APPENDIX 2B

DBESP

DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) FOR RIPARIAN/RIVERINE HABITAT

MILLCREEK PROMENADE
MENIFEE, RIVERSIDE COUNTY, CALIFORNIA
(Township 7 South, Range 3 West, Section 15)
(APN 360-350-006, 360-350-011, and 360-350-017)

Prepared for:

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Project Number: #2016-60(DBESP)

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(Updated August 16, 2018)

TITLE PAGE

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Date Field Work Completed:	**January 15 and July 30, 2018**
Report Title:	**Determination of Biologically Equivalent or Superior Preservation (DBESP)**
Assessor's Parcel Number:	**360-350-006, 360-350-011, and 360-350-017**
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TABLE OF CONTENTS

List of Figures

1.0 SUMMARY

This report provides the results of a Determination of Biologically Equivalent or Superior Preservation (DBESP) Analysis performed for a 59-acre property located in Menifee, California (Figures, 1, 2, 3, 4, 5, 6, and 7; Appendix A). The project proponent is proposing to construct a mixed development consisting of residential units (apartments, condominiums, and townhouses) and various commercial businesses. The proposed project would also include the necessary infrastructure for the proposed development including streets, sewer, utility lines, and parking (Figure 7).

Following discussions with California Department of Fish and Wildlife (CDFW) and other resource agencies, it was determined that a DBESP would be required to analyze the impacts to riparian and riverine habitats present on the site. The proposed project would impact a small portion of the Riparian/Riverine habitat of two separate channels that traverse the property (Figure 4). A DBESP analysis has not been previously conducted for the property; therefore, it was determined that an analysis of the riverine area and riparian habitat is necessary to evaluate the existing functions and values of the habitats. Mill Creek bisects the site in a north-south direction eventually connecting to a culvert along the eastern boundary of the site, which extends under Haun Road to a boarding property. Mill Creek is considered to be an intermittent blue line stream and has a small patch of riparian habitat. The property also consists of a small manmade v-drainage feature along Garbani Road, this feature is considered to be an ephemeral drainage and does not support any riparian vegetation, please refer to the Jurisdiction Delineation report under a separate cover.

This report is being submitted to the City of Menifee as part of the environmental requirements of the California Environmental Quality Act (CEQA) and will be forwarded to the Western Riverside County Regional Conservation Authority (RCA) for review. This analysis was conducted to fully evaluate the impacts to the riverine and riparian habitats as required under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The DBESP will also demonstrate that the mitigation being proposed will provide an equivalent or superior preservation of habitat functions and values of Riparian/Riverine resources.

The property consists of approximately 59-acres of vacant land which supports disturbed grassland habitat throughout most of the site except for a small riparian habitat located along the southern portion of the site (Figure 4 and 5).

This assessment was conducted as part of the MSHCP consistency analysis for the proposed project pursuant to MSHCP Section 6.2.1. As required by MSHCP, a DBESP Analysis must be conducted when a proposed project will impact riparian/riverine or vernal pool habitats and must include mitigation for those impacts that are biologically equivalent or superior to the baseline conditions. The DBESP Analysis presented in this report includes a detailed discussion of riparian/riverine habitat and drainage channels that will be impacted by the proposed development. In addition, the report summarizes avoidance, minimization, and mitigation measures that will be implemented to offset these impacts and bring the impacts to a level of less than significant. The project proponent will provide on-site mitigation in coordination with CDFW to replace the functions and values that will be lost as a result of the proposed development. Prior to approval of the project, CDFW shall approve the location of the mitigation acreage. The mitigation area would be maintained in order to meet the Urban/Wildlife interface guides as recommended for drainage, toxics, lighting, noise, invasive plant species, and barriers.

2.0 INTRODUCTION

2.1 Project Location

The project site is located east of Haun Road, south of Garbani Road and west of Sherman Road in the City Menifee. The site is located in Section 15, Township 6 South, Range 3 West on the USGS Romoland 7.5' topographic quadrangle. The approximately 59-acre site is composed of three parcels (APN 360-350-006, 360-350-011, and 360-350-017), and is approximately 0.1-miles east of Interstate 215 (Figures 1, 2, and 3).

The property is located in the Sun City/Menifee Area Plan; however, the site is not located within any Criteria Cells according to the MSHCP (2018).

2.2 Project Description

The proposed Millcreek Promenade project is a mixed development which would consist of residential units (attached single-family dwellings), and various commercial/retail businesses and restaurants (Figure 7). Infrastructures would also be a component of the development including streets, sidewalks, alleys, parking, and sewer, and utility lines.

The proposed project will include the installation of one pedestrian bridge over Mill Creek that is 0.02-acres (881 SF). Approximately 0.20-acres (8,500 SF) of Mill Creek will be placed into 2-5'x 10' box culvert. The current riparian vegetation within the channel will not be impacted. The ephemeral drainage along Garbani Road is approximately 0.06-acres (2,600 SF) and will be filled during the proposed project.

Figure 1

Regional Vicinity Map

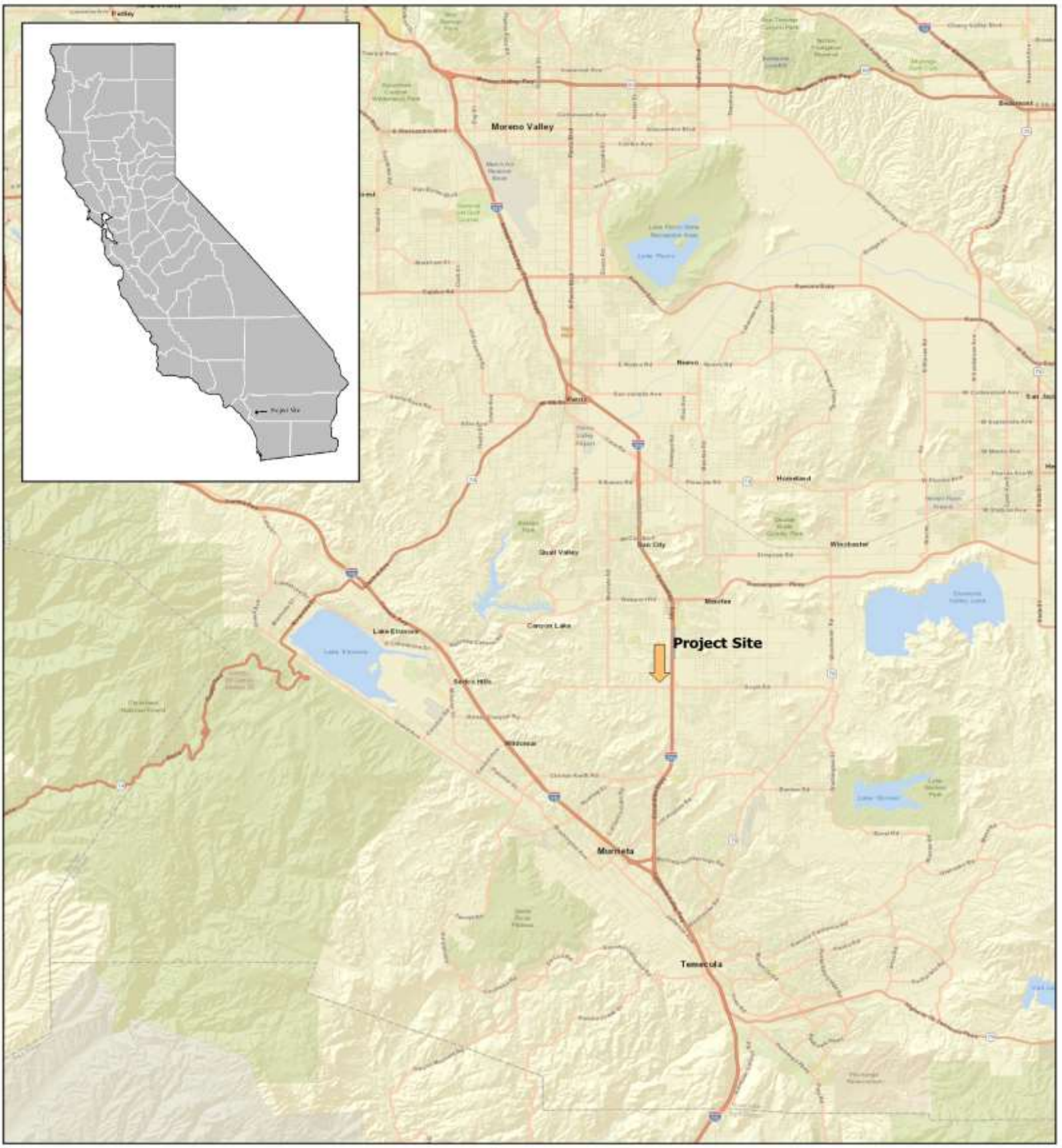
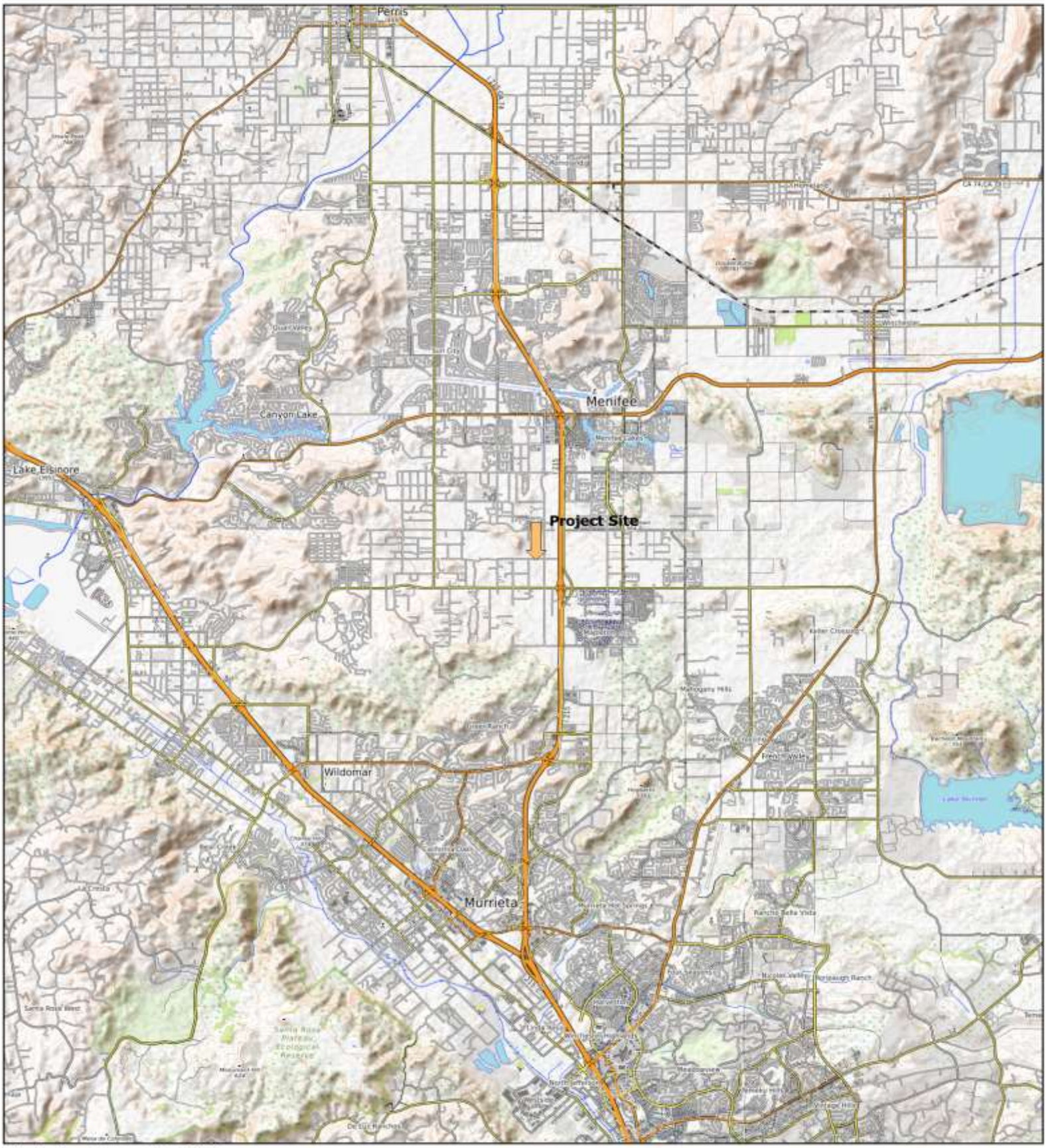


Figure 2

Local Topographic Map



Credit: Google Imagery 2017, ESRI

2.5 0 2.5 5 7.5 10 km

N

RCA ASSOCIATES, INC

Figure 3

Local Vicinity Map

Credit: Google Imagery 2017

250 0 250 500 m

Legend

Project Border

N

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3.0 METHODOLOGY

3.1 Literature Review

Pertinent environmental documents were reviewed prior to initiation of the DBESP analysis. Documents reviewed included but were not limited to, sensitive species occurrence maps, Riverside County MSHCP, data from the California Department of Fish and Wildlife (CDFW) and the California Natural Diversity Database (2018). Data from the U.S. Fish and Wildlife Service (USFWS, 2017) was evaluated to determine if any wetlands have been previously documented on the site. Information on the soils was obtained from the U.S. Department of Agriculture Natural Resources Conservation Service (NRSC) Web Soil Survey 2.3 (2018). Table 1 (Appendix B) provides a list of the plants identified within the drainage swales and riparian habitat. The vegetation classification system used during the biological surveys and in this report is based on a classification system described by Holland (1986).

3.2 Field Investigation

The property was surveyed on January 15 and July 30, 2018, during which a habitat assessment was conducted to determine whether the site met the MSHCP consistency requirements as outlined in the MSHCP for Western Riverside County. Field investigations of the drainage swales and riparian habitat were also conducted on January 15 and July 30, 2018. A General Biological Resources Assessment report was prepared for the property and all plant and animal species observed were documented in the biological report and are also provided in Tables 1 and 2 (Appendix B).

Based on the results of the field investigations it was determined that there are two drainage channels (i.e., riverine habitat) that bisects the site. As depicted in Figure 4, Mill Creek bisects the site in a north-south direction eventually connecting to a culvert along the eastern boundary of the site, which extends under Haun Road to a boarding property. The current condition of the channel is considered to be poor due to the sedimentation that has choked up the northern section of the channel causing water to puddle onsite. The cause of this sediment buildup is believed to have been created from decades of agricultural production on site and encroachment from machinery on the channel banks.

The second channel parallels Garbani Road and it was created when Garbani Road was installed. At the eastern section of the drainage is a culvert were the water exits the project site and continues into the city stormwater system. This feature is ephemeral drainage that is approximately 1,300 linear feet with a streambed width of 2 feet. The drainage does not support any riparian habitat but is dominated by upland vegetation.

Mill Creek and the Garbani drainage feature were delineated using the bank to bank method so that the associated habitat will be included. All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of riparian/riverine and vernal pool resources in the Project area. Riparian/riverine boundaries were determined based on the presence of riparian vegetation or regular surface flow. These resources include all riparian shrub or tree canopy that may extend beyond stream banks.

For CDFW Mill Creek and Garbani drainage were delineated by using the bank to bank method. CDFW asserts jurisdiction over the bed and banks of a stream channel and associated wildlife and habitats as per CDFW Code Sections 1600-1616. The CDFW jurisdictional area is defined as the "top of bank" of a channel or to the limit (outer dripline) of the adjacent riparian vegetation. CDFW regulates any activities that would "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, ground pavement where it would pass into any river, stream, or lake" (Section 1602 of the CDFW Code [Streambed Alteration]).

3.3 Infeasibility of Avoidance of Riparian/Riverine Habitat

The Western Riverside MSHCP typically recommends avoiding Riparian/Riverine resources; however, this is not feasible for the proposed project. The channel bisects the site north-south thus isolating approximately 8 acres of the property. The channel crossing is necessary to provide access to the land south of the creek, for community cohesiveness and for emergency services access.

4.0 DETERMINATION BIOLOGICAL EQUVELENT OR SUPERIOR PRESEVATION (DBESP) ANALYSIS

4.1 Description of Pre-Project Riparian/Riverine Functions and Values

Riparian/riverine areas are defined as "Lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby freshwater source; or areas with fresh water flow during all or a portion of the year (Dudek, 2003)." Based on this definition, the site does support habitats which meet these criteria (Appendix A, Figure 4 and 5).

Riparian/Riverine habitat as defined by the MSHCP occurs within a single drainage feature. Mill Creek supports a southern cottonwood-willow riparian forest of approximately 0.68-acres. The rest of the channel has been filled with sediment which created sheet flow and is dominated by upland grasses and invasive species, this area is approximately 0.20-acres (8,500 SF). The intermittent blueline channel (Mill Creek) traversing the site has a direct surface connection with Canyon Lake approximately 6-miles to the northwest. Water enters the site from the southwest and flows in a northeasterly direction until it crosses under Haun Road via box culvert approximately 0.8-miles south of the intersection of Haun Road and Garbani Road (Figure 4). After the water has left the site via the culvert it then flows in a northeasterly direction for approximately 0.40-miles before merging with a larger intermittent blueline channel then traveling another 2-miles to the north and converging with a large man-made channel that directly links to Canyon Lake. The drainage feature conveys urban nuisance and natural runoff from the watershed northeast of the project site. A small flow of water was observed within the drainage during the January 15, 2018, site visit after a rainstorm the day before. Therefore, the drainage feature is considered an intermittent riverine. The drainage feature appears stable and widens slightly just before a pinch-point in the northeastern portion of the project.

The second drainage on-site parallels Garbani Road and it was created when Garbani Road was built. At the eastern section of the drainage is a culvert were the water exits the project site and continues into the city stormwater system. This feature is ephemeral drainage that is

approximately 1,300 linear feet with a streambed width of 2 feet. The drainage does not support any riparian habitat but is dominated by upland vegetation.

Due to the southern cottonwood-willow riparian forest community in Mill Creek, suitable nesting habitat for many tree-nesting bird species is present within the Riparian/Riverine drainage.

This DBESP Analysis focuses on the hydrological functions and values of the Riparian/Riverine drainage on site. The following is a complete description of the portions of the project site that were determined to meet the minimum criteria requirements to be considered Riparian/Riverine, based on definitions provided in the MSHCP, Section 6.1.2.

The riparian area supports a moderately dense stand of vegetation consisting of various shrubs and herbaceous species; however, the overall functional value of the riparian area is expected to be relatively low given its small size. Plant species identified in the riparian area include seep willow (*Baccharis emoryi*), red-osier dogwood (*Cornus stolonifera*), cottonwood (*Populus angustifolia*), and arroyo willow (*Salix lasiolepis*).

A DBESP was deemed necessary to address mitigation which will be required to compensate for the impacts to the riparian/riverine habitat. This decision was based on the connectivity between the channel and existing blueline streams in the surrounding area, as well as the presence of riparian habitat in the southern portion of the site (Figure 4 and 5).

4.2 Existing Vegetation

Plant surveys were conducted during January 2018 when most of the plant species are not readily identifiable. A disturbed grassland community covers most of the site with a few trees in the southwest portion of the site. The riparian habitat along the southern boundary of Mill Creek covers approximately 0.68-acres (29,620 SF) and supports various plants typically associated with riparian habitats (See Section 4.1). The other half of the channel supports non-native grasses and invasive species which encompass 0.20-acres (8,500 SF). No other sensitive habitats (e.g., coastal sage scrub, vernal pools, etc.) were noted during the field investigations. Plant diversity was relatively low with various invasive species typically associated with disturbed habitats noted

throughout the site. Garbani drainage supports upland vegetation which covers 1.05-acres (45,844 SF).

The most common vegetation observed although somewhat limited includes brome grasses (*Bromus*, sp.), lamb's quarters (*Chenopodium album*), heliotrope (*Heliotropium* sp.), dove weed (*Eremocarpus setigerus*), and goldfields (*Lastenia California*).

The riparian area is located on a property which has been disturbed in the past and is in an urban area in the City of Menifee. The plants that were observed in the riparian area included seep willow (*Baccharis emoryi*), red-osier dogwood (*Cornus stolonifera*), cottonwood (*Populus angustifolia*), and arroyo willow (*Salix lasiolepis*).

Garbani drainage support an upland vegetation community that includes California buckwheat (*Eriogonum fasciculatum*), *Stephanomeria* species, California sagebrush (*Artemisia californica*), Russian thistle (*Salsola tragus*), mustard (*Hirschfeldia incana*), and various non-native grassland species such as bromegrass (*Bromus sp.*). No riparian vegetation is present.

The site does not support habitat considered suitable for various listed wildlife species documented in the general area (e.g., Least Bell's vireo and Southwestern willow flycatcher). These species are typically found in large expansive areas of riparian woodlands in undisturbed areas, and the small riparian area does not meet these criteria. Furthermore, the site is not contiguous with any high-quality habitat which might support sensitive plant or wildlife species.

Special Status Plant Species

A search of the CNDDB (CDFW, 2018) did not reveal any special status plant species on the project site. However, there are two special status plants which could potentially occur on the site which include the smooth tarplant (*Centromadia pingens ssp. Laevis*) and round leaved filaree (*California macrophylla*). These two species are typically associated with native grasslands, and the site does support a disturbed grassland community which could support populations of smooth tarplant or round-leaved filaree. However, there is a relatively low probability either species occurs on the site given the level of disturbed conditions and were not observed during the field investigations.

Special Status Wildlife Species

There are several special status wildlife species which have been documented in the region and which could potentially occur on the site based on the presence of various habitats. One listed species which could be present is the Stephen's kangaroo rat (*Dipodomys stephensi*), which typically occurs in grassland communities. Several populations of the species have been documented in the area. Other rodents known to occur in the area (i.e., State species of special concern) and which could potentially occur on the site, include the Dulzera pocket mouse (*Chaetodipus californicus femoralis*), Los Angeles pocket mouse (*Peromyscus longimenbris brevinasus*), Jacumba pocket mouse (*P. l. internationalis*), Southern grasshopper mouse (*Onychomys torridus Ramona*), and San Diego woodrat (*Neotoma lepida intermedia*). Live-trapping surveys were not conducted on the property and the presence or absence of these rodent species cannot be definitively determined. However, no woodrat middens were observed during any of the field investigations, and the absences of middens may be an indication the site does not support any woodrat populations at the present time. Suitable habitat (i.e., open grassland) for the black-tailed jackrabbit is present on the site; although, the species was never seen during any of the field investigations.

A burrowing owl (*Athene cunicularia*) has been observed on the site during the field investigation on January 15, 2018. A number of suitable burrows (i.e., ground squirrel burrows, etc.) have been observed on site (e.g., whitewash, castings, etc.) were noted. A burrowing owl focused survey is being prepared and will be submitted under a separate cover. The ferruginous hawk (*Buteo regalis*) may occasionally be seen foraging over the site; although, the species is not expected to be a permanent resident on the property. Loggerhead shrikes (*Lanius ludovicianus*) are the only other avian species which may occasionally occur on the site. The western spadefoot toad (*Spea hammondii*) is the only sensitive amphibian which could potentially inhabit the site based on the presence of riparian habitat and the drainage channel. The small riparian habitat along the southern boundary do provide suitable habitat for the toad.

4.3 Urban/Wildlife Interface Guideline

Urban/Wildlife Interface Guidelines will be incorporated into the project design to ensure indirect impacts to riparian/riverine habitat on the project will be minimized as much as possible.

Drainage: The project shall not create additional flows off-site. Measures should be taken to assure that the project stormwater discharges are no greater in volume and velocity than current undeveloped conditions and that the water leaving the site complies with all applicable water quality standards. In addition, implementation of Best Management Practices during the construction phase, and utilization of buried RCP will minimize impacts to water quality in the surrounding area. Retention areas will also be constructed as part of the development which will also help maintain and control on-site and off-site flows.

Toxics: The project will not use any toxic chemicals or generate any toxic byproducts. However, the project will be subject to the Riverside County Water Quality Management Plan for Urban Runoff which was adopted on September 17, 2004. The project will also be subject to the National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges Associated with Construction Activity (General Permit) Water Quality Order 99-08-DWQ. When the WQMP and the NPDES general permits are implemented for the project, potential impacts to the area from toxics will be reduced to a level of less than significant.

Lighting: Lighting around the various apartment buildings, commercial/retail buildings, and parking lots will adhere to the required standards of the City of Menifee. Lighting will be directed in such a way as to minimize impacts to surrounding areas, including Interstate 215.

Noise: The current ambient noise levels in the area are already relatively high due to daily noise along Interstate 215, and other roads in the immediate area. However, once construction is completed, the proposed project is not expected to cause a significant increase in noise levels to the local environment or any MSHCP Conservation Areas in the area. Noise from the project will be confined to daily traffic to and from the site.

Invasive Plant Species: No invasive species from MSHCP Table 6.2 shall be included in any landscaping for the project.

Barriers: Fences, rocks/boulders, walls, signage, or any other measures will be included in the project design in order to minimize unauthorized public access, domestic predation, or illegal trespass on the property.

Grading/Land Development: Project-related grading would be outside of the riparian/ravine area with a 25-foot buffer from centerline on each side of the channel.

Fuels Management: No fuel management will be required for this project. No gasoline or diesel underground or above ground tanks will be installed in association with any of the potential commercial and retail businesses.

4.4 Reduction of Edge Effects

As the proposed project is not adjacent to an MSHCP conservation area, most of the requirements of Urban Wildlands Interface Guideline (UWIG) in MSHCP Section 6.1.4 are applicable to this Project. The Project will conform to MSHCP Section 6.1.4, and will reduce edge effects to the urban/wildland interface through the following measures:

- BMPs will be implemented to maintain water quality. All runoff will be treated prior to exiting the site to reduce pollutants of concern. There will be no increase in water flow from the Project site.
- The Project will not drain into any MSHCP Conservation Area.
- The Project will not discharge toxins into any MSHCP Conservation Area.
- No plants included on the California Exotic Pest Plant Council's list of invasive species or in Table 6-2 of the MSHCP will be used in any Project landscape anywhere on the site, and only native species will be planted adjacent to open space areas.

The proposed project is not adjacent to a MSHCP conservation area. The Project will implement the following UWIG measures to reduce potential impacts to the avoided riparian/riverine habitat.

- Night lighting will be selectively placed and directed/shielded away from sensitive habitat.
- The proposed Project will not impact avoided habitat for fuel modification purposes.
- No manufactured slope associated with the Project will extend into the avoided habitat area.

5.0 RIPARIAN, RIVERINE, FAIRY SHRIMP AND VERNAL POOL RESOURCES

5.1 Direct Effects on Riparian and Riverine Resources

The vegetation and plant communities in Mill Creek is considered to be partially southern cottonwood-willow riparian forest community for approximately 0.68-acres (29,620 SF) while the rest of the channel is considered to be full of non-native and invasive species for approximately 0.20-acres (8,500 SF). The riparian area supports a low to moderate dense stand of vegetation consisting of various shrubs and herbaceous species; however, the overall functional value of the riparian area is expected to be relatively low given its small size and poor condition. Plant species identified in the riparian area include seep willow (*Baccharis emoryi*), red-osier dogwood (*Cornus stolonifera*), cottonwood (*Populus angustifolia*), and arroyo willow (*Salix lasiolepis*). The current condition of the channel is poor due to past human disturbance and encroachment. There is no suitable riparian scrub and forest habitat or the necessary aquatic resources for foraging within the project area. Least Bell's vireo is unlikely to nest on the project site. There is no suitable southwestern willow flycatcher or western yellow-billed cuckoo habitat on the project site.

The project is proposing to install one pedestrian bridge over Mill Creek for access to the project and direct permanent impacts will be 0.02-acres (881 SF) of the southern cottonwood-willow riparian forest. The installation of 2 - 5'x 10' box culvert in Mill Creek will direct permanent impacts 0.20-acres (8,500 SF) of non-native vegetation. The direct permanent impacts will include installing box culvert and pedestrian crossings in Mill Creek have a total impact of 0.22-acres (9,381 SF) with the additional associated vegetation communities within the project site. The current condition of the northern portion of Mill Creek is considered to be poor due to the sedimentation that has choked up the channel causing water to stop its flow northward. This buildup of sedimentation in Mill Creek is believed to be from past agricultural activities and encroachment from machinery on the channel.

The drainage feature along Garbani Road is considered to be an ephemeral drainage. The vegetation in the drainage is upland vegetation and includes California buckwheat (*Eriogonum fasciculatum*), *Stephanomeria* species, California sagebrush (*Artemisia californica*), Russian thistle (*Salsola tragus*), mustard (*Hirschfeldia incana*), and various non-native grassland species

such as bromegrass (*Bromus sp.*). No riparian vegetation is present. The project proponent is proposing to fill the entire channel for the purpose of road widening and bike path installation. The total impacts associated with filling Garbani drainage would be 1.05-acres (45,840 SF).

Proposed Impacts to Riparian/Riverine Habitats (acres)		
Habitat	**Avoided**	**Impacts**
Riparian Habitat		
Southern cottonwood-willow riparian forest	0.66	0.02
Riverine Habitat		
Non-native Vegetation/Sheet Flow	0.00	0.20
Upland Vegetation	0.00	1.05
TOTAL	**0.66**	**1.27**

5.2 Indirect Effects

Indirect effects to the avoided habitat on site and to downstream waters include reducing groundwater recharge due to increased impervious surfaces; increasing transport of sediment downstream from increased velocity and volume of stormwater; reduced filtering and on-site percolation, pollution from the proposed commercial and residential land development; restricted or eliminated wildlife movement corridors; and decrease in plant community diversity in the upland areas.

5.3 Impacts to Functions and Values for Species Associated with Riparian/Riverine Features

Wetland functions can include, but are not limited to, short- and long-term water storage; water conveyance; transformation of cycling of elements; retention and removal of dissolved substances; accumulation and retention of sediment; and plant and wildlife habitat. Water storage and conveyance are related to floodwater control, support of crops, and support of biodiversity. Wildlife habitat support recreational activities, including hunting, bird watching, fishing, and support for endangered species.

The functions of the riparian/riverine habitats on the Project site include water conveyance, minimal sediment transport, energy dissipation, removal of dissolved substances, cover for

wildlife movement, and habitat for nesting birds. No impacts to potential least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo habitat will occur since the riparian vegetation present on site is not adequate foraging or nesting.

5.4 Determination of Biological Equivalent or Superior Preservation

The City of Menifee is a participant in the MSHCP; therefore, impacts to riparian/riverine habitat associated with this project will be fully mitigated through the implementation of the mitigation measures outlined below.

Mitigation Measure #1: The project proponent will mitigate on-site impacts to approximately 0.02-acres of riparian habitats through on-site restoration and enhancement.

Mitigation Measure #2: The MSHCP Urban/Wildlands Interface Guidelines will be implemented to ensure all indirect impacts to off-site drainage channels and associated riparian/riverine habitats downstream will be minimized to the greatest extent possible.

Mitigation Measure #3: Pre-construction surveys will be performed for the burrowing owl as per CDFW survey protocols immediately prior to the start of site grading/clearing to verify the presence or absence of the species. A survey report will be prepared within seven days following completion of the survey and will be submitted to the City for their review. If the species is observed during the pre-construction surveys, mitigation measures required by CDFW and the MSHCP will be implemented following consultations with CDFW and the City.

Mitigation Measure #4: All Best Management Practices (BMP), as well as measures required by the NPDES requirements, will be implemented to ensure that the quantity and quality of runoff from the site is not altered in a significant way when compared to existing conditions. Stormwater systems for the project will be designed to prevent toxins, chemicals, petroleum products, and other toxic substances from entering any adjacent drainage channels which could potentially impact downstream riparian/riverine habitats.

Mitigation Measure #5: Temporary silt fence will be installed along both sides of the channel at a buffer of 25 feet from OHWM to avoid impacts to the channel during the construction of the

pedestrian and vehicle bridges. Once construction is complete the silt fence can be removed and restored to the natural state.

5.5 Demonstration of Increased in Post-Project Riparian/Riverine Functions and Values

The following discussion demonstrates how the post-project conditions of the onsite Riparian/Riverine habitat to be preserved would be functionally superior to the pre-project conditions.

Pre-project conditions consist of an isolated southern cottonwood-willow riparian forest of approximately 0.68-acres (29,620 SF). The condition of the isolated southern cottonwood-willow riparian forest is considered to be poor with invasive species and trash filling the channel. The existing onsite conservation area proposed for mitigation is not currently protected to ensure preservation. The following enhancements are recommended:

- The routine maintenance in the riparian forest to remove invasive plant species and trash.
- Planting native riparian species in the channel to enhance the current habitat and bank stabilization.

In addition, a new detention basin would be created to treat all nuisance flows from the proposed development resulting in a net gain in water quality through the removal of excess sediment. Temporary silt fence will be installed along both sides of the channel at a buffer of 25 feet from OHWM to avoid impacts to the channel during the construction of the pedestrian bridge. Once construction is complete the silt fence can be removed and restored to the natural state.

Approximately 0.20-acres (8,500 SF) of the northern portion of Mill Creek will be impacted during the installation of a box culvert. The pedestrian bridge that will be installed over the channel will also impact approximately 0.02-acres (881 SF) of the southern cottonwood-willow riparian forest. The total permanent impacts to Mill Creek will be approximately 0.22-acres (9,381 SF).

Based on this analysis, approximately 0.68-acres (29,620 SF) of southern cottonwood-willow riparian forest will be preserved on the site. The creation of a 0.76-acre (33,105 SF) detention

basin would result in the superior preservation and an increase in habitat value as opposed to a pre-project condition. The project proponent will mitigate on-site impacts to approximately 0.22-acres (9,381 SF) of riverine and riparian habitats through on-site restoration and enhancement.

Mitigation Summary (acres)			
Habitat	**Impacts**	**Ratio**	**Mitigation**
Southern cottonwood-willow riparian forest	0.02	3:1	0.06
Non-native Vegetation/Sheet Flow	0.20	2:1	0.40
Upland Vegetation	1.05	2:1	2.10
TOTAL	**1.27**		**2.56**

5.0 BIBLIOGRAPHY

Barbour, M.G. and J. Major, editors. 1977. Terrestrial Vegetation of California. John Wiley and Sons, New York.

BonTerra Consulting. February 14, 2008. Determination of Biologically Equivalent or Superior Preservation for Riparian/Riverine Habitat for the Foothill Parkway Extension Project in the City of Corona and Incorporated Riverside County

California Department of Fish and Wildlife. 1988. California's Wildlife: Volume 1 – Amphibians and Reptiles. Sacramento. 272 pp.

California Department of Fish and Wildlife. 1990a. California's Wildlife: Volume 2 – Birds. Sacramento. 731 pp.

California Department of Fish and Wildlife. 1990b. California's Wildlife: Volume 3 – Mammals. Sacramento. 407 pp.

California Department of Fish and Wildlife. 1991. Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants. State of California Department of Fish and Game. 191 pp.

California Department of Fish and Wildlife. March 7, 2012. Staff Report on Burrowing Owl Mitigation. State of California. 34 pp.

California Department of Fish and Wildlife. 2018. Natural Diversity Database: CNDDB Element occurrences for Romoland, California USGS topographic quadrangle, Sacramento.

California Native Plant Society. 1988. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, Special Publication No. 1, Fourth Edition.

Dudek & Associates. 2003. Western Riverside County Multiple Species Habitat Conservation Plan.

Grenfell, W.E. Jr., and W.F. Laudenslayer, Jr. editors. 1983. Distribution of California Birds. California Wildlife/Habitat Relationship Program. Publication No. 4 California Department of Fish and Game, Sacramento, and USDA Forest Service.

Hickman, J.C. 1993. The Jepson Manual: Higher Plants of California. University of California, Berkeley, California. 1400 pp.

Holland, R.F. 1986. Preliminary Description of the Terrestrial Natural Communities of California. Nongame Heritage Program, California Department of Fish & Game.

Hurt, G.W., and L.M. Vasilas (eds.). 2006. "Field Indicators of Hydric Soils in The United States, Version 6.0". United States of Department of Agriculture, Natural Resources Conservation Service, in cooperation with the National Technical Committee for Hydric Soils.

Lichvar, R.W., and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States. Army Engineer Research and Development Center. ERDC/CRREL TR-08-12.

Michael Brandman Associates (MBA). December 17, 2012. Determination of Biological Equivalent or Superior Preservations (DBESP) Analysis for the Riparian/Riverine Habitat: Amberwood Project, City of Wildomar, Riverside County, California.

Munz, P.A. 1974. A Flora of California. University of California Press, Berkeley. 1681 pp.

Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley. 1086 pp.

NGS. 1987. Birds of North America. National Geographic Society, Washington, D.C. 464 pp.

RCA Associates, Inc. January 2018. General Biological Resources Assessment (updated). Mill Creek Promenade Project, Menifee, California.

U.S. Department of Agriculture. 2018. National Resources Conservation Service (NRCS) Web Soil Survey 2.3. http://websurvey.nrcs.usda.gov/.

U. S. Army Corps of Engineers (USACE). 1987. Wetlands Delineation Manual-Technical Report Y-87-1 (online edition). U.S. Army Corps of Engineers Waterways Experiment Station.

U. S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0. U.S. Army Engineer Research and Development Center. ERDC/EL TR-08-28.

U.S. Fish and Wildlife Service 2014. National Wetlands Inventory Wetlands Mapper. http://www.fws.gov/wetlands/Data/Mapper.html.

APPENDIX A

FIGURES

Figure 4

Channel Location Map

Credit: Google Imagery 2017

50 0 50 100 150 m

Legend

Project Border

Channel

Mill Creek

Garbani Drainage

N

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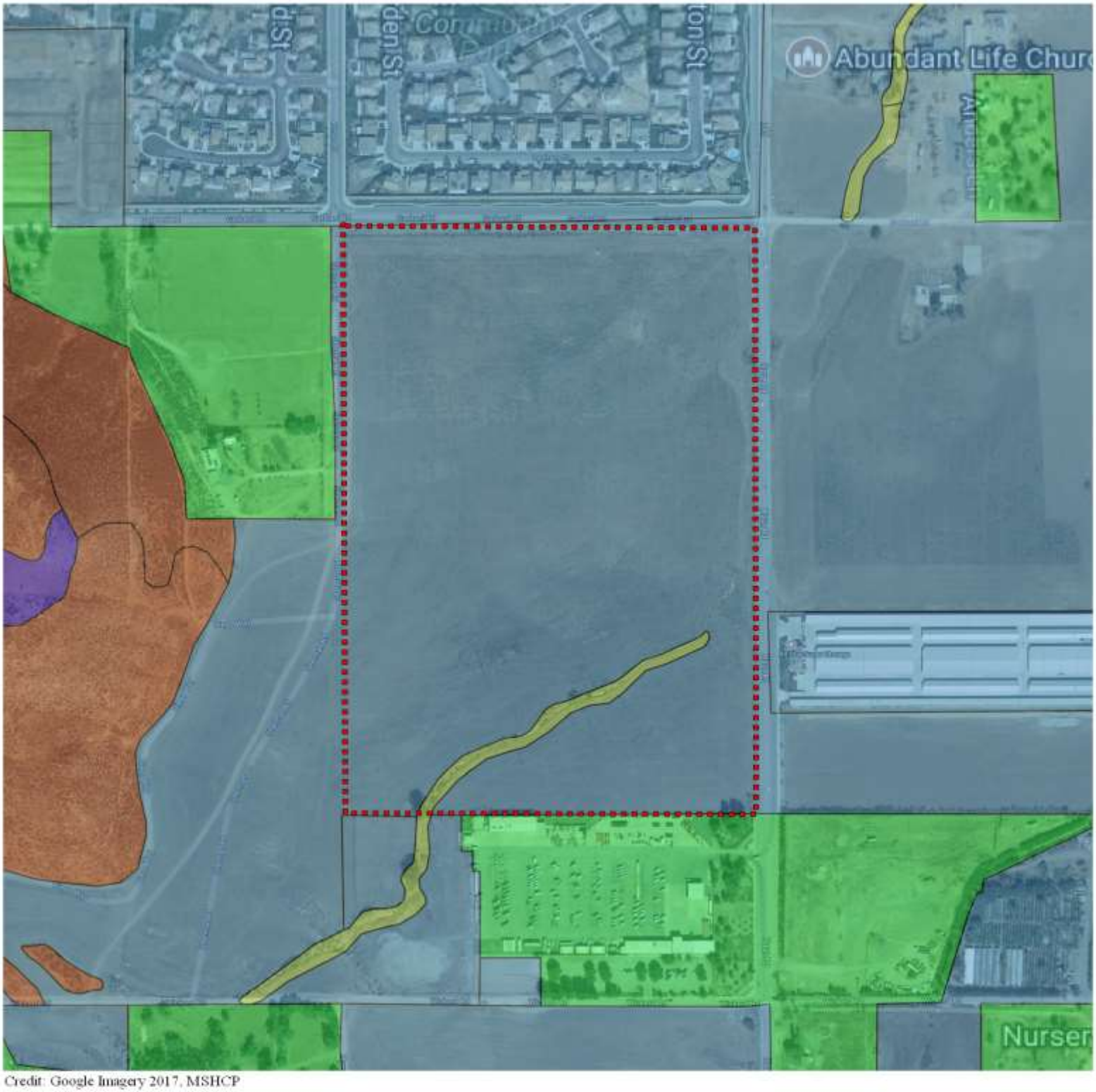
Figure 5

Vegetation Community Map



Credit: Google Imagery 2017, MSHCP

100 0 100 200 300 400 m

N

Legend

Project Border

Vegetation

- Agricultural Land
- Coastal Sage Scrub
- Developed/Disturbed Land
- Grassland
- Riparian Scrub, Woodland, Forest

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Figure 6

Site Photographs

Figure 7

Site Plan

APPENDIX B

FLORA AND FAUNA COMPENDIUM TABLES

Table 1 - Plants observed on the site and known to occur in the area.

Note: The above Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which have been identified on the site or in the region by biologists from RCA Associates, Inc.

Common Name	Scientific Name	Comments
Annuals		
Snakeweed	*Gutierrezia sarothrea*	Observed off-site
Telegraph weed	*Heterotheca gradifolia*	"
Bladderpod	*Isomeris aroborea*	"
Fiddleneck	*Amsinckia tessellate*	"
Black mustard	*Brassica nigra*	"
Plantain	*Plantago erecta*	"
Croton	*Croton califonica*	"
Coyote melon	*Cucurbita foetidissma*	"
Pearly everlasting	*Gnaphalium californicum*	"
Phacelia	*Phacelia distans*	"
Lambs quarters	*Chenopodium califonicum*	"
Centaurem	*Centaurea squarrosa*	"
Brome grass	*Bromus sp.*	On-site
Dove weed	*Eremocarpus setigerus*	"
Tobacco	*Nicotiana attenuta*	"
Lamb's quarters	*Chenopodium album*	"
Cottonwood	*Populus angustifolia*	"
Arroyo Willow	(*Salix lasiolepis*	"
Heliotrope	*Heliotropium sp.*	"
Erodium	*Erodium cicutarium*	"
Goldfields	*Lasthenia californica*	"
Russian thistle	*Salsola tragus*	"
Stephanomeria	*Stephanomeria sp.*	"
Seep willow	*Baccaharis emoryi*	"
Mustard	*Brassica tourneforti*	"
Red-osier dogwood	*Cornus stolonifera*	"
Tamarisk	*Tamarix ramoissina*	"

Source: Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley, California. 1086 pp.

Table 2 - Wildlife observed on the site and those species expected to the area.

Note: The above Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which have been identified on the site or in the region by biologists from RCA Associates, Inc.

Common Name	Scientific Name	Comments
Mammals		
Desert cottontail	*Sylvilagus auduboni*	Observed on-site
California ground squirrel	*Spermophilus beecheyi*	"
Coyote	*Canis latrans*	Scats observed on-site.
Deer mouse	*Peromyscus maniculatus*	May occur on-site.
California mouse	*P. californicus*	"
Botta's pocket gopher	*Thomonys bottae*	"
Birds		
Raven	*Corvus corax*	Observed on-site.
Crow	*C. brachyrhynchos*	"
American Kestrel	*Falco sparverius*	"
Burrowing Owl	*Athene cunicularia*	"
Western meadowlark	*Sturnella neglecta*	"
Western kingbird	*Tyrannus verticalis*	"
Say's Phoebe	*Sayornis saya*	"
Northern mockingbird	*Mimus polyglottus*	"
Anna's hummingbird	*Calypte amna*	Observed on site
Mourning dove	*Zenaida macroura*	"
California quail	*Callipepla Californica*	Observed in surrounding area
White-crowned sparrow	*Zonotrichia leucophrys*	"
Red-tail Hawk	*Buteo jamaicensis*	"
Greater Roadrunner	*Geococcyx californianus*	"
Rock pigeon	*Columba livia*	"
Brewer's blackbird	*Euphagus cyanocephalus*	"
Lark sparrow	*Chondestes grammacus*	"
House finch	*Carpodacus mexicanis*	"
Bullock's oriole	*Icterus bullockii*	"
Sage sparrow	*Amphispiza belli*	"
Costa hummingbird	*Calypte costae*	".
Ash-throated flycatcher	*Myiarchus cinerascens*	"
American robin	*Turdus migratorius*	"
Scrub jay	*Aphelocoma coerulescens*	"
Reptiles and Amphibians		
Side-blotched lizard	*Uta stansburiana*	Observed on site.
Western fence lizard	*Sceloprus occidentalis*	"
Granite spiny lizard	*Sceloporus orcuttii*	"
Common garter snake	*Thamnophis sirtalis*	Occurs in area
Gopher snake	*Pituphis melanolecus*	"
Western toad	*Bufo boreas*	"
Southwestern toad	*Bufo mircroscaphus*	"

SOURCES:
(1) Blair, W.F. 1968. Vertebrates of the United States. McGraw-Hill, Inc. New York. 616 pp.
(2) Whitaker, J. O. 1980. The Audubon Society Field Guide to North American Mammals. A. A. Knopf, New York. 745 pp.

REGULATORY CONTEXT

The following provides a summary of federal and state regulatory jurisdiction over biological and wetland resources. Although most of these regulations do not directly apply to the site, given the general lack of sensitive resource, they provide important background information.

Federal Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (ESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. ESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Federal regulation 50CFR17.3 defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering (50CFR17.3). Furthermore, federal regulation 50CFR17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (50CFR217.12).

Section10(a) of the ESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by ESA as take that is "incidental to, and not the purpose of, the carrying out of another wise lawful activity." Preparation of a habitat conservation plan, generally referred to as an HCP, is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the ESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required

to minimize impacts to all listed species resulting from their actions, including issuance or permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (ESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, the Section 9 of the ESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act.

California Endangered Species Act

CDFW has jurisdiction over species listed as threatened or endangered under Section 2080 of the California Fish and Wildlife Code. Section 2080 prohibits the take of a species listed by CDFW as threatened or endangered. The state definition of take is similar to the federal definition, except that Section 2080 does not prohibit indirect harm to listed species by way of habitat modification. To qualify as take under the state ESA, an action must have direct, demonstrable detrimental effect on individuals of the species. Impacts on habitat that may ultimately result in effects on individuals are not considered take under the state ESA but can be considered take under the federal ESA.

Proponents of a project affecting a state-listed species must consult with CDFW and enter into a management agreement and take permit under Section 2081. The state ESA consultation process is similar to the federal process. California ESA does not require preparation of a state biological assessment; the federal biological assessment and the CEQA analysis or any other relevant information can provide the basis for consultation. California ESA requires that CDFW coordinate consultation for joint federally listed and state-listed species to the extent possible; generally, the state opinion for the listed species is brief and references provisions under the federal opinion.

Clean Water Act, Section 404

The COE and the U.S. Environmental Protection Agency regulates the placement of dredged or fill material into "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the United States include lakes, rivers, streams, and their tributaries, and wetlands. Wetlands are defined for regulatory purposes as "areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3).

The COE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits (NWP's) are general permits issued to cover particular fill activities. All NWP's have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each NWP.

Clean Water Act, Section 401

Section 401 of the Clean Water Act requires water quality certification and authorization of placement of dredged or fills material in wetlands and Other Waters of the United States. In accordance with Section 401 of the Clean Water Act, criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. As such, proponents of any new project which may impair water quality as a result of the project are required to create a post construction stormwater management plan to ensure offsite water quality is not degraded. The resulting requirements are used as criteria in granting National Pollution Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Central Valley Regional Water Quality Control Board (RWQCB). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Fish and Wildlife Code, Sections 1600-1616

Under the California Fish and Wildlife Code, Sections1600-1616 CDFW regulates projects that divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Proponents of such projects must notify CDFW and enter into a streambed alteration agreement with them.

Section 1602 of the California Fish and Wildlife Code requires a state or local government agency, public utility, or private entity to notify CDFW before it begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Once the notification is filed and determined to be complete, CDFW issues a streambed alteration agreement that contains conditions for construction and operations of the proposed project.

California Fish and Wildlife Code, Section 3503.5

Under the California Fish and Wildlife Code, Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes (hawks, eagles, and flacons) or Strigiformes (owls). Take would include the disturbance of an active nest resulting in the abandonment or loss of young.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act.

Sensitive Natural Communities

The California Office of Planning and Research and the Office of Permit Assistance (1986) define project effects that substantially diminish habitat for fish, wildlife, or plants, or that disrupt or

divide the physical arrangement of an established community as significant impacts under CEQA. This definition applies to certain natural communities because of their scarcity and ecological values and because the remaining occurrences are vulnerable to elimination. For this study, the term "sensitive natural community" includes those communities that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined under CEQA. Sensitive natural communities are important ecologically because their degradation and destruction could threaten populations of dependent plant and wildlife species and significantly reduce the regional distribution and viability of the community. If the number and extent of sensitive natural communities continue to diminish, the status of rare, threatened, or endangered species could become more precarious, and populations of common species (i.e., not special status species) could become less viable. Loss of sensitive natural communities also can eliminate or reduce important ecosystem functions, such as water filtration by wetlands and bank stabilization by riparian woodlands for example.