APPENDIX 8.0

DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION ANALYSIS

HELIX Environmental Planning

The Commons at Hidden Springs Project

Determination of Biologically Equivalent or Superior Preservation - FINAL

February 03, 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

APN	Assessor's Parcel Number
BMP	Best Management Practices
BUOW	Burrowing Owl
CASSA	Criteria Area Species Survey Area
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Riverside
City	City of Wildomar
DBESP	Determination of Biologically Equivalent or Superior Preservation
Dudek	Dudek & Associates
GBRA	General Biological Resource Assessment
HELIX	HELIX Environmental Planning, Inc.
LBVI	least Bell's vireo
MSHCP	Multiple Species Habitat Conservation Plan
NEPSSA	Narrow Endemic Plant Species Survey Area
Project	The Commons at Hidden Springs
RWQCB	Regional Water Quality Control Board
USGS	U.S. Geologic Survey

Report Date:	February 03, 2020
Title:	Determination of Biologically Equivalent or Superior Preservation for The Commons at Hidden Springs Project
Project Location:	The approximately 15.15-acre study area is located to northwest of the intersection of Clinton Keith Road and Hidden Springs Road 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 includes the project site plus additional adjacent lands. The 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 species, vernal pools, or rare plants were observed on the study area. The study area does include Riparian/Riverine habitats.
Report Preparers:	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 to summarize our analysis of Somar Land Group, Inc (applicant) Commons at Hidden Springs project compliance with the Western Riverside county Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003). MSHCP 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 the habitat values for species inside the MSHCP Conservation Area are maintained.

For projects that propose impacts to Riparian/Riverine or vernal pool resources a Determination of Biologically Equivalent or Superior Preservation (DBESP) assessment must be completed to ensure that the proposed alternative provides for "replacement of any lost function and values of habitat as it relates to Covered Species." This DBESP analysis provides information necessary for the City to find that the project meets these objectives.

Biological surveys were conducted in 2019 and a general biological resource assessment (GBRA) report (HELIX 2020) was prepared for the project site. The information in this biological report was used to aid in preparation of this DBESP. This DBESP analysis provides information necessary for the City of Wildomar (City) to determine if the project meets the MSHCP conservation objectives. In addition, the applicant will coordinate with the CDFW and RWQCB to ensure compliance with applicable permitting requirements.

The project is not within a Narrow Endemic Plant Species Survey Area (NEPSSA) or a Criteria Area Species Survey Area (CASSA). No NEPSSA or CASSA species were observed in the study area. This DBESP only addresses impacts and mitigation related to Riparian/Riverine resources.

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 that encompass a subset of the study area and total approximately nine acres. The

approximate 15.5-acre study area includes APNs adjacent to the proposed project footprint 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 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 to 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 included a delineation of 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 potential 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.

Full details on the various surveys are included in the project's General Biological Resource Assessment report (HELIX 2020). This DBESP specifically addresses the Riparian/Riverine and Vernal Pool survey.

2.1 NOMENCLATURE AND LITERATURE REVIEW

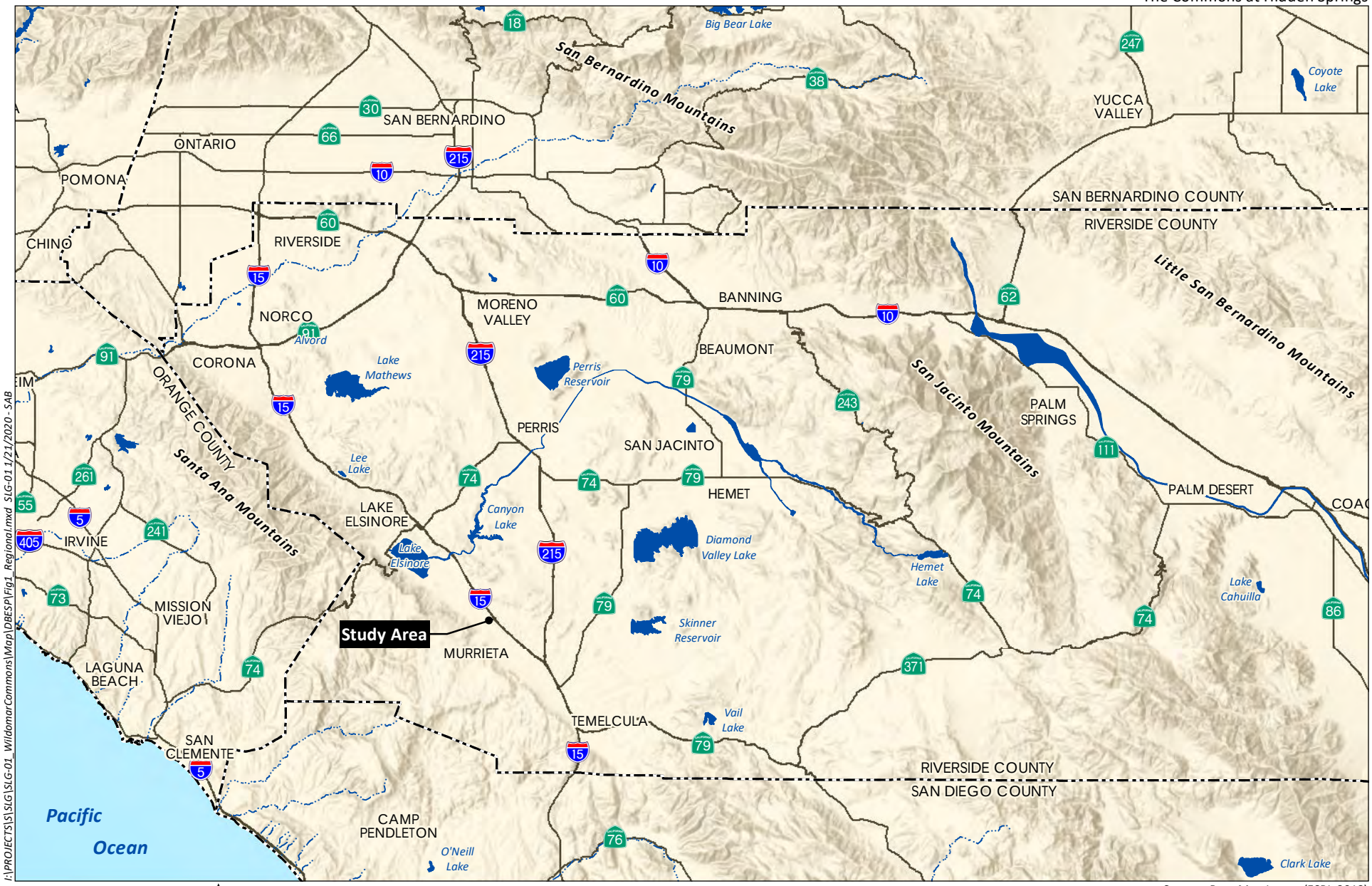
Nomenclature used in this report generally follows MSHCP conventions. Vegetation community classifications follow Holland (1986) and the MSHCP (Dudek 2003). Latin names of plants follow Baldwin et al. (2012), and common names follow the California Native Plant Society (CNPS; 2019). Sensitive plant and 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.

2.2 FIELD SURVEYS

2.2.1 Riparian/Riverine and Vernal Pool Habitat Assessment

Section 6.1.2 of the MSHCP defines Riparian/Riverine and Vernal Pool habitat as:

- Riparian/Riverine areas are lands that contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture



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Regional Location

Figure 1

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0 300 Feet

Source: Aerial (NearMap, 2019)

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Project Vicinity (Aerial Photograph)

Figure 2

Source: Pacific West Design (2019)

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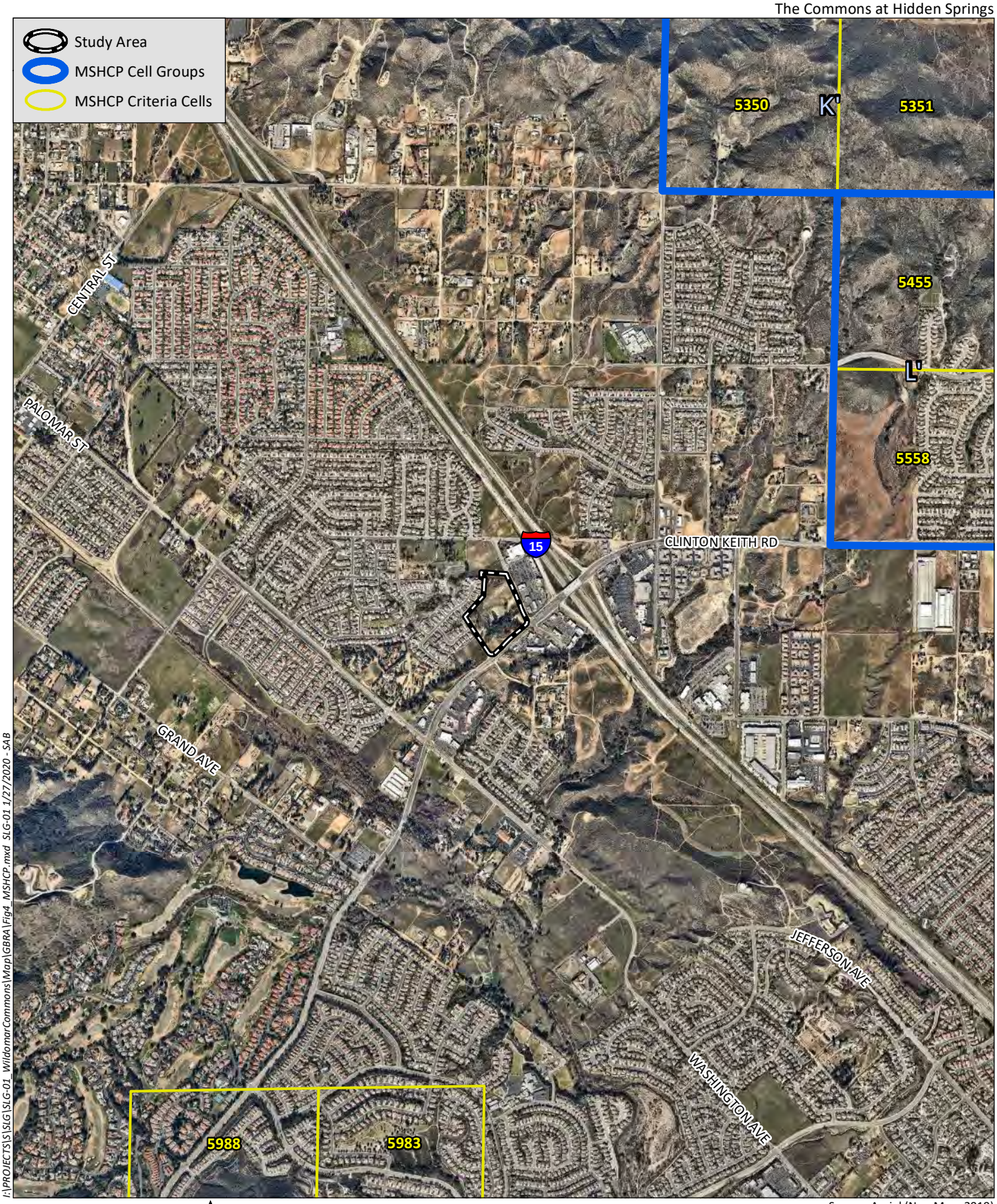
Site Plan

Figure 3



Source: Aerial (NearMap, 2019)

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MSHCP Criteria

Figure 4

from a nearby fresh water source, or areas with freshwater flow during all or a portion of the year.

- Vernal pools are seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology must be made on an individual basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, the uses to which the area has been subjected, and weather and hydrologic records.

A Riparian/Riverine and Vernal Pool habitat assessment was conducted by Mr. Hogenauer during site visits on August 8 and 29, 2019 (Table 1, *Riparian/Riverine Habitats*). 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 compensatory mitigation.

Note that Section 6.1.2 of 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.

The Riparian/Riverine habitat assessment identified a total of approximately 0.60 acre of Riparian/Riverside habitat in the study area. The habitat is comprised of 0.24 acre of streambed, 0.12 acre of oak woodland, and 0.24 acre of southern willow scrub (Table 1). 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 is small (0.24 acre) and of low quality. The habitat is regularly subject to human encampments located under the canopy of the southern willow scrub. The streambed includes only sparse vegetation mostly comprised of ruderal vegetation similar to the surrounding disturbed uplands. Vegetation cover in the streambed varies with an average cover of less than ten percent.

Table 1
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 within the study area is not associated with a stream and is, therefore, not included in the Riparian/Riverine 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 southern willow scrub and oak woodland. The functions and services of the reaches of the drainages are minimal, consisting of conveying minimal amounts of water, sediment trapping and transport, toxicant trapping, and nutrient trapping and transport. In addition, this drainage connection to downstream resources with the potential to support species shown in Section 6.1.2 of the MSHCP is limited to a sheet flow connection of over 300 feet.

2.2.1.1 Riparian/Riverine and Vernal Pool Plants

The MSHCP requires that all projects are assessed for potential to support sensitive plants associated with Riparian/Riverine and Vernal Pool habitats. The MSHCP lists 23 sensitive plant species that have potential to occur in Riparian/Riverine and Vernal Pool habitats. These species are:

- 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*),

Source: Aerial (NearMap, 2019)

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Riparian/Riverine

Figure 5

- 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*).

Based on the survey of the site conducted in August 2019, 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. Spreading navarretia were recorded in CNDDB within two miles 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 2019). 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 2019). This species has CNDDB records within two miles of the study area but was not observed in the study area 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 in the

study area 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.

2.2.1.2 Riparian Birds

Section 6.1.2 of the MSHCP list five sensitive bird species associated with Riparian/Riverine habitats. The species are bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Both the bald eagle and peregrine falcon occur primarily in and adjacent to open water habitats, with the falcon possibly occurring in riparian areas with nearby cliffs for nesting. The study area includes 0.24 acre of southern willow scrub. This habitat is of limited size, lacks an understory, and is disturbed from encampments under the canopy. This riparian habitat is not expected to support these riparian bird species. Additionally, these species were not heard or observed during the surveys conducted on the study area. The Riparian/Riverine assessment was conducted when least Bell's vireo (LBVI) would have been detectable.

2.2.1.3 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*). 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 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. No suitable habitat occurs within the study area for these species, and no focused surveys were conducted or are required.

2.2.1.4 Fish

The Santa Ana sucker (*Catostomus santaanae*) is the only fish included on the MSHCP Riparian/Riverine and Vernal Pool animal species list. The 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 and

with 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.

2.2.1.5 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.

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 and is ephemeral. 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.

Additionally, 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.

2.2.2 Narrow Endemic Plant Species Survey Area

The 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.

2.2.3 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.

3.0 RIPARIAN/RIVERINE IMPACTS

As described above, the emphasis of the MSHCP's Riparian/Riverine and vernal pool policy is on conservation of habitats capable of supporting MSHCP Covered Species. The goal of the DBESP process is to determine if the project has in fact provided for a project alternative that results in biologically equivalent or superior preservation. The priority for Riparian/Riverine habitats that have potential to contribute to the biological values of the MSHCP preserve is avoidance of direct impacts. Due to the rolling topography and small size of the site avoidance of impacts would result in a no project alternative.

Of the total 0.60 acre in the study area, proposed Riparian/Riverine impacts total 0.40 acre and are comprised of 0.24 acre southern willow scrub, 0.06 acre coast live oak woodland, and 0.10 acre unvegetated streambed (Table 2, *Impacts to MSHCP Riparian/Riverine Resources*).

Table 2
IMPACTS TO MSHCP RIPARIAN/RIVERINE RESOURCES

RIPARIAN/RIVERINE RESOURCES	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
Riverine			
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, with totals showing effects of rounding.

As noted above, plant and animal species associated with Riparian/Riverine and Vernal Pool habitats do not occur in the study area. None of the species covered under Section 6.1.2 occur in the study area as evident by a lack of potential habitat or where habitat occurs the species have not been observed.

The Riparian/Riverine habitats proposed to be impacted do not support Riparian/Riverine target species. The southern willow scrub is currently impacted from use as a homeless campsite which significantly reduces the habitat potential to support sensitive species and results in a removal of the understory. The functions of the Riverine streams in the study area are primarily water conveyance, sediment transport, and energy dissipation (hydrologic regime and flood attenuation). The southern willow scrub and oak woodland habitats provide all of the above along with providing habitat for nesting birds.

4.0 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

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

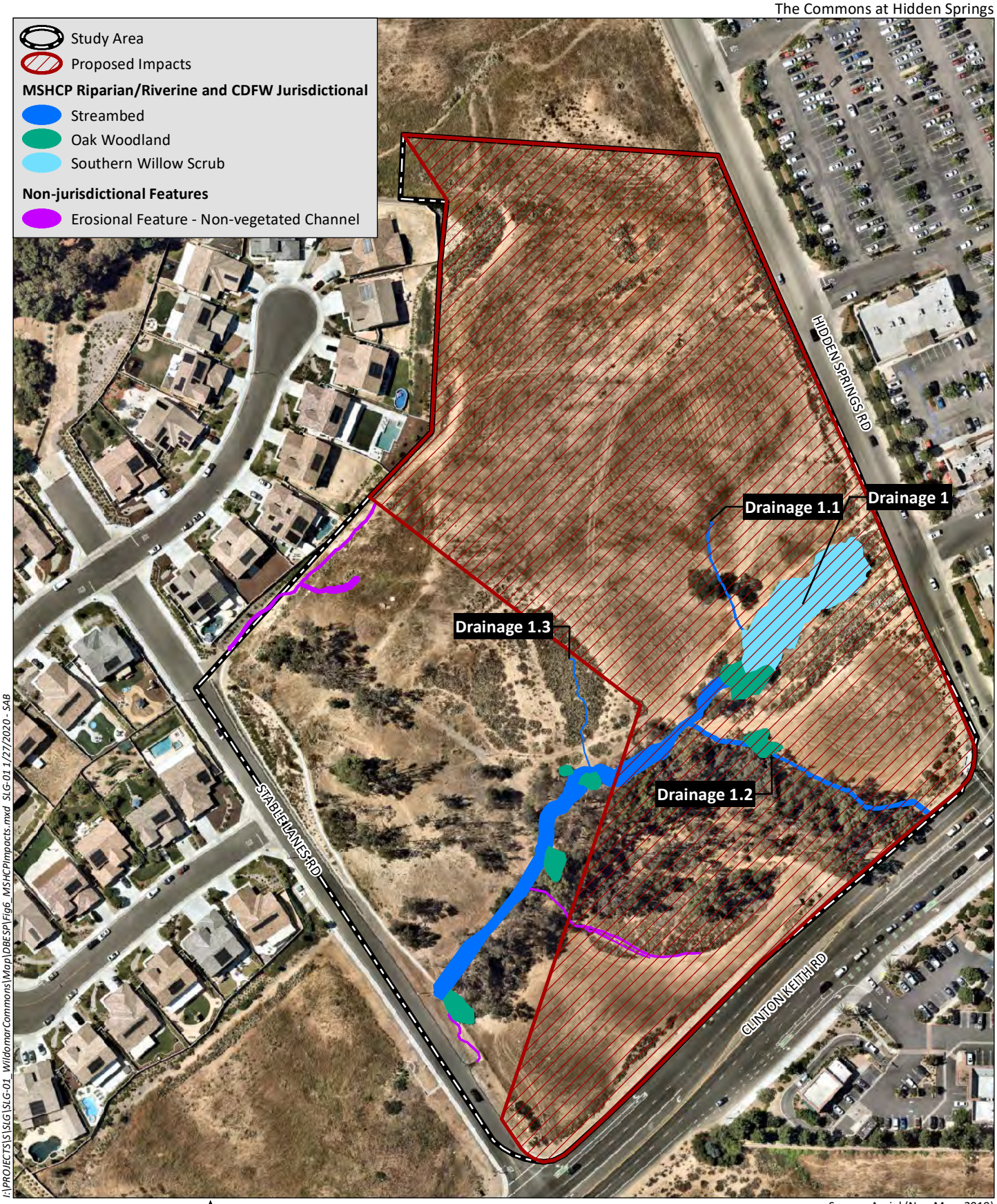
4.1 AVOIDANCE

MSHCP Section 6.1.2 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."

And that:

> "[f]or identified and mapped resources not necessary for inclusion in the MSHCP Conservation Area, applicable mitigation under CEQA, which may include federal and state regulatory standards related to wetland functions and values, will be imposed by the Permittees. To ensure that these standards are met, Permittees shall ensure that, through the CEQA process, project applicants develop project alternatives demonstrating efforts that first avoid, and then minimize



Source: Aerial (NearMap, 2019)

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Riparian/Riverine Impacts

Figure 6

direct and indirect effects to the mapped wetlands and shall review these alternatives with the Permittee. An avoidance alternative shall be selected, if feasible. If an avoidance alternative is selected, measures shall be incorporated into the project design to ensure the long-term conservation of the areas to be avoided.

If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to Riparian/Riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigated such that the lost functions and values as they relate to Covered Species are replaced as set forth below under the Determination of Biologically Equivalent or Superior Preservation."

The first priority for Riparian/Riverine habitats that have potential to contribute to MSHCP preserve biological values is avoidance of direct impacts. The study area and therefore the Riparian/Riverine resources are not within an MSHCP Conservation Area, however, the resources within the study area can contribute to downstream resources that are within the MSHCP Conservation Area. The connection to downstream resources is via sheet flow, and as such limits the value that the study area resource has to downstream resources.

The Riparian/Riverine resources in the Study Area are located at the bottom of the slopes present on the site. Complete avoidance of the Riparian/Riverine resources would result in a no-project alternative due to the topography present on the relatively small study area. As currently designed the project avoids impacts (0.20 acre of the total 0.60 acre) to the Riparian/Riverine resources that occur on the adjacent parcel.

4.2 MITIGATION

Mitigation measures that would result in equivalent or superior preservation of the functions and values of Riparian/Riverine resources impacted by the project are shown here.

Mitigation for impact to Riparian resources are proposed to be at a 3:1 ratio. Mitigation for impact to Riverine resources are proposed to be at a 2:1 ratio (Table 3, *Mitigation for Impacts to Riparian/Riverine Resources*). The mitigation is proposed to be via a Mitigation Bank or In Lieu Fee option. These options will provide for mitigation within a much broader conservation context with resources that will be of an equal or greater conservation value to the impacted southern willow scrub, coast live oak woodland, and streambed resources. The mitigation is proposed to occur at the Riverpark Mitigation Bank that provides re-establishment of alkali playa and vernal pool habitat which are two of the rarest habitat types in the MSHCP. Mitigation for impacts to Riparian/Riverine areas will be biologically equivalent to resources being impacted by the proposed project.

Table 3
MITIGATION FOR IMPACTS TO RIPARIAN/RIVERINE RESOURCES

Vegetation Type	Impacts*	Mitigation Ratio	Mitigation Required*
Coast live oak woodland	0.06	3:1	0.18
Southern willow scrub	0.24	3:1	0.72
Unvegetated Streambed	0.10	2:1	0.20
TOTAL	**0.40**		**1.10**

* acres

Mitigation measures to minimize impacts to waters include:

- Use of standard best management practices (BMPs) to minimize the impacts during construction;
- Storage of equipment in upland areas, outside of drainages except as required by project design (restoration, trash removal, etc.);
- Implementation of source control and treatment control BMPs to minimize the potential contaminants that are generated during and after construction. Source control BMPs include landscape planning, roof runoff controls, trash storage areas, use of alternative building materials, and education of future tenants and residents. Treatment control BMPs includes detention basins, vegetated swales (bio-swales), drain inlets, and vegetated buffers. Water quality BMPs will be implemented throughout the project to capture and treat contaminants.
- Keeping the project clean of debris to the extent possible to avoid attracting predators. All food-related trash items shall be enclosed in sealed containers and regularly removed from site.
- Strict limitation of employee activities, vehicles, equipment, and construction material to the proposed project footprint, staging areas, and designated routes of travel.
- Fencing construction limits with orange snow screen and maintenance of exclusion fencing until the completion of construction activities.

Consistency with MSHCP Section 6.1.4

The following measures will be implemented by the project to minimize the identified potential indirect impacts, including:

- All project runoff will be treated prior to exiting the site to reduce toxins.
- Detention basins proposed within the project footprint will ensure that there is no increase in flows from the project.
- No plants included on the California Exotic Pest Plant Council's list of invasive species (or in Table 6-2 of the MSHCP) will be used anywhere on the site, and only native species will be planted adjacent to open space areas. A list of prohibited species will be provided to homebuyers.

- The proposed project has been designed so that no additional take of conserved habitat, including Riparian/Riverine, will be necessary for fuel modification purposes.

- Manufactured slopes associated with the proposed site development will not extend into the MSHCP conservation area.

The above measures would serve to minimize the adverse effects of the project on conservation configuration and would minimize management challenges that can arise from development located adjacent to conserved habitat or that have potential to affect downstream conserved habitat.

5.0 CONCLUSION

The project is being implemented consistent with Section 6.1.2 of the MSHCP based on the following:

- No plant species targeted for conservation in Section 6.1.2 are known or expected to occur within the Riparian/Riverine areas proposed for impact.

- The project grading has been designed to avoid impacts to adjacent Riparian/Riverine resources.

- Edge effects (including lighting, noise, trash/debris, urban and stormwater run-off, toxic materials, exotic plant and animal infestation, dust, trampling, and unauthorized recreation) to the MSHCP conservation area shall be minimized by the measures described in Section 6.1.4 and by landscaping, elevation difference, minimization of effects, and compensatory mitigation.

- Compensatory mitigation for direct impacts to 0.40 acre will total 1.10 acres composed of off-site purchase of credits from an approved Mitigation Bank or In Lieu Fee program, or off-site habitat restoration. The credits will offset losses of riparian function and value.

- Based on this DBESP assessment, the project is consistent with Section 6.1.2.

6.0 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: February 03, 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 southern willow scrub looking north from south side of habitat.

Photo 2. View of homeless encamping impacting southern willow scrub resulting in a lack of understory.

Photo 3. View showing lack of understory in the southern willow scrub.

Photo 4. View of main drainage showing lack of native vegetation.

Photo 5. View of drainage 1.2 showing small size and lack of native vegetation.

Photo 6. View of location of barely visible drainage 1.3 hidden within sage scrub.