agencies require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

The California Natural Community Conservation Planning Act of 1991 is designed to conserve habitat-based natural communities at the ecosystem scale while accommodating compatible land uses in coordination with CESA. The CDFW is the principal state agency implementing the Natural Community Conservation Planning (NCCP) program. The Act established a process to allow for comprehensive, long-term, regional, multi-species, and habitat-based planning in a manner that satisfies the requirements of CESA and FESA (through a companion regional habitat conservation plan). The NCCP program has provided the framework for innovative efforts by the state, local governments, and private interests to plan for the protection of regional biodiversity and the ecosystems upon which they depend. The NCCP program seeks to ensure the long-term conservation of multiple species, while allowing for compatible and appropriate economic activity to proceed. The MSHCP was prepared as part of regional planning pursuant to the NCCP Act.

4.3 LOCAL REGULATIONS

4.3.1 Western Riverside Multiple Species Habitat Conservation Plan

The MSHCP is a comprehensive multi-jurisdictional effort that includes the western County and multiple cities throughout the western County. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system (Dudek 2003). Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the County Board of Supervisors. The Incidental Take Permit was issued by both the USFWS and CDFW on June 22, 2004.

4.3.2 Stephens' Kangaroo Rat Habitat Conservation Plan

The SKRHCP describes the conservation, mitigation, and monitoring measures that are implemented within core reserves. Within the SKRHCP, there are seven core reserves totaling 41,221 acres for conservation of Stephens' kangaroo rat and associated habitat. The SKRHCP provides a 30-year incidental take authorization for Stephens' kangaroo rat on lands within its boundaries, which includes 533,954 acres within the County and the Cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and Temecula.

The study area is within the SKRHCP but is not located within any of the core reserves. The project would be required to pay a $500 per acre Stephens' kangaroo rat mitigation fee per development requirements under the SKRHCP.

5.0 IMPACTS

This section describes potential direct and indirect impacts associated with the proposed project. Direct impacts immediately alter the affected biological resources such that those resources are eliminated temporarily or permanently. For purposes of this impact analysis, direct impact areas are considered 100 percent lost. Indirect impacts consist of secondary effects (i.e., edge effects) of a project including but not limited to: noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, animal behavioral changes, and

night lighting. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

According to Appendix G of the CEQA Guidelines, project impacts to biological resources would be considered significant if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any special status species in local or regional plans, policies, or regulations, or by the CDFW and or USFWS.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

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

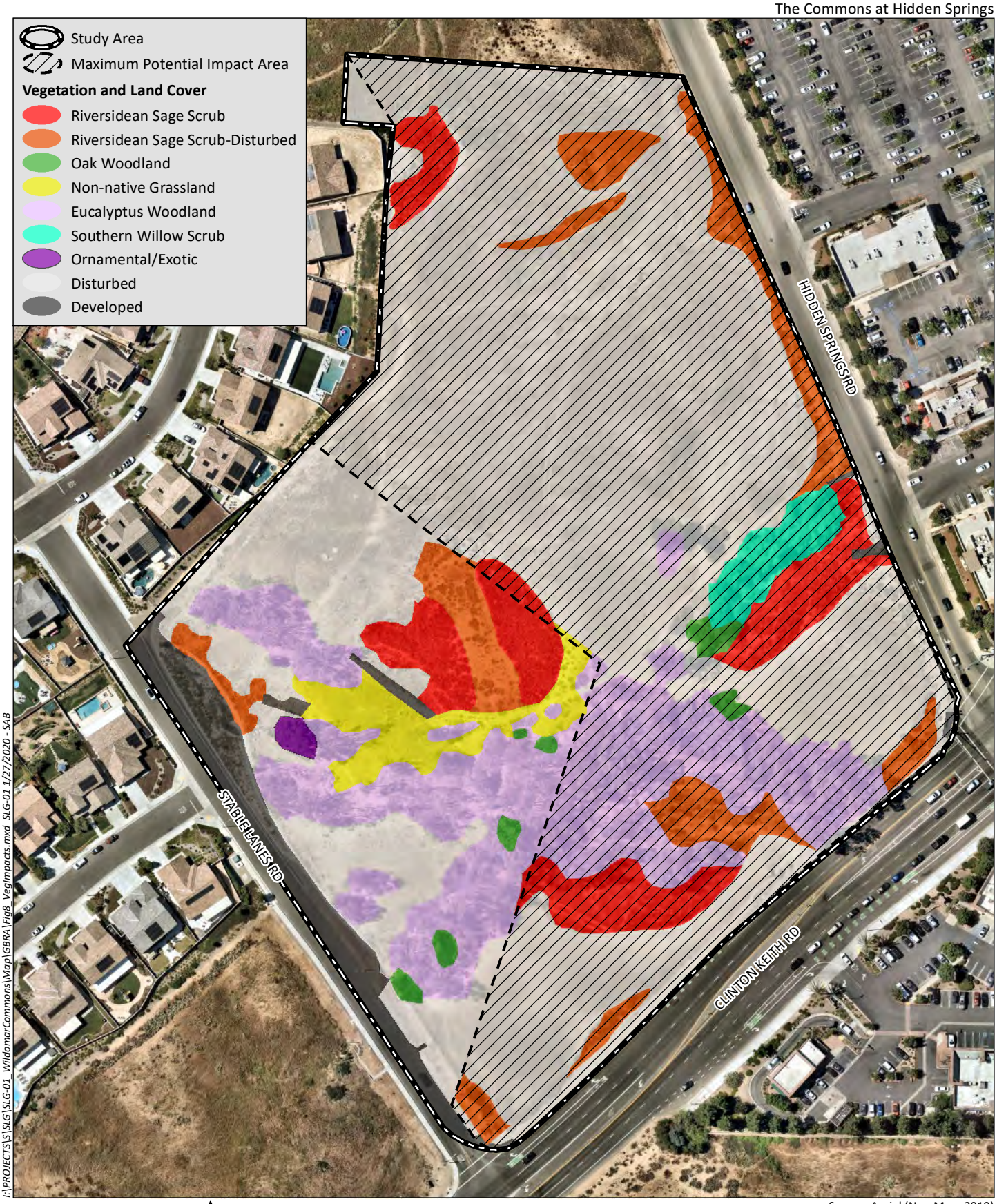
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, NCCP, or other approved local, regional, or state habitat conservation plan.

5.1 VEGETATION COMMUNITIES

The study area supports 0.24 acre of southern willow scrub, 0.14 acre of oak woodland, 1.14 acres of Riversidean sage scrub, 1.05 acres of Riversidean sage scrub-disturbed, 2.59 acres of eucalyptus woodland, 0.40 acre of non-native grassland, 0.04 acre of ornamental/exotic, 0.72 acre of developed land, and 8.83 acres of disturbed land. The project would permanently impact 0.24 acre southern willow scrub, 0.07 acre oak woodland, 0.78 acre of Riversidean sage scrub, 0.75 acre of Riversidean sage scrub-disturbed, 1.23 acres of eucalyptus woodland, 0.01 acre non-native grassland, 0.05 acre of developed land, and 7.41 acres of disturbed land. No impacts to the ornamental/exotic plant community are proposed. Permanent impacts to vegetation communities are shown on Figure 8, *Impacts to Vegetation*, and the corresponding acreages are in provided below in Table 9, *Project Impacts to Vegetation Communities and Land Cover Types*.

As discussed above, the study area supports 0.24 acre of southern willow scrub, which is considered a sensitive community pursuant to CDFW (2019b). The study area also supports 0.12 acre of oak woodland in a riparian setting and is therefore also sensitive. Southern willow scrub and oak woodland are streambed-associated and are considered CDFW jurisdiction and an MSHCP Riparian/Riverine Area. Permanent impacts are proposed to 0.24 acre of southern willow scrub and 0.07 acre of oak woodland. Since both of these communities are under CDFW jurisdiction and are MSHCP Riparian/Riverine Areas, the project would mitigate for permanent impacts to these communities through compensatory mitigation as described in Section 6.1.1 below.



Source: Aerial (NearMap, 2019)

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Impacts to Vegetation

Figure 8

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Table 9
PROJECT IMPACTS TO VEGETATION COMMUNITIES AND LAND COVER TYPES

Community/Type	Existing (acres)[1]	Direct Permanent Impacts (acres)[1]	Study Area Avoidance
Southern Willow Scrub	0.24	0.24	0
Oak Woodland[2]	0.14	0.07	0.07
Riversidean Sage Scrub	1.14	0.78	0.36
Riversidean Sage Scrub-Disturbed	1.05	0.75	0.30
Eucalyptus Woodland	2.59	1.23	1.36
Non-native Grassland	0.40	0.01	0.39
Ornamental/Exotic	0.04	0.00	0.04
Developed Land	0.72	0.05	0.67
Disturbed Land	8.83	7.41	1.42
TOTAL	**15.15**	**10.54**	**4.61**

[1] Acreage is rounded to the nearest hundredth.
[2] A portion of the oak woodland is not associated with a stream and is, therefore, not included in the Riparian/Riverine or CDFW jurisdictional acreage.

5.2 SENSITIVE PLANT AND ANIMAL SPECIES

No rare plant species were observed on the study area during focused surveys; therefore, no impacts would occur.

Of the 12 sensitive animal species that were recorded within the vicinity of the study area, 9 species were considered to have a potential to occur on the study area or were observed during field surveys. Eight of these species are fully covered under the MSHCP, including western spadefoot, orange-throated whiptail, southern California rufous-crowned sparrow, California horned lark, coastal California gnatcatcher, Stephen's kangaroo rat, and San Diego black-tailed jackrabbit. With payment of the MSHCP Local Development Mitigation Fee (LDMF), no additional mitigation is required for potential impacts to these species. See Section 6.4 below for a more detailed discussion. In addition, the study area is located within the SKRHCP and is required to pay a Stephens' kangaroo rat mitigation fee for incidental take authorization under the SKRHCP. See Section 6.5 below for a more detailed discussion.

The remaining two species that are not fully covered under the MSHCP include BUOW, which is conditionally covered species under the MSHCP, and California glossy snake, which is not covered under the MSHCP. The BUOW is presumed absent from the study area based on negative focused surveys. However, since the study area supports suitable BUOW habitat, the MSHCP requires a survey to be conducted 30 days prior to commencement of construction to confirm absence of BUOW on the study area. See Section 5.5.4 below for a more detailed discussion. Although California glossy snake is not a covered species under the MSHCP, the study area supports a limited amount of isolated patches of suitable Riversidean sage scrub. Additionally, this species has not been observed in the vicinity since 1946 (CNDDB 2019). For these reasons, there is only a small likelihood that this species would occur on the study area. Finally, California glossy snake species is not a federal or state listed species. Therefore, impacts to suitable habitat for California glossy snake would not be considered significant and no mitigation would be required.

The MSHCP does not cover impacts to nesting birds that are protected under the MBTA. Impacts to birds protected under the MBTA are considered significant and discussed below.

5.2.1 Nesting Birds

Development of the proposed project could disturb or destroy active migratory bird nests including eggs and young, if construction is implemented during the bird breeding season (February 15 to August 31). Disturbance to or destruction of migratory bird eggs, young, or adults is in violation of the MBTA and CFG Code; such impacts would be considered significant.

5.3 JURISDICTIONAL WATERS AND WETLANDS

5.3.1 Potential RWQCB Jurisdiction

As currently planned, the project proposes impacts to 0.17 acre (1,429.7 linear feet) of waters of the State (Figure 9 and Table 10, *Impacts to RWQCB Jurisdiction*). The impacts consist entirely of non-wetland waters of the State.

Table 10
IMPACTS TO RWQCB JURISDICTION

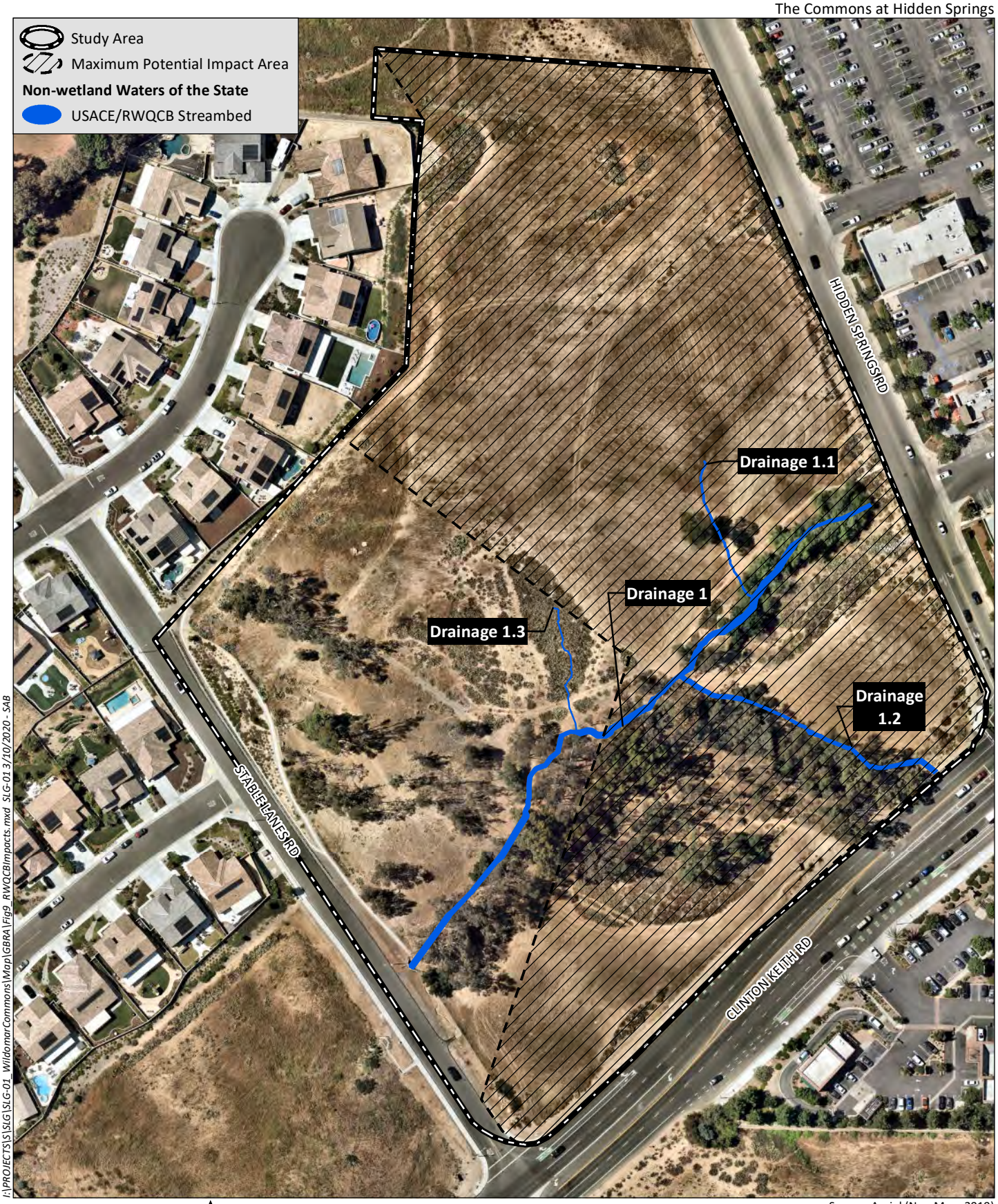
Drainage Segment	Existing (acres)[1]	Proposed Impacts (acres)[1]	Linear Feet of Impacts[2]
Segment 1	0.27	0.13	443
Segment 1.1	0.01	0.01	143
Segment 1.2	0.03	0.03	321
Segment 1.3	<0.01	0	0
TOTAL	**0.32**	**0.17**	**907**

[1] Acreage rounded to nearest 0.01.
[2] Linear feet rounded to the nearest whole foot

Impacts to RWQCB jurisdiction will require a CWA Section 401 ROWD authorization from the RWQCB.

5.3.2 Potential CDFW Jurisdiction

The project proposes impacts to 0.40 acre of CDFW jurisdiction (Figure 10, *Impacts to MSHCP Riparian/ Riverine and CDFW Jurisdiction*; Table 11, *Impacts to CDFW Jurisdiction*).



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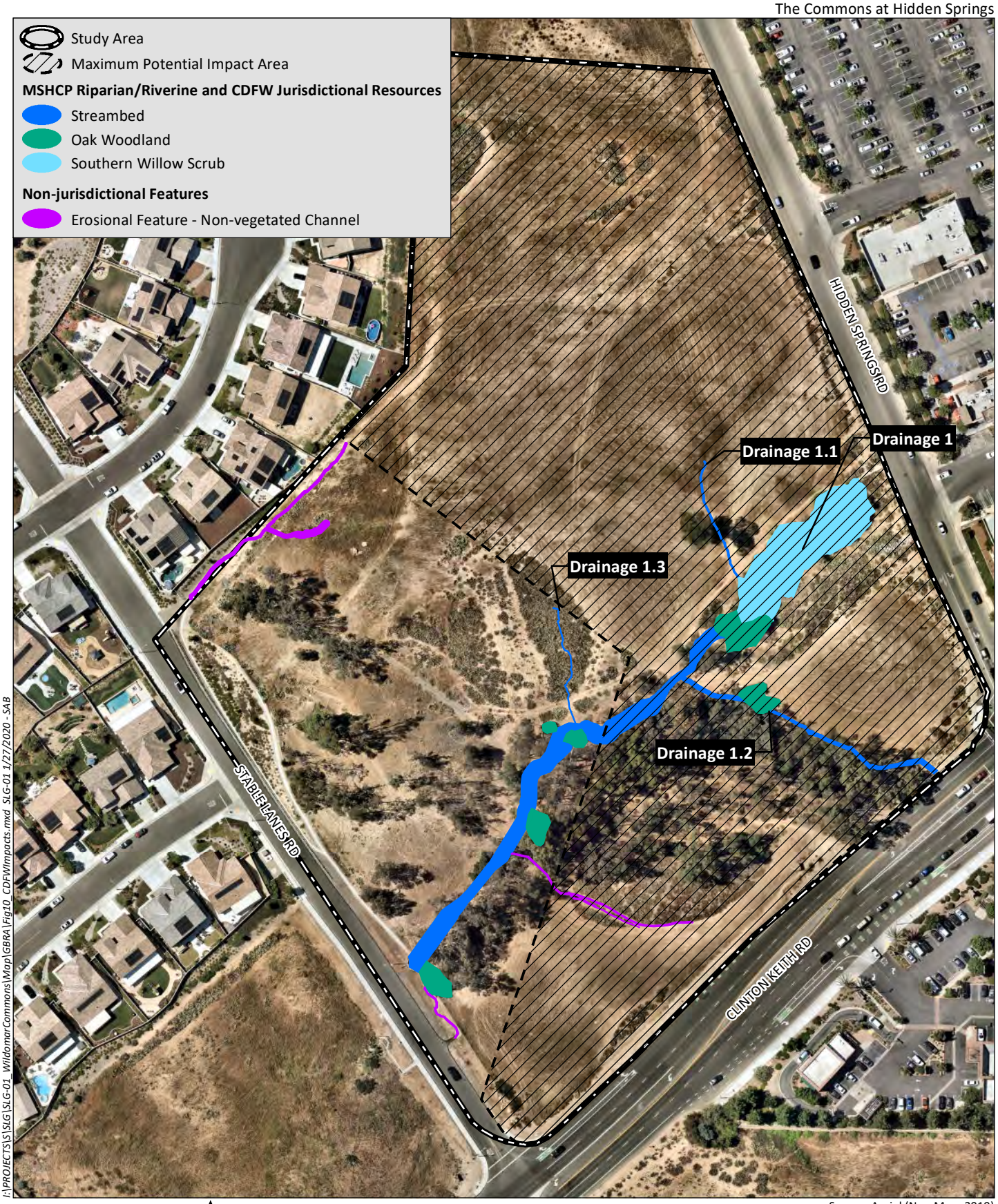
Impacts to USACE and RWQCB Jurisdiction

Figure 9



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Source: Aerial (NearMap, 2019)

Impacts to MSHCP Riparian/Riverine and CDFW Jurisdiction

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Figure 10

Table 11
IMPACTS TO CDFW JURISDICTION

CDFW JURISDICTION	Existing (acres)[1]	Proposed Impacts (acres)[1]	Avoided (acres)[1]
Riparian			
Oak Woodland	0.12	0.06	0.05
Southern Willow Scrub	0.24	0.24	0.00
SUBTOTAL	0.36	0.30	0.05
Streambed			
Streambed	0.24	0.10	0.14
SUBTOTAL	0.24	0.10	0.14
TOTAL	**0.60**	0.40	**0.20**

[1] Acreage rounded to nearest 0.01, and totals reflect rounding.

Impacts to CDFW jurisdiction will require a Section 1602 Stream Alteration Agreement from CDFW. Compensatory mitigation for permanents impacts to CDFW jurisdiction would be required as part of subsequent Section 1602 permitting requirements.

5.4 HABITAT AND WILDLIFE CORRIDOR EVALUATION

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species present. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations.

The study area is not located within any MSHCP Linkages, which are areas within the Plan Area that are identified as having the potential to facilitate wildlife movement. The nearest linkage to the study area is Proposed Linkage 8, which is approximately 1.5 miles to the northeast of the study area and consists of upland habitat within the Sedco Hills and Wildomar area (Dudek 2003). The study area is not located within any linkages recognized by the South Coast Missing Linkages report. The nearest linkage described by the South Coast Missing Linkages report is the Santa Ana-Palomar Connection located approximately 12 miles to the southeast of the study area (South Coast Wildlands 2008).

The study area is constrained by commercial development and I-15 to the east and residential development to the west. The southwestern corner of the study area is adjacent to undeveloped land which connects to Murrieta Creek. The northern portion of the study area is also adjacent to undeveloped land which is constrained by residential development and I-15 further north. The study area supports mostly non-contiguous patches of native vegetation. These patches are isolated and do not connected to any other areas dominated by native vegetation. Larger open space areas dominated by native vegetation are located within the Santa Ana Mountains approximately 1.5 miles to the southwest of the study area and the unnamed hills 1.5 miles to the northeast of the study area. These areas do not directly connect to the study area due to existing residential and commercial development. Since the study area does not connect two or more large habitat areas, the study area is not considered a regional wildlife corridor.

The open areas and the presence of fossorial mammals on the study area may provide some foraging habitat for certain species. These open areas offer little value for wildlife cover due to ongoing disturbance and the resultant lack of vegetation. The southwestern willow scrub and the eucalyptus woodland may offer some cover for wildlife species adapted to human disturbance, such as small mammals (e.g., raccoon [*Procyon lotor*], skunk [*Mephitis* sp.], cottontail rabbits [*Sylvilagus* sp.]), and small reptiles (e.g., western fence lizard [*Sceloporus occidentalis*]). Additionally, bird species may fly over existing development to access the study area for foraging. Therefore, the study area may support limited opportunities for local wildlife movement but does not function as a wildlife corridor since it does not directly connect to large blocks of habitat.

5.5 MSHCP CONSISTENCY ANALYSIS

The purpose of this section is to provide an analysis of the project with respect to compliance with biological resources aspects of the MSHCP.

The project was evaluated for consistency with the following MSHCP issue areas:

- MSHCP Reserve Assembly requirements;
- Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools);
- Section 6.1.3 (Protection of Narrow Endemic Plant Species);
- Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface);
- Section 6.3.2 (Additional Survey Needs and Procedures); and
- Section 6.4 (Fuels Management).

The discussions below provide a summary demonstrating how the project is consistent with MSHCP requirements for each of the above-listed issue areas.

5.5.1 MSHCP Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, states:

"The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained."

Riparian/Riverine Habitat

The MSHCP Riparian/Riverine Area mapped on the study area is equivalent to CDFW jurisdiction. Implementation of the proposed project would result in permanent impacts to approximately 0.65 acre of MSHCP Riparian Habitat. Permanent impacts would occur to southern willow scrub and oak woodland associated with the drainage. Proposed impacts to the Riparian/Riverine Area are shown on Figure 10.

Since the project proposes impacts to an MSHCP Riparian/Riverine Area, the project is required to prepare a Determination of Biologically Equivalent or Superior Preservation (DBESP), which provides a detailed account of impacts and proposed mitigation to compensate for impacts. Permanent impacts to the MSHCP Riparian/Riverine Area are proposed to be mitigated through purchase of credits at an approved mitigation bank such as Riverpark Mitigation Bank and are to be detailed in the DBESP.

Riparian/Riverine Species

The study area was evaluated for potential to support MSHCP Riparian/Riverine species. These species were determined not to occur in the study area, or the study area does not support suitable habitat for Riparian/Riverine or Vernal Pool plant and animal species. Therefore, no impacts are anticipated by the project.

As discussed above, the proposed project is consistent with MSHCP Section 6.1.2.

5.5.2 MSHCP Section 6.1.3 Protection of Narrow Endemic Plant Species

The study area is not located within a NEPSSA; therefore, no focused surveys were required, and the proposed project is consistent with Section 6.1.3 of the MSHCP.

5.5.3 MSHCP Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface

Section 6.1.4 of the MSHCP addresses potential indirect impacts to MSHCP Conservation Area lands via the Urban/Wildlands Interface Guidelines (UWIG). The study area does not occur adjacent to an MSHCP Conservation Area; the nearest Conservation Areas are within Proposed Linkage 8, located approximately 1.5 miles to the northeast. The study area is not located within an MSHCP Criteria Cell. The MSHCP UWIG guidelines discussed below are to demonstrate how the project would prevent and/or reduce potential impacts to off-site Conservation Areas to ensure consistency with Section 6.1.4 of the MSHCP.

Drainage

Although the project does not directly drain into an MSHCP Conservation Area, storm water flows from the site could ultimately reach a downstream Conservation Area. The project would adhere to the Construction Guidelines in Section 7.5.3 of the MSHCP and would incorporate measures, including general construction Best Management Practices and those required through the National Pollutant Discharge Elimination System to ensure that the quantity and quality of runoff discharged off-site is not altered in an adverse way when compared with existing conditions. The project shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes downstream from the study area. Detention basins within the project footprint will ensure that there is no increase in flows leaving the study area.

Toxics

The project does not propose toxic impacts to sensitive species habitats. Land uses that use chemicals or generate bio-products that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in

discharge into downstream waters. Measures such as those employed to address drainage issues would be implemented by the proposed project to avoid the potential impacts of toxics. The current project design includes construction of five water quality treatment basins.

Lighting

The project does not occur close (i.e., within 500 linear feet) to a conservation area; therefore, this does not apply.

Invasives

The project shall not use invasive plants for erosion control, landscaping, wind rows, or other purposes. The project will comply with the MSHCP and avoid the use of invasive, non-native plants in accordance with MSHCP Table 6-2.

Barriers

The project does not occur close (i.e., within 500 linear feet) to a conservation area; therefore, this does not apply.

Grading/Land Development

The project does not occur close (i.e., within 500 linear feet) to a conservation area; therefore, this does not apply.

5.5.4 MSHCP Section 6.3.2 Additional Survey Needs and Procedures

The study area is not located in a CASSA, Amphibian Species Survey Area, or Mammal Species Survey Area. Therefore, project impacts to CASSA species or sensitive amphibian or mammal species are not anticipated. The project is located within a BUOW Survey Area and project compliance with the MSHCP is discussed below.

Burrowing Owl

The MSHCP requires a habitat assessment and focused surveys if suitable BUOW habitat occurs on the study area. The study area was determined to support suitable habitat for BUOW; and as such, protocol BUOW survey were conducted in accordance with County survey protocol (County 2006). No BUOW or sign of the species was detected during the survey. According to CNDDB, the nearest record of BUOW is from 2007, approximately 3.4 miles to the northwest of the study area. Although the focused BUOW surveys were negative, a 30-day pre-construction survey is required in accordance with MSHCP requirements. Therefore, the proposed project would be consistent with Section 6.3.2 of the MSHCP.

5.5.5 MSHCP Section 6.4 Fuels Management

The study area is not adjacent to an MSHCP Conservation Area. Therefore, fuel modification impacts would not extend into a Conservation Area. The project is consistent with Section 6.4 of the MSHCP.

5.6 NESTING BIRDS

Development of the proposed project could disturb or destroy active migratory bird nests including eggs and young. Disturbance to or destruction of migratory bird eggs, young, or adults is in violation of the MBTA and is, therefore, considered to be a potentially significant impact.

6.0 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

Proposed mitigation measures listed below shall reduce potential significant impacts to a level below significant.

6.1 SENSITIVE VEGETATION COMMUNITIES

6.1.1 California Department of Fish and Wildlife Sensitive Vegetation Communities/Habitats

Permanent impacts to southern willow scrub and oak woodland would be considered significant and require compensatory mitigation as part of the Section 1602 permitting requirements. Permanent impacts to southern willow scrub would be mitigated through purchase of in-lieu fee credits or mitigation bank credits. Specific mitigation measures will be determined in the permitting process for impact to CDFW and RWQCB habitats.

6.2 SENSITIVE SPECIES

6.2.1 Burrowing Owl

Within 30 days prior to initiating ground-disturbance activities, the Project Proponent shall retain a qualified biologist to complete a pre-construction avoidance survey, in accordance with the MSHCP guidelines. If the pre-construction survey is negative and BUOW is confirmed absent, then ground-disturbing activities shall be allowed to commence and no further mitigation would be required.

If BUOWs have colonized the study area prior to initiation of construction, the Project Proponent shall immediately inform RCA and the wildlife agencies (CDFW and USFWS). Preparation of a BUOW Protection and Relocation Plan prior to initiating ground disturbance may be required by the RCA and/or the wildlife agencies.

6.2.2 Nesting Birds

Vegetation clearing for the project shall be conducted outside the avian nesting season, which is generally defined as February 15 to August 31. If vegetation clearing must take place during the nesting season, a qualified biologist shall perform a pre-construction Nesting Bird Survey no more than seven days prior to vegetation impacts. Results of the survey shall be submitted to the City for review and approval prior to initiating impacts during the breeding season.

If active bird nests are confirmed to be present during the pre-construction survey, the project biologist shall delineate an appropriate buffer between 100 and 300 feet (500 feet for raptors) around each nest. Construction activities within the buffer shall not be permitted until nesting behavior has ceased, nests have failed, or young have fledged. The project biologist may modify the buffer or propose other recommendations in order to minimize disturbance to nesting birds.

6.3 NON-NATIVE INVASIVE SPECIES RESTRICTIONS

In accordance with Section 6.1.4 of the MSHCP, no species listed in Table 6-2 of the MSHCP (Appendix C of the MSHCP) shall be used on the study area, including hydroseed mix used for interim erosion control.

6.4 MSHCP LOCAL DEVELOPMENT MITIGATION FEE

Because the project is within an area participating in the MSHCP, the Project Proponent is required to pay a LDMF to finance the acquisitions of conservation areas to provide habitat for MSHCP covered species (County 2003). The LDMF must be paid prior to issuance of a building permit. The LDMF for residential developments is based on a fee per dwelling unit. The applicant would pay the LDMF as determined through coordination with the City. The fee schedule is adjusted annually by the RCA and was recently adjusted. The current LDMF is $7,382 per acre for industrial or commercial uses. The final LDMF shall be an amount determined in coordination with the County.

6.5 STEPHENS' KANGAROO RAT HABITAT CONSERVATION PLAN FEES

Because the project is within the SKRHCP area, the Project Proponent is required to pay a Stephens' kangaroo rat mitigation in accordance with the SKRHCP. The SKRHCP fee for the project shall be an amount determined in coordination with the County. The standard fee is $500 per acre.

7.0 CERTIFICATION/QUALIFICATION

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.

DATE: January 28, 2020 SIGNED: 

Robert Hogenauer
Senior Scientist
HELIX Environmental Planning, Inc.

Fieldwork Performed By:

Robert Hogenauer
Biologist, HELIX Environmental Planning, Inc.
B.S., Biology, Minor in Zoology, California State Polytechnic University, 2004

Daniel Torres
Biologist, HELIX Environmental Planning, Inc.
B.S., Ecology and Natural Resources, Rutgers University, 2013

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Appendix A

Plant Species Observed

Appendix A
Plant Species Observed

Family	Scientific Name	Common Name
ANGIOSPERMS – EUDICOTS		
Anacardiaceae	*Rhus aromatica*	basket-brush
Apocynaceae	*Asclepias eriocarpa*	Indian milkweed
	Asclepias fascicularis	narrow-leaf milkweed
Asteraceae	*Acourtia microcephala*	sacapellote
	Artemisia californica	California sagebrush
	Centaurea melitensis	tocalote
	*Cirsium vulgare**	bull thistle
	Corethrogyne filaginifolia	common sandaster
	Deinandra paniculata	paniculate tarplant
	Encelia farinosa	brittlebush
	Erigeron canadensis	horseweed
	Helianthus annuus	western sunflower
	Heterotheca grandiflora	telegraph weed
	Pseudognaphalium californicum	California everlasting
	Stephanomeria exigua ssp. *exigua*	small wreath-plant
Brassicaceae	*Hirschfeldia incana**	short-pod mustard
Chenopodiaceae	*Salsola tragus**	Russian thistle
Euphorbiaceae	*Croton setigerus*	dove weed
	*Euphorbia serpillifolia**	thyme-leafed spurge
Fabaceae	*Acmispon americanus*	Spanish-clover
	*Melilotus indicus**	Indian sweet clover
Fagaceae	*Quercus agrifolia var. agrifolia*	coast live oak
Lamiaceae	*Trichostema lanceolatum*	vinegar weed
Malvaceae	*Malva parviflora**	cheeseweed
Myrtaceae	*Eucalyptus camaldulensis**	river red gum
Oleaceae	*Olea europaea**	olive
Polygonaceae	*Eriogonum fasciculatum*	buckwheat
Rosaceae	*Adenostoma fasciculatum*	chamise
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood
	Salix gooddingii	Goodding's black willow
	Salix laevigata	red willow
ANGIOSPERMS – MONOCOTS		
Poaceae	*Bromus madritensis* ssp. *rubens**	foxtail chess
	*Schismus barbatus**	Mediterranean grass

* Non-native species

Appendix B

Animal Species Observed or Detected

Appendix B
Animal Species Observed or Detected

Order	Family	Scientific Name	Common Name
Invertebrates			
Coleoptera	Tenebrionidae	*Eleodes* sp.	darkling beetle
Lepidoptera	Nymphalidae	*Vanessa cardui*	painted lady
Reptiles			
Squamata	Boidae	*Lichanura trivirgata*	rosy boa
Birds			
Accipitriformes	Accipitridae	*Buteo jamaicensis*	red-tailed hawk
Anseriformes	Anatidae	*Branta canadensis*	Canada goose
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	killdeer
Columbiformes	Columbidae	*Streptopelia decaocto*	Eurasian collared-dove
		Zenaida macroura	mourning dove
Falconiformes	Falconidae	*Falco sparverius*	American kestrel
Cuculiformes	Cuculidae	*Geococcyx californianus*	Greater Roadrunner
Galliformes	Odontophoridae	*Callipepla californica*	California Quail
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit
	Alaudidae	*Eremophila alpestris*†	horned lark
	Corvidae	*Aphelocoma californica*	California scrub-jay
		Corvus brachyrhynchos	American Crow
		Corvus corax	common raven
	Fringillidae	*Haemorhous mexicanus*	house finch
		Spinus psaltria	lesser goldfinch
	Hirundinidae	*Petrochelidon pyrrhonota*	cliff swallow
		Stelgidopteryx serripennis	northern rough-winged swallow
	Icteridae	*Agelaius phoeniceus*	red-winged blackbird
		Sturnella neglecta	western meadowlark
	Mimidae	*Mimus polyglottos*	northern mockingbird
	Parulidae	*Setophaga coronata*	yellow-rumped warbler
	Passerellidae	*Aimophila ruficeps*†	rufous-crowned sparrow
		Melospiza melodia	song sparrow
		Melozone crissalis	California towhee
		Passerculus sandwichensis	savannah sparrow
		Pipilo maculatus	spotted towhee
		Zonotrichia leucophrys	white-crowned sparrow
	Passeridae	*Passer domesticus*	house sparrow
	Polioptilidae	*Polioptila californica californica*†	coastal California gnatcatcher
	Sturnidae	*Sturnus vulgaris*	European starling
	Troglodytidae	*Catherpes mexicanus*	canyon wren
		Thryomanes bewickii	Bewick's wren
		Troglodytes aedon	house wren
	Tyrannidae	*Sayornis nigricans*	black phoebe
		Sayornis saya	Say's phoebe
		Tyrannus verticalis	western kingbird
		Tyrannus vociferans	Cassin's kingbird
Pelecaniformes	Ardeidae	*Ardea alba*	great egret

Appendix B (cont.)
Animal Species Observed or Detected

Order	Family	Scientific Name	Common Name
Mammals			
Carnivora	Canidae	*Canis latrans*	coyote
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

† Sensitive species

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Appendix C

Site Photographs

Photo 1. View of disturbed habitat in the central portion of the study area, facing northeast.

Photo 2. View of eucalyptus woodland in the southern portion of the study area, facing southwest.

Photo 3. View of Riversidean sage scrub-disturbed habitat adjacent to the eastern boundary of the study area, facing southeast. Hidden Springs Road can be seen on the left.

Photo 4. View of southern willow scrub to the left and disturbed habitat to the left. This photo was taken in the southeastern portion of the study area, facing southwest.

Photo 5. View of southern willow scrub to the right, eucalyptus woodland to the left, and Riversidean sage scrub and disturbed habitat in the foreground. This photo was taken in the southeastern portion of the study area, facing northwest.

Photo 6. View of disturbed habitat adjacent to the western boundary of the study area, facing southwest. Eucalyptus woodland can be seen in the upper left.

Appendix D

Explanation of Status Codes for Plant and Animal Species

Appendix E
Explanation of Status Codes for Plant and Animal Species

U.S. FISH AND WILDLIFE SERVICE (USFWS)

BCC Birds of Conservation Concern
FE Federally listed endangered
FT Federally listed threatened

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

SE State listed endangered
ST State listed threatened
SSC State species of special concern
WL Watch List
FP Fully Protected

MULTIPLE SPECIES HABITAT CONSERVATION PLAN (MSHCP) COVERED

MSHCP Covered indicates that the species is part of a proposed list of species (146 total) considered at this time to be adequately conserved by the Western Riverside MSHCP, provided that participants meet all conditions listed in the Final MSHCP.

CALIFORNIA NATIVE PLANT SOCIETY (CNPS) CODES

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 = Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A CA Endemic entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no threat code extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences are considered in setting the Threat Code.

Appendix E

Burrowing Owl Focused Survey Report

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619.462.1515 tel
619.462.0552 fax
www.**helixepi**.com

September 17, 2019 SLG-01

Steve Macie
Somar Land Group, Inc.
P.O. Box 120432
Chula Vista, CA 91912

Subject: Results of the 2019 Burrowing Owl Survey for The Commons at Hidden Springs Project

Dear Mr. Macie:

This letter presents the results of the focused burrowing owl (*Athene cunicularia*) survey conducted by HELIX Environmental Planning, Inc. (HELIX) for The Commons at Hidden Springs Project. The survey meets the requirements of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and the City of Wildomar. This report describes the methods used to perform the survey and the results.

Project Location and Description

The approximately 15-acre The Commons at Hidden Springs study area is located in the City of Wildomar, Riverside County, California, along the northwest side of Clinton Keith Road between Hidden Springs Road and Stable Lanes Road (Figure 1, *Regional Location*, and Figure 2, *Project Vicinity [USGS Topography]*). Surrounding land uses include commercial to the east; a mix of undeveloped land and commercial development to the south; undeveloped land to the north; and a mix of residential development and undeveloped land to the west (Figure 3, *Survey Transects*). The project site is located in Township 7 South, Range 4 West, Sections 1 on the U.S. Geological Survey (USGS) 7.5-minute Murrieta quadrangle (Figure 2). Elevations on site range from approximately 1,267 feet (ft) to 1,315 ft above mean sea level.

The proposed project is a commercial development consisting of five commercial pads, five water quality/detention basins, parking lots, and associated infrastructure. The proposed project will also include permanent off-site impacts for roadway improvements associated with turn lanes and improvements to Hidden Springs Road, Clinton Keith Road, and Stable Lanes Road. The configuration of the proposed project is subject to change but will remain a commercial development with associated infrastructure.

The site is currently undeveloped and is dominated by disturbed land. The property also includes eucalyptus woodland (Exotic), Riversidean sage scrub (including disturbed), and southern willow scrub. The site is disturbed from trash dumping and use by encampments.

Methods

The protocol burrowing owl survey was conducted by HELIX biologists Rob Hogenauer and Dan Torres in accordance with the *Burrowing Owl Survey Instruction for the Western Riverside Multiple Species Habitat Conservation Plan Area* (County 2006). The biologists conducted the survey on the entire property along with the potential off-site impact acres and a buffer of up to 500 ft where potential burrowing owl habitat bordered the project site. The survey consisted of walking transects no greater than 30 meters to allow for 100 percent coverage (Figure 3). Smaller pockets, of potential BUOW habitat, were surveyed using meandering transects to provide 100 percent survey coverage. The buffer zone was visually surveyed with the aid of binoculars. The biologist walked slowly and methodically, closely checking the areas that met the basic requirements of owl habitat:

- Open expanses of sparsely vegetated areas (less than 30 percent canopy cover from trees and shrubs),
- Gently rolling or level terrain,
- An abundance of small mammal burrows, especially those of California ground squirrel (*Spermophilus beecheyi*), and
- Fence posts, rock, or other low perching locations.

Burrows with potential to support burrowing owl were mapped (Figure 4, *Potential Burrowing Owl Burrows*). All potential owl burrows were checked for signs of recent owl occupation, which includes:

- Pellets/casting (regurgitated fur, bones, and insect parts),
- White wash (excrement), and
- Feathers.

The survey was conducted over a period of six visits as the study area was expanded following the completions of surveys one and two. Visits one through four were conducted approximately one week apart. Surveys one and two covered the initial survey area, with surveys three and four covering the expanded study area. The additional surveys on August 27 and 29, 2019 were conducted to properly cover the additional property added to the study area that was not included in surveys one and two.

Table 1
BURROWING OWL SURVEY INFORMATION

Date	Time	Conditions	Personnel
7/27/19	0600-0650	Start: 0 percent clouds, 66° F, wind 1-2 mph End: 0 percent clouds, 69° F, wind 1-2 mph	Rob Hogenauer
8/2/19	0650-0720	Start: 5 percent clouds, 66° F, wind 0-1 mph End: 5 percent clouds, 68° F, wind 0-1 mph	Dan Torres
8/8/19	0620-0700	Start: 0 percent clouds, 61° F, wind 0-1 mph End: 0 percent clouds, 65° F, wind 0-1 mph	Rob Hogenauer
8/16/19	0610-0650	Start: 0 percent clouds, 59° F, wind 1-2 mph End: 0 percent clouds, 61° F, wind 1-2 mph	Rob Hogenauer
8/27/19	0640-0715	Start: 0 percent clouds, 64° F, wind 0-1 mph End: 0 percent clouds, 66° F, wind 0-1 mph	Rob Hogenauer
8/29/19	0630-0705	Start: 0 percent clouds, 64° F, wind 1-2 mph End: 0 percent clouds, 66° F, wind 0-1 mph	Rob Hogenauer

Conclusions

No burrowing owl or burrowing owl sign were observed on or adjacent to the study area. The site only has a few burrows with potential to support burrowing owl, and no sign of burrowing owl use was observed at the burrows (Figure 4). As a result, it has been determined that the project site is not occupied by burrowing owl. Consistent with MSHCP requirements, a preconstruction burrowing owl survey will be required to be conducted within 30 days prior to ground disturbing activities.

Please call me at (562) 537-2426 if you have any questions.

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 believe.

Date: September 17, 2019 Signed: 

Sincerely,

Rob Hogenauer
Senior Scientist

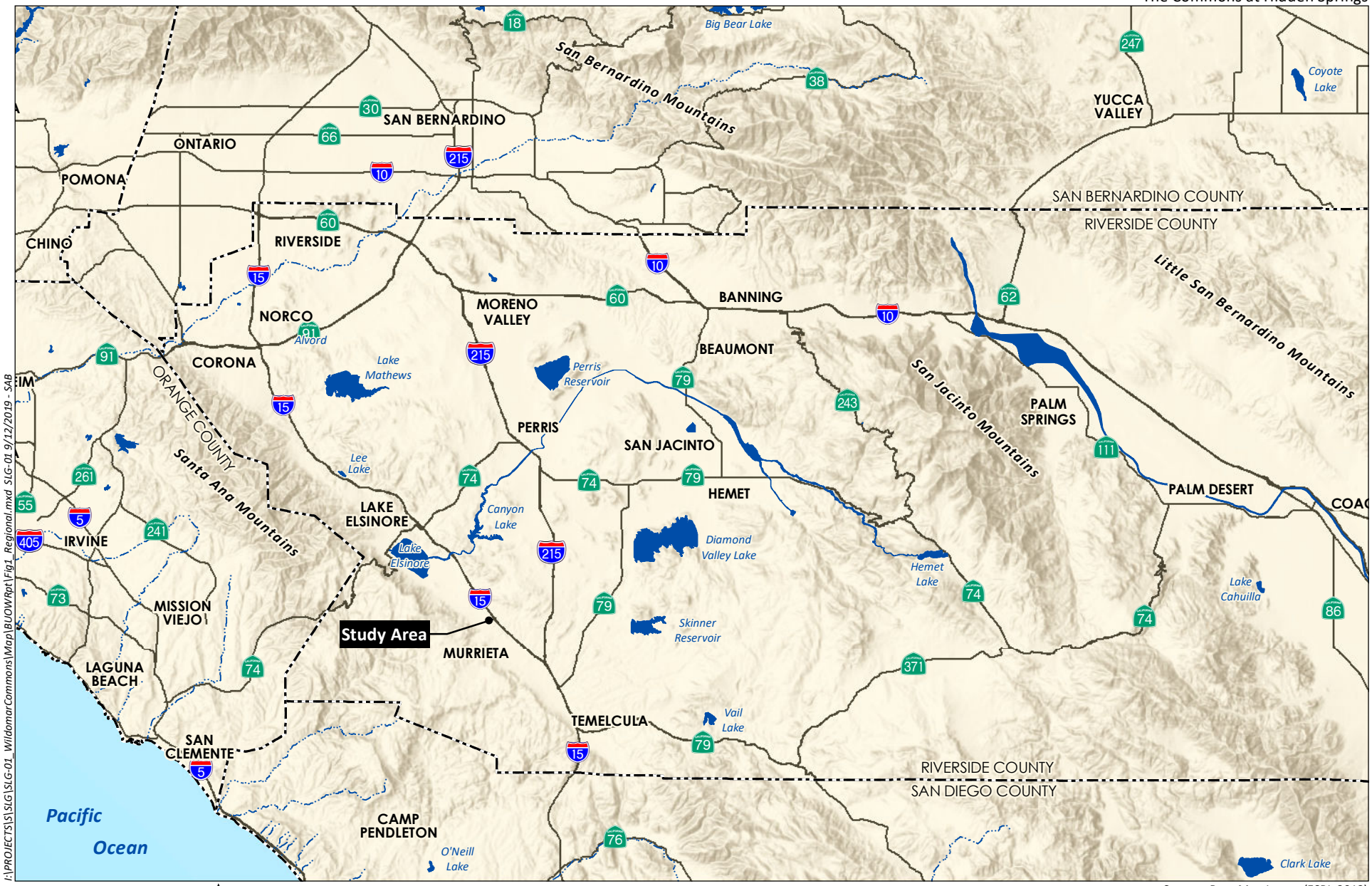
Attachments:

Figure 1 Regional Location
Figure 2 Project Vicinity (USGS Topography)
Figure 3 Survey Transects
Figure 4 Potential Burrowing Owl Burrows

REFERENCES

County of Riverside (County) Environmental Programs Department. 2006. Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. Available at: http://rctlma.org/Portals/1/EPD/consultant/burrowing_owl_survey_instructions.pdf. March 29.

Dudek and Associates. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Final MSHCP Volume I. Prep. for County of Riverside, Transportation and Land Management Agency.



I:\PROJECTS\S\SLG\SLG-01_WildomarCommons\Map\BUOWRpt\Fig1_Regional.mxd SLG-01 9/12/2019 - SAB

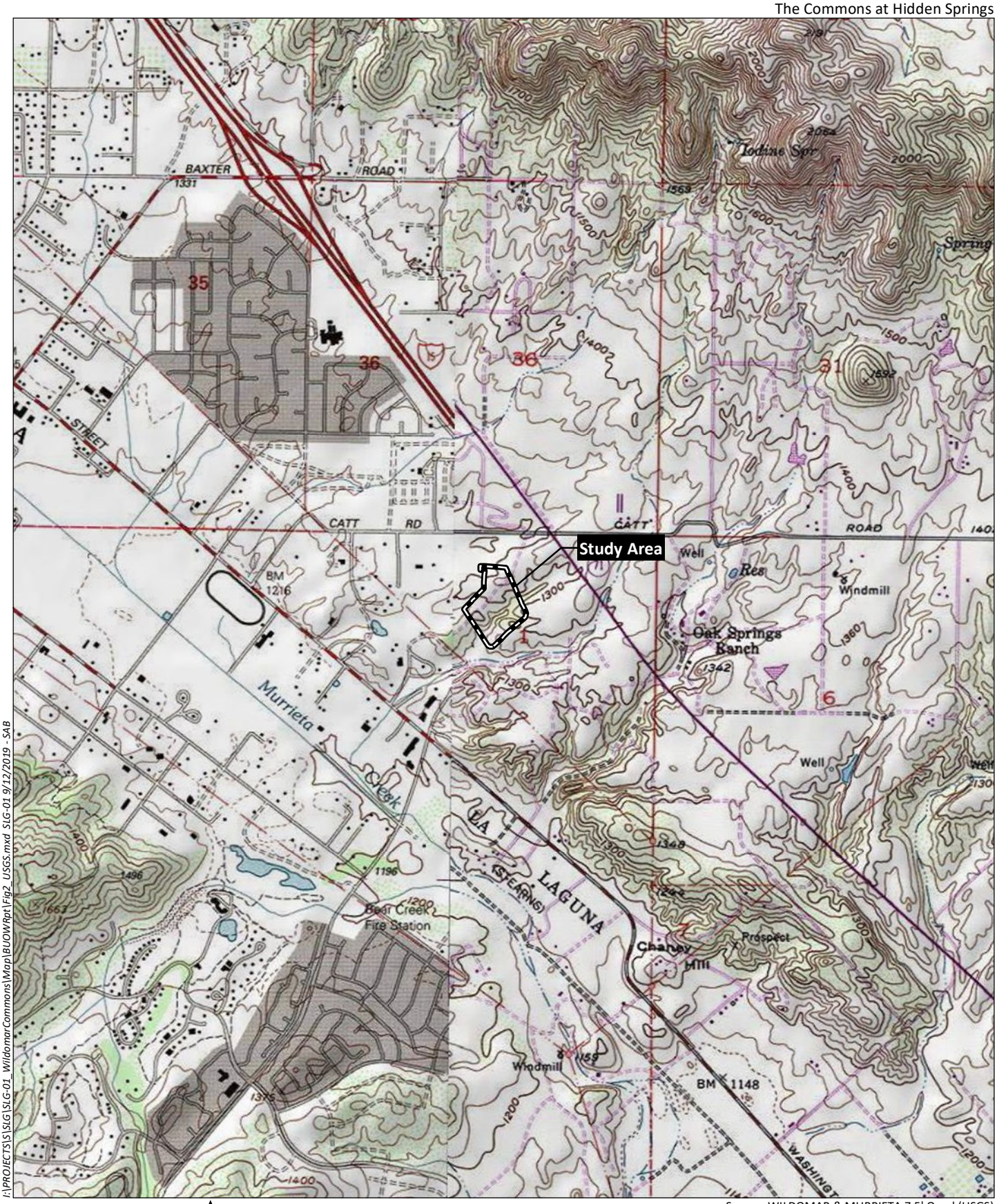
0 10 Miles

Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



I:\PROJECTS\S\SLG\SLG-01_WildomarCommons\Map\BUOWRpt\Fig2_USGS.mxd SLG-01 9/12/2019 - SAB

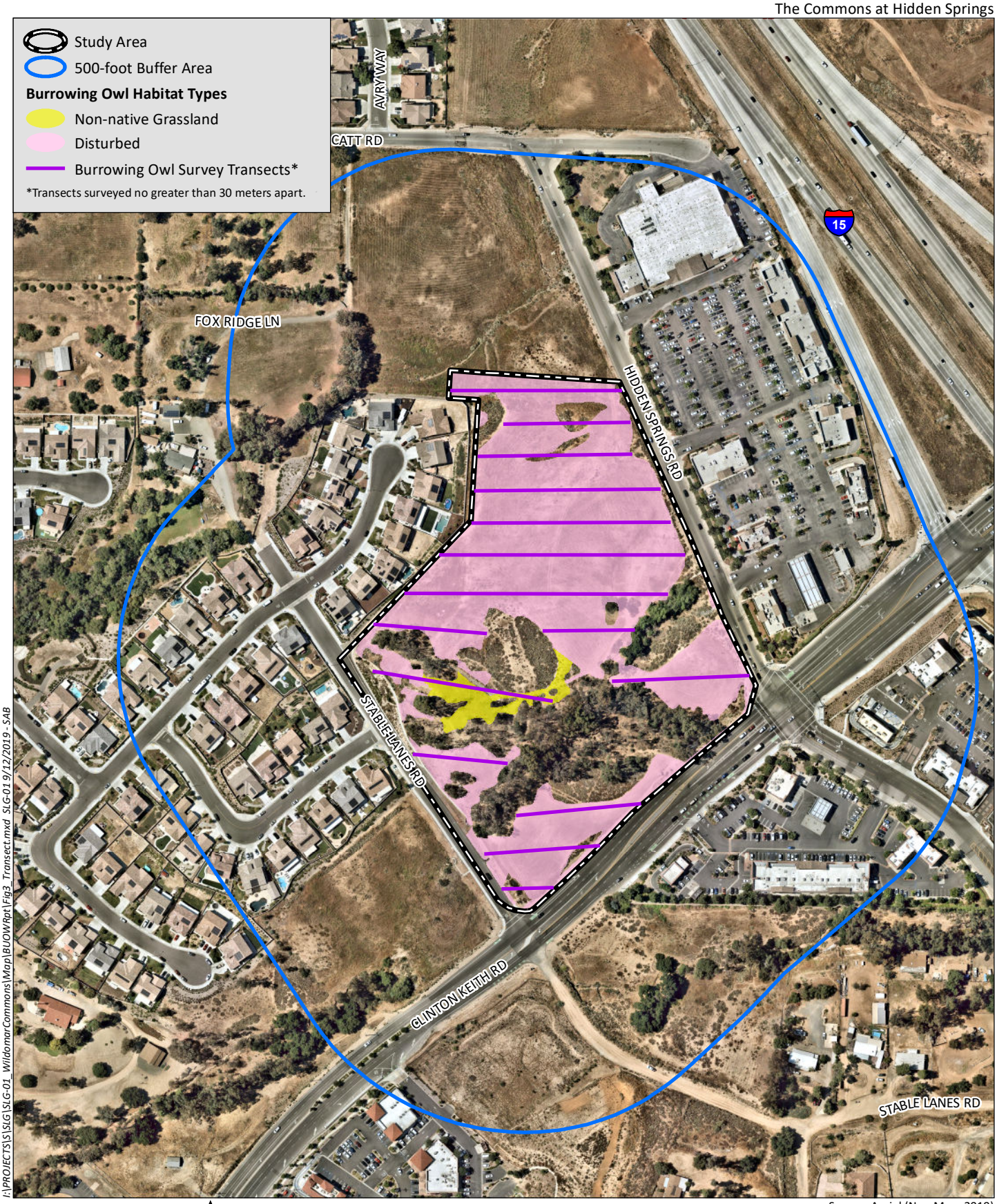
0 2,000 Feet

Source: WILDOMAR & MURRIETA 7.5' Quad (USGS)

HELIX Environmental Planning

Project Vicinity (USGS Topography)

Figure 2



I:\PROJECTS\S\SLG\SLG-01_WildomarCommons\Map\BUOWRpt\Fig3_Transect.mxd SLG-01 9/12/2019 - SAB

0 300 Feet

Source: Aerial (NearMap, 2019)

HELIX Environmental Planning

Survey Transects

Figure 3

HELIX Environmental Planning

Potential Burrowing Owl Burrows

Figure 4