



INFORMATION SUMMARY

- A. Report Date: July 5th, 2017
- B. Report Title: General MSHCP Habitat Assessment, Regulatory Constraints, and MSHCP Consistency Approach for the 245.07-Acre Rancho Diamante Project Site, City of Hemet, California
- C. Case #: TTM 36841
- D. APNs#: 465-100-016, 465-100-022, 465-110-020, 021, 022, 023, and 027. Offsite – Portions of 465-120-019, and 021, 465-130-016 and 017, 465-100-031, and 033 (including northern reach of Hemet Channel).
- E. Project Location: Located immediately west of Warren Road, south of the Hemet Channel and east of the San Diego Aqueduct - Portions of the east ½ of Section 24, Township 5 South, Range 2 West, San Bernardino Base and Meridian, in the County of Riverside, California.
- F. Applicant: Benchmark Pacific
550 Laguna Drive, Suite B, Carlsbad, CA 92008
Contact: Richard Robotta (760) 450-0444
- G. MOU Principal: Cadre Environmental
701 Palomar Airport Road, Suite 300, Carlsbad, CA. 92011
Contact: Ruben S. Ramirez, Jr. (949) 300-0212
USFWS permit #TE780566-13, CDFW 002243
- H. Date of Surveys: July 21st, 22nd, 23rd, August 3rd, 4th, 5th, 6th, 18th, 19th, 20th, 25th, 26th, 28th, September 8th, 2015, February 19th, March 1st, April 17th, 21st, 26th May 6th, 22nd, June 15th 2016, March 7th, 16th, April 15th, 18th, May 11th, 12th, 18th, 25th, 26th, June 8th, 9th, 22nd, 23rd, 27th, 28th, 29th, and 30th, 2017.
- I. Summary: The 245.07-acre project site is dominated by agricultural lands (field croplands), seasonal depressions, Eucalyptus woodland, disturbed/herbaceous wetland, and a man-made urban-agricultural drainage ditch created along the southern boundary which extends west to an existing infiltration basin. A 16.70-acre offsite

assessment area is dominated by unvegetated streambed (Hemet Channel) and agricultural lands (field croplands) extending south from the southwest corner of the project site toward Simpson Road.

The project site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) San Jacinto Valley Area Plan, south of Proposed Noncontiguous Habitat Block 7 and Constrained Linkage B (Hemet Channel). A 62.75-acre portion of the project site is located within Criteria Cell 4007 and 20.23-acre portion is located within Criteria Cell 3892 (SU4 Hemet Vernal Pool Areas East).

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants, criteria area species, and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

A portion of the project site occurs within a predetermined Survey Area for narrow endemic and criteria area plant species. Initial MSHCP sensitive plant surveys were conducted within the eastern region of the project site in the spring of 2005 and 2006 (MBA 2007b). Updated sensitive plant surveys were initiated throughout the project site and offsite impact areas during the summer of 2015 and spring of 2016 and 2017. A single MSHCP sensitive plant, smooth tarplant (*Centromadia pungens* ssp. *laevis*), was documented along the offsite impact area which extends south from the southwest corner of the project site.

The project site does not occur within a predetermined Survey Area for amphibians or mammals (RCIP Conservation Summary Report Generator 2017).

The project site occurs completely within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*). Based on the presence of suitable habitat documented onsite during the habitat assessment and previous observations of foraging adults/nests within/adjacent to the project site in 2005 and 2006 by Michael Brandman Associates and CH2M Hill, updated surveys were conducted by Cadre Environmental during the summer of 2015. No burrowing owl or characteristic sign were detected within or

immediately adjacent to the project site during the 2015 and 2017 survey efforts. At a minimum, a 30-day preconstruction survey will be conducted immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If burrowing owls are detected onsite during the 30-day preconstruction survey, a burrowing owl relocation plan will be developed for the passive/active translocation of individuals to Regional Conservation Authority lands located north of the project site within Proposed Noncontiguous Habitat Block 7.

Marginal to low quality habitat for the least Bell's vireo (*Vireo bellii pusillus*) was documented within the southeast reach of the drainage ditch located adjacent to the southern project site boundary and Warren Road. No suitable breeding habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) was detected within or adjacent to the project site.

The man-made urban-agricultural drainage ditch, associated infiltration basin and Hemet Channel are subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) (Helix Environmental Planning, Inc. 2017). The features possess, unvegetated streambed, disturbed wetland, mule fat scrub, Tamarisk scrub, herbaceous wetland, and southern willow scrub vegetation communities. A portion of the man-made urban-agricultural drainage ditch, infiltration basin and Hemet Channel are also subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB) (Helix Environmental Planning, Inc. 2017). The Hemet Channel is also regulated by the Army Corps of Engineers (USACE) (Helix Environmental Planning, Inc. 2017).

Those areas designated as CDFW resources are also classified as Western Riverside County MSHCP Section 6.1.2 riparian and riverine resources. A MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) will be prepared to address all direct and/or indirect impacts to these resources.

A total of fourteen (14) seasonal depressions were delineated by Helix Environmental Planning, Inc. following a review of historical aerials from 2011 and 2017 rain events. The features were surveyed for sensitive fairy shrimp during the summer of 2015 (dry season) and winter/spring of 2015, 2016 and 2017 (wet season). The common versatile fairy shrimp (*Branchinecta lindahli*) was

documented within the project site in 2006 by MBA and again in 2016 and 2017 by Helix Environmental Planning, Inc. No federally listed species including the vernal pool fairy shrimp (*Branchinecta lynchi*) or Riverside Fairy shrimp (*Streptocephalus woottoni*) were detected during the dry or wet season sampling efforts (Helix Environmental Planning, Inc. 2016b). Helix Environmental Planning characterized the depressions as non-vernal pool/non-wetland depressions.

SUBJECT

General MSHCP Habitat Assessment, Regulatory Constraints, and MSHCP Consistency Approach for the 245.07-Acre Rancho Diamante Project Site, City of Hemet, California

This report presents the findings of a general biological habitat assessment and regulatory constraints analysis for the 245.07-acre project site “Project Site”, APN’s 465-100-016, 465-100-022, 465-110-020, 021, 022, 023, and 027. Offsite – Portions of 465-120-019, and 021, 465-130-016 and 017, 465-100-031, and 033 (including adjacent right-of-way centerline within Warren Road and northern reach of Hemet Channel). The purpose of this study, conducted by Cadre Environmental, is to document the existing biological resources, identify general vegetation types, and assess the potential biological impacts associated with the proposed development within the Project Site as outlined by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

The Project Site is located immediately west of Warren Road, south of the Hemet Channel and east of the San Diego Aqueduct in the City of Hemet, Riverside County, California as shown in Attachment A, *Regional Location Map*, and Attachment B, *Vicinity Map*. The Project Site is located on the U.S. Geological Survey (USGS) 7.5’ series Winchester Quadrangle, Township 5 South, Range 2 West, east ½ of Section 24.

The Project Site is located within the MSHCP San Jacinto Valley Area Plan. A 62.75-acre portion of the Project Site is located within Criteria Cell 4007 and 20.23-acre portion is located within Criteria Cell 3892 (SU4 Hemet Vernal Pool Areas East) as illustrated in Attachment C, *MSHCP Criteria Area & Photograph Key Map*.

This report incorporates the findings of an extensive literature review, compilation of existing documentation, field reconnaissance and initial results of updated focused surveys conducted on July 21st, 22nd, 23rd, August 3rd, 4th, 5th, 6th, 18th, 19th, 20th, 25th, 26th, 28th, September 8th, 2015, February 19th, March 1st, April 17th, 21st, 26th May 6th, 22nd, June 15th 2016, March 7th, 16th, April 15th, 18th, May 11th, 12th, 18th, 25th, 26th, June 8th, 9th, 22nd, 23rd, 27th, 28th, 29th, and 30th, 2017. This documentation is consistent with accepted scientific and technical standards, the requirements of the United States Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW). When appropriate, general biological resources are described in summary form in an effort to provide the reader with adequate background information. However, the report focuses on documenting those resources considered to be significant and/or sensitive as outlined by the California Environmental Quality Act (CEQA) and the Western Riverside County MSHCP.

A formal jurisdictional delineation and MSHCP riparian/riverine and vernal pool assessment was conducted in 2015-2017 by Helix Environmental Planning, Inc. The

following report provides a summary of topographic features, soils and habitats observed onsite that are subject to the United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act, CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the CDFW Code, the Santa Ana Regional Water Quality Control Board (RWQCB), and MSHCP jurisdiction pursuant to section 6.1.2 (MSHCP 2004).

Accordingly, this report provides an overview of potential USACE, RWQCB, CDFW, MSHCP riparian/riverine/vernal pool jurisdictional resources, habitat assessment for species that may require additional focused surveys as outlined by the MSHCP, and initial summary of compliance with MSHCP guidelines.

METHODS OF STUDY

Prior to visiting the Project Site, a review of all available and relevant data on the biological characteristics, sensitive habitats, and species potentially present on or adjacent to the Project Site was conducted. Additionally, aerial photography, and USGS topographic map were examined. After reviewing the available information, Cadre Environmental conducted a physical site assessment.

As required by the MSHCP, and during the initial property assessment process, all Project Site APN's were searched using the Conservation Report Summary Generator to determine if the property falls within a "Criteria Area" and if additional surveys for endemic plant species or wildlife not adequately covered by the MSHCP may be required.

During the initial survey, the Project Site's habitat was characterized, preliminary vegetative communities and primary topographic features potentially subject to MSHCP jurisdiction mapped, and the potential to support sensitive species as required by the guidelines of the MSHCP evaluated. Data, which contain digital images derived from aerial photography with orthographic projection properties, were used in conjunction with Cadre Environmental's in-house geographic information system (GIS) database as an important base layer to identify vegetation communities, drainage features, and USFWS designated critical habitat boundaries. Vegetation communities were then "ground-truthed" during field observations to obtain characteristic descriptions.

Literature Review

The study was initiated with a review of relevant literature and previous environmental documents describing the biological resources of the Project Site and vicinity. The MSHCP list of covered species potentially occurring onsite was also examined (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). In addition, federal register listings, protocols, and species data provided by USFWS were reviewed in conjunction with anticipated federally listed species potentially

occurring at the Project Site. The California Natural Diversity Database (CNDDDB),¹ a review of the California Native Plant Society sixth inventory (Tibor 2001), and Roberts et al. (2004) were also reviewed for pertinent information regarding the location of known occurrences of sensitive species in the vicinity of the property. In addition, numerous regional floral and faunal field guides were utilized in the identification of species and suitable habitats. Documents consulted regarding potential onsite biological conditions are listed in the references section at the end of this report.

Field Investigation

The Project Site was initially surveyed on July 21st 2015. The survey included complete coverage of the Project Site, with special attention focused toward sensitive species or those habitats potentially supporting sensitive flora or fauna that would be essential to efficiently implementing the terms and conditions of the Western Riverside County MSHCP, and drainage/depression features potentially subject to MSHCP jurisdiction. Aerial photography of the Project Site and vicinity was utilized to accurately locate and survey the property including offsite impact areas. General plant communities were preliminarily mapped directly on the aerial photo using visible landmarks in the field, which are depicted in Attachment D, *Biological Resources Map*. Representative photographs of the Project Site's natural resources were taken during the field survey as illustrated in Attachments E-G, *Current Project Site Photographs*.

Plant Community/Habitat Classification and Mapping

Plant communities were preliminarily mapped with the aid of an aerial photograph using the MSHCP uncollapsed vegetation communities classification system. When a vegetation community could not be accurately characterized using this classification system, an updated community classification code was developed to more accurately represent onsite habitat types.

General Plant Inventory

A general plant survey was conducted throughout the Project Site during the initial reconnaissance in a collective effort to identify all species occurring onsite.

All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy and nomenclatural changes follow Baldwin et al. (2012) or the Jepson Flora Project (2017). Common names used in this report generally follow Roberts et al. (2004) or Baldwin et al. (2012). Scientific names are included only at the first mention of a species; thereafter, common names alone are used.

¹ California Natural Diversity Data Base, Department of Fish and Wildlife. July 2015-July 2017. Natural Heritage Program: RareFind, Winchester Quadrangle.

General Wildlife Inventory

All animals identified during the reconnaissance survey by sight, call, tracks, scat, or other characteristic sign were recorded onto a 1:200 scale orthorectified color aerial photograph or documented using a global positioning system (GPS). In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

Vertebrate taxonomy followed in this report is according to the Center for North American Herpetology (2017 for amphibians and reptiles), the American Ornithologists' Union (1988 and supplemental) for birds, and Baker et al. (2003) for mammals. Both common and scientific names are used during the first mention of a species; common names only are used in the remainder of the text.

MSHCP Criteria Area and Narrow Endemic Plant Surveys

A portion of the Project site occurs within a predetermined MSHCP Survey Area for criteria area and narrow endemic plant species. Initial MSHCP sensitive plant surveys were conducted within the eastern region of the Project Site in the spring of 2005 and 2006 (MBA 2007b). Updated sensitive plant surveys were initiated throughout the Project Site and offsite impact areas during the summer of 2015, spring of 2016 and 2017.

The methodology and focus of the sensitive plant program is consistent with the MSHCP guidelines, but also conforms to scientific and technical standards listed by USFWS, California Native Plant Society (CNPS), and CDFW for sensitive plant species surveys. Field surveys were coordinated with the blooming periods of many reference populations in order to determine whether the target species were identifiable at the time of the survey and therefore aid detection on site.

MSHCP Burrowing Owl Surveys

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl (*Athene cunicularia*). Based on the presence of suitable habitat documented onsite during the habitat assessment and previous observations of foraging adults/nests within/adjacent to the Project Site in 2005 and 2006 by Michael Brandman Associates and CH2M Hill, updated surveys were conducted by Cadre Environmental during the summer of 2015 and spring/summer of 2017.

Surveys were conducted in accordance with the MSHCP Burrowing Owl Survey Instructions (County of Riverside 2006).

Regional Connectivity/Wildlife Movement Corridor Assessment

The analysis of wildlife movement corridors associated with the Project Site and its immediate vicinity is based on information compiled from literature, input from wildlife agency personnel, analysis of the aerial photograph, and direct observations made in the field during the site visit.

A literature review was conducted that included documents on island biogeography (studies of fragmented and isolated habitat “islands”), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in southern California were also reviewed. Use of field-verified digital aerial data, in conjunction with the GIS database, allowed proper identification of vegetation communities and drainage features. This information was crucial to assessing the relationship of the property to large open space areas in the immediate vicinity and was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated with the property and the immediate vicinity.

A review of MSHCP designated Habitat Blocks and Linkage Areas was also reviewed.

Jurisdictional Delineation and MSHCP Riparian/Riverine/Vernal Pool Assessment

A formal jurisdictional delineation and MSHCP riparian/riverine and vernal pool assessment was conducted from 2015-2017 by Helix Environmental Planning, Inc. (Helix Environmental Planning, Inc. 2017). All potential jurisdictional areas were assessed for the presence of definable channels, ordinary flow (Ordinary High Water Mark), soils and hydrology, and other indicators of waters of the United States and/or jurisdictional wetland vegetation. Suspected wetland habitats on the site were evaluated using the methodology set forth by the U.S. Army Corps of Engineers, 1987, *Wetland Delineation Manual*² and Regional Supplement³. Areas of topographic relief were also evaluated according to the criteria outlined by the California Department of Fish and Game, 2010, *A review of stream processes and forms in dryland watersheds*⁴, to determine the presence of a definable bed, bank, and channel, hydrology, indicators of periodic or intermittent flow (i.e., streambeds), riparian vegetation, and the presence of wildlife species that depend upon aquatic and riparian habitats. Lastly, historical

² U.S. Army Corps of Engineers. Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation_Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

³ U.S. Army Corps of Engineers (USACE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0). Eds. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: US Army Corps of Engineers, Engineer Research and Development Center, Environmental Laboratory. September.

⁴ Vyverberg, K. 2010. *A review of stream processes and forms in dryland watersheds*. Sacramento, CA: California Department of Fish and Game, Ecosystem Conservation Division. 32 pp. December.

aerials were reviewed to determine the location and extent of potential seasonal depressions throughout the site.

The Project Site was also assessed for resources regulated by the MSHCP Section 6.1.2 (riparian, riverine, vernal pool resources) by Helix Environmental Planning Inc., based on the following definitions. In accordance with the Riverside County Integrated Project definition (Section 6.1.2, Volume I, Final MSHCP):

- *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 from a nearby freshwater 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 a case-by-case 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, uses to which it has been subjected, and weather and hydrologic records.*

EXISTING CONDITIONS

The majority of the Project Site is characterized as flat highly disturbed active agricultural lands with elevations ranging from 1,495 feet above mean sea level (AMSL) and 1,507 feet AMSL. The Project Site is primarily characterized as agricultural lands (field croplands), seasonal depressions, Eucalyptus woodland, and disturbed/herbaceous wetland vegetation communities. A man-made urban-agricultural drainage ditch created along southern boundary extends west to an existing infiltration basin. A total of 14 seasonal depressions have also been delineated within the Project Site (Helix Environmental Planning, Inc. 2017). The majority of flat lowlands are currently being actively farmed (wheat production).

SOILS

The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the property as shown on Attachment H, *Soil Associations Map*:

- Ce – Chino silt loam, drained.
- Cf – Chino silt loam, drained, saline-alkali.
- Cg – Chino silt loam, drained, strongly saline-alkali.
- Ds2 – Domino fine sandy loam, eroded.
- Dt – Domino fine sandy loam, saline-alkali.
- **Dv – Domino silt loam, saline-alkali.**
- **Dw – Domino silt loam, strongly saline-alkali.**
- EnA – Exeter sandy loam, 0-2% slopes.
- EoB – Exeter sandy loam, slightly saline-alkali, 0-5% slopes.
- EpA – Exeter sandy loam, deep, 0-2% slopes.
- GoB – Grangeville loamy fine sand, drained, 0-4% slopes.
- GsB – Grangeville sandy loam, saline-alkali, 0-5% slopes.
- GyA – Greenfield sandy loam, 0-2% slopes.
- GyC2 – Greenfield sandy loam, 2-8% slopes, eroded.
- HcA – Hanford course sandy loam, 0-2% slopes.
- HcC – Hanford course sandy loam, 2-8% slopes.
- HgA – Hanford fine sandy loam, 0-2% slopes.
- PaA - Pachappa fine sandy loam, 0-2% slopes.
- PaC2 – Pachappa fine sandy loam, 2-8% slopes, eroded.
- **Tp2 – Traver loamy fine sand, eroded.**
- **Tr2 – Traver loamy fine sand, saline-alkali, eroded.**
- **Ts – Traver fine sandy loam, saline-alkali.**
- **Tt2 – Traver fine sandy loam, strongly saline-alkali, eroded.**
- **Wg – Willows silty clay, saline-alkali.**

Domino, Traver and Willows soil types (Bold) are classified as sensitive substrates considered important for the conservation of certain plant species and vernal pool resources in the region (MSHCP 2004). The soils documented onsite are characterized as extending the full range from non- to highly saline levels and as being poorly to well drained (drainage class).

PLANT COMMUNITY/HABITAT CLASSIFICATION

The following section provides general vegetation descriptions for habitat types documented within the Project Site. Representative distribution and photographs of these habitat types are illustrated in Attachment D, *Biological Resources Map* and Attachment E-G, *Current Project Site Photographs*. Acreage totals for a vegetation communities documented onsite are listed in Table 1. *Vegetation Communities Acreages*.

Table 1. Vegetation Communities Acreages

*Vegetation Type	Acreage (onsite)	Acres (offsite)	Acres (total)
Agriculture Land – Field Croplands	217.75	8.07	225.82
Seasonal Depressions	12.93	--	12.93
Unvegetated Streambed	6.57	6.34	12.91
Disturbed Wetland	3.42	--	3.42
Eucalyptus Woodland	2.94	--	2.94
Tamarisk Scrub	0.61	--	0.61
Mule Fat Scrub	0.48	--	0.48
Herbaceous Wetland	0.31	--	0.31
Southern Willow Scrub	0.06	--	0.06
Disturbed	0.00	2.29	2.29
TOTALS	245.07	16.70	261.77

*Source: Cadre Environmental 2015/Helix Environmental Planning Inc. 2017

Agricultural Land – Field Croplands (FC):

Most of the property consists of active agricultural land – field croplands, which is routinely disked as part of dry-land farming practices. At the time of investigation, most of the property was nearly devoid of vegetation, consisting of sparse, scattered non-native plants such as field bindweed (*Convolvulus arvensis*), cheeseweed (*Malva parviflora*), Russian thistle (*Salsola australis*), heliotrope (*Heliotropium curassavicum*), and Bermuda grass (*Cynodon dactylon*). A few native and non-native forbs were seen along dirt roads that cross the site and along Warren Road, including bur clover (*Medicago polymorpha*), stink-net (*Oncosiphon piluliferum*), Russian thistle, telegraph weed (*Heterotheca grandiflora*), puncture vine (*Tribulus terrestris*), and serrate-leaved saltbush (*Atriplex suberecta*). A total of fourteen (14) **Seasonal Depressions (SD)** are scattered throughout the field croplands and are dominated by the same plant species as described above. One of the seasonal depressions is represented by an existing infiltration basin as described below.

Eucalyptus Woodland (EW):

A few *Eucalyptus* gum trees (*Eucalyptus* sp.) grow in the central-eastern portion of the Project Site along Warren Road, which supports a sparse to dense understory of mostly exotic forbs and grasses. Non-native grasses and forbs observed include red brome (*Bromus madritensis* subsp. *rubens*), Russian thistle, field bindweed, Bermuda grass, hare barley (*Hordeum murinum* subsp. *leporinum*), burclover (*Medicago polymorpha*), and ripgut grass (*Bromus diandrus*). Mexican fan palm (*Washingtonia robusta*) is also planted on site.

Constructed Urban-Agricultural Drainage Ditch:

In 2007, an artificial ditch was constructed along the southern boundary of the Project Site to collect agricultural and expanding urban development runoff from adjacent properties. This constructed ditch now supports **Disturbed Wetland (DW)**, **Herbaceous Wetland (HW)**, **Mule Fat Scrub (MFS)**, **Southern Willow Scrub (SWS)**,

Tamarisk Scrub (TS) and Unvegetated Streambed (US) vegetation communities. The drainage ditch is dominated by facultative native and non-native species, including mule fat (*Baccharis salicifolia*), tamarisk (*Tamarix ramosissima*), and arroyo willow (*Salix lasiolepis*). Scattered Fremont cottonwood (*Populus fremontii*), Emory's baccharis (*Baccharis emoryi*), and black willow (*Salix gooddingii*) are also present. The understory vegetation is dominated by non-native forbs and grasses such as Spanish sunflower (*Pulicaria paludosa*), English plantain (*Plantago lanceolata*), tumbling pigweed (*Amaranthus albus*), curly dock (*Rumex crispus*), white sweet-clover (*Melilotus alba*), common purslane (*Portulaca oleracea*), rabbit-foot grass (*Polypogon monspeliensis*), and Bermuda grass. A few native forbs are also present within and along the outer edge of the ditch, including slender aster (*Aster subulatus* var. *ligulatus*), sand-bur (*Ambrosia acanthicarpa*), and western sunflower (*Helianthus annuus*).

Infiltration Basin:

An infiltration basin was also constructed in the southwestern portion of the Project Site to collect overflow runoff from the drainage ditch and adjacent farmlands. This shallow basin supports scattered clumps of tamarisk, and facultative weedy forb and grass species such as stink-net, heliotrope, Boccone's sand spurry (*Spergularia bocconeii*), common knotweed (*Polygonum arenastrum*), prickly lettuce (*Lactuca serriola*), Bermuda grass, Spanish sunflower, and English plantain. Vegetation communities documented within this infiltration basin include **Disturbed Wetland (DW), Unvegetated Streambed (US), Seasonal Depression (SD), and Tamarisk Scrub (TS)**.

WILDLIFE POPULATIONS

General wildlife species documented onsite or within the vicinity during the site visits and/or during previous surveys include but are not limited to western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferous*), rock dove (*Columba livia*), mourning dove (*Zenaidura macroura*), great horned owl (*Bubo virginianus*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), cliff swallow (*Petrochelidon pyrrhonota*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), blue grosbeak (*Passerina caerulea*), lark sparrow (*Chondestes grammacus*), Brewer's blackbird (*Euphagus cyanocephalus*), western meadowlark (*Sturnella neglecta*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*) house sparrow (*Passer domesticus*), and California ground squirrel (*Otospermophilus beecheyi*).

REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT

Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of

open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989, Bennett 1990). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed “demes”) linked together via a system of corridors is termed a “metapopulation.” The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population’s genetic variability is generally associated with an increase in a population’s health.

Corridors mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs. Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as “wildlife corridor”, “travel route”, “habitat linkage”, and “wildlife crossing” to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel Route: A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

Wildlife Corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or

isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

Wildlife Movement within the Project Site

The Project Site does not represent a regional wildlife movement corridor and provides extremely limited cover, food, and no natural unrestricted water courses that would facilitate regional wildlife movement onsite. The closest regional wildlife movement corridor is located approximately 3,500 ft. south of the Project Site within Salt Creek and immediately north within the Hemet Channel (Constrained Linkage B).

The Project Site is bordered by the San Diego Aqueduct along the western boundary and existing residential development and Warren Road along the eastern boundary. Hemet Channel is located adjacent to the northern boundary and is expected to be utilized for local and regional movement. As stated by MBA:

“This linkage provides habitat and movement for species from the Hemet area in the east, through the central region of the MSHCP Area, to Canyon Lake in the west. This Linkage is constrained by existing urban and agriculture along both the northern and southern edges of the Linkage.” (MBA 2007)

Potential edge effects to Constrained Linkage B (Hemet Channel) will be addressed by implementing all MSHCP Urban Wildlife Interface Guidelines as presented in the section Summary of Consistency with MSHCP Policies.

The Project Site is not located within a MSHCP designated core, extension of existing core, non-contiguous habitat block, constrained linkage, or linkage area.

SENSITIVE BIOLOGICAL RESOURCES

OVERVIEW OF CLASSIFICATIONS

The following discussion describes the plant and wildlife species present, or potentially present within the property boundaries, that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations, principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by either state or federal resource management agencies, or both, as threatened or endangered, under provisions of the state and federal Endangered Species Acts. Vulnerable or "at-risk" species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as "candidates" by the USFWS. CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California. These are described below.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFW, the USFWS, and special groups like the California Native Plant Society (CNPS) maintain watch lists of such resources. For the purpose of this assessment sources used to determine the sensitive status of biological resources are:

Plants: USFWS (2016), CDFW (2017c, 2017d), CNDDDB (2017a), and CNPS (Skinner and Pavlik 1994).

Wildlife: California Wildlife Habitat Relationships Database System (CWHRRS 1991), USFWS (2016), CDFW (2017b, 2017e), CNDDDB (2017a).

Habitats: CNDDDB (2017a).

Federal Protection and Classifications

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range..." Threatened species are defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined as follows in Section 3(18) of the FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification

as forms of a “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. Recently, the USFWS instituted changes in the listing status of former candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing at this time) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are henceforth to be considered Federal Species of Concern. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For purposes of this assessment, the following acronyms are used for federal status species:

FE	Federal Endangered
FT	Federal Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FC	Federal Candidate for Listing

State of California Protection and Classifications

California's Endangered Species Act (CESA) defines an endangered species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a threatened species as “...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “...a native species or subspecies of a bird, mammal, fish,

amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the federal ESA, CESA does not include listing provisions for invertebrate species.

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

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (“special” animals and plants) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management and U.S. Forest Service sensitive species, species considered to be declining or rare by the CNPS or National Audubon Society, and a selection of species which are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFW’s CNDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites. For the purposes of this assessment, the following acronyms are used for state status species:

SE	State Endangered
ST	State Threatened
SCE	State Candidate Endangered
SCT	State Candidate Threatened
SFP	State Fully Protected
SP	State Protected

SR	State Rare
SSC	California Species of Special Concern

California Native Plant Society

The California Native Plant Society is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the State. This organization has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW. The CNPS has developed five categories of rarity (California Rare Plant Rank (CRPR):

CRPR 1A	Presumed extinct in California.
CRPR 1B	Rare, threatened, or endangered in California and elsewhere.
CRPR 2	Rare, threatened, or endangered in California, but more common elsewhere.
CRPR 3	Plants about which we need more information – a review list.
CRPR 4	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

As stated by the CNPS:

“Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.” (CNPS 2012, <http://www.rareplants.cnps.org/>)

0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
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POTENTIALLY SENSITIVE SPECIES/RESOURCES

Determinations of MSHCP sensitive species that could potentially occur on the Project Site are based on one or both of the following: (1) a record reported in the CNDDDB or CNPS inventory and; (2) the Project Site is within the known distribution of a species and contains suitable habitat or species documented onsite.

Sensitive Plant Communities

As stated by CDFW:

“One purpose of the vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Ranking of alliances according to their degree of imperilment (as measured by rarity, trends, and threats) follows NatureServe’s Heritage Methodology, in which all alliances are listed with a G (global) and S (state) rank. For alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled” (CDFW 2012)

No sensitive vegetation communities were documented onsite.

Sensitive Plant Species

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants and/or criteria area species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

Portions of the Project Site occur within a predetermined Survey Area for six (6) MSHCP narrow endemic (ne) and nine (9) criteria area (ca) plant species as outlined below.

- California Orcutt grass (*Orcuttia californica*) (ne), FE, SE, CRPR 1B.1
- Coulter’s goldfields (*Lasthenia glabrata* ssp. *coulteri*) (ca), CRPR 1B.1
- Davidson’s saltscale (*Atriplex serenana* var. *davidsonii*) (ca), CRPR 1B.2
- Little mousetail (*Myosurus minimus* ssp. *apus*) (ca), CRPR 3.1
- Many-stemmed dudleya (*Dudleya multicaulis*) (ne), CRPR 1B.2

- Mud nama (*Nama stenocarpum*) (ca), CRPR 2.2
- Munz's onion (*Allium munzii*) (ne), FE, ST, CRPR 1B.1
- Parish's brittlebush (*Atriplex parishii*) (ca), CRPR 1B.1
- Round-leaved filaree (*California macrophyllum*) (ca), CRPR 1B.1
- San Diego Ambrosia (*Ambrosia pumila*) (ne), FE, CRPR 1B.1
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*) (ca), FE, CRPR 1B.1
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*) (ca), CRPR 1B.1
- Spreading navarretia (*Navarretia fossalis*) (ne), FT, CRPR 1B.1
- Thread-leaved brodiaea (*Brodiaea filifolia*) (ca), FT, SE, CRPR 1B.1
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) (ne), CRPR 2.1

Initial MSHCP sensitive plant surveys were conducted within the eastern region of the Project Site in spring 2005. Updated sensitive plant surveys were initiated throughout the Project Site during the summer of 2015 and spring of 2016 and 2017 by Cadre Environmental. A single MSHCP sensitive plant, smooth tarplant (*Centromadia pungens* ssp. *laevis*), was documented along the offsite impact area which extends south from the southwest corner of the Project Site as shown in Attachment D, *Biological Resources Map*. A total of 191 plants were documented within this offsite impact area.

Oak Tree and Plant Protection and Management

No oak trees were documented within or adjacent to the Project Site.

Sensitive Wildlife Species

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for criteria area species and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined "Survey Area" (MSHCP 2004).

The Project Site does not occur within a predetermined Survey Area for amphibians or mammals (RCIP Conservation Summary Report Generator 2017).

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl - SSC. Based on the presence of suitable habitat documented onsite during the habitat assessment and previous observations of foraging adults/nest located within and adjacent to the Project Site during 2005 and 2006 surveys conducted by Michael Brandman Associates and CH2M Hill, updated surveys were conducted by Cadre Environmental during the summer of 2015 and spring/summer of 2017. No

burrowing owl or characteristic sign were detected within or immediately adjacent to the Project Site during the 2015 or 2017 survey efforts.

Marginal to low quality habitat for the least Bell's vireo (*Vireo bellii pusillus*), FE/SE was documented within the southeast reach of the man-made urban-agricultural drainage ditch located adjacent to the southern Project Site boundary (southern willow and mule fat scrub). No suitable breeding habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) FE/SE or western yellow-billed cuckoo (*Coccyzus americanus*) FT/SE was detected within or adjacent to the Project Site.

Sensitive species covered by the MSHCP and documented onsite during previous or updated survey efforts include (MBA 2007, Cadre Environmental 2015):

- white tailed kite (*Elanus leucurus*) - SFP
- loggerhead shrike (*Lanius ludovicianus*) - SSC
- California horned lark (*Eremophila alpestris actia*) - SSC

Jurisdictional Resources

The man-made urban-agricultural drainage ditch, associated infiltration basin and Hemet Channel are subject to the jurisdiction of the CDFW (Helix Environmental Planning, Inc. 2017). The features possess, unvegetated streambed, disturbed wetland, mule fat scrub, Tamarisk scrub, herbaceous wetland, and southern willow scrub vegetation communities. A portion of the man-made urban-agricultural drainage ditch, infiltration basin and Hemet Channel are also subject to the jurisdiction of the RWQCB (Helix Environmental Planning, Inc. 2017). The Hemet Channel is also regulated by the USACE (Helix Environmental Planning, Inc. 2017).

A formal jurisdictional delineation has been conducted and documentation will be presented in a separate report. Prior to issuance of a grading permit, the project applicant will obtain a 1602 SAA from CDFW and a WDR permit issued by the USACE pursuant to the California Water Code Section 13260, as warranted.

MSHCP Riparian, Riverine, Vernal Pool Resources

Those areas designated as CDFW regulated resources are also classified as Riverside County MSHCP Section 6.1.2 riparian and riverine resources. Specifically, all vegetation communities and unvegetated streambeds associated with the man-made urban-agricultural drainage ditch, infiltration basin, and Hemet Channel are subject to the jurisdiction of the Riverside County MSHCP (section 6.1.2) as shown in Attachment I, *MSHCP Riparian, Riverine, Vernal Pool Resources Map*.

No vernal pools were documented onsite. As stated by Helix Environmental Planning Inc.:

“The vegetation observed within the non-jurisdictional features is characteristic of disked dry-farmed agricultural areas and disturbed or ruderal habitats in uplands. Wheat and other non-native grasses are the dominant species throughout the site, which are UPL, FACU, or species without a wetland indicator status. Some of the features exhibited a higher percent cover by salt heliotrope, which is also a FACU species. No vernal pool indicator plant species were observed. Based on the data reviewed, none of the non-jurisdictional features support vegetation indicative of wetlands, vernal pools, or areas that remain inundated or saturated for sufficient periods of time to support water and wetland resources.” (Helix Environmental Planning Inc. 2017)

SUMMARY OF CONSISTENCY WITH MSHCP POLICIES

The purpose of this report is to document the existing biological resources, identify general vegetation types, and assess the potential biological and regulatory constraints associated with the proposed development within the Project Site as outlined by the Western Riverside County MSHCP. Specifically, the report is intended to assist the City of Hemet, Regional Conservation Authority (RCA) and MSHCP wildlife regulatory agencies during the review of the updated Habitat Evaluation and Acquisition Negotiation Strategy (HANS) determination and MSHCP Consistency Analysis. The following sections summarize the Project Site’s relationship to MSHCP Criteria Cells and MSHCP compliance guidelines.

CRITERIA AREAS

The Project Site is located within the Western Riverside County MSHCP San Jacinto Valley Area Plan. A 62.75-acre portion of the project is located within Criteria Cell 4007 and 20.23-acre portion is located within Criteria Cell 3892 (SU4 Hemet Vernal Pool Areas East) as illustrated in Attachment C, *MSHCP Criteria Area & Photograph Key Map*.

Criteria Cell 3892 - SU4 Hemet Vernal Pool Areas East

As stated by the MSHCP:

“Conservation within this Cell will contribute to assembly of Proposed Noncontiguous Habitat Block 7. Conservation within this Cell will focus on playas/vernal pool habitat and agricultural land. Areas conserved within this Cell will be connected to playas/vernal pool habitat proposed for conservation in Cell Group D’ to the north and in Cell #3891 to the west. Conservation within this Cell will range from 75%-85% of the Cell focusing in the northwestern portion of the Cell.” (MSHCP 2004)

A 20.23-acre portion of the Project Site is located within the extreme southeastern region of Criteria Cell 3892. The southeastern region of Criteria Cell 3892 (where no

conservation is identified) is separated hydrologically from the northwestern portion of the Cell (Proposed Noncontiguous Habitat Block 7) by the Hemet Channel (Constrained Linkage B).

No conservation within Criteria Cell 3892 is proposed or identified by the MSHCP criteria for the region located within the Project Site. The project is consistent with conservation goals identified for Criteria Cell 3892 – SU4 Hemet Vernal Pool Areas East.

Criteria Cell 4007 - SU4 Hemet Vernal Pool Areas East

As stated by the MSHCP:

“Conservation within this Cell will contribute to assembly of Proposed Noncontiguous Habitat Block 7. Conservation within this Cell will focus on playas/vernal pool habitat. Areas conserved within this Cell will be connected to playas/vernal pool habitat proposed for conservation in Cell #3891 to the north and in Cell #4007 in the Harvest Valley/Winchester Area Plan to the west. Conservation within this Cell will be approximately 5% of the Cell focusing in the northern portion of the Cell.” (MSHCP 2004)

A 62.75-acre portion of the Project Site is located within the southeastern region of Criteria Cell 4007. The southeastern region of Criteria Cell 4007 (where no conservation is identified) is separated hydrologically from the northern portion of the Cell (Proposed Noncontiguous Habitat Block 7) where conservation is identified.

No conservation within Criteria Cell 4007 is proposed or identified by the MSHCP criteria for the region located within the Project Site. The project is consistent with conservation goals identified for Criteria Cell 4007 – SU4 Hemet Vernal Pool Areas East.

The following outline summarizes the MSHCP conservation goals respective of MSHCP regulated resources documented onsite.

CRITERIA AREA SPECIES SURVEY AREA

The Project Site occurs within a predetermined Survey Area for nine (9) criteria area plant species. Initial MSHCP sensitive plant surveys were conducted within the eastern region of the Project Site in the spring of 2005 (Michael Brandman Associates 2007a). Updated sensitive plant surveys were initiated throughout the Project Site during the summer of 2015 and spring and summer of 2016 and 2017 by Cadre Environmental. A single MSHCP sensitive plant, smooth tarplant, was documented along the offsite impact area which extends south from the southwest corner of the Project Site. A total of 191 plants were documented within this offsite impact area.

The limited distribution of this species documented within the offsite impact area is not expected to have long-term conservation value and no additional mitigation obligations specific to this species is expected.

The project is consistent with MSHCP Section 6.3.2.

NARROW ENDEMIC PLANT SPECIES SURVEY AREA

The Project Site occurs within a predetermined Survey Area for six (6) narrow endemic plant species. Initial MSHCP sensitive plant surveys were conducted within the eastern region of the Project Site in the spring of 2005 (Michael Brandman Associates 2007a). Updated sensitive plant surveys were initiated throughout the Project Site during the summer of 2015 and spring of 2016 by Cadre Environmental. No MSHCP narrow endemic sensitive plant species were detected onsite during the initial or focused 2015 – 2017 survey efforts.

The project is consistent with MSHCP Section 6.3.2.

AMPHIBIAN SPECIES SURVEY AREA

The Project Site is not located within the Amphibian Species Survey Area; therefore, no surveys were required (RCIP Conservation Summary Report Generator 2017).

The project is consistent with MSHCP Section 6.3.2.

MAMMAL SPECIES SURVEY AREA

The Project Site is not located within the Mammal Species Survey Area; therefore, no surveys were required (RCIP Conservation Summary Report Generator 2017).

The project is consistent with MSHCP Section 6.3.2.

BURROWING OWL SURVEY AREA

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl - SSC. Based on the presence of suitable habitat documented onsite during the habitat assessment and previous observations of foraging adults/nest located within and adjacent to the Project Site during 2005 and 2006 surveys conducted by Michael Brandman Associates and CH2M Hill, updated surveys were conducted by Cadre Environmental during the summer of 2015 and spring/summer of 2017. No burrowing owl or characteristic sign were detected within or immediately adjacent to the Project Site during the 2015 or 2017 survey efforts.

At a minimum, a MSHCP 30-day preconstruction survey will be conducted immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If burrowing owls are detected onsite during the 30-day preconstruction survey, a burrowing owl relocation plan will be

developed for the passive/active translocation of individuals to RCA conserved lands located north of the Project Site within Proposed Noncontiguous Habitat Block 7.

The project is consistent with MSHCP Section 6.3.2.

RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

Those areas designated as CDFW regulated resources are also classified as Riverside County MSHCP Section 6.1.2 riparian and riverine resources. All vegetation communities and unvegetated streambeds associated with the man-made urban-agricultural drainage ditch, infiltration basin and Hemet Channel are subject to the jurisdiction of the Riverside County MSHCP (section 6.1.2) as shown in Attachment I, *MSHCP Riparian, Riverine, Vernal Pool Resources Map*.

No vernal pools were documented within the Project Site. As stated by Helix Environmental Planning Inc.:

“The vegetation observed within the non-jurisdictional features is characteristic of disked dry-farmed agricultural areas and disturbed or ruderal habitats in uplands. Wheat and other non-native grasses are the dominant species throughout the site, which are UPL, FACU, or species without a wetland indicator status. Some of the features exhibited a higher percent cover by salt heliotrope, which is also a FACU species. No vernal pool indicator plant species were observed. Based on the data reviewed, none of the non-jurisdictional features support vegetation indicative of wetlands, vernal pools, or areas that remain inundated or saturated for sufficient periods of time to support water and wetland resources.” (Helix Environmental Planning Inc. 2017)

No federally listed species including the vernal pool FT or Riverside fairy shrimp FE were detected within the features (seasonal depressions) during USFWS protocol dry and wet season sampling surveys (Helix Environmental Planning, Inc 2016a/b, 2017).

Marginal to low quality habitat for the least Bell’s vireo FE/SE was documented within the southeast reach of the man-made urban-agricultural drainage ditch located adjacent to the southern Project Site boundary (southern willow and mule fat scrub). No suitable breeding habitat for the southwestern willow flycatcher FE/SE or western yellow-billed cuckoo FT/SE was detected within or adjacent to the Project Site.

A MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP) will be prepared to address all direct and/or indirect impacts to the MSHCP section 6.1.2 riparian and riverine resources.

The project will be consistent with MSHCP Section 6.1.2 following the submittal, review and approval of the DBESP by the City of Hemet, RCA and wildlife agencies (USFWS and CDFW).

URBAN/WILDLANDS INTERFACE

The guidelines pertaining to the Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. Although the Project Site is not located adjacent to an existing MSHCP Conservation Area, final project design will be developed to ensure best management practices incorporated into the proposed project address and minimize edge effects associated with the Urban/Wildlands Interface of open space and future/existing conserved lands located north of the property within Proposed Noncontiguous Habitat Block 7, Criteria Cell 3892, Criteria Cell 4007, and the Hemet Channel (Constrained Linkage B).

Drainage

The project will comply with all applicable water quality regulations, including obtaining and complying with those conditions established in Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permits. Both of these permits include the treatment of all surface runoff from paved and developed areas, the implementation of applicable Best Management Practices (BMPs) during construction activities and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course or offsite conservation areas.

Toxics

Storm water treatment systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that might degrade or harm biological or aquatic resources. Toxic sources within the project site would be limited to those commonly associated with residential, commercial and mixed use development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. In order to mitigate the potential effects of these toxics, the project will incorporate structural BMPs, as required in association with compliance with WDRs and the NPDES permit system, in order to reduce the level of toxins introduced into the drainage system and the surrounding areas.

Lightings

Night lighting associated with the proposed development that is adjacent to the open space areas north of the Project Site would be directed away to reduce potential indirect impacts to wildlife species. In addition, shielding shall be incorporated into the project

design, as appropriate, in order to ensure that ambient lighting adjacent to the proposed open space areas is not increased.

Noise

Because the proposed project development will not result in noise levels that exceed residential, commercial or mixed use noise standards established for Riverside County, wildlife within open space habitats will not be subject to noise that exceeds these established standards. Short-term construction-related noise impacts will be reduced by the implementation of the following:

- During all project site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project Site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the Project Site during all project construction.
- The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by City staff.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

Invasives

The landscape plans for the residential development and parks shall avoid the use of invasive species for the portions of the development areas adjacent to the open space areas north of the Project Site. Invasive plants that should be avoided are included in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*.

Barriers

Where appropriate, barriers will be incorporated into the final project design to reduce or minimize unauthorized public access, and impacts to open space and protected resources north of the Project Site.

Grading/Land Development

No manufactured slopes will extend into the open space or conserved lands located north of the Project Site including the Hemet Channel and/or Proposed Noncontiguous Habitat Block 7.

Although the Project Site is not located adjacent to an existing conservation area, the above measures would serve to minimize adverse project effects north of the property based on future MSHCP conservation configurations and would minimize management challenges that can arise during development located adjacent to conserved habitat, as warranted. The project design and best management practices incorporated into the proposed project will address and minimize edge effects associated with the Urban/Wildlands interface.

The project is consistent with MSHCP Section 6.1.4.

FUELS MANAGEMENT

The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. Although the Project Site is not located adjacent to an existing MSHCP Conservation Area, the final project design will ensure that no fuel modification will extend north of the Project Site boundary into the Hemet Channel and/or Proposed Noncontiguous Habitat Block 7.

The project is consistent with MSHCP Section 6.4.

REFERENCES

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ATTACHMENTS

A – Regional Location Map

B – Vicinity Map

C – MSHCP Criteria Area and Photograph Key Map

D – Biological Resources Map

E – Current Project Site Photographs

F – Current Project Site Photographs

G – Current Project Site Photographs

H – Soil Associations Map

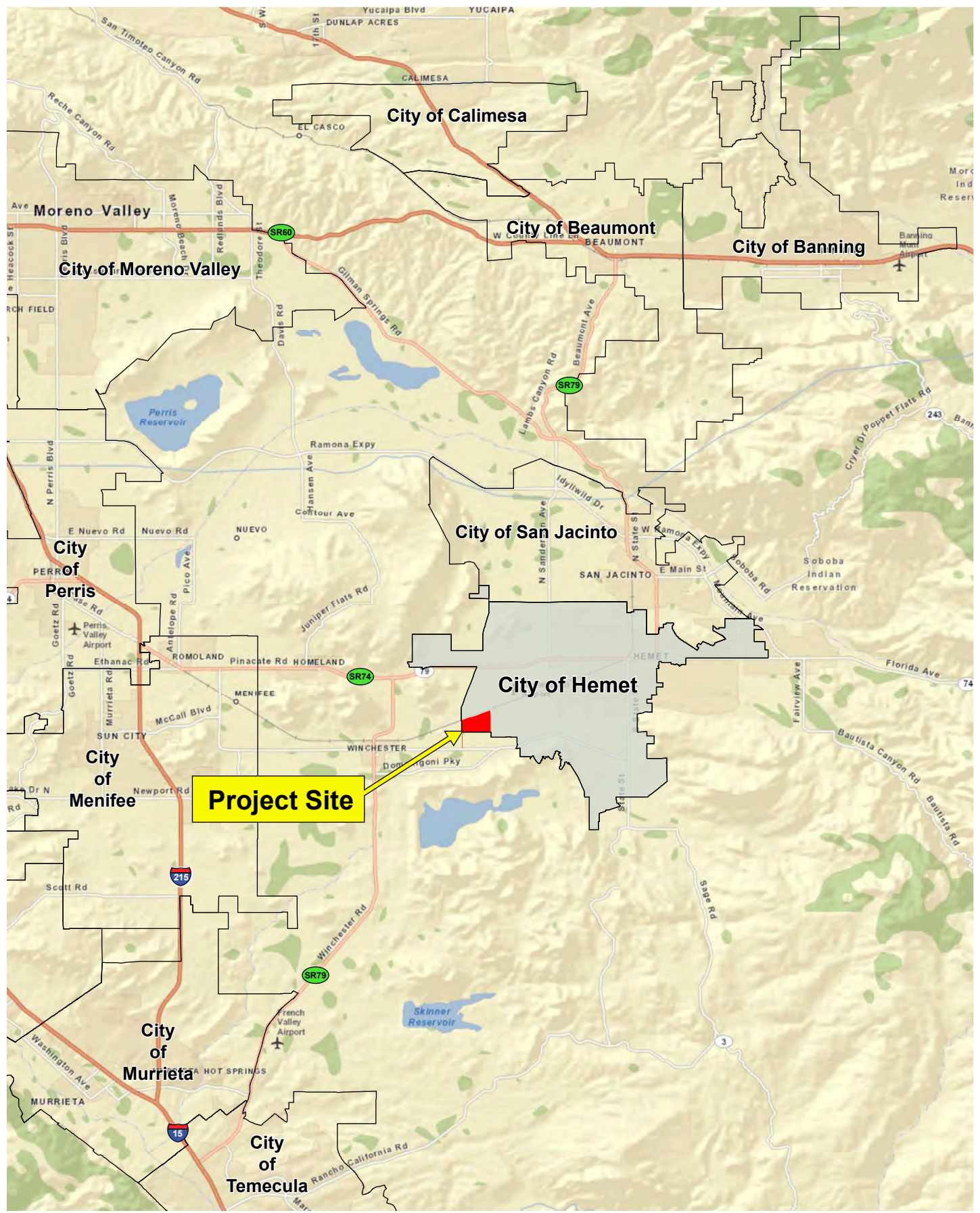
I – MSHCP Riparian, Riverine, Vernal Pool Resources Map

Certification

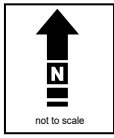
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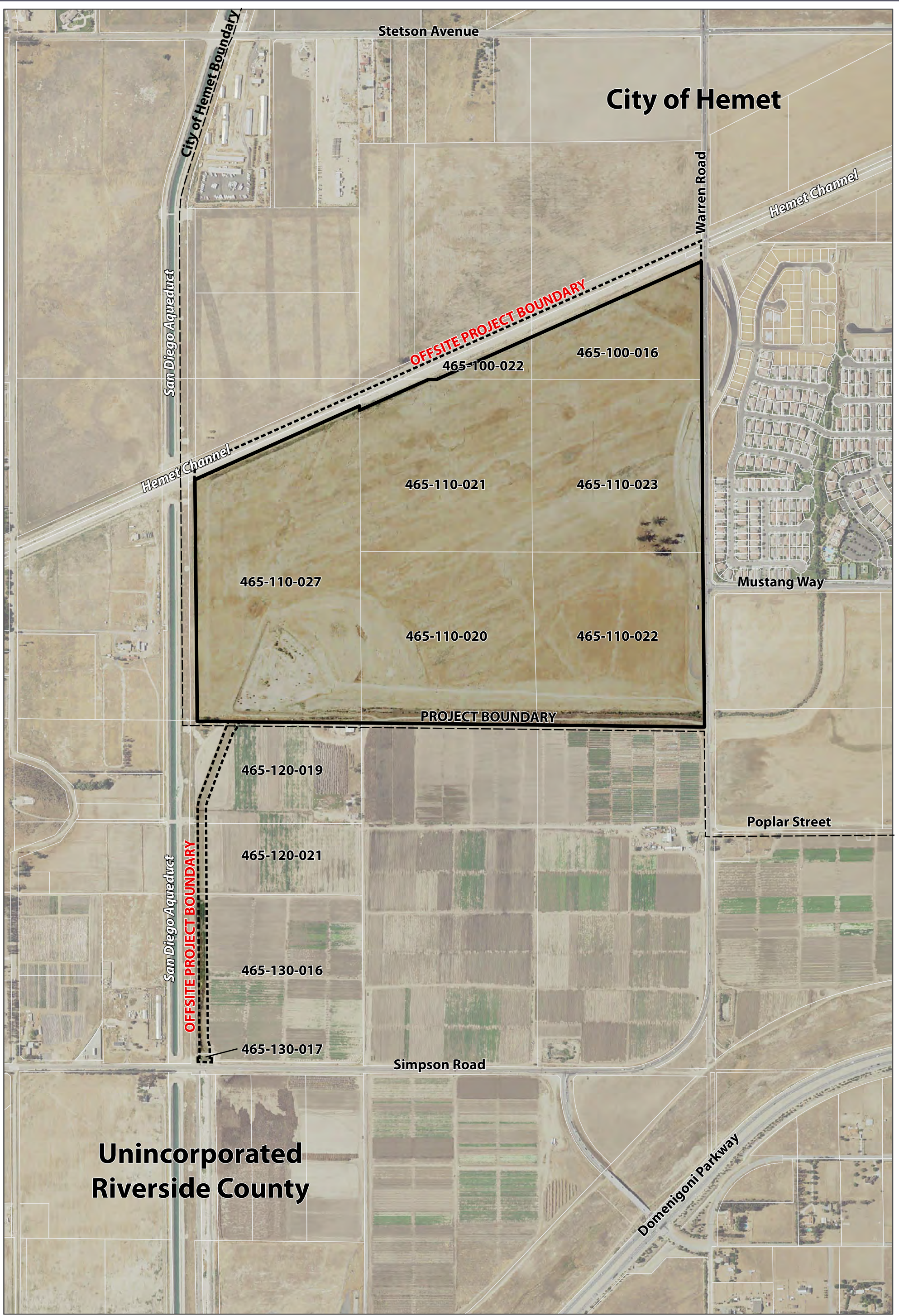
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Fieldwork Performed By:  Date: July 5th, 2017



Attachment A - Regional Location Map
MSHCP General Habitat Assessment
Rancho Diamante





City of Hemet

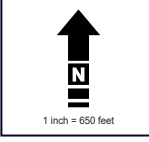
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Riverside County**

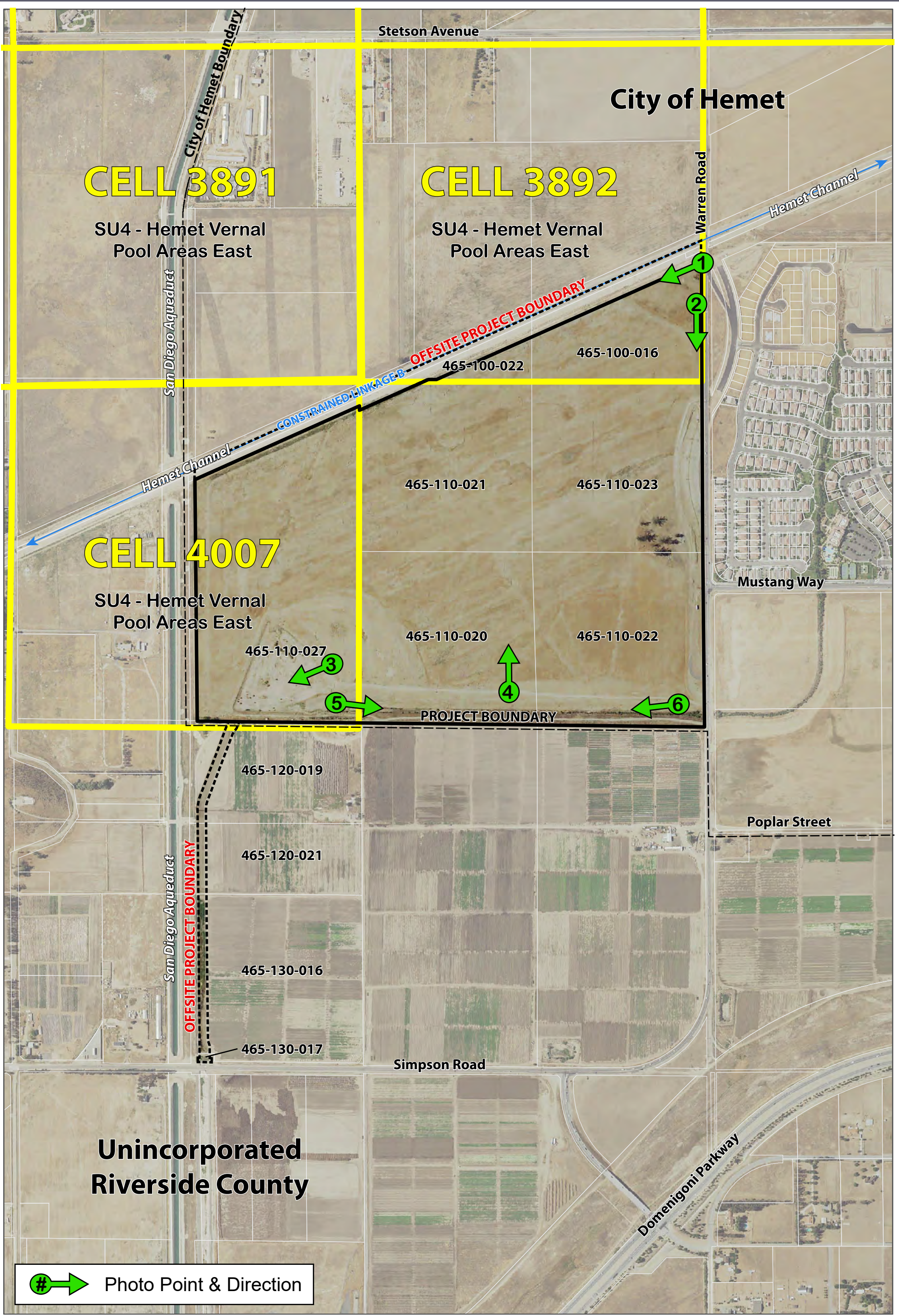
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Aerial: NAIP 2014

Attachment B - Vicinity Map

*MSHCP General Habitat Assessment
Rancho Diamante*

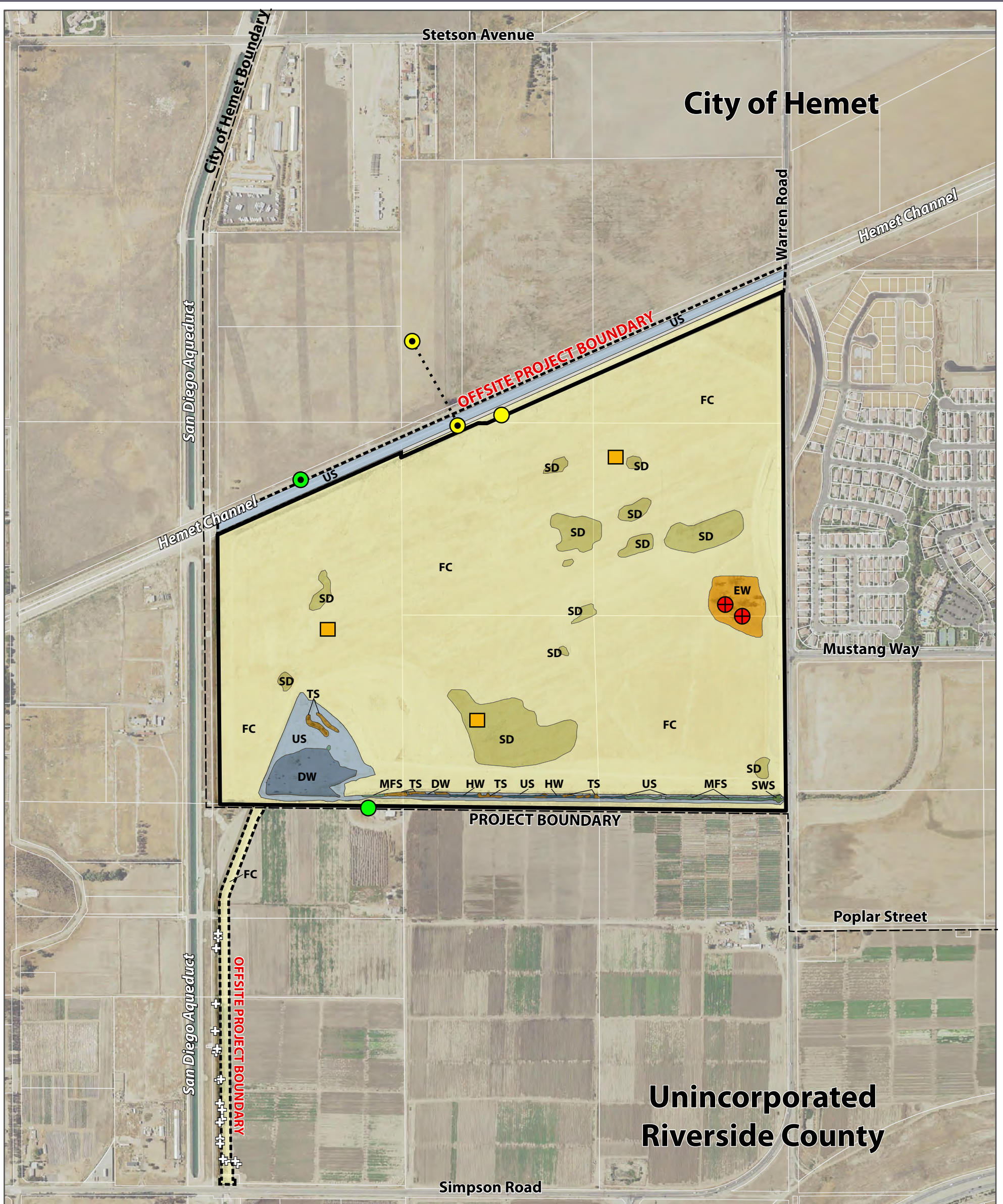




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Aerial: NAIP 2014

→ Photo Point & Direction



- Burrowing Owl Observations**
- Pair & Young, MBA 2005/2006, CH2M Hill (2005/2006)
 - Adult Foraging, MBA 2006
 - Pair CH2M Hill 2005
 - Single Owl, CH2M Hill 2006
- Raptor Nests**
- ⊕ Cadre Environmental 2015
- Sensitive Bird Species**
- California Horned Lark - SSC (flock), Cadre 2015

- Vegetation Communities**
- | | |
|---|--|
| FC Agriculture Land - Field Croplands | HW Herbaceous Wetland |
| SD Seasonal Depression | MFS Mule Fat Scrub |
| EW Eucalyptus Woodland | SWS Southern Willow Scrub |
| TS Tamarisk Scrub | US Unvegetated Streambed |
| DW Disturbed Wetland | |
- Sources: Cadre Environmental 2015/Helix Environmental Planning Inc. 2017
- ⊕ Smooth Tarplant (*Centromadia pungens ssp. laevis*), CRPR 1B.1
Sources: Riefner and Associates 2017

APN 465-100-016, 465-100-022, 465-110-020, 021, 022, 023, and 027. Offsite 465-120-019, and 021, 465-130-016 and 017.

Aerial: NAIP 2014



PHOTOGRAPH 1 - Southwest view of project site from confluence of Hemet Channel and Warren Road. The majority of the project site is characterized as agriculture/field cropland.



PHOTOGRAPH 2 - Southward view from northeast region of project site toward exotic/*Eucalyptus* woodland vegetation community.

Refer to Attachment C - MSHCP Criteria Area and Photograph Key Map

Attachment E - Current Project Site Photographs

*MSHCP General Habitat Assessment
Rancho Diamante*





PHOTOGRAPH 3 - Southwest view of infiltration basin from agriculture field croplands located in southwest region of project site.



PHOTOGRAPH 4 - Northward view of agriculture field croplands from south-central region of project site.

Refer to Attachment C - MSHCP Criteria Area and Photograph Key Map

Attachment F - Current Project Site Photographs

*MSHCP General Habitat Assessment
Rancho Diamante*



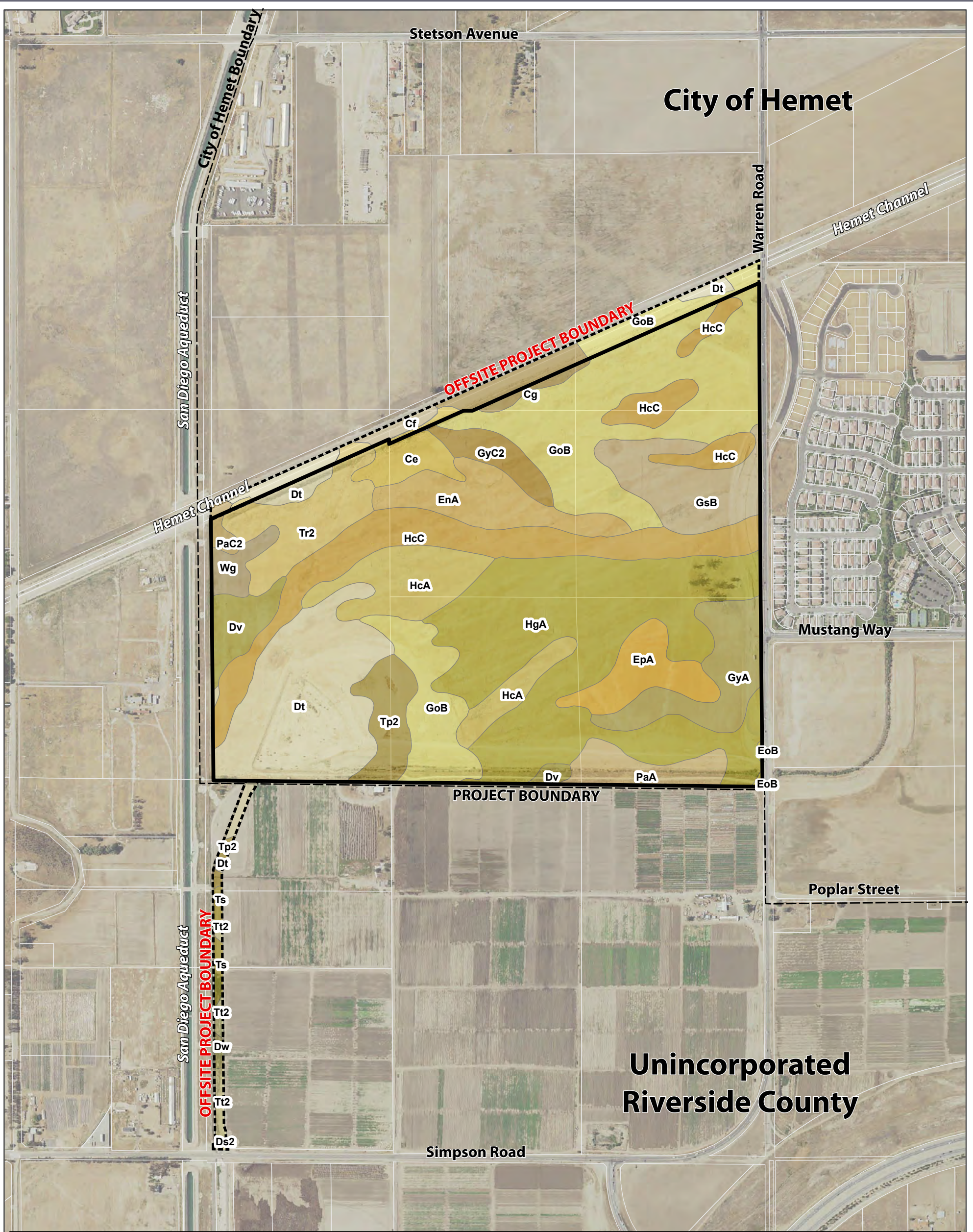


PHOTOGRAPH 5 - Eastward view of constructed urban-agricultural drainage ditch located immediately north of southern project site boundary which extends to the basin.



PHOTOGRAPH 6 - Westward view of ditch dominated by disturbed wetland, herbaceous wetland, mule fat scrub, southern willow scrub, tamarisk and unvegetated streambed.

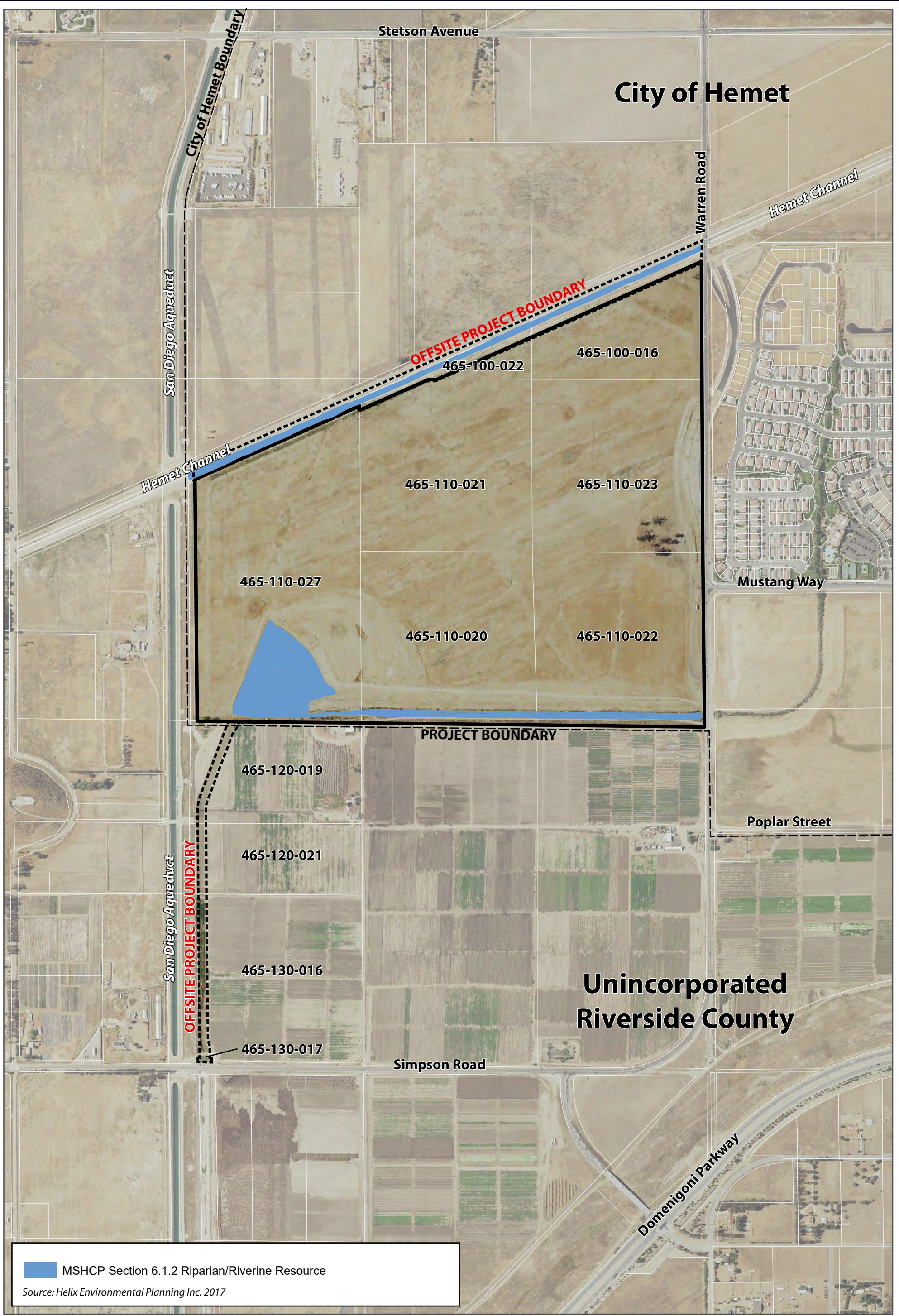
Refer to Attachment C - MSHCP Criteria Area and Photograph Key Map



Ce Chino silt loam, drained	EoB Exeter sandy loam, slightly saline-alkali, 0-5% slopes	HgA Hanford fine sandy loam, 0-2% slopes
Cf Chino silt loam, drained, saline-alkali	EpA Exeter sandy loam, deep, 0-2% slopes	PaA Pachappa fine sandy loam, 0-2% slopes
Cg Chino silt loam, drained, strongly saline-alkali	GoB Grangeville loamy fine sand, drained, 0-5% slopes	PaC2 Pachappa fine sandy loam, 2-8% slopes, eroded
Ds2 Domino fine sandy loam, eroded	GsB Grangeville sandy loam, saline-alkali, 0-5% slopes	Tp2 Traver loamy fine sand, eroded
Dt Domino fine sandy loam, saline-alkali	GyA Greenfield sandy loam, 0-2% slopes	Tr2 Traver loamy fine sand, saline-alkali, eroded
Dv Domino silt loam, saline-alkali	GyC2 Greenfield sandy loam, 2-8% slopes, eroded	Ts Traver fine sandy loam, saline-alkali
Dw Domino silt loam, strongly saline-alkali	HcA Hanford course sandy loam, 0-2% slopes	Tt2 Traver fine sandy loam, strongly saline-alkali, eroded
EnA Exeter sandy loam, 0-2% slopes	HcC Hanford course sandy loam, 2-8% slopes	Wg Willows silty clay, saline-alkali

APN 465-100-016, 465-100-022, 465-110-020, 021, 022, 023, and 027. Offsite 465-120-019, and 021, 465-130-016 and 017.

Aerial: NAIP 2014, Soils NRCS 2014



MSHCP Section 6.1.2 Riparian/Riverine Resource
 Source: Helix Environmental Planning Inc. 2017

APN 465-100-016, 465-100-022, 465-110-020, 021, 022, 023, and 027. Offsite 465-120-019, and 021, 465-130-016 and 017.

Aerial: NAIP 2014