Determination of Biologically Equivalent or Superior Preservation Report

TM 36199 (APN 335-080-056, 335-080-066, 335-080-067)
City of Menifee, Riverside County, California
USGS 7.5-minute topographic Romoland Quadrangle
Township 5 South, Range 3 West, portion of Section 20

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September 26, 2019
Revised per comments March 24, 2020

1 EXECUTIVE SUMMARY

The following document provides an analysis in support of a Determination of Biologically Equivalent or Superior Preservation (DBESP) for TM 36199 [APN(s) 335-080-056, 335-080-066, and 335-080-067] impacts to 0.723 acres of MSHCP 6.1.2 riverine habitat that meets the definition of Multiple Species Habitat Conservation Program (MSHCP) riparian and riverine areas under Section 6.1.2: Protection of Species Associated with Riparian and Riverine Areas and Vernal Pools of the MSHCP, herein after referred to as Section 6.1.2 for the project TM 37177 (Project) located in City of Riverside, County of Riverside, California. The project will result in on-site improvements that will have direct permanent impacts to MSHCP riverine habitat supported by two drainage features associated with the project site. Impacts to the riverine area will occur from drainage improvements and lot construction. Fairy shrimp wet and dry season surveys were completed due to the finding of standing water in tire rills and check dams. Fairy shrimp hatched in September 2019 were non-sensitive *Branchinecta* sp. located in the three tire rills.

Western Riverside Multiple Species Habitat Conservation Plan

The project is in the Sun City/Menifee Valley Area Plan of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). No Criteria cell, Core and Linkage are located in or around the project area.

Habitat assessment is required for burrowing owl (*Athene cunicularia*). No burrowing owl, were found on the project site, however one burrowing owl was located immediately outside of the buffer area southeast of the project area.

Endangered, Threatened and Sensitive Species

No special-status plant and animal species have the potential to occur on site, and none were observed on the project site. A circumstance of a negative result is not necessarily evidence that the species does not exist on the site or that the site is not actual or potential habitat of the species. The survey results are only good for one year. Regardless of the survey results, sensitive species cannot be taken under State and Federal law. The survey report and any mitigation measures included do not constitute authorization for incidental take of any sensitive species.

Streambed Resources

Streambed/wetland delineation studies found 0.726 acres of state streambed /MSHCP Section 6.1.2 riverine and 0.726 acre waters of the U.S. (WOUS) for federal jurisdictional area on the proposed project site. In addition 0.004 acre of streambed off of the project site were found between the project site and Chambers Street.

Permits

The area is under the jurisdiction of the U. S. Army Corps of Engineers, California Department of Fish and Wildlife and California Regional Water Quality Control Board. A California Department of Fish and Wildlife streambed alteration agreement and a California Regional Water Quality Control Board Water Quality Discharge (WDR) permit will be required. Final authority over the area rests with the appropriate agencies.

Temporary and/or Permanent Impacts

Permanent impacts to 0.726 acres of riverine under MSHCP 6.1.2 on-site and 0.004 acre of riverine under MSHCP 6.1.2 off site will be impacted by construction of the proposed project.

Proposed Mitigation

Provision of a one-time fee for 2.19 acres for riparian and riverine habitats in-lieu fee program off-site reestablishment through Riverpark Mitigation Bank, or any other approved in-lieu fee program at time of rough grading permit issuance will be acquired for mitigation of the impacts at a minimum ratio of 2:1 or greater if required by another agency. If reestablishment credits are not available then 3.0 acres for riparian and riverine habitats in-lieu fee program off-site enhancement credits through Riverpark Mitigation Bank, or any other approved in-lieu fee program at time of rough grading permit issuance will be acquired for mitigation of the impacts if required by another agency. Notification to California Department of Fish and Wildlife, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers is required regarding which type of in-lieu fee credits (reestablishment or enhancement) are being utilized. Mitigation for the impacts will be at a minimum 3:1 ratio for riverine or whatever is required[1] by California Department of Fish and Wildlife, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers.

Should sufficient in-lieu fee credits not be available for purchase at the time the project is implemented, or should other agencies not approve in-lieu fee credit purchase, then the Developer must prepare and submit for review and approval a Habitat Mitigation and Monitoring Plan (HMMP) for a site-specific restoration project at a minimum 3:1 mitigation to impact ratio. The plan must meet County of Riverside requirements, as well as requirements of other resource and wildlife agencies. Appropriate guarantees for the restoration project must be in place (e.g., letter of credit, bond, etc.) prior to issuance of a grading permit.

[1] Specific mitigation ratios are usually determined during California Department of Fish and Game, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers permit processes

2 INTRODUCTION

2.1 Project Area

The project site (site) discussed in this report is located west of Interstate 215, west of Valley Boulevard and north and south of Chambers Avenue in the City of Menifee, Riverside County, California. See Figures 1 and 2. The project site consists of APN(s) 335-080-056 (5.8 acres), 335-080-066 (9.81 acres), and 335-080-067 (6.05 acres).

The site is located within San Bernardino Meridian in a portion of Section 20, Township 5 South, Range 3 West in Riverside County, California (Figures 1, 2 and 3). This location is shown on the Romoland, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Romoland Photorevised 1979); page 837 Blocks J4 and J5 of the Riverside County Street Guide and Directory (Thomas Brothers Maps Design 2013). The approximate center of the site is located at 33.720146·N, - 117.213911·W.

The proposed project site is sloping to the north and northwest, depending on the location in the landscape. It occurs at an elevation between 1,189 and 1,283 feet above mean sea level.

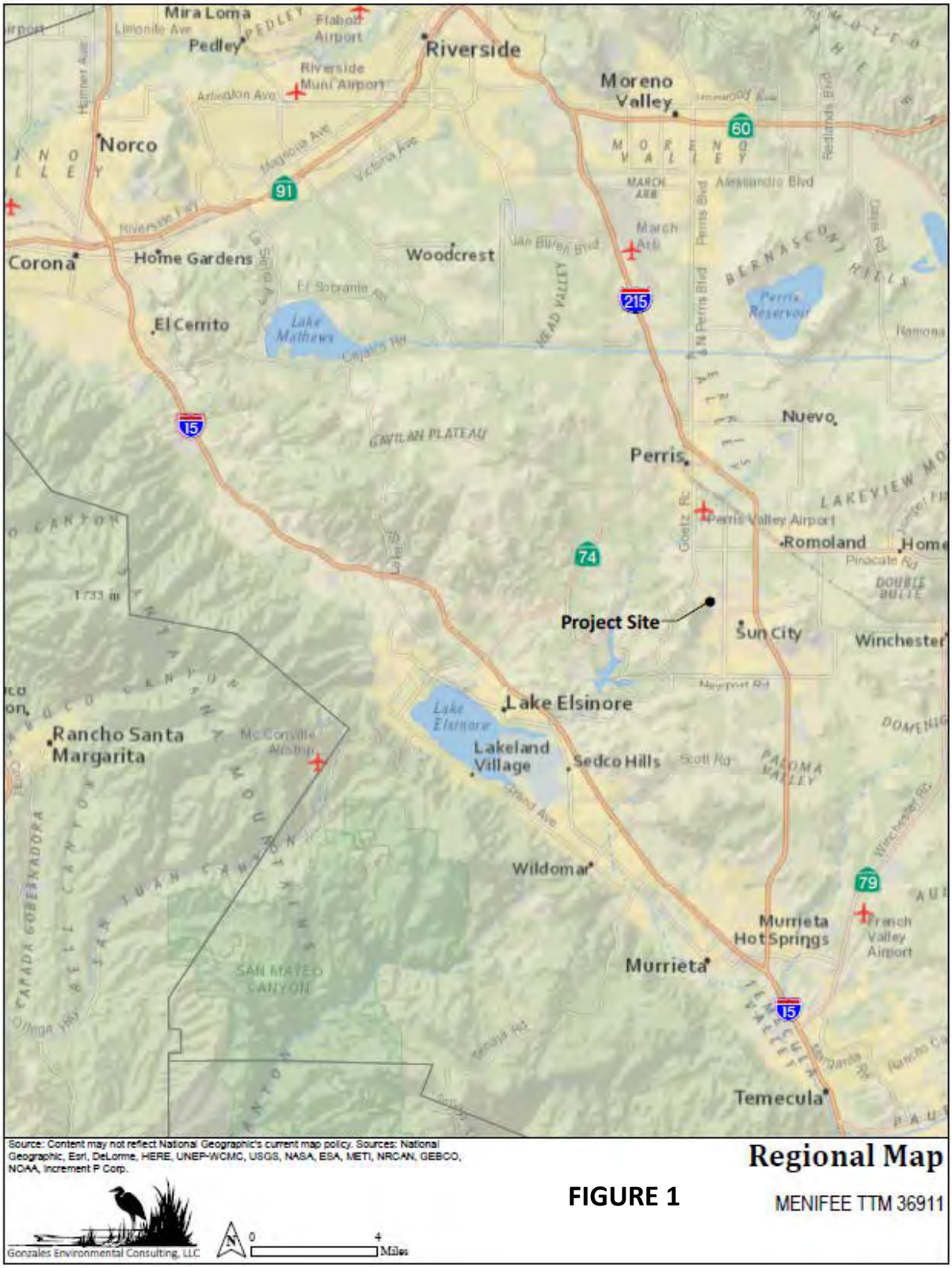
Portions of the project site have been disturbed by anthropogenic disturbances. Vegetation has been disturbed by dirt roads, vegetation removal for fire breaks, unauthorized access and adjacent land uses.

Elevation of the assessment area ranges from a from a low of 1484± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1560± feet above msl in the southwestern portion of the assessment area. This represents an elevational change across the assessment area of 76± feet. The entire site consists of undulating, sloping land among sage scrub habitat. The project site has been impacted by anthropogenic activities. Land use in the surrounding area varies between natural, semi-rural and single family residential.

The primary vegetation communities in the project area are primarily *Eriogonum fasciculatum* Alliance – Disturbed, Grasslands – Disturbed (*Bromus diandrus*-mixed herb Alliance), *Baccharis salicifolia* Alliance (Mule Fat Scrub), *Populus fremontii* (Cottonwood Scrub) Alliance, *Tamarix ramosissima* (Tamarisk Scrub) Alliance and developed.

Land immediately adjacent to the site's eastern boundary contains medium high density residential properties. Land to the north, south and west is partially open space.

Similar to many of the other open areas in the area, the site shows signs of off-road vehicle, unauthorized disposal sites, and anthropogenic use. Vehicle tracks and roads traverse the site, degrading plant and animal habitat.


Mira Loma
Pedley
Riverside
Riverside Muni Airport
Moreno Valley
Norco
Corona
Home Gardens
Woodcrest
El Cerrito
Lake Mathews
Nuevo
Perris
Perris Valley Airport
Romoland
Project Site
Sun City
Winchester
Lake Elsinore
Rancho Santa Margarita
Lakeland Village
Sedco Hills
Wildomar
Murrieta Hot Springs
French Valley Airport
Murrieta
Temecula
Source: Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.
Gonzales Environmental Consulting, LLC
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4
Miles
Regional Map
MENIFEE TTM 36911

FIGURE 1

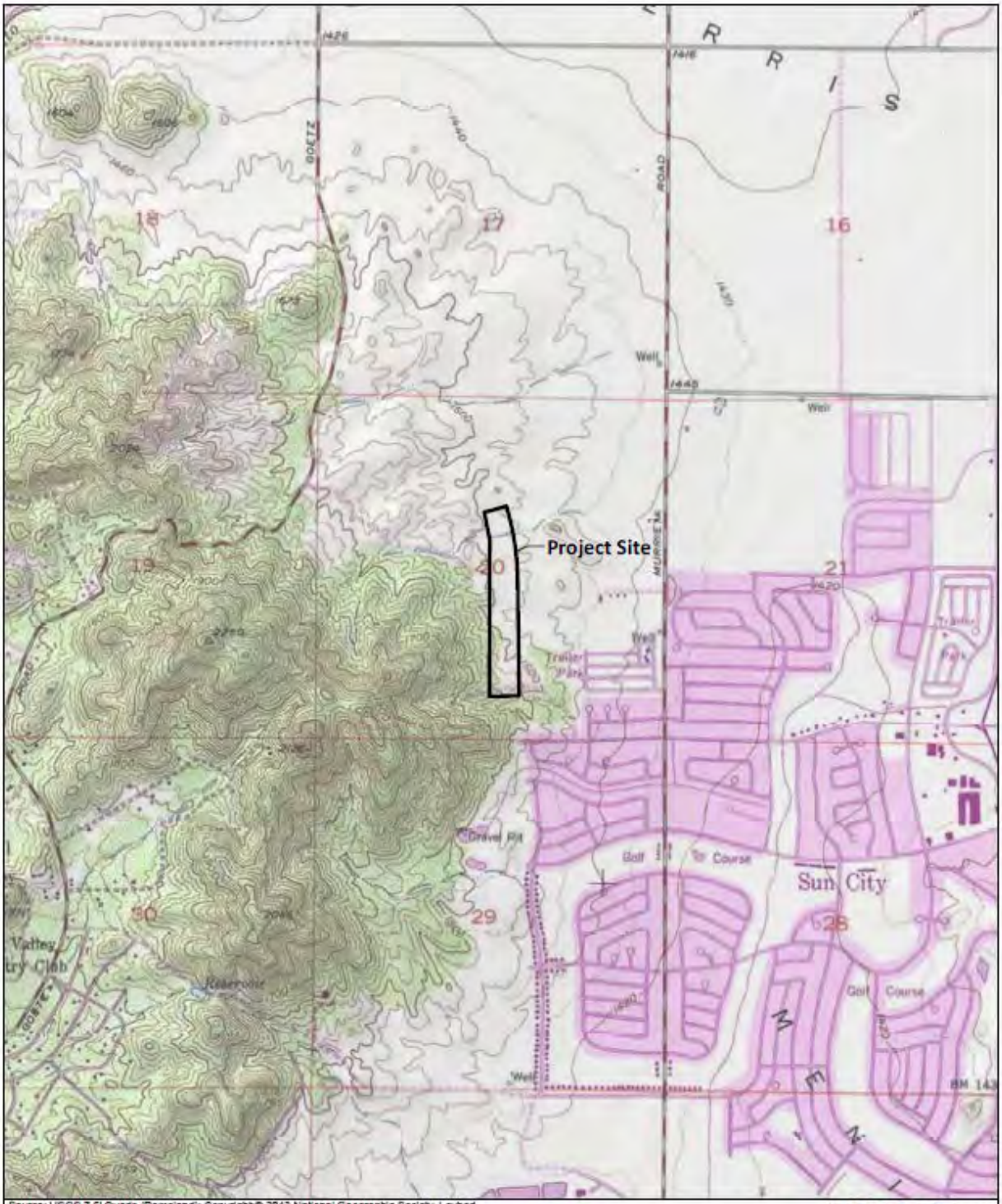

Project Site
Sun City
Golf Course
Well
Reservoir
Source: USGS 7.5' Quads (Romoland); Copyright© 2013 National Geographic Society, i-cubed
USGS Topo
MENIFEE TTM 36911
Gonzales Environmental Consulting, LLC
0
2,000
Feet

FIGURE 2


Boundary
Prominence Road
Chambers Avenue
Genevieve Drive
Valley Boulevard
Connie Way
Google
Imagery ©2017 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency
Aerial Photograph
MENIFEE TTM 36911
Gonzales Environmental Consulting, LLC
0
350
Feet

FIGURE 3

2.2 Project Description

The site is comprised of 21.66 acres of rural property situated in the City of Menifee in Riverside County, California.

Elevation of the assessment area ranges from a from a low of 1484± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1560± feet above msl in the southwestern portion of the assessment area. This represents an elevational change across the assessment area of 76± feet. The entire site consists of undulating, sloping land among sage scrub habitat.

TR 36199 proposes the subdivision of approximately 21.66 acres of undeveloped land into 72 single family residential lots. As part of the project a three open space lots will be dedicated. They will be dedicated as water quality basins for compliance with Regional Water Quality Control Board requirements. All streets proposed as a part of this development will be public streets. Access to the tract can be taken from Chambers Avenue and Connie Way.

Estimated Duration of Construction:

Estimated duration of construction is 4 months of grading and 1.5-2 years for full build out.

Full Avoidance Infeasibility:

The project, as designed proposes to disturb only where required in order to allow for subdivision of the surrounding property. Where avoidance was not possible, mitigation of these impacts is being provided offsite as a part of this project.

2.3 Existing Conditions

Elevation of the assessment area ranges from a from a low of 1484± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1560± feet above msl in the southwestern portion of the assessment area. This represents an elevational change across the assessment area of 76± feet. The entire site consists of undulating, sloping land among sage scrub habitat.

Single family tracts are located on the eastern side of the site and the north is an approved tract map development. The project will not impact public/quasi-public (PQP) land.

Soils

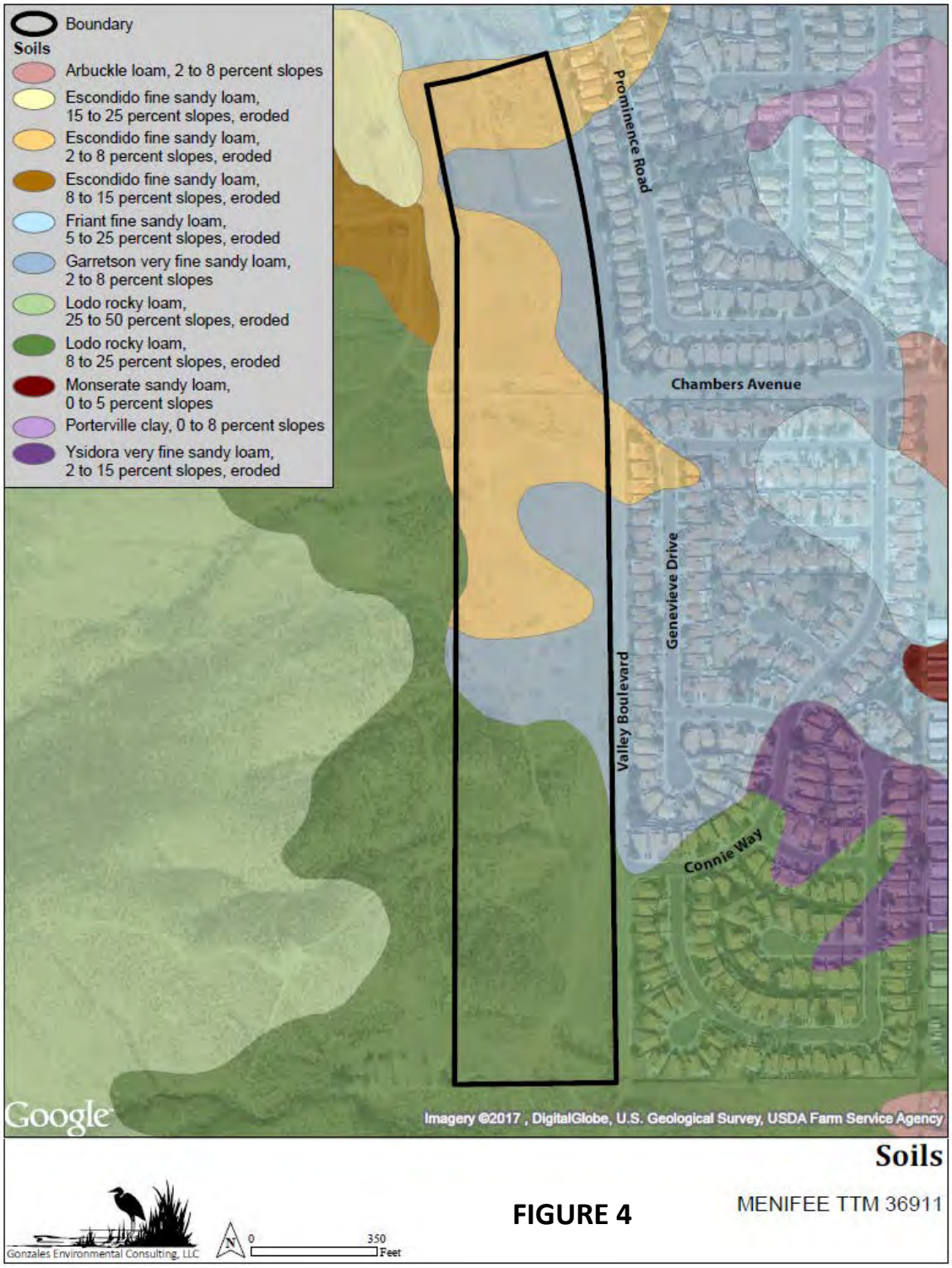
The soil associations mapped for the area are Monserate-Arlington-Exeter association. Monserate-Arlington-Exeter association: Well-drained nearly level to moderately steep soils that have a surface layer of sandy loam to loam and are shallow to deep to a hardpan. The soil series mapped for the

area are described in Table 1. There are no hydric soils listed for the area. The soils found are consistent with the soils mapped for the area. Figure 4 maps the soils of the area.

TABLE 1

SOIL SERIES MAPPED FOR THE AREA

Name	Description
Arbuckle loam 2-8% slopes	Well-drained and have slopes of 2-8%. They occur on alluvial fans and developed in alluvium from metasedimentary rocks. Elevations range from 600-1,600 feet. The average annual rainfall ranges from 10-15 inches, the average annual temperature from 59-64 degrees F, and the average frost-free season from 240-280 days. Vegetation is chiefly annual grasses, forbs and chamise.
Escondido fine sandy loam 15-25% slopes, eroded	Well-drained and have slopes of 15-25%. These soils developed in metamorphosed fine-grained sandstone and schist. Elevations range from 1,000-2,800 feet. The average annual rainfall ranges from 10-13 inches, the average annual temperature from 62-65 degrees F, and the average frost-free season from 230-280 days. Vegetation is chiefly annual grasses, forbs, salvia and chaparral.
Escondido fine sandy loam 2-8% slopes, eroded	Well-drained and have slopes of 2-8%. These soils developed in metamorphosed fine-grained sandstone and schist. Elevations range from 1,000-2,800 feet. The average annual rainfall ranges from 10-13 inches, the average annual temperature from 62-65 degrees F, and the average frost-free season from 230-280 days. Vegetation is chiefly annual grasses, forbs, salvia and chaparral.
Escondido fine sandy loam 8-15% slopes, eroded	Well-drained and have slopes of 8-15%. These soils developed in metamorphosed fine-grained sandstone and schist. Elevations range from 1,000-2,800 feet. The average annual rainfall ranges from 10-13 inches, the average annual temperature from 62-65 degrees F, and the average frost-free season from 230-280 days. Vegetation is chiefly annual grasses, forbs, salvia and chaparral.
Friant fine sandy loam, 5-25% slopes, eroded	Well-drained soils that developed on slightly weathered mica-schist. These soils are on uplands and have slopes of 5-25%. Elevations range from 800-3,000 feet. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 59-65 degrees F, and the average frost-free season from 210-280 days. Vegetation is chiefly annual grasses, forbs, buckwheat and chaparral.
Garretson very fine sandy loam, 2-8% slopes	Well-drained soils on alluvial fans. Slopes range from 2-8%. These soils developed in alluvium made up chiefly of metasedimentary materials. Elevations range from 600-2,000 feet. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 61-64 degrees F, and the average frost-free season from 220-280 days. Vegetation is chiefly annual grasses, forbs, chamise and sumac.
Lodo rocky loam, 25-50% slopes, eroded	Somewhat excessively drained upland soils on slopes of 25-50%. These soils developed on metamorphosed fine-grained sandstone. Elevations range from 700-2,500 ft. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 62-65 degrees F, and the average frost-free season from 230-250 days. The vegetation is chiefly annual grasses, forbs and chaparral.
Lodo rocky loam, 8-25% slopes, eroded	Somewhat excessively drained upland soils on slopes of 8-25%. These soils developed on metamorphosed fine-grained sandstone. Elevations range from 700-2,500 ft. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 62-65 degrees F, and the average frost-free season from 230-250 days. The vegetation is chiefly annual grasses, forbs and chaparral.
Monserate sandy loam, 0-5% slopes	Well-drained soils that developed in alluvium from predominately granitic materials. Slopes range from 0-5%. These soils are on terraces and on old alluvial fans. Elevations range from 700-2,500 feet. The average annual rainfall ranges from 9-14 inches, the average annual temperature from 6—64 degrees F., and the average frost-free season from 220-280 days. Vegetation is chiefly annual grasses, forbs and chamise.
Porterville clay, 0-8% slopes	Well-drained soils on alluvial fans. Slopes range from 0-8%. These soils developed in alluvium consisting mainly of very fine basic igneous materials. Elevations range from 1,000-2,700 feet. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 61-64 degrees F, and the average frost-free season from 230-280 days. Vegetation is chiefly annual grasses, forbs, salvia and buckwheat.
Ysidora very fine sandy loam, 2-15% slopes, eroded	Moderately well-drained soils on old alluvial fans in valley fills, and on terraces. Slopes range from 2-15%. These soils developed in alluvium predominantly of metasedimentary origin. They are underlain by an iron-silica cemented pan. Elevations range from 1,000-2,500 ft. The average annual rainfall ranges from 10-14 inches, the average annual temperature from 61-65 degrees F., the average frost-free season from 220-280 days. Vegetation is chiefly annual grasses, forbs and chamise.


Boundary
Soils
Arbuckle loam, 2 to 8 percent slopes
Escondido fine sandy loam, 15 to 25 percent slopes, eroded
Escondido fine sandy loam, 2 to 8 percent slopes, eroded
Escondido fine sandy loam, 8 to 15 percent slopes, eroded
Friant fine sandy loam, 5 to 25 percent slopes, eroded
Garretson very fine sandy loam, 2 to 8 percent slopes
Lodo rocky loam, 25 to 50 percent slopes, eroded
Lodo rocky loam, 8 to 25 percent slopes, eroded
Monserate sandy loam, 0 to 5 percent slopes
Porterville clay, 0 to 8 percent slopes
Ysidora very fine sandy loam, 2 to 15 percent slopes, eroded
Prominence Road
Chambers Avenue
Genevieve Drive
Valley Boulevard
Connie Way
Google
Imagery ©2017 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency
Gonzales Environmental Consulting, LLC
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Feet
Soils
MENIFEE TTM 36911

FIGURE 4

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

Literature Review

Gonzales Environmental Consulting, LLC (GEC) conducted a review of existing documents for the site and other relevant reference material prior to the subject analysis. Previous documentation for the proposed project reviewed for the preparation of the subject DBESP includes the following:

- Gonzales Environmental Consulting, LLC. 2019. Delineation of Waters of the United States and Department of Fish and Wildlife Jurisdictional Habitats for TM 36199, City of Menifee, Riverside County, California; Report Date: June 16, 2019.
- Gonzales Environmental Consulting, LLC. 2019. Habitat Assessment Including the Results of Focused Burrowing Owl Surveys and MSHCP Overview Analysis for TM 36199, City of Menifee, Riverside County, California; Report Date: June 16, 2019.
- Gonzales Environmental Consulting, LLC. 2019. Burrowing Owl Surveys for TM 36199, City of Menifee, Riverside County, California; Report Date: June 16, 2019.
- Gonzales Environmental Consulting, LLC. 2019. Consistency Analysis for TM 36199, City of Menifee, Riverside County, California; Report Date: December 5, 2019.
- Finium Environmental. 2019. Results of Wet Season Fairy Shrimp Surveys for TM 36911 Project Site Located in Menifee, Riverside County, California; Report Date: April 22, 2019.
- Finium Environmental. 2019. Results of Dry Season Fairy Shrimp Surveys for TM 36911 Project Site Located in Menifee, Riverside County, California; Report Date: September 20, 2019.
- Helix Environmental. 2019. Dry Season Fairy Shrimp Soil Processing and Examination Report for the TM 36911Project; Report Date: August 8, 2019.

Prior to onsite fieldwork, USGS topographic map [Romoland East 7.5' USGS topographic Quadrangle], National Resource Conservation Service Hydric Soils List for California (2016), Riverside County GIS Land Information System, the Soil Survey for the Western Riverside Area of California, local precipitation data, hydrological information, information from USFWS, and CDFW, literature searches,

examination of aerial photographs, and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. A list of special status species was compiled, including all species in the project area that were:

- Listed as endangered or threatened, proposed for listing, or candidates for listing under Federal Endangered Species Act (FESA);
- Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
- Included in one of the CDFW publications on species of special concern;
- "Fully protected" by the State of California;
- Included in the CNPS compilation ; or
- Identified as plants meeting the definition of rare or endangered under CEQA.

Field Reconnaissance

Baseline biological studies of the proposed project were conducted in 2017 (Gonzales Environmental Consulting, LLC) and again in 2019 (GEC) and again in 2018 (GEC). Existing biological data was collected using Personal Computers (PCs) and Geographic Positioning System (GPS). This allowed for data to be collected in real time. Data layers uploaded onto these PCs included recent aerial photography, and topographic contours. Biological data was mapped onto the aerial photograph layers as polygon, line, and point attributes.

Checklists of biological information were uploaded onto the PCs, which allowed us to accurately label all data points, ensure consistency, and keep a running electronic account of all species encountered during the surveys. Finally, these checklists allowed for the inclusion of supplemental field notes, most notably, ranking of the quality of the various habitats including dominant and associate species for each vegetation polygon; assessing habitats for the potential presence of sensitive species not observed during the surveys; and identifying areas that would require protocol-level sensitive species surveys (i.e., USFWS protocol-level surveys for federal threatened and endangered species.

The habitat assessment component of the subject DBESP report is based primarily on the findings of the burrowing owl and nesting bird report and the jurisdictional delineation for the proposed project. These included field surveys of the riverine habitat during the burrowing owl and nesting bird surveys

in March, April May and June 2019. Methodology followed during these surveys is contained within their respective source documents (GEC 2019).

Regulatory Background

Riverside County Multi-Species Habitat Conservation Plan (MSHCP)

Riverside County has reached the end of a comprehensive planning effort called the Riverside County Integrated Project (RCIP). RCIP integrates three regional planning efforts: 1) County General Plan, 2) Community and Environmental Transportation Acceptability Process to determine present and future roadway infrastructure, and 3) Multiple Species Habitat Conservation Plan (MSHCP) to conserve listed and sensitive species and their habitats. The final MSHCP was approved by the County Board of Supervisors on June 17, 2003.

The MSHCP is a comprehensive, multi-jurisdictional effort that includes portions of Western Riverside County and fourteen cities. Rather than deal with endangered species on a one-by-one basis, the MSHCP plans for the conservation of 146 species. The MSHCP proposes a reserve system of approximately 500,000 acres of which approximately 347,000 acres are currently within public ownership and 153,000 acres are currently in private ownership. The approved MSHCP is intended to contribute to the economic viability of the region by providing landowners, developers and those who build public infrastructure with regulatory certainty, a streamlined regulatory process and identified project mitigation.

The MSHCP has been adopted by the County, the Implementation Agreement signed, and federal/state permits have also been issued. Since the permits are granted, no further surveys for 75% of the 146 species covered by the MSHCP will be required. Habitat assessments and/or surveys may be undertaken within suitable habitat areas within specific areas, depending on Cell Group Criteria.

The project site is in Sun City/Menifee Valley Area Plan. Habitat assessment for burrowing owl is required.

Section 6.1.2

Section 6.1.2 of the MSHCP requires an assessment of the potentially significant effects of the proposed project on riparian/riverine areas, and vernal pools as currently required by CEQA using available information augmented by project-specific mapping. Riparian/riverine areas and vernal pools are defined as follows:

- Riparian/Riverine Areas are lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.

• Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. 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 the 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.

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

Section 6.1.2 Riverine/Riparian and Vernal Pools

Section 6.1.2 riverine/riparian and vernal pools were delineated in the field concurrently with the delineation of federal waters/wetlands and state wetlands/streambed. Prior to conducting field assessments, transects (ranging from 0.15 to 0.5 miles in length) were drawn on a one-meter resolution aerial photograph. During the field assessment, points where these transects intercepted potentially jurisdictional waters were mapped on the aerial photographs or with a Trimble GeoXT GPS unit. Field maps were digitized using GIS technology and the total area of jurisdictional features was calculated.

Vegetation Mapping

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries. General wetland assessments of the proposed project site were conducted in March 2019 by GEC, which included general mapping of habitat(s) that may be subject to jurisdiction of CDFW pursuant to sections 1600-12 of the California Fish and Game Code, ACOE and MSHCP Section 6.1.2. A assessment of the wetland/vernal pool/riparian/riverine jurisdictional communities encountered was also conducted which described the dominant and associate plant species of each community and the presence and/or absence of visual field indicators (e.g., dominance of hydrophytic species, presence of drift lines).

The site consists of five vegetation communities, described below. The site shows signs of recent disturbance, including cutting of vegetation. Portions of the project site have been subject to anthropogenic disturbances. The locations of the native plant communities have been generally the same over the years. The existing plant communities are described in more detail below.

The project encompasses several vegetation community types. The vegetation communities within the project area are primarily *Eriogonum fasciculatum* Alliance – Disturbed, Grasslands – Disturbed (*Bromus diandrus*-mixed herb Alliance), *Baccharis salicifolia* Alliance (Mule Fat Scrub), *Populus fremontii* (Cottonwood Scrub) Alliance, *Tamarix ramosissima* (Tamarisk Scrub) Alliance and developed.

The major plant communities in the survey area are Grasslands – Disturbed (*Bromus diandrus*-mixed herb Alliance).

Disturbed *Eriogonum fasciculatum* Alliance

This series is considered part of the coastal scrub, which is better thought of as a collection of series. This approach allows stands of composition, which can be considered, regardless of geographic location. This series has California buckwheat (*Eriogonum fasciculatum*) as the dominant plant species. Other sage scrub alliances noted on site: *Artemisia californica - Eriogonum fasciculatum* (California sagebrush – California buckwheat scrub) Alliance. This community braids with disturbed grassland on most of the project area.

Bromus diandrus-mixed Herb Alliance (Grasslands – Disturbed)

Stands of Bromus diandrus–mixed herbs form a dense herbaceous layer (75%) at 0-0.5m tall. Shrub and tree layers are absent. Total vegetation cover is 75%.

Mule Fat Scrub (*Baccharis salicifolia*) Alliance

An individual mulefat was observed in one of the drainage check dams. One emergent Populus fremontii was found next to the mulefat. Wide space bare of vegetation between plants was observed. The check dam is an anthropogenic creation and is lined with black plastic.

Populus fremontii (Cottonwood Scrub) Alliance

One emergent *Populus fremontii* was found in one of drainages, next to one mulefat (*Baccharis salicifolia*). Growth was noted in one of the check dam areas only. Soil consists of fine course sand on top of black plastic. Some wide space bare of vegetation is prevalent, especially where deposition seems to indicate strong periodic flows. Check dam areas are anthropogenic creations and lined with black plastic

.

Tamarix ramosissima (Tamarisk Scrub) Alliance

A single tamarisk (*Tamarix ramosissima*) was found in the checkdam area separate from the mulefat and cottonwood. Growth was noted in one of the check dam areas only. Soil consists of fine course sand on top of black plastic. Some wide space bare of vegetation is prevalent, especially where deposition seems to indicate strong periodic flows. Check dam areas are anthropogenic creations and lined with black plastic.

Disturbed/Developed

Disturbed areas are characterized by predominantly non-native species introduced and established through human action. Disturbed or barren areas are areas that either completely lack vegetation or have a predominance of non-native species.

Table 2 below summarizes vegetation types/land uses and associated acreages on-site areas. Figure 5 provides a vegetation map for the project site.

TABLE 2
VEGETATION TYPES MAPPED FOR THE AREA

Vegetation	Existing (Acres)
Developed	
Erogonium fasciculatum Alliance - Disturbed	10.063
Fremont's Cottonwood (riparian scrub)	0.004
Grasslands - Disturbed	16.485
Mule Fat Scrub	0.002
Spillway	0.031
Streambed	0.363
Tamarisk	0.003
TOTAL (acres)	**26.951**

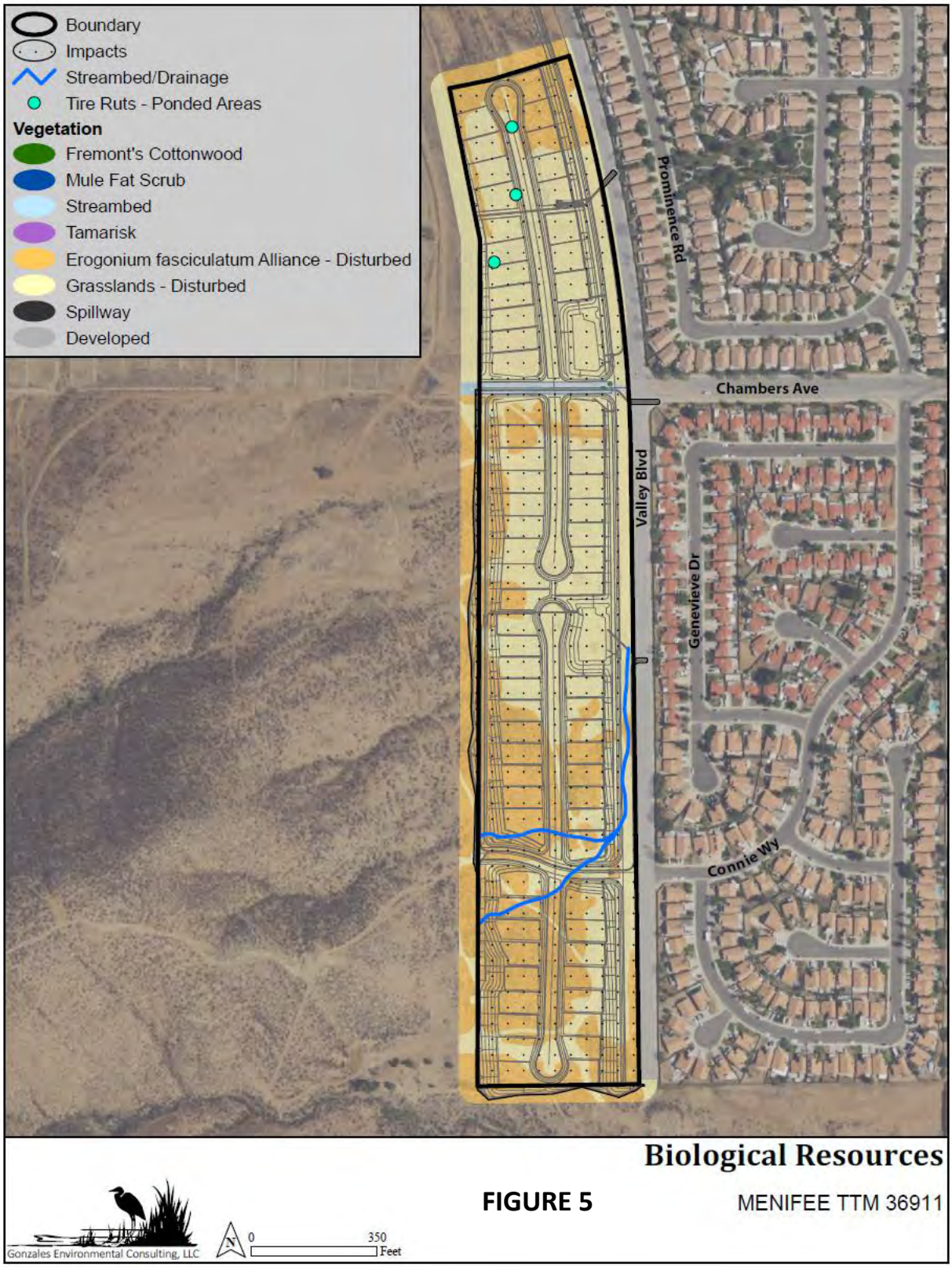

Boundary
Impacts
Streambed/Drainage
Tire Ruts - Ponded Areas
Vegetation
Fremont's Cottonwood
Mule Fat Scrub
Streambed
Tamarisk
Erogonium fasciculatum Alliance - Disturbed
Grasslands - Disturbed
Spillway
Developed
Prominence Rd
Chambers Ave
Valley Blvd
Genevieve Dr
Connie Wy
Biological Resources
MENIFEE TTM 36911
Gonzales Environmental Consulting, LLC
0
350
Feet

FIGURE 5

Impacts

Existing, impacted, conserved and impacted offsite are detailed in Table 3 below.

TABLE 3

EXISTING, IMPACTED, CONSERVED & IMPACTED OFFSITE AMOUNTS

Vegetation	Existing/Onsite Impacts	Offsite Impacts
Developed		0.050
Erogonium fasciculatum Alliance - Disturbed	10.063	0.676
Fremont's Cottonwood	0.004	
Grasslands - Disturbed	16.485	0.088
Mule Fat Scrub	0.002	
Spillway	0.031	
Streambed	0.363	0.004
Tamarisk	0.003	
TOTAL (acres)	**26.951**	**0.817**

Section 6.1.2 riverine/riparian and vernal pools were delineated in the field concurrently with the delineation of federal waters/wetlands and state wetlands/streambed (Sections 4.2.1 and 5.2 above). Prior to conducting field assessments, transects (ranging from 0.15 to 0.5 miles in length) were drawn on a one-meter resolution aerial photograph. During the field assessment, points where these transects intercepted potentially jurisdictional waters were mapped on the aerial photographs or with a Trimble GeoXT GPS unit. Field maps were digitized using GIS technology and the total area of jurisdictional features was calculated.

Functions and Values

The project site supports minimally vegetated, ephemeral drainages. As required in MSHCP Section 6.1.2, the following is a discussion of the functions and values (hydrologic regime, flood storage and flood flow modification, sediment trapping and transport, nutrient retention and transformation, toxicant trapping, public use, wildlife habitat, and aquatic habitat) of the MSHCP Riparian/Riverine areas in the study area.

Potential impacts to water quality could occur during construction and operation of the proposed project due to increased erosion and storm water runoff. However, construction BMPs would be implemented during construction of the proposed project to reduce impacts to water quality and beneficial water resource values.

During construction of the current site existing vegetation will be trimmed and/or removed. Impacts to these features would result in impacts to conservation of habitats and may result in impacts to covered species. As previously discussed, MSHCP 6.1.2 areas, United States Army Corps of Engineers

potential jurisdictional areas, CDFW jurisdictional areas, and Regional Water Quality Control Board (RWQCB) jurisdictional areas are present on the site. Drainage 1 contains non-wetland waters (Riverine), as defined by the MSHCP. Drainage 2 is an ephemeral drainage with low functions and values for flood storage and flood flow modification, sediment trapping and transport, nutrient retention and transformation, toxicant trapping, public use, and wildlife and aquatic habitat due to its small size, anthropogenic impacts by lack of perennial or intermittent sources of water. Implementation of the proposed project would not result in significant impacts to natural and beneficial floodplain values. Post- construction hydrology will be equal to preconstruction conditions, resulting in no net loss to the functions and values of the area.

Results

GEC found Section 6.1.2 riverine areas on the project site. Delineation studies found 0.726 acres of 6.1.2 riverine areas were found on the project site. Riverine areas include Drainage 1, which has one emergent cottonwood (0.004 acre), two mulefat scrub (0.002 acre), one emergent tamarisk (0.003 acre), and unvegetated streambed (0.363 acre). Drainage 2 riverine areas include 0.354 acre streambed. Offsite impacts to Drainage 1 include 0.004 acre streambed. Impacts are described below.

TABLE 4

SUMMARY OF POTENTIAL SECTION 6.1.2 AREAS BY HABITAT

Riparian/Riverine	Existing/Impact On-Site Acres	Linear Feet On-Site	Existing/Impact Off-Site Acres	Linear Feet Off-Site
Riverine D-1	0.372	414	0.004	
Riverine D-2	0.354	471		
Total	0.726	885	0.004	

Riparian Birds

The project site was evaluated to not have suitable nesting habitat for least Bell's vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]).

Least Bell's Vireo (LBV)

Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the federally and State listed LBV within areas of suitable riparian habitat that cannot be avoided by projects. The project site contains no riparian habitat. As such, no focused LBV surveys were conducted by GEC.

Southwestern Willow Flycatcher (SWFL)
Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the federally and State listed SWFL within areas of suitable riparian habitat that cannot be avoided by projects. The project site contains no riparian habitat therefore there is no potential to support the SWFL. As such, focused SWFL surveys were not conducted by GEC.

Western Yellow-Billed Cuckoo (Cuckoo)
Volume I, Section 6.1.2 of the MSHCP requires focused surveys for the cuckoo within areas of suitable riparian habitat that cannot be avoided by projects. The project site contains no riparian habitat therefore there is no potential to support cuckoo. As such, focused cuckoo surveys were not conducted by GEC.

Existing Conditions and Results

Existing Drainages on the project site do not contain habitat for least Bell's vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]). No other federally and/or state listed threatened or endangered bird species, were observed during surveys on the project site.

Impacts

No impacts to least Bell's vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]) will occur with the implementation of the project.

Mitigation

No mitigation is required as least Bell's vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]) are not present on the project site.

Vernal Pools

Prior to conducting field assessments, transects (ranging from 0.15 to 0.5 miles in length) were drawn on a one-meter resolution aerial photograph. During the field assessment, points where these transects intercepted potentially jurisdictional waters were mapped on the aerial photographs or with a Trimble GeoXT GPS unit. Field maps were digitized using GIS technology and the total area of jurisdictional features was calculated.

Criteria used to determine whether there are vernal pools on the project site included the following: whether there is evidence of a watershed supporting vernal pool hydrology: if the area exhibits upland and wetland characteristics (inundated or not) and length of time if that is the case, evidence

of the persistence of wetness using historic information (e.g. aerials), vegetation, soils, drainage characteristics, uses to which the site has been subjected, and weather and hydrologic records.

Existing Conditions and Results

No evidence of vernal pools was found on the project site. None of the area, outside of the two drainages and tributaries, exhibited upland and wetland characteristics (inundated or not), evidence of the persistence of wetness (current conditions and using historic information (e.g. aerials)), vegetation, soils, drainage characteristics, uses to which the site has been subjected, and weather and hydrologic records appropriate for vernal pools.

Impacts

No impacts to vernal pools will occur on the proposed project.

Mitigation

No mitigation for vernal pools will be necessary as there are no vernal pools on the project site.

Fairy Shrimp

Prior to conducting field assessments, transects (ranging from 0.15 to 0.5 miles in length) were drawn on a one-meter resolution aerial photograph. During the field assessment, points where these transects intercepted potentially jurisdictional waters were mapped on the aerial photographs or with a Trimble GeoXT GPS unit. Field maps were digitized using GIS technology and the total area of jurisdictional features was calculated.

Criteria used to determine whether there are fairy shrimp on the project site included the following: stock ponds, ephemeral pools, road ruts, human-made depressions, or other depressions that may pond water.

Existing Conditions and Results

We found ponded water in two check-dams (plastic lined depressions created by the City of Menifee to control water flow downstream)(Ponding Features 1 and 2) and in tire ruts (Ponding Features 3, 4, 5). These features are not vernal pools, but anthropogenic created features. The check-dams (Ponding Features 1 and 2) are included in riverine aspects and the tire ruts (Ponding Features 3, 4, 5) have examined for the presence of Fairy shrimp. Fairy shrimp were found in the tire ruts only (Ponding Features 3, 4, 5). Wet and dry season protocol surveys were conducted by Finium Environmental. Hatching was conducted by Helix Environmental with dry season samples collected by Finium Environmental.

Impacts

Results of dry season cyst hatching found non-sensitive fairy shrimp (*Branchinecta* sp). Based

on this information no impacts to sensitive fairy shrimp will occur on the proposed project.

Mitigation

No mitigation for fairy shrimp will be necessary as there are no sensitive fairy shrimp on the project site.

3.2 Results/Impacts

Temporary effects are impacts of covered activities that 1) alter the behavior of a covered species during the duration of the activity, 2) alter the habitat conditions supporting covered species occurrences for a period of less than one year following implementation of the activity, or 3) alter a land cover type or that affect the functions of a land cover type as habitat for covered and other native species for less than one year following implementation of the activity (e.g., clearing of grassland for construction staging areas).

Vegetation Communities

The proposed project will result in unavoidable impacts to 0.726 acre of MSHCP 6.1.2 riverine areas. The areas conduct sheet, stormwater and nuisance flow through the project site and continues off-site with water traversing only in a rain event for a short duration.

Unavoidable impacts to 0.726 acre of riverine areas will be impacted by lot and internal road grading on site. 0.004 acre of riverine area will be impacted by drainage connection to Chambers Street.

An analysis of unavoidable impacts to MSHCP riverine areas by drainage feature is described further below.

TABLE 5
SUMMARY OF POTENTIAL SECTION 6.1.2 AREAS BY HABITAT

Riparian/Riverine	Existing/Impact On-Site Acres	Linear Feet On-Site	Existing/Impact Off-Site Acres	Linear Feet Off-Site
Riverine D-1	0.372	414	0.004	
Riverine D-2	0.354	471		
Total	0.726	885	0.004	

WILDLIFE SPECIES

The proposed project would result in the loss of foraging and/or breeding habitat for common animals; including birds, reptiles, and small mammals. A portion of the wildlife species observed utilizing the site include: mourning dove (*Zenadia macroura*), mockingbird (*Mimus polyglottos*), raven (*Corvus corax*), roadrunner (*Geococcyx californianus*), house finch (*Carpodactus mexicanus*), house sparrow (*Passer domesticus*), Anna's hummingbird (*Calypte anna*), domestic dog (*Canis familiaris*), pocket gopher (*Thomomys bottae*), cottontail (*Sylvilagus audubonii*), California mouse (*Peromyscus californicus*), California ground squirrel (*Spermophilus beechyi*), coyote (*Canis latrans*) and domestic cat (*Felis domesticus*).

Impacts to Raptor Foraging Habitat

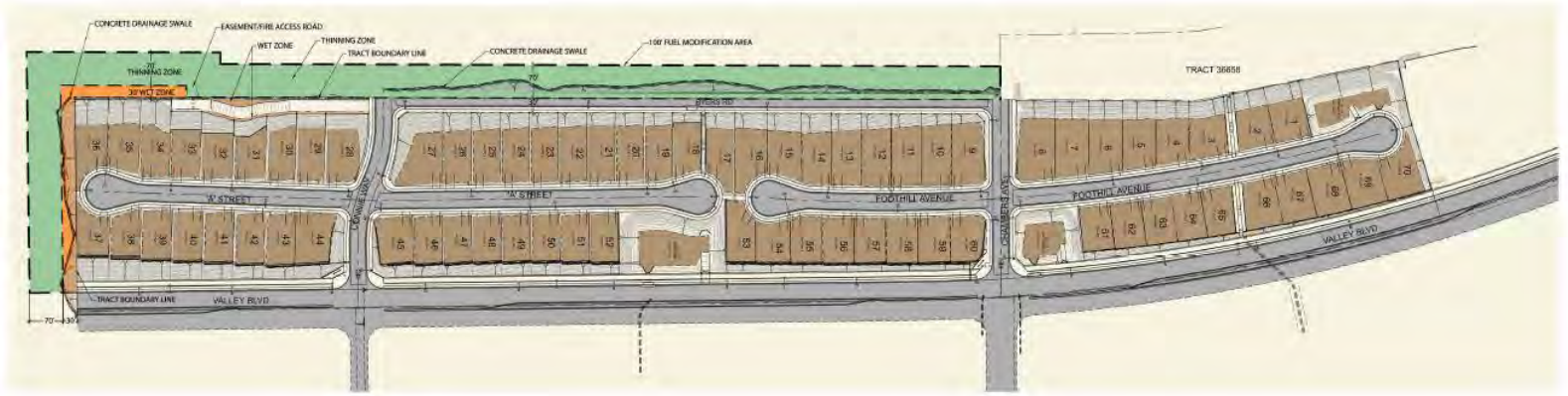
The proposed project would result in the direct loss of foraging habitat for a number of raptors such as the red-tailed hawk and American kestrel. The majority of the project site constitutes low-medium quality foraging habitat for these raptor species. Impacts to raptor foraging habitat are reduced to a less than significant level with coverage afforded by the MSHCP.

Impacts to Nesting Birds

The project has the potential to impact active nests if vegetation is to be removed during the nesting season (February 1 to September 30).

RIPARIAN LINKAGES

There will be no direct impacts to off-site riparian linkages. The flow from D-1 and D-2 will continue to contribute to offsite drainages; therefore it will maintain the hydrology to the drainages, which contributes to offsite vegetation.



FUEL MOD LEGEND:

DESCRIPTION	ACTION
WET ZONE 30' IRRIGATED AND LANDSCAPED SLOPE PER PRELIMINARY LANDSCAPE PLAN	NO ACTION REQUIRED
THINNING ZONE 70' NATIVE PLANTS PRESENT: ADENOSTOMA FASCICULATUM - CHAMISE (9' O.C.) ARTEMESIA CALIFORNICA - CALIFORNIA SAGEBRUSH (5' O.C.) ERIOGONUM FASCICULATUM - CALIFORNIA BUCKWHEAT (10' O.C.) HETEROMELES ARBUTIFOLIA - TOYON (15' O.C.) LARREA TRIDENTATA - CREOSOTE BUSH (5' O.C.) QUERCUS ILEX - HOLLY OAK (30' O.C.) RHUS OVATA - SUGAR BUSH (5' O.C.) SALVIA MELLIFERA - BLACK SAGE (5' O.C.) YUCCA WHIPPLEI - OUTLERS CANDLE (5' O.C.) SPRAKE NATIVE GRASSES QUERCUS AGRIFOLIA - COAST LIVE OAK (15' O.C.)	REMOVE ALL DEAD OR DYING FOLIAGE. TRIM NATIVE GRASSES TO A MAXIMUM HEIGHT OF 12" REMOVE SHRUBS TO ESTABLISH A MINIMUM OF 40' HORIZONTAL GAP BETWEEN SHRUB STANDS 7' TALL OR TALLER PRUNE LOWER LIMBS OF ALL TREES TO 10'-15' ABOVE GROUND REMOVE VEGETATION OVER 6" IN HEIGHT FROM BENEATH OAK TREES

EXHIBIT NO. _____
CASE NO. _____
DATE _____

PRELIMINARY FUEL MODIFICATION PLAN

TRACT 36911

RECREATIONAL LAND INVESTMENTS, INC.-MENIFEE, CA

NORTH 0' 100' 200' 400'

DATE: 5/16/2019
PROJECT #: 170508
CITY FILE #: TR2015-211

FIGURE 6

Fuel management zones/buffers are located within permanently impacted lots and included in totals already accounted for in the totals above. The Fuel treatment plan, Figure 6 above, includes fuel modification zone 1 which is in irrigated manufactured slopes that the HOA is to maintain.

3.3 Mitigation and Equivalency

3.3.1 Direct Effects

Recommended mitigation for significant direct impacts to sensitive vegetation communities consists of preservation or restoration of vegetation communities of equal or greater habitat value.

VEGETATION COMMUNITIES

The proposed project will result in unavoidable impacts to 0.726 acre riverine areas. Unavoidable impacts to onsite riverine areas will be impacted by pad development and ingress/egress into the project site. The compensatory mitigation is proposed as follows:

Provision of a one-time fee for 2.19 acres for riparian and riverine habitats in-lieu fee program off-site reestablishment through Riverpark Mitigation Bank, or any other approved in-lieu fee program at time of rough grading permit issuance will be acquired for mitigation of the impacts at a minimum ratio of 2:1 or greater if required by another agency. If reestablishment credits are not available then 3.0 acres for riparian and riverine habitats in-lieu fee program off-site enhancement credits through Riverpark Mitigation Bank, or any other approved in-lieu fee program at time of rough grading permit issuance will be acquired for mitigation of the impacts if required by another agency. Notification to California Department of Fish and Wildlife, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers is required regarding which type of in-lieu fee credits (reestablishment or enhancement) are being utilized. Mitigation for the impacts will be at a minimum 3:1 ratio for riverine or whatever is required[2] by California Department of Fish and Wildlife, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers.

Should sufficient in-lieu fee credits not be available for purchase at the time the project is implemented, or should other agencies not approve in-lieu fee credit purchase, then the Developer must prepare and submit for review and approval a Habitat Mitigation and Monitoring Plan (HMMP) for a site-specific restoration project at a minimum 3:1 mitigation to impact ratio. The plan must meet County of Riverside requirements, as well as requirements of other resource and wildlife agencies. Appropriate

[2] Specific mitigation ratios are usually determined during California Department of Fish and Game, California Regional Water Quality Control Board, and U.S. Army Corps of Engineers permit processes

guarantees for the restoration project must be in place (e.g., letter of credit, bond, etc.) prior to issuance of a grading permit.

The Restoration Plan and Habitat Mitigation and Monitoring Program (HMMP) will be reviewed and approved by the RCA and Wildlife Agencies prior to project implementation (any vegetation removal, staging equipment on site, ground disturbance, etc.).

By providing compensatory mitigation through an in-lieu fee program for riverine/riparian impacts equivalent or Superior in Preservation requirements will be met. The habitat on site is fragmented, disturbed and does not connect to any viable riparian and riverine habitat up or down stream. Habitat through an in-lieu fee program will increase existing riverine/riparian habitat and add to it. By doing this it will be Superior in Preservation.

WILDLIFE SPECIES

There is no riparian habitat on and off of the immediate project site so there is no suitable habitat for most riparian wildlife species, including no potential for federally and State listed least Bell's vireo, and southwestern willow flycatcher or western yellow-billed cuckoo.

Raptors

Seven days prior to the onset of construction activities during the raptor nesting season (February 1 to June 30), a qualified biologist shall survey within 500 feet of the project impact area for the presence of any active raptor nests (common or special status). Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFW. If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. To protect any nest site, the following restrictions to construction activities are required until nests are no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any occupied nest, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any occupied nest, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the known nest shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest. If an active nest is observed during the non-nesting season, the nest site shall be monitored by a qualified biologist, and when the raptor is away from the nest, the biologist will flush any raptor to open space areas. A qualified biologist, or construction personnel under the direction of the qualified biologist, shall then remove the nest site so raptors cannot return to a nest.

Burrowing Owl

Pursuant to the MSHCP Objective 6, for burrowing owl, a preconstruction burrowing owl survey shall be conducted prior to issuance of a grading permit to verify the presence/absence of the owl on the project site. Within thirty days of the onset of construction activities, a qualified biologist shall survey within 500 feet of the project site for the presence of any active owl burrows. Any active burrow found during survey efforts shall be mapped on the construction plans. If no active burrows are found, no further mitigation would be required. If burrowing owls are found onsite during the 30-day preconstruction survey, the project proponent will notify the Wildlife Agencies, the City of Riverside and the RCA immediately and will develop a Burrowing Owl Protection and Relocation Plan in conjunction with and approved by the Wildlife Agencies before ground disturbance. If nesting activity is present at an active burrow, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants.

Migratory Birds

If construction is to occur during the MBTA nesting cycle (February 15-September 15) than a nesting bird survey should be conducted by a qualified biologist. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) and a 300' buffer will be flagged around the nest (500' buffer for raptor nests). Construction should not be permitted within the buffer areas while the nest continues to be active (eggs, chicks, etc.).

RIPARIAN LINKAGES

The flows from D-1 and D-2 will continue to contribute to offsite areas; therefore it will maintain the hydrology to the drainage, which contributes to offsite vegetation. There is no riparian habitat on the project site.

MSHCP CONSERVATION AREA

MSHCP Conservation Area(s) will not be impacted by the project.

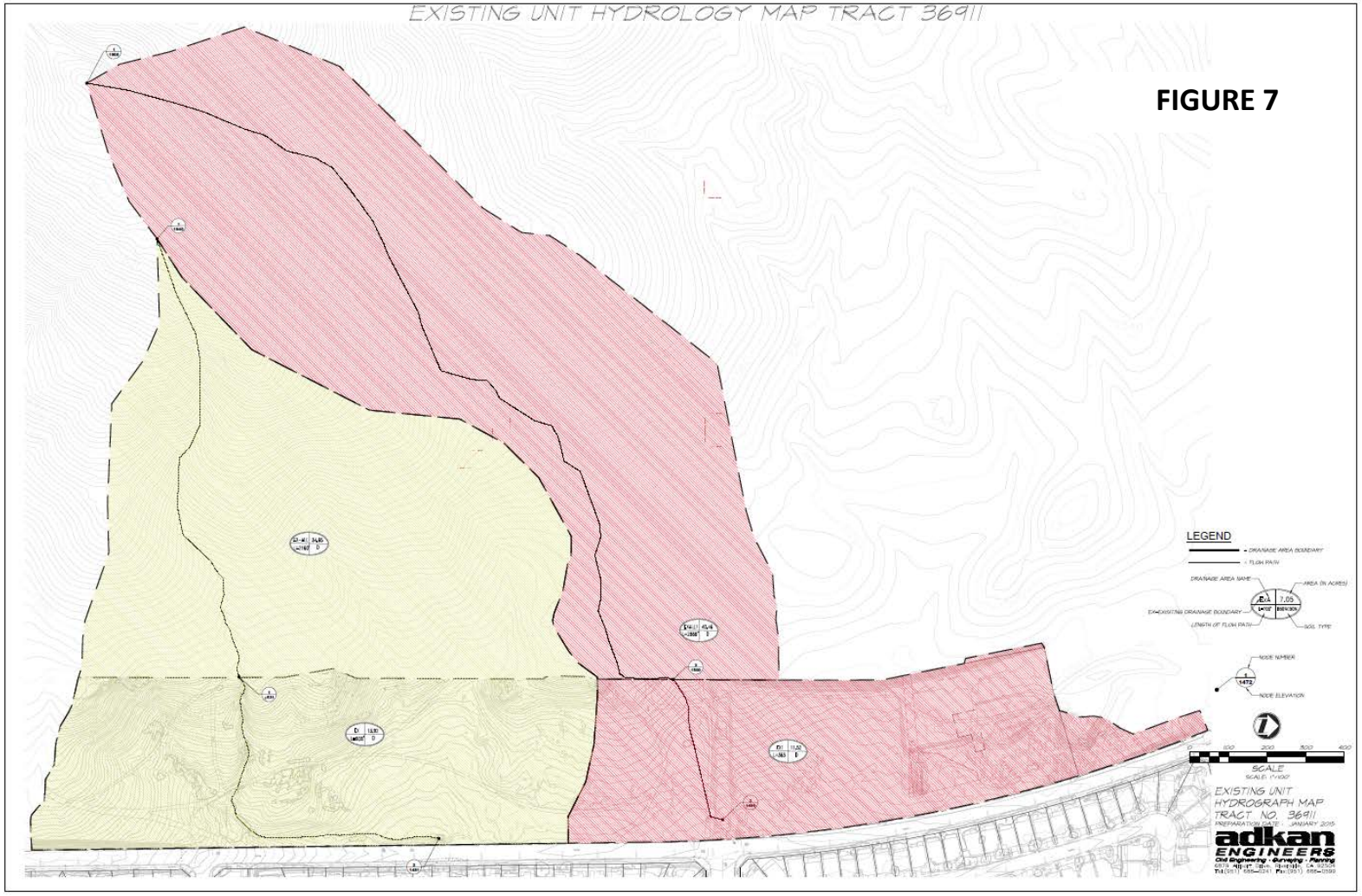
3.3.2 Indirect Effects

The following project design features and measures are incorporated into the project plans, that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement, consistent with the Western Riverside MSHCP, Section 6.14, Guidelines are mitigation for indirect impacts.

Toxics

The proposed project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality Best Management Practices (BMPs) include the vegetated earthen channel within the project and other BMPs such as education. These BMPs will be implemented as part of the storm water pollution prevention measures for the project, in accordance with all appropriate NPDES requirements. Pre and Post hydrology is shown in Figures 7 and 8.

FIGURE 7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LEGEND
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FLOW PATH
DRAINAGE AREA NAME
AREA (IN ACRES)
EX-EXISTING DRAINAGE BOUNDARY
LENGTH OF FLOW PATH
SOIL TYPE
NODE NUMBER
NODE ELEVATION
SCALE
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EXISTING UNIT HYDROGRAPH MAP
TRACT NO. 36911
PREPARATION DATE : JANUARY 2015
adkan
ENGINEERS

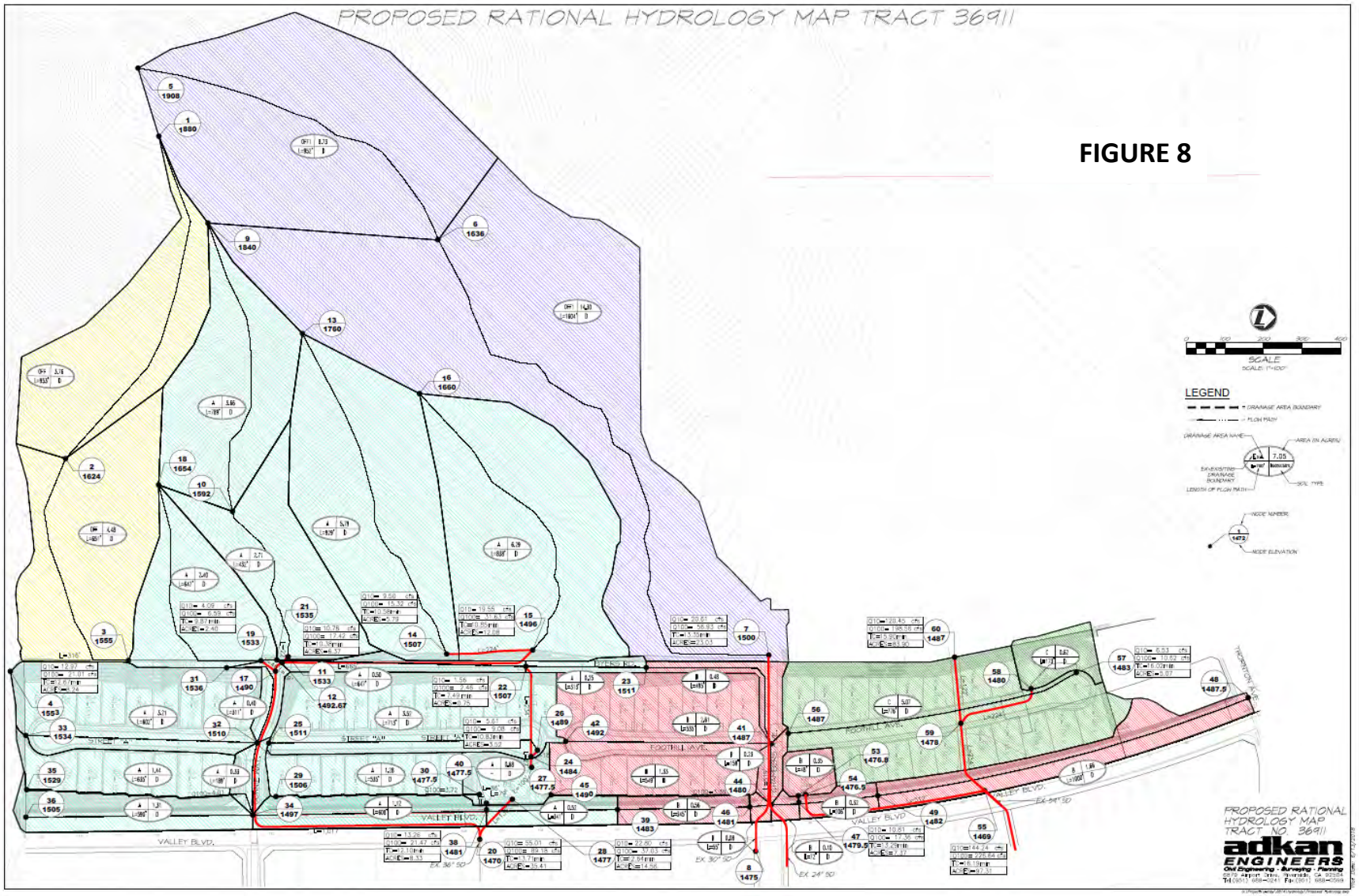
PROPOSED RATIONAL HYDROLOGY MAP TRACT 36911
LEGEND
SCALE
VALLEY BLVD.
FOOTHILL AVE.
PROPOSED RATIONAL HYDROLOGY MAP TRACT NO. 36911
adkan ENGINEERS

FIGURE 8

Noise

The proposed project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction on the project site. Noise created on the project site is not expected to exceed residential noise standards. If construction is to occur during the MBTA nesting cycle (February 15-September 30) than a nesting bird survey should be conducted by a qualified biologist. If sound walls are to be used they will be installed outside of nesting season. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) and a 300' buffer will be flagged around the nest (500' buffer for raptor nests). Construction should not be permitted within the buffer areas while the nest continues to be active (eggs, chicks, etc.).

TEMPORARY INDIRECT IMPACTS

Potential effects of construction-related sedimentation, siltation, erosion, or pollutant run-off typically would be minimized through fencing of the construction area and adoption of best management practices (BMPs) required in order to obtain permits from local, state, and federal regulatory agencies. Implementation of BMPs incorporated in preparation of a Stormwater Pollution Prevention Plan (SWPPP) and in accordance with the National Pollutant Discharge Elimination System (NPDES) general construction permit would reduce these indirect impacts to less than significant.

PERMANENT INDIRECT IMPACTS

The long-term potential for introduction of invasive exotic plants may be minimized through prohibition on planting invasive non-native species. Landscape designs should designate that container plants and hydro seed application shall not include any invasive species listed in Section 6.1.4 of the MSHCP. Adequate landscape designs shall conform to the City of Menifee and County of Riverside requirements.

The long-term potential of water quality impacts may be reduced through proper engineering design of storm water filtration. Preparation of an Urban Storm Water Management Plan demonstrating appropriate post-construction water quality Best Management Practices (BMPs) would also reduce these impacts. All BMPs should be located within the limits of development.

These measures would reduce potential indirect impacts to riparian communities to less than significant.

Wildlife

Long-term indirect impacts to sensitive wildlife species may be minimized by construction of a fence separating the project area from adjacent properties.

3.3.3 Infeasibility of Avoidance

Volume I, Section 6.1.2 of the MSHCP requires that projects develop avoidance alternatives, if feasible, that would allow for full avoidance of riverine areas. The avoidance of MSHCP riverine areas by the proposed project is not feasible. The purpose of the project is to construct a residential development within the project site. TR 36199 proposes the subdivision of approximately 21.66 acres of undeveloped land into 72 single family residential lots. As part of the project a three open space lots will be dedicated. They will be dedicated as water quality basins for compliance with Regional Water Quality Control Board requirements. All streets proposed as a part of this development will be public streets. Access to the tract can be taken from Chambers Avenue and Connie Way.

The existing topography on the site contains a flow path that generally bisects the site from the west to northeast. The tributary areas are relatively small, with minimal offsite residentially developed area draining onto the property. The flow path crosses the site and continues offsite through underground culvert and via Chambers Avenue. The topography of the site and the location of the flow path are such that total avoidance would essentially prohibit any development of the property.

The proposed grading plan would alter the drainage patterns. However, since the offsite drainage areas are small, any diversion would still maintain similar soil and topographic properties. The drainage area in the post condition will match or reduce the area. For the area where the post project area is greater (on-site), detention basin(s) will be constructed to mitigate for water quality and excess runoff. The outlet will not exceed the pre-project flows.

A design limitation that this project faces is also dependent on County preference of water quality design. The County of Riverside Transportation and Land Management Agency has stated that the preferred water quality treatment option for single family residential is an end of pipe solution. The County will not allow privately maintained on-lot water quality measures, as those are more likely to not be maintained in accordance with the Water Quality Management Plan, or be removed by the owners of the lots.

4 NARROW ENDEMIC PLANT SPECIES MITIGATION (SECTION 6.1.3)

4.1 Methods

Reference to Table 6-1 in the MSHCP for habitat characteristics and the appropriate blooming period for all species included under the Narrow Endemic Plant Species Survey Area (NEPSSA) policy was conducted. Methodologies for NEPSSA species and habitats are addressed below.

FIELD SURVEY OVERVIEW

The general biological study area consisted of the proposed project area with some focused surveys out to 500 feet on either side of the proposed project area. A number of biological resources assessments and focused surveys have been performed within the project area to date. General and focused biological surveys and habitat assessments were conducted in order to assess the following:

- General biological characteristics of the project area;
- Presence or potential presence of any listed, special-status, or MSHCP species;
- Vegetation communities;
- Flora and fauna species inventories;
- Habitat suitability for burrowing owls (*Athene cunicularia*) within MSHCP survey area;
- Presence or potential presence of species not covered by the MSHCP;
- Presence or potential presence of MSHCP defined fairy shrimp, Vernal Pool, and

Riparian/Riverine habitats; and

- Presence or potential presence of waters and wetlands under U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction.

Data was collected in the field by numerous techniques including the use of field notes, hand-held Global Positioning System (GPS) devices, standardized data forms, photographs, and field maps. Field maps with an aerial view of the project area included CNDDB, USFWS, and MSHCP sensitive species data points. Potentially occurring habitats for special-status species were identified prior to field investigations through aerial photo-interpretation. Initial reconnaissance level wildlife and botanical surveys were conducted in conjunction with vegetation mapping. The project area was traversed on foot and by vehicles as needed to gain 100 percent access of the survey area. Focused surveys were scheduled based on the results of the initial assessments.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Wildlife Survey and Habitat Assessment Methods

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for

listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

Special Status Rare Plant Species Survey Methods

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019), CNDDB (CNDDB 2019), and CalFlora (CalFlora 2019). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed in 2019 to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Plant surveys of the project area were conducted in spring 2019. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed. A floral inventory of all species observed during the course of the surveys was also documented.

TABLE 6
SURVEY LOCATIONS, PERSONNEL, DATES, AND PURPOSE

Surveyor(s)	Date(s)		Purpose
	2017	2019	
TG, PG	April 16, April 29, May 13	March 15, March 20, April 3, May 18, June 15	General Biological Survey (Plant and Wildlife Habitat Assessments)
TG, PG	April 22, May 3, May 20, June 2, June 10, June 18, June 26	March 20, April 3, May 18, June 15	Focused Burrowing Owl Surveys
TG, PG	May 13, May 20	March 15, March 20	MSHCP Habitat Assessment
TG, PG, JP		March 15, March 20	Jurisdictional Delineation/ 6.1.2 Studies
FE		March 26, April 2, April 9	Fairy Shrimp
TG, JP	May 13, May 20	April 3, May 18, June 15	Vegetation Mapping
TG, JP	April 29, May 13, May 20, June 2 and June 26	March 20, April 3, May 18, June 15	Various Assessments, Vegetation Mapping

TG=Teresa Gonzales, GEC Principal Biologist
PG=Paul Gonzales, GEC Senior Biologist
JP= Justin Palmer, AJP GIS
FE=Finite Environmental

4.2 Results/Impacts

No NEPSSA species or habitat is located on the project site. There are no NEPSSA impacts associated with the proposed project.

4.3 Mitigation and Equivalency

4.3.1 Direct Effects

Not applicable no NEPSSA species is located on site.

4.3.2 Indirect Effects

Not applicable no NEPSSA species is located on site.

5 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

5.1 Criteria Area Species Survey Area - Plants

Reference to Table 6-1 in the MSHCP for habitat characteristics and the appropriate blooming period for all species included under the Criteria Area Species Survey Area (CASSA) plants was conducted. Methodologies for CASSA species and habitats are addressed below.

5.1.1 Methods

Methodologies for CASSA species and habitats are addressed below.

FIELD SURVEY OVERVIEW
The general biological study area consisted of the proposed project area with some focused surveys out to 500 feet on either side of the proposed project area. A number of biological resources assessments and focused surveys have been performed within the project area to date. General and focused biological surveys and habitat assessments were conducted in order to assess the following:

- General biological characteristics of the project area;
- Presence or potential presence of any listed, special-status, or MSHCP species;
- Vegetation communities;
- Flora and fauna species inventories;
- Habitat suitability for burrowing owls (*Athene cunicularia*) within MSHCP survey area;
- Presence or potential presence of species not covered by the MSHCP;
- Presence or potential presence of MSHCP defined fairy shrimp, Vernal Pool, and

Riparian/Riverine habitats; and

- Presence or potential presence of waters and wetlands under U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction.

Data was collected in the field by numerous techniques including the use of field notes, hand-held Global Positioning System (GPS) devices, standardized data forms, photographs, and field maps. Field maps with an aerial view of the project area included CNDDB, USFWS, and MSHCP sensitive species data points. Potentially occurring habitats for special-status species were identified prior to field investigations through aerial photo-interpretation. Initial reconnaissance level wildlife and botanical surveys were conducted in conjunction with vegetation mapping. The project area was traversed on

foot and by vehicles as needed to gain 100 percent access of the survey area. Focused surveys were scheduled based on the results of the initial assessments.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Wildlife Survey and Habitat Assessment Methods

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

Special Status Rare Plant Species Survey Methods

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019), CNDDB (CNDDB 2019), and CalFlora (CalFlora 2019). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed in 2018 to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Plant surveys of the project area were conducted in spring 2019. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed. A floral inventory of all species observed during the course of the surveys was also documented.

TABLE 7
SURVEY LOCATIONS, PERSONNEL, DATES, AND PURPOSE

Surveyor(s)	Date(s)		Purpose
	2017	2019	
TG, PG	April 16, April 29, May 13	March 15, March 20, April 3, May 18, June 15	General Biological Survey (Plant and Wildlife Habitat Assessments)
TG, PG	April 22, May 3, May 20, June 2, June 10, June 18, June 26	March 20, April 3, May 18, June 15	Focused Burrowing Owl Surveys
TG, PG	May 13, May 20	March 15, March 20	MSHCP Habitat Assessment
TG, PG, JP		March 15, March 20	Jurisdictional Delineation/ 6.1.2 studies
FE		March 26, April 2, April 9	Fairy Shrimp
TG, JP	May 13, May 20	April 3, May 18, June 15	Vegetation Mapping
TG, JP	April 29, May 13, May 20, June 2 and June 26	March 20, April 3, May 18, June 15	Various Assessments, Vegetation Mapping

TG=Teresa Gonzales, GEC Principal Biologist
PG=Paul Gonzales, GEC Senior Biologist
JP= Justin Palmer, AJP GIS
FE=Finite Environmental

5.1.2 Results/Impacts

No CASSA species or habitat is located on the project site. There are no CASSA impacts associated with the proposed project.

5.1.3 Mitigation and Equivalency

5.1.3.1 Direct Effects

Not applicable no CASSA species is located on site.

5.1.3.2 Indirect Effects

Not applicable no CASSA species is located on site.

5.2 Burrowing Owl

5.2.1 Methods

Special Status Wildlife Species Survey Methods

Prior to conducting habitat assessment surveys, CNDDB and other sources were reviewed for the records of special status wildlife species potentially occurring in the project area. General reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife species habitats within the project area. Maps depicting all known sensitive wildlife species locations within the regional vicinity of the project were produced to aid in determining the target species to survey. All wildlife species encountered during surveys were documented. Any specific areas (e.g., potential nesting, breeding, and foraging habitat) encountered during the surveys that have a high probability for supporting sensitive wildlife were documented. The likelihood of these species occurrence (not expected, low, moderate, high, expected) was also assessed.

General habitat assessments and focused protocol-level surveys for other species including, but not limited to, burrowing owl (*Athene cunicularia*), were also conducted. General habitat assessments involved evaluating the specific vegetation communities encountered and their potential to support these sensitive species (expected, high, moderate, low, not expected).

The following table identifies the sensitive species for which protocol-level surveys were required for the project.

TABLE 8
PROTOCOL SURVEYS

Protocol Surveys			
Species		Survey Protocol	Location
Scientific Name	**Common Name**		
Athene cunicularia	burrowing owl	A minimum of four surveys are required between March 15 and August 31.	Grasslands, debris piles, disturbed areas

Transects for general reconnaissance and habitat assessment surveys were conducted to assess the presence of burrowing owl within the project area (Figure 9). Survey information is included in Table 9.

Based on the findings of the biological surveys, focused habitat assessment and species-specific surveys were conducted for burrowing owl (*Athene cunicularia*) to determine presence of sensitive, listed, and covered species within the project area. Burrowing owl habitat surveys were conducted on March 20, 2019. The habitat assessment and focused surveys were conducted in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006).

The schedule and field conditions during the visits are summarized below.

TABLE 9
SURVEY SUMMARY 2019

Date	Air Temperature (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Sunrise/Sunset Times	Time-Duration*
March 20	48-51	0-5	Clear-90% cloud cover	No-stopped surveys when drizzle started at 9 AM	0651/1900	0551/0851 3 hrs
April 3	52-58	0-7	30-90% cloud cover	No	0632/1911	0532/0832 3 hrs
May 18	47-52	0-3	Clear	No	0545/1945	0445/0745 3 hrs
June 15	59-68	0-4	Marine layer-clear	No	0537/2000	0437-0737 3 hrs

*Approved hours for burrowing owl surveys are one hour prior to sunrise until two hours after and two hours prior to sunset and one hour after sunset.

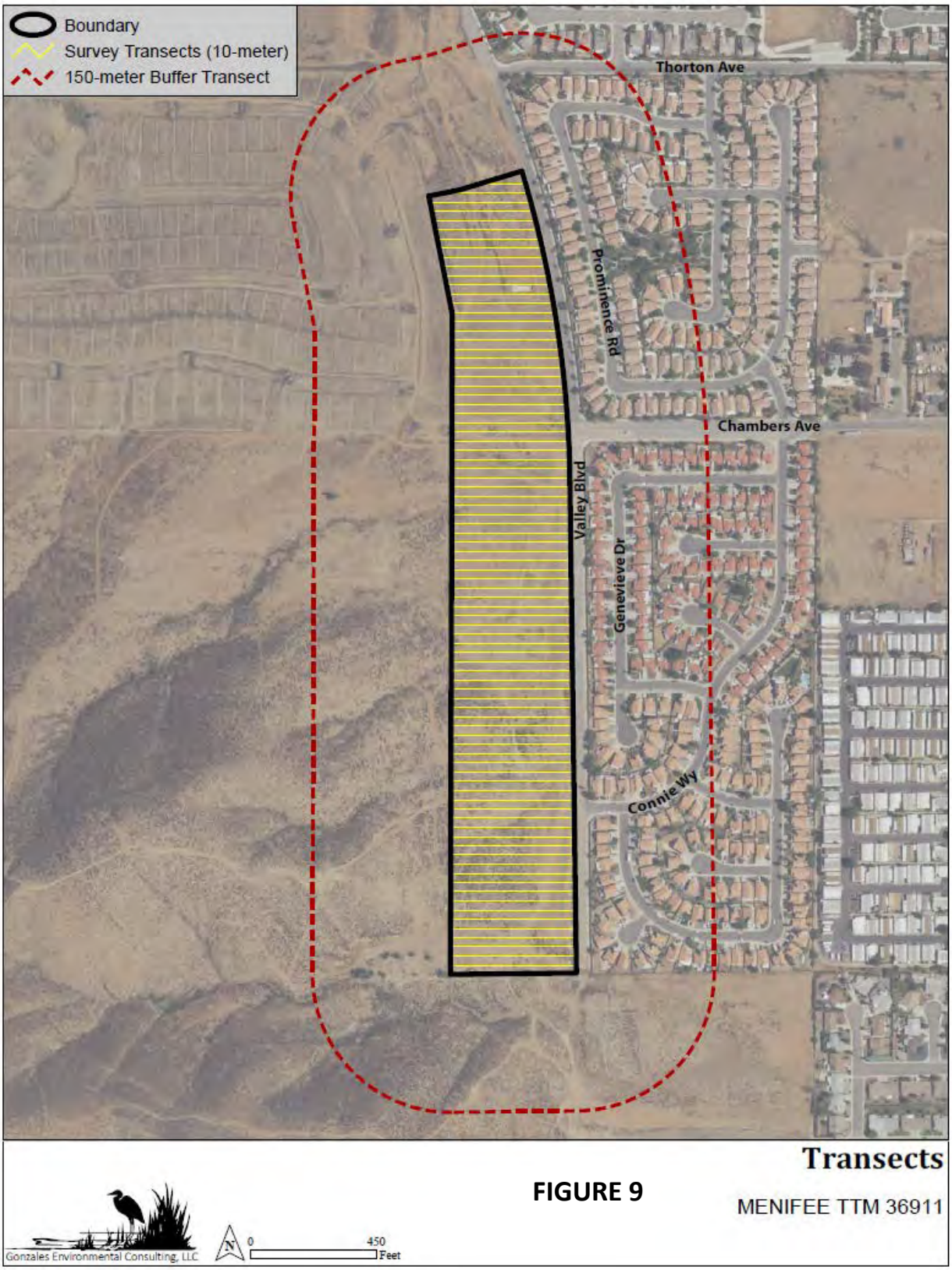
Boundary
Survey Transects (10-meter)
150-meter Buffer Transect
Thorton Ave
Prominence Rd
Chambers Ave
Valley Blvd
Genevieve Dr
Connie Wy
Transects
MENIFEE TTM 36911
Gonzales Environmental Consulting, LLC
N
0
450
Feet

FIGURE 9

Step I Habitat Assessment

The habitat assessment followed the BURROWING OWL SURVEY INSTRUCTIONS for the Western Riverside Multiple Species Habitat Conservation Plan Area, dated March 29, 2006 per Section 6.3.2. Of the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP).

The habitat assessment was performed to determine the site's suitability to support burrowing owl. The assessment was conducted on March 20, 2019. Several key indicators were used in determining the site's potential to support burrowing owl. Key indicators included the presence of low-growing vegetation within grassland, desert, and scrublands, small fossorial mammals, and isolated features such as cement or wood debris piles, and/or cement culverts.

The Site exhibited multiple key indicators of suitable burrowing owl habitat. The following indicators observed on-site were:

- Disturbed low-growing vegetation, as described in the Vegetation section; and
- Debris piles (varied due to non-authorized dumping on the site)

Additional wildlife observed during surveys is listed in Appendix, *Animal and Plant Compendium*.

The results of the habitat assessment concluded that the site contained suitable burrowing owl habitat. As a result, Focused Burrowing Owl Burrow Survey was warranted.

Step II A Focused Burrowing Owl Burrow Survey

Immediately after the habitat assessment, a burrow survey was conducted on the site to determine if any of the debris piles contained evidence of burrowing owl. Surveys were conducted by Teresa Gonzales and Paul Gonzales. Surveys consisted of slowly walking the site via transects 30 feet apart and the 500-ft buffer zone that was previously delineated for the habitat assessment. All existing fossorial mammal burrows were thoroughly examined for evidence of burrowing owl, including molting feathers, prey remains, cast pellets, eggshell fragments, and excrement.

Focused Burrowing Owl Burrow Survey Results

No burrows were observed on site, however numerous debris piles of wood and trash were found around the site. All debris piles were carefully checked for evidence of burrowing owl, including molting feathers, prey remains, cast pellets, eggshell fragments, and excrement. Results of the surveys found no owl burrows or burrowing owls on the proposed project site or in adjacent areas.

Step II B Focused Burrowing Owl Survey

Immediately after the burrow survey, a burrowing owl survey was conducted on the site to determine if any of the debris piles contained evidence of burrowing owl. Surveys were conducted by Teresa Gonzales and Paul Gonzales. Surveys consisted of slowly walking the site via transects 30 feet apart and the 500-ft buffer zone that was previously delineated for the habitat assessment. All existing birds observed were documented.

Focused Burrowing Owl Burrow Survey Results

No burrowing owls were observed on site. Results of the surveys found no burrowing owls on the proposed project site or in adjacent areas.

5.2.2 Results/Impacts

Results of the surveys found no owl burrows or burrowing owls on the proposed project site or in adjacent areas (500 foot buffer area). We did observe one burrowing owl outside of the 500 foot buffer area near McCall Avenue on one survey.

5.2.3 Mitigation and Equivalency

5.2.3.1 Direct Effects

There are no owl burrows or burrowing owls on the proposed project site or in adjacent areas (500 foot buffer area). We did observe one burrowing owl outside of the 500 foot buffer area near McCall Avenue on one survey. The MSHCP requires preconstruction surveys pursuant to the MSHCP Objective 6, for burrowing owl, a preconstruction burrowing owl survey shall be conducted prior to issuance of a grading permit to verify the presence/absence of the owl on the project site. Within thirty days of the onset of construction activities, a qualified biologist shall survey within 500 feet of the project site for the presence of any active owl burrows. Any active burrow found during survey efforts shall be mapped on the construction plans. If no active burrows are found, no further mitigation would be required. If burrowing owls are found onsite during the 30-day preconstruction survey, the project proponent will notify the Wildlife Agencies, the City of Riverside and the RCA immediately and will develop a Burrowing Owl Protection and Relocation Plan in conjunction with and approved by the Wildlife Agencies before ground disturbance. If nesting activity is present at an active burrow, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active as determined by a

qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. A Burrowing Owl Protection and Relocation Plan must be approved by USFWS and CDFW before construction can continue if burrowing owls or active burrows are found.

5.2.3.2 Indirect Effects

There are no indirect effects on burrowing owls anticipated as part of the project.

5.3 Mammals

5.3.1 Methods

A systematic approach was taken to identify and characterize biological resources, including mammals in the project area. The biological resource study area is defined as the area either directly or indirectly impacted by the project. Records of known occurrences were reviewed to identify those plant and wildlife species that may occur in the project area. Those records were then compared with federal or state listed threatened, endangered, or special status species. General biological surveys; vegetation mapping; and surveys for special status wildlife and plant species for the project were conducted. Methods that were used during these surveys are summarized by resource type in the following sections.

Records Search
Preliminary investigations included review of information obtained from the USFWS, and CDFW; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. The following resources were used in background research and during field surveys:

- Topographic maps (USGS 7.5 minute quadrangle)
- Aerial photos
- California Natural Diversity Database (CDFW 2019)
- USFWS sensitive species occurrence database (USFWS 2019)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019)

- Western Riverside Area, California Soil Survey (U.S. Department of Agriculture [USDA] 1971)
- Volume 1, Parts I and II of the MSHCP (County of Riverside 2003)
- RCA MSHCP Web App Viewer, RCA MSHCP Information Map (2009) accessed at: http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd

A list of special status species was compiled, including all species in the project area that were:
Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
Included in one of the CDFW publications on species of special concern;
"Fully protected" by the State of California;
Included in the CNPS compilation; or
Identified as plants meeting the definition of rare or endangered under CEQA.

The information provided by these agencies included both regional and site-specific data on sensitive species.

FIELD SURVEY OVERVIEW

The general biological study area consisted of the proposed project area with some focused surveys out to 500 feet on either side of the proposed project area. A number of biological resources assessments and focused surveys have been performed within the project area to date. General and focused biological surveys and habitat assessments were conducted in order to assess the following:

- General biological characteristics of the project area;
- Presence or potential presence of any listed, special-status, or MSHCP species;
- Vegetation communities;
- Flora and fauna species inventories;
- Habitat suitability for burrowing owls (*Athene cunicularia*) within MSHCP survey area;
- Presence or potential presence of species not covered by the MSHCP;
- Presence or potential presence of MSHCP defined fairy shrimp, *Vernal Pool*, and *Riparian/Riverine* habitats; and
- Presence or potential presence of waters and wetlands under U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction.

Data was collected in the field by numerous techniques including the use of field notes, hand-held Global Positioning System (GPS) devices, standardized data forms, photographs, and field maps. Field maps with an aerial view of the project area included CNDDB, USFWS, and MSHCP sensitive species

data points. Potentially occurring habitats for special-status species were identified prior to field investigations through aerial photo-interpretation. Initial reconnaissance level wildlife and botanical surveys were conducted in conjunction with vegetation mapping. The project area was traversed on foot and by vehicles as needed to gain 100 percent access of the survey area.

Focused surveys were scheduled based on the results of the initial assessments.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Wildlife Survey and Habitat Assessment Methods

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

SPECIAL STATUS SPECIES METHODS

Special Status Wildlife Species Survey Methods

Prior to conducting habitat assessment surveys, CNDDB and other sources were reviewed for the records of special status wildlife species potentially occurring in the project area. General reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife species habitats within the project area. Maps depicting all known sensitive wildlife species locations within the regional vicinity of the project were produced to aid in determining the target species to survey. All wildlife species encountered during surveys were documented. Any specific areas (e.g., potential nesting, breeding, and foraging habitat) encountered during the surveys that have a high probability for supporting sensitive wildlife were documented. The likelihood of these species occurrence (not expected, low, moderate, high, expected) was also assessed. General habitat assessments and focused protocol-level surveys for other species including, but not limited to, burrowing owl (*Athene cunicularia*) were also conducted. General habitat assessments involved evaluating the specific vegetation communities encountered and their potential to support these sensitive species (expected, high, moderate, low, not expected).

TABLE 10
SURVEY LOCATIONS, PERSONNEL, DATES, AND PURPOSE

Surveyor(s)	Date(s)		Purpose
	2017	2019	
TG, PG	April 16, April 29, May 13	March 15, March 20, April 3, May 18, June 15	General Biological Survey (Plant and Wildlife Habitat Assessments)
TG, PG	April 22, May 3, May 20, June 2, June 10, June 18, June 26	March 20, April 3, May 18, June 15	Focused Burrowing Owl Surveys
TG, PG	May 13, May 20	March 15, March 20	MSHCP Habitat Assessment
TG, PG, JP		March 15, March 20	Jurisdictional Delineation/ 6.1.2
FE		March 26, April 2, April 9	Fairy Shrimp
TG, JP	May 13, May 20	April 3, May 18, June 15	Vegetation Mapping
TG, JP	April 29, May 13, May 20, June 2 and June 26	March 20, April 3, May 18, June 15	Various Assessments, Vegetation Mapping

TG=Teresa Gonzales, GEC Principal Biologist
PG=Paul Gonzales, GEC Senior Biologist
JP= Justin Palmer, AJP GIS
FE=Finite Environmental

5.3.2 Results/Impacts

The project site is within the federal endangered and state threatened Stephen's kangaroo rat (SKR) fee area.

5.3.3 Mitigation and Equivalency

5.3.3.1 Direct Effects

Take of Stephen's kangaroo rat (*Dipodomys stephensi*; SKR) will be processed directly through the SKR Habitat Conservation Plan (HCP) and a fee will be required.

5.3.3.2 Indirect Effects

The following project design features and measures are incorporated into the project plans, consistent with the Western Riverside MSHCP, Section 6.14, Guidelines are mitigation for indirect impacts.

Toxics

The proposed project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality Best Management Practices (BMPs) include the vegetated earthen channel within the project and other BMPs such as education. These BMPs will be implemented as part of the storm water pollution prevention measures for the project, in accordance with all appropriate NPDES requirements.

Noise

The proposed project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction on the project site. Noise created on the project site is not expected to exceed residential noise standards.

5.4 Amphibians

5.4.1 Methods

A systematic approach was taken to identify and characterize biological resources, including mammals in the project area. The biological resource study area is defined as the area either directly or indirectly impacted by the project. Records of known occurrences were reviewed to identify those plant and wildlife species that may occur in the project area. Those records were then compared with federal or state listed threatened, endangered, or special status species. General biological surveys; vegetation mapping; and surveys for special status wildlife and plant species for the project were conducted. Methods that were used during these surveys are summarized by resource type in the following sections.

Records Search

Preliminary investigations included review of information obtained from the USFWS, and CDFW; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. The following resources were used in background research and during field surveys:

- Topographic maps (USGS 7.5 minute quadrangle)
- Aerial photos
- California Natural Diversity Database (CDFW 2019)
- USFWS sensitive species occurrence database (USFWS 2019)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019)

- Western Riverside Area, California Soil Survey (U.S. Department of Agriculture [USDA] 1971)
- Volume 1, Parts I and II of the MSHCP (County of Riverside 2003)
- RCA MSHCP Web App Viewer, RCA MSHCP Information Map (2009) accessed at: http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd

A list of special status species was compiled, including all species in the project area that were:
Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
Included in one of the CDFW publications on species of special concern;
"Fully protected" by the State of California;
Included in the CNPS compilation; or
Identified as plants meeting the definition of rare or endangered under CEQA.

The information provided by these agencies included both regional and site-specific data on sensitive species.

FIELD SURVEY OVERVIEW

The general biological study area consisted of the proposed project area with some focused surveys out to 500 feet on either side of the proposed project area. A number of biological resources assessments and focused surveys have been performed within the project area to date. General and focused biological surveys and habitat assessments were conducted in order to assess the following:

- General biological characteristics of the project area;
- Presence or potential presence of any listed, special-status, or MSHCP species;
- Vegetation communities;
- Flora and fauna species inventories;
- Habitat suitability for burrowing owls (*Athene cunicularia*) within MSHCP survey area;
- Presence or potential presence of species not covered by the MSHCP;
- Presence or potential presence of MSHCP defined fairy shrimp, *Vernal Pool*, and *Riparian/Riverine* habitats; and
- Presence or potential presence of waters and wetlands under U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction.

Data was collected in the field by numerous techniques including the use of field notes, hand-held Global Positioning System (GPS) devices, standardized data forms, photographs, and field maps. Field maps with an aerial view of the project area included CNDDB, USFWS, and MSHCP sensitive species

data points. Potentially occurring habitats for special-status species were identified prior to field investigations through aerial photo-interpretation. Initial reconnaissance level wildlife and botanical surveys were conducted in conjunction with vegetation mapping. The project area was traversed on foot and by vehicles as needed to gain 100 percent access of the survey area.

Focused surveys were scheduled based on the results of the initial assessments.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Wildlife Survey and Habitat Assessment Methods

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

SPECIAL STATUS SPECIES METHODS

Special Status Wildlife Species Survey Methods

Prior to conducting habitat assessment surveys, CNDDB and other sources were reviewed for the records of special status wildlife species potentially occurring in the project area. General reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife species habitats within the project area. Maps depicting all known sensitive wildlife species locations within the regional vicinity of the project were produced to aid in determining the target species to survey. All wildlife species encountered during surveys were documented. Any specific areas (e.g., potential nesting, breeding, and foraging habitat) encountered during the surveys that have a high probability for supporting sensitive wildlife were documented. The likelihood of these species occurrence (not expected, low, moderate, high, expected) was also assessed. General habitat assessments and focused protocol-level surveys for other species including, but not limited to, burrowing owl (*Athene cunicularia*) were also conducted. General habitat assessments involved evaluating the specific vegetation communities encountered and their potential to support these sensitive species (expected, high, moderate, low, not expected).

TABLE 11
SURVEY LOCATIONS, PERSONNEL, DATES, AND PURPOSE

Surveyor(s)	Date(s)		Purpose
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TG, PG	April 16, April 29, May 13	March 15, March 20, April 3, May 18, June 15	General Biological Survey (Plant and Wildlife Habitat Assessments)
TG, PG	April 22, May 3, May 20, June 2, June 10, June 18, June 26	March 20, April 3, May 18, June 15	Focused Burrowing Owl Surveys
TG, PG	May 13, May 20	March 15, March 20	MSHCP Habitat Assessment
TG, PG, JP		March 15, March 20	Jurisdictional Delineation/ 6.1.2
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TG, JP	May 13, May 20	April 3, May 18, June 15	Vegetation Mapping
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TG=Teresa Gonzales, GEC Principal Biologist
PG=Paul Gonzales, GEC Senior Biologist
JP= Justin Palmer, AJP GIS
FE=Finite Environmental

5.4.2 Results/Impacts

The habitat assessment yielded no suitable habitat for amphibians included under MSHCP Section 6.3.2; therefore no focused surveys are required.

6 DELHI SANDS FLOWER-LOVING FLY

6.1 Methods

Not applicable, no Delhi soil types are mapped within the MSHCP baseline data on the proposed project.

6.2 Results/Impacts

Not applicable, no Delhi soil types are mapped within the MSHCP baseline data on the proposed project.

6.3 Mitigation and Equivalency

6.3.1 Direct Effects

Not applicable, no Delhi soil types are mapped within the MSHCP baseline data on the proposed project.

6.3.2 Indirect Effects

Not applicable, no Delhi soil types are mapped within the MSHCP baseline data on the proposed project.

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SUPPORTING APPENDICES

Habitat Assessment Including the Results of a Focused Burrowing Owl Survey and MSHCP Consistency Analysis TM 36199 + Appendices (Site photographs, Plant & Animal Compendium, Plant and Wildlife Status Onsite or Potential to Occur, Burrowing Owl, Fairy Shrimp and Jurisdictional Delineation)