

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN CONSISTENCY ANALYSIS AND BIOLOGY REPORT

THE BOULDERS PROJECT

MSHCP PERMITTEE:

CITY OF MENIFEE

Prepared for:

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1.0 EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by the City of Menifee to conduct a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis and general biological study of the approximately 9.92-acre The Boulders Project (project) site located at the northeast corner of Normandy Road and Berea Road in the City of Menifee (City), Riverside County, California. The study was conducted to address compliance with the MSHCP and the California Environmental Quality Act (CEQA) and for the identification of potential jurisdictional waters. Results of the MSHCP consistency analysis and general biological study are summarized below.

No aquatic resources subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) or California Department of Fish and Wildlife (CDFW) were found within the project site. One ephemeral concrete-lined drainage (identified as drainage D-1) subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB) was found within the project site. The single drainage does not meet the MSHCP definition of riparian/riverine. No riparian habitat was found within the project site. Impacts to drainage D-1 are limited to temporary impacts; therefore, no compensatory mitigation is warranted and permitting is anticipated through the RWQCB's Statewide General Waste Discharge Requirement.

The project site is not within an MSHCP designated Criteria Area.

The site does not contain riverine/riparian areas as defined in the MSHCP. Therefore, suitable habitat for MSHCP-covered riparian bird species is absent from the site. Focused wet and dry season fairy shrimp surveys conducted in 2021 resulted in documentation of the presence of the commonly occurring versatile fairy shrimp (*Branchinecta lindahli*). No other fairy shrimp species were identified during the focused fairy shrimp surveys, including those covered under the MSHCP.

The project site is within the MSHCP survey area for burrowing owl (*Athene cunicularia hypugaea*) and suitable habitat for this species is present on site in the form of ruderal areas and coastal sage scrub. A focused burrowing owl survey was conducted March through July, 2021. No burrowing owl or their sign were observed during the survey. Three burrows suitable for burrowing owl occupation were observed on the project site but showed no sign of burrowing owl use. Due to the presence of suitable burrowing owl habitat on the project site, a pre-construction survey is required.

The project site is within an MSHCP NEPSSA for six plant species: Munz's onion (*Allium munzii*), San Diego Ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). NEPSSA species were not observed during focused surveys conducted in April and June for the six NEPSSA species noted above.

The project site is not located within an MSHCP designated survey areas for any other species and does not contain Delhi series soils. Therefore, no surveys for other MSHCP-covered species will be required.

The project will not be subject to MSHCP Urban/Wildlands interface requirements because the site is not within or adjacent to an identified Conservation Area.

The project is within the Stephens' Kangaroo Rat Habitat Conservation Plan area and payment of the appropriate fee will be required.

2.0 INTRODUCTION

LSA was retained by the City to conduct an MSHCP consistency analysis and general biological study of the approximately 9.92-acre The Boulders Project site located at northeast corner of Normandy Road and Berea Road in the City of Menifee, Riverside County, California (Appendix A, Figure 1). The study was conducted to address compliance with the MSHCP and CEQA and for the identification of potential jurisdictional waters. The study included a site visit on November 19, 2020, by LSA biologist Stan Spencer as well as follow-up focused surveys by several LSA biologists in 2021 for fairy shrimp, burrowing owl and narrow endemic plant species and a jurisdictional delineation.

2.1 PROJECT AREA

The project area consists of Assessor's Parcel Number (APN) 339-200-080. The project area is approximately 9.92 acres. The project proposes to develop the entire parcel.

2.2 PROJECT DESCRIPTION

Project activities include the construction of a 234-unit multifamily residential development, on-site recreational features (e.g., recreation area, pool, and fitness center), leasing office/clubhouse, parking, landscaping, and ancillary features. The project also plans for 30,000 square feet of commercial uses located in a single three-story structure located along Heroes Court (Appendix A, Figure 2).

2.3 GENERAL SETTING

The project site is undeveloped and is bordered to the north by a concrete-lined storm water channel and residential development, to the west by Berea Road and commercial development, to the east by undeveloped areas, and to the south by Heroes Court and Spirit Park. The site is more or less flat and level except for boulder outcroppings located in the eastern portion of the study area. The site elevation ranges from approximately 1,410 to 1,435 feet above mean sea level. The only mapped soils on the site are Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded, Domino silt loam, saline-alkali, Monserate sandy loam, 0 to 5 percent slopes, and Vista coarse sandy loam, 2 to 8 percent slopes (California Soil Resource Lab 2020; Appendix A, Figure 3). Soil observed throughout the site appears to be consistent with this designation.

3.0 RESERVE ASSEMBLY ANALYSIS

3.1 CELL AND CRITERIA ANALYSIS

The MSHCP provides for the assembly of a Conservation Area consisting of Core Areas and Linkages for the conservation of covered species. The Conservation Area is to be assembled from portions of the MSHCP Criteria Area, which consist of quarter-section (i.e., approximately 160-acre) Criteria Cells, each with specific criteria for the species conservation within that cell.

The project site is not within the MSHCP Criteria Area; therefore, no cell or criteria analysis is required.

3.2 PUBLIC/QUASI-PUBLIC LANDS ANALYSIS

The MSHCP provides for the assembly of a Conservation Area consisting of existing lands known to be in public/private ownership (also known as Public/Quasi-Public lands) and expected to be managed for open space value and/or in a manner that contributes to the conservation of Covered Species (including lands contained in existing reserves). As such, projects within and adjacent to public/quasi-public lands require an analysis of effects to public/quasi-public lands.

The project site is not within or adjacent to Public/Quasi-Public lands; therefore, no additional Public/Quasi-Public lands analysis is required.

4.0 VEGETATION

The study area is highly disturbed due to current and historic routine maintenance for fire suppression and/or weed control and resource extraction. Based on historic aerial imagery, the project site was mowed and/or disked except for areas with boulder outcroppings between 2003 and 2006. An approximately 135-foot wide swath along Berea Road and along the northern boundary of the project site has been regularly mowed and/or or disked since 2009. A 35-foot wide swath along the project site's southern boundary along Heroes Court has been mowed and/or disked since 2016. In addition, smaller rocks and boulders were extracted from the site in 2011 disturbing nearly all areas where current boulder outcroppings occur with the exception of the far southeastern corner of the project site, which appeared to be undisturbed. Dirt roads have been present in different configurations since 1996, based on historic aerial imagery, with the current configuration of dirt roads being present since 2012.

As a result of the disturbance caused by the historic maintenance practices, including disking, the vegetation on the project site is sparse and ruderal in nature. Vegetation on the site consists of California sagebrush scrub and ruderal vegetation (Appendix A, Figure 4). There are no native or non-native trees within the project site. Dominant species within California sagebrush scrub include California sagebrush (*Artemisia californica*), California buckwheat, and shortpod mustard (*Hirschfeldia incana*). Dominant species within ruderal areas are limited to non-native species and include shortpod mustard, tocalote (*Centaurea melitensis*), and stinknet (*Oncosiphon pilulifer*). There are no other plant communities on the site. Areas mapped as "developed" in Figure 4 consist of well-traveled dirt roads and concrete-lined channel that do not allow for the establishment of vegetation due to continuous use, disturbance and/or maintenance. A complete list of plant species observed on the site is included in Appendix B. Appendix A, Figure 4 shows land cover and photograph locations, and site photographs are provided in Figure 5.

5.0 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (MSHCP SECTION 6.1.2)

Section 6.1.2 of the MSHCP requires assessment of impacts to riparian habitats, riverine areas, and vernal pools, including focused surveys for sensitive riparian bird and fairy shrimp species when suitable habitat is present. The intent of the assessment requirement is to provide for the protection of resources used by MSHCP-covered species, as well as existing and future downstream conservation areas. Riverine/riparian areas and vernal pools are defined in Section 6.1.2 of the MSHCP 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.

Fairy Shrimp. *For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall also be undertaken as determined appropriate by a qualified biologist.*

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.

5.1 RIPARIAN/RIVERINE AREAS

5.1.1 Methods

The project site was assessed for riparian/riverine areas at the time of the November 19, 2020 site visit and throughout the 2020-2021 wet season concurrent with wet season fairy shrimp surveys. A jurisdictional delineation was conducted on June 15, 2021 using agency standard methodology at the

time of survey. The assessment and delineation included identification and mapping of plant communities on the site as well as any potential jurisdictional drainage features. A jurisdictional delineation report documenting the result of the jurisdictional delineation is included as Appendix C.

5.1.2 Existing Conditions and Results

One distinct drainage feature (identified as drainage D-1 in the jurisdictional delineation report) was identified within the Jurisdictional Delineation Study Area (JDSA) (refer to Figure 2 of Appendix C) and, in this case, was determined to be jurisdictional under the RWQCB. However, drainage D-1 would not meet the MSHCP definition of riparian/riverine as it is entirely concrete-lined, lacks soils and vegetation and is maintained to be free of soils and vegetation.

There are a few of shallow depressions (mostly road ruts) and a culvert on the project site; however, these areas were all determined to be non-jurisdictional. These areas would also not meet the MSHCP definition of riparian/riverine areas as they are dominated by upland plants or lack riparian vegetation and generally lack fresh water flow. There is no riparian vegetation on the project site. Impacts to MSHCP riparian/riverine areas are not anticipated during project implementation.

5.2 VERNAL POOLS

5.2.1 Methods

The project site was assessed for the presence of potential vernal pools at the time of the November 19, 2020 site visit and throughout the 2020-2021 wet season concurrently with wet season fairy shrimp surveys. A jurisdictional delineation was conducted on June 15, 2021 using agency standard methodology at the time of survey (Appendix C). The assessment and jurisdictional delineation included a search for depressions that may provide sufficient ponding of water to sustain hydrophytic vegetation and create hydric soil conditions during the growing season. The assessment also included a review of seasonally appropriate aerial photographs (Google Earth: 9/1996, 6/2002, 12/2003, 10/2005, 12/2005, 1/2006, 8/2006, 6/2009, 11/2009, 3/2011, 6/2012, 1/2013, 3/2013, 11/2013, 4/2014, 2/2016, 10/2016, 2/2018, and 8/2018).

5.2.2 Existing Conditions and Results

Isolated, shallow depressions (up to about two feet deep) were observed in the eastern portion of the project site and, after further determination, were classified as road ruts (Appendix A, Figure 6). Water was observed pooling in these areas, which resulted from either the removal of large boulders or continued vehicular use along dirt access roads present, as observed on 2011 historic aerial imagery. For a depression to be considered a vernal pool under the MSHCP, it must have wetlands indicators of all three parameters (soils, vegetation and hydrology). All of the mapped depressions (Figure 6) satisfied the conditions for wetland hydrology, but only two had hydrophytic vegetation. These were further evaluated by looking for indicators of hydric soils during the growing season (refer to Wetland Data Form SP1 in Appendix C). Indicators of hydric soils were absent, therefore none of the shallow depressions on the site had all three wetland criteria and thus none met the MSHCP definition of a vernal pool. Therefore, impacts to vernal pools are not anticipated during project implementation as none are present onsite.

5.3 FAIRY SHRIMP

5.3.1 Methods

The project site was assessed for fairy shrimp habitat at the same time and using the same methods as the initial assessment for vernal pools on November 19, 2020. Follow-up wet and dry season fairy shrimp surveys were conducted in 2021 as described below.

The MSHCP calls for habitat assessments for three sensitive species of fairy shrimp: Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), Riverside fairy shrimp (*Streptocephalus woottoni*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Santa Rosa Plateau fairy shrimp occurs only on the Santa Rosa Plateau of extreme southwest Riverside County. A fourth sensitive species of Southern California, San Diego fairy shrimp (*Branchinecta sandiegonensis*) is found primarily in coastal areas of Orange and San Diego Counties. It has been found as far inland as the Wildomar area of southwest Riverside County, but is not expected in the project area. These sensitive fairy shrimp species inhabit vernal pools as well as stock ponds, large road ruts, or other similar habitats that pond water long enough to allow growth and reproduction. Reports documenting the methods and results of both the wet and dry season fairy shrimp surveys report are included as Appendices D and E, respectively.

5.3.2 Existing Conditions and Results

As noted above, there are road ruts and similar shallow depressions that provide suitable habitat for fairy shrimp on the project site (Appendix A, Figure 6). Versatile fairy shrimp (*Branchinecta lindahli*) was the only fairy shrimp species observed within the road ruts and was observed in all sampled features during the wet season survey. *Branchinecta* eggs were found in the sampled features during the dry season survey. No MSHCP-covered fairy shrimp were identified during the focused surveys. Therefore, the project is not anticipated to impact MSHCP-covered fairy shrimp. See Table A, below.

5.4 RIPARIAN BIRDS

5.4.1 Methods

Habitat suitability for riparian birds, including least Bell's vireo (LBVI; *Vireo bellii pusillus*), southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*), and yellow-billed cuckoo (YBCU; *Coccyzus americanus*) was assessed in conjunction with the assessment for riverine/riparian areas and jurisdictional delineation.

5.4.2 Existing Conditions and Results

Riparian/riverine and/or any habitat suitable for riparian bird species, including those covered by the MSHCP, is absent from the project site. Therefore, no surveys for riparian birds will be required and project implementation is not anticipated to impact riparian bird species.

Table A: MSHCP and Other Special-Status Fairy Shrimp Species

Species	Status	MSHCP Habitat	Activity Period	Occurrence Probability
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	US: FT CA: SA MSHCP: S	Vernal pools and similar features in unplowed grassland areas. Pools must contain water continuously for at least 18 days in all but the driest years to allow for reproduction. Known from the Central Valley and adjacent foothill areas, the central coast and south coast ranges, from the transverse ranges near Santa Clarita, from the Santa Rosa Plateau, Skunk Hollow, and the Stowe Road vernal pool west of Hemet in Riverside County, and from northwest San Diego County. May also occur in Orange County. Occurs at up to about 2,300 feet elevation in areas north of Kern County and at up to 5,600 feet elevation in areas to the south.	Seasonally following rains; typically January through April	Absent. Not identified during wet or dry season focused surveys.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	US: FE CA: SA	Small, shallow (usually less than 30 centimeters deep), relatively clear but unpredictable vernal pools on coastal terraces. Pools must retain water for a minimum of 13 days for this species to reproduce (3 to 8 days for hatching, and 10 to 20 days to reach reproductive maturity). Known from Orange and San Diego Counties, and Baja California.	Seasonally following rains in late fall, winter and spring	Absent. Project site occurs outside the current range of the species. Not identified during wet or dry season focused surveys.
Santa Rosa Plateau fairy shrimp <i>Linderiella santarosae</i>	US: - CA: SA MSHCP: S	Southern basalt flow vernal pools with cool clear to milky waters that are moderately predictable and remain filled for extended periods of time. Known only from the Santa Rosa Plateau of western Riverside County.	Seasonally following rains; typically January through April	Absent. Project site occurs outside the current range of the species. Not identified during wet or dry season focused surveys.
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	US: FE CA: SA MSHCP: S	Warm-water vernal pools (i.e., large, deep pools that retain water into the warm season) with low to moderate dissolved solids, in annual grassland areas interspersed through chaparral or coastal sage scrub vegetation. Suitable habitat includes some artificially created or enhanced pools, such as some stock ponds, that have vernal pool like hydrology and vegetation. Known from areas within about 50 miles of the coast from Ventura County south to San Diego County and Baja California.	Seasonally following rains; typically January through April	Absent. Not identified during wet or dry season focused surveys.

LEGEND

US: Federal Classifications

FE Listed as endangered.

FT Listed as threatened.

CA: State Classifications

SA Special Animal. Refers to any other animal monitored by the Natural Diversity Data Base, regardless of its legal or rarity status.

MSHCP: Western Riverside County MSHCP Status

S Species is covered and adequately conserved under the MSHCP, but surveys are required within indicated habitats and/or survey areas.

6.0 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (MSHCP SECTION 6.1.3)

Section 6.1.3 of the MSHCP requires focused surveys for specified sensitive plant species if the project is located within a NEPSSA and suitable habitat is present. The project is located within NEPSSA 3, which indicates the need for habitat assessment for the following plant species:

- Munz's onion (*Allium munzii*);
- San Diego Ambrosia (*Ambrosia pumila*);
- many-stemmed dudleya (*Dudleya multicaulis*);
- spreading navarretia (*Navarretia fossalis*);
- California Orcutt grass (*Orcuttia californica*); and
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*).

6.1 METHODS

The project site was assessed for suitable habitat for these species during the November 19, 2020, site visit. The assessment included evaluation of soils, identification of plant species and communities, and investigation of landforms and evidence of past hydrologic conditions on the project site relative to the habitat requirements summarized for each narrow endemic plant species. The assessment also included a review of aerial photographs to look at historical vegetation patterns and for areas of ponding that could provide habitat for vernal pool plants.

Based on the presence of potentially suitable habitat onsite during the November 2020 assessment, focused NEPSSA surveys were conducted on April 14-15 and June 16, 2021 by LSA Biologist Stan Spencer to coincide with the blooming periods of NEPSSA 3 species. Surveys were conducted by walking meandering transects throughout the project site and inspecting all road ruts onsite. It should be noted that road ruts were also inspected for NEPSSA plant species during the wet and dry season fairy shrimp surveys and the jurisdictional delineation and the entire project site was inspected for NEPSSA plant species during the burrowing owl surveys.

6.2 EXISTING CONDITIONS AND RESULTS

Table B describes habitat requirements for each species, along with an assessment of habitat and the likelihood that the species is present on the site.

Table B: MSHCP Narrow Endemic Plant Survey Species

Species	Status	MSHCP Habitat	Growth Form and Blooming Period	Occurrence Probability
Munz's onion <i>Allium munzii</i>	US: FE CA: ST/1B MSHCP: S	Seasonally moist sites on clay soils (generally) or within rocky outcrops (pyroxenite) on rocky-sandy loams (such as Cajalco, Las Posas, and Vallecitos) with clay subsoils, in openings within coastal sage scrub, pinyon juniper woodland, and grassland, at 300 to 1,070 meters (1,000 to 3,500 feet) elevation. Known only from western Riverside County in the greater Perris Basin (Temescal Canyon-Gavilan Hills/Plateau, and Murrieta-Hot Springs areas) and within the Elsinore Peak (Santa Ana Mountains) and Domenigoni Hills regions.	Blooms April through May	Absent. Coastal sage scrub and rocky outcroppings occur on the eastern portion of the site, but clay soils are absent. Not observed during focused surveys.
San Diego Ambrosia <i>Ambrosia pumila</i>	US: FE CA: 1B MSHCP: S	Open, seasonally wet, generally low areas in floodplains or at edges of vernal pools or playas, usually in sandy loam or on clay (including upland clay slopes), at 20 to 487 meters (70 to 1,600 feet) elevation. Known from western Riverside and western San Diego Counties. Also occurs in Mexico.	Generally non-flowering (perennial herb)	Absent. Seasonal wet areas occur on site, although these areas are highly disturbed. Not observed during focused surveys.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	US: – CA: 1B MSHCP: S	Heavy, often clay soils or around granitic outcrops in chaparral, coastal sage scrub, and grassland below 790 meters (2,600 feet) elevation. Known only from Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties.	Blooms April through July (perennial herb)	Absent. Sparse, disturbed coastal sage scrub and rocky outcroppings occur on the eastern portion of the site, but clay soils are absent. Not observed during focused surveys.
spreading navarretia <i>Navarretia fossalis</i>	US: FT CA: 1B MSHCP: S	In vernal pools, playas, shallow freshwater marshes, and similar sites at 15 to 820 meters (50 to 2,700 feet) elevation. In California, known only from Los Angeles, San Luis Obispo, Riverside, and San Diego Counties. Also occurs in Mexico.	Blooms April through June (annual herb)	Absent. Seasonal wet areas occur on site, but these areas are highly disturbed. Not observed during focused surveys.
California Orcutt grass <i>Orcuttia californica</i>	US: FE CA: SE/1B MSHCP: S	Vernal pools from 15 to 660 meters (50 to 2,200 feet) elevation. In California, known from Los Angeles, Ventura, Riverside, and San Diego Counties. Also occurs in Mexico.	Blooms April through August (annual grass)	Absent. Seasonal wet areas occur on site, but these areas are highly disturbed. Not observed during focused surveys.

Table B: MSHCP Narrow Endemic Plant Survey Species

Species	Status	MSHCP Habitat	Growth Form and Blooming Period	Occurrence Probability
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	US: - CA: 2B MSHCP: S	Alkali soils in meadows, riverbeds, vernal pools, and lakes at 5 to 435 meters (20 to 1,430 feet) elevation. In California, known from the Central Valley and Riverside County. Also occurs in Texas and Baja California.	Blooms May through September (annual or perennial herb)	Absent. Seasonal wet areas occur on site, but these areas are highly disturbed. Not observed during focused surveys.

LEGEND

US: Federal Classifications

FE Listed as endangered.

FT Listed as threatened.

CA: State Classifications

ST State-listed as Threatened.

1B California Rare Plant Rank 1B – rare, threatened or endangered in California and elsewhere.

2B California Rare Plant Rank 2B – rare, threatened or endangered in California, but more common elsewhere.

MSHCP: Western Riverside County MSHCP Status

S Species is covered and adequately conserved under the MSHCP, but surveys are required within indicated habitats and/or survey areas.

As noted in Table B, potentially suitable habitat exists for these species; however, no NEPSSA species were observed during focused plant surveys conducted during the appropriate season. Therefore, all NEPSSA are considered absent from the site and are not anticipated to be impacted by project activities.

7.0 ADDITIONAL SURVEY NEEDS AND PROCEDURES (MSHCP SECTION 6.3.2)

MSHCP Section 6.3.2 requires surveys for additional plants, amphibians, small mammals, and burrowing owl for projects located within mapped survey areas.

7.1 CRITERIA AREA PLANT SPECIES

The project is not within a mapped survey area for CASSA plant species; therefore, no surveys for Criteria Area plant species and no evaluation of effects to these species are required.

Smooth tarplant (*Centromadia pungens* ssp. *laevis*), a CASSA species, was observed on the site (Appendix A, Figure 7). The species is considered adequately conserved under the MSHCP. Since the site is not within a CASSA survey area, neither surveys nor mitigation for this species is required.

7.2 AMPHIBIANS

The project is not within a mapped survey area for amphibian species.

7.3 BURROWING OWL

The project site is within the MSHCP burrowing owl survey area. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats often associated with burrowing animals. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other animals, in pipes, under piles of rock or debris, and in other similar features.

7.3.1 Methods

Habitat suitability for burrowing owl (BUOW) was assessed during the November 19, 2020, site visit. The assessment included an evaluation of soil texture, vegetative cover, topography, and the presence of mammal burrows, rock piles, or other areas suitable for nest construction. The site was found to contain low vegetative cover, devoid of trees, and contained rocky outcroppings and ground squirrel burrows. These conditions indicate suitable habitat for BUOW so a focused burrowing owl survey was conducted March 29 through July 14, 2021.

The surveys were conducted by LSA biologist Stan Spencer according to the *County of Riverside Guidelines for Burrowing Owl Surveys* (revised March 29, 2006). A total of four surveys were conducted from March to July 2021. The surveys were conducted by walking approximately 30-meter transects throughout areas of suitable habitat to look for burrowing owls, potential burrows (burrows greater than 11 centimeters [cm] in diameter and 150 cm deep), and burrowing owl sign. Burrows encountered during the survey were examined for owl sign (e.g., feathers, pellets, whitewash, and prey remnants). Burrows with presence of burrowing owl sign and/or burrowing owls were to be recorded using a handheld global positioning system (GPS) unit and mapped onto an aerial photograph. Potential habitat within 500 feet and visible from the site was surveyed using binoculars. A burrowing owl survey report documenting the result of the focused burrowing owl surveys is included as Appendix F.

7.3.2 Existing Conditions and Results

No burrowing owls or burrowing owl sign were found to be present within the survey area. Three burrows suitable for burrowing owl occupation were observed within the survey area but showed no sign of burrowing owl use (Appendix A, Figure 8). Suitable habitat is present throughout the project site consisting of ruderal and coastal sage scrub as both vegetation communities contain low-growing plant species. Although coastal sage scrub is not always considered suitable for burrowing owl due to shrub density and height, shrubs present within coastal sage scrub on site are generally spaced far apart and are relatively short due to past maintenance disturbances making the community suitable. Some areas within the southeastern portion of the project site lack suitability for burrowing owl due to the presence of large boulders that prevent the creation of burrows. Developed areas on site generally lack suitable habitat for burrowing owl as they consist of well-traveled dirt roads that have been maintained in their current location and condition since at least 2016 and are subject to vehicular and pedestrian travel, illegal dumping, and inundation in some areas due to the presence of road ruts.

Areas within 500 feet of the project site generally lack suitable habitat for burrowing owl as they primarily consist of developed land cover including residential and commercial uses and a park. There is suitable habitat for burrowing owl adjacent to and east of the project site where the area is undeveloped and consists of similarly composed ruderal and coastal sage scrub vegetation communities as can be found on the project. Suitable habitat also occurs within Salt Creek to the west of the project site. Based on historic aerial imagery, vegetation within Salt Creek has been maintained since at least 2009 and is considered ruderal.

A pre-construction survey for BUOW will be required within 30 days prior to any ground-disturbing activities.

7.3.3 Impacts and Mitigation

If BUOW is found during the pre-construction survey, the project proponent will need to inform the CDFW and U.S. Fish and Wildlife Service (USFWS) and prepare a mitigation plan for burrowing owl for approval by these agencies prior to initiating ground disturbance.

7.4 MAMMALS

The project is not within a mapped survey area for mammals.

8.0 INFORMATION ON OTHER SPECIES

8.1 DELHI SANDS FLOWER-LOVING FLY

The MSHCP requires surveys for Delhi sands flower-loving fly in most areas of mapped Delhi series soils where suitable habitat exists (MSHCP Section 9).

The project site is not within an area of mapped Delhi soils and (as noted in Section 2.0, above) soil mapped and observed throughout the site is sandy loam, coarse sandy loam, and silt loam, which is inconsistent with Delhi soils; therefore, no survey or additional analysis is required for this species.

8.2 SPECIES NOT ADEQUATELY CONSERVED

Some species that will eventually have full coverage under the MSHCP are not considered adequately conserved until requirements indicated in Table 9-3 of MSHCP Section 9 are met.

8.2.1 Methods

A literature review was conducted to investigate the potential occurrence of special-status species on the project site or in the vicinity. Database records for a three-mile radius of the project site were searched on November 16, 2020, using *Rarefind 5* (CDFW 2020).

8.2.2 Existing Results

None of the species listed in MSHCP Table 9-3 and lacking full coverage has been reported from the project site or within three miles of the project site and none was observed during various surveys conducted onsite. Given the habitat quality, none of these species has more than a low potential of being present.

9.0 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (MSHCP SECTION 6.1.4)

To preserve the integrity of areas described as existing or future MSHCP Conservation Areas, the guidelines contained in Section 6.1.4 (Urban Wildlands Interface Guidelines) are to be implemented for projects that are adjacent to either existing conservation or land described for conservation in the MSHCP Criteria Area.

The project site is not adjacent to conserved lands or lands in a Criteria Area that are described for conservation. Therefore, the Urban Wildlands Interface Guidelines do not apply to this project.

10.0 POTENTIAL JURISDICTIONAL WATERS AND STREAMBEDS

As described in Section 5.1, one distinct drainage feature (D-1) was identified on the project site and, in this case, was determined to be jurisdictional. All remaining features identified on site, including a metal culvert and road ruts were all determined to be non-jurisdictional. The regulatory basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency.

10.1 UNITED STATES ARMY CORPS OF ENGINEERS

D-1 is an artificially constructed, concrete-lined storm water control feature designed to collect and convey storm water and other urban runoff out of the immediate residential areas and into Salt Creek. The metal culvert is an artificially constructed storm water control feature designed to collect and convey storm water off the project site and areas west of Berea Road. Under the current definition of WOTUS, WOTUS do not include storm water control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store storm water runoff. In addition, Drainage D-1 and the metal culvert are ephemeral and also constructed or excavated in uplands and, as such, do not correspond to previously existing natural waterbodies or wetlands.

Road ruts present on site were inadvertently created due to vehicular travel and the removal of large boulders. The road ruts are isolated, ephemeral features that do not convey flows off site or connect to features that convey flows off site. Under the current definition of WOTUS (EPA and USACE 2020), WOTUS do not include ephemeral features including ephemeral streams, swales, gullies, rills, and pools.

Furthermore, none of these features supports jurisdictional wetlands. Therefore, based on current regulations, these features are categorically excluded from federal jurisdiction and do not meet the criteria for WOTUS pursuant to the Navigable Waters Protection Rule.

10.1.1 California Department of Fish and Wildlife

In accordance with Section 1602 of the California Fish and Game Code, CDFW asserts jurisdiction over rivers, streams, and lakes. There are no “rivers” or “lakes” within or adjacent to the project site. The features within the project are either concrete-lined or lack bed and bank, and lack associated riparian habitat. Although these features appear to convey flows periodically during or for a short period following a storm event, they do not provide associated aquatic resource values for fish and wildlife species. Therefore, based on the conditions of the features as well as their lack of aquatic functions and values, these features are not considered to be “streams” or “lakes” subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code.

10.1.2 Regional Water Quality Control Board

Since these features are currently excluded from federal jurisdiction subject to Section 404 of the CWA and thus do not meet the definitions of WOTUS pursuant to the Navigable Waters Protection Rule, these drainage features would likewise not be considered WOTS subject to Section 401 of the CWA. Furthermore, no wetlands according to the State’s new wetlands definition and procedures

were identified in any of the features. In addition, since these features are not considered jurisdictional streams and lack associated riparian habitat subject to CDFW jurisdiction, it is expected that the RWQCB would not assert jurisdiction over these drainage features pursuant to the Porter-Cologne Water Quality Control Act, with the exception of D-1.

D-1 is considered jurisdictional under the Porter-Cologne Water Quality Control Act as it conveys ephemeral surface flows directly into Salt Spring Creek. This equates to approximately 0.009 acre of non-wetland WOTS within the project site.

The findings and conclusions presented in this report, including the location and extent of non-wetland waters subject to regulatory jurisdiction, represent the professional opinion of LSA. These findings and conclusions should be considered preliminary until verified by the USACE, CDFW, and RWQCB. It should also be noted that jurisdictional delineation and classification of jurisdiction waters described in this section are based on the USACE guidance and definitions in place at the time of the delineation. Classification of waters of the U.S. under the jurisdiction of the USACE is currently in flux due to a recent court decision in August 2021 (EPA 2021).

10.1.3 Impacts and Mitigation

Project activities are anticipated to temporarily impact up to 0.0008 acre of concrete-lined drainage D-1. No permanent impacts are anticipated to drainage D-1. Therefore, compensatory mitigation will not be required. Concrete temporarily removed as part of project activities will be replaced. Best management practices to prevent the degradation of water quality with drainage D-1 will be implemented to prevent sediment and other materials from entering drainage D-1. Permitting through the RWQCB under a Statewide General Waste Discharge Requirements (WDR) is anticipated and conditions identified within the WDR shall be implemented during project activities within drainage D-1.

11.0 NESTING BIRDS

During the bird breeding season (typically February 1 through August 31), electrical distribution poles, large trees on or adjacent to the project site may be used by hawks, ravens, or other large birds for nesting. Trees, shrubs, and other vegetation may provide nest sites for smaller birds, and burrowing owls may nest in ground squirrel burrows, pipes, or similar features. Most birds and their active nests are protected from “take” (meaning destruction, pursuit, possession, etc.) under the Migratory Bird Treaty Act and/or Sections 3503–3801 of California Fish and Game Code. Activities that cause destruction of active nests, or that cause nest abandonment and subsequent death of eggs or young, may constitute violations of one or both of these laws.

If vegetation is to be removed during the nesting season (February 1 through August 31), a pre-construction nesting bird survey shall be conducted and avoidance measures taken to ensure that no take of birds or their nests will occur.

12.0 CEQA COMPLIANCE

12.1 ADOPTED HABITAT CONSERVATION PLANS

Section 10(a)(2)(A) of the 1973 Federal Endangered Species Act requires the preparation of a habitat conservation plan (HCP) for incidental take of threatened or endangered species when there is no federal agency involvement in a project. Continuing land development may cause incidental take of listed species and, therefore, HCPs have been prepared for areas within western Riverside County. The MSHCP and the Stephens' Kangaroo Rat (SKR) HCP are the principal habitat conservation plans in western Riverside County. The USFWS regional office maintains a current list of habitat conservation plans for the southern California region.

The project site is within the MSHCP area and within the SKR HCP fee area. Focused surveys for SKR will not be required for this project and a fee associated with the SKR HCP is required. The project site is not subject to any other adopted HCP.

12.2 THREATENED AND ENDANGERED SPECIES

The USFWS and CDFW may list species as threatened or endangered under the Federal and California Endangered Species Acts. The USFWS can designate critical habitat that identifies specific areas, either occupied or unoccupied, that are essential to the conservation of a listed species. Critical habitat areas may require special management considerations or protections. The USFWS and CDFW have issued permits for the take of most threatened and endangered species within the MSHCP area. The MSHCP covers impacts to these species. However, if a project has the involvement of a federal agency, that agency is required to address impacts to listed species and critical habitat by consulting with the USFWS. The USFWS has indicated in the permit issued for the MSHCP that, in such cases, the consultation will be expedited and that no restrictions will be imposed on the project beyond those specified in the MSHCP.

No critical habitat occurs on the project site. Coastal California gnatcatcher (*Poliophtila californica californica*), a species listed as federally threatened, has been reported within three miles of the project site according to CNNDDB records. Table C describes habitat requirements for coastal California gnatcatcher, along with an assessment of habitat and the likelihood of the species occurring on the site.

Table C: Threatened and Endangered Species

Species	Status	MSHCP Habitat	Activity Period	Occurrence Probability
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	US: FT CA: SSC MSHCP: C	Inhabits coastal sage scrub in low-lying foothills and valleys up to about 500 meters (1,640 feet) elevation in cismontane southwestern California and Baja California.	Year-round	Low. One small patch of isolated, marginal coastal sage scrub occurs within the southeastern portion of the site. If gnatcatchers are present in more suitable habitat areas east or south of the site, they may occasionally visit the site to forage; however, the patch of scrub on the site is too small and sparsely vegetated to provide nesting habitat.

US: Federal Classifications

FT Listed as threatened.

CA: State Classifications

SSC Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.

MSHCP: Western Riverside County MSHCP Status

C Species is covered and adequately conserved under the MSHCP.

This species is fully covered and adequately conserved under the MSHCP and the site lacks suitable nesting habitat. Therefore, no surveys or additional mitigation measures are required for this species for the project site.

12.3 OTHER SPECIAL-STATUS SPECIES

Other special-status species may occur on the proposed project site. The CDFW, USFWS, local agencies, and special interest groups, such as the California Native Plant Society (CNPS), maintain lists of species that they consider to be in need of monitoring. Legal protection for special-status species varies widely.

The special-status species listed in Table D may be expected to occur in the general project vicinity but are not covered under the MSHCP. None of the species listed in Table D has been reported from the project site and none was observed during the site visit. Both special-status species listed in Table D were reported within three miles of the project site. Only one of these species, Crotch bumble bee (*Bombus crotchii*), has potential to occur on the site. It is not likely to occur, however, given the disturbance and predominance of ruderal vegetation. If it does occur, given the small size of the site and low habitat quality, relatively few individuals would be present and, therefore, any effects to this species by the project would not be substantial.

Table D: Special-Status Species Potentially Occurring in the Project Vicinity (Not Covered by MSHCP)

Species	Status	Habitat and Distribution	Growth Form and Blooming Period/ Activity Period	Occurrence Probability
Crotch bumble bee <i>Bombus crotchii</i>	US: – CA: SCE	Inhabits open scrub and grassland from coastal California to crest of Sierra-Cascade and in desert edge areas, south into Mexico. Primarily nests underground. Suitable bumble bee habitat requires the continuous availability of flowers on which to forage throughout the duration of the colony (spring through fall), colony nest sites, and overwintering sites for the queens.	Spring and summer	Low. An isolated, marginally suitable patch of coastal sage scrub occurs on site.
California glossy snake <i>Arizona elegans occidentalis</i>	US: – CA: SSC	Scrub and grassland habitats, often with loose or sandy soils. Patchily distributed from the eastern portion of San Francisco Bay to southern San Joaquin Valley and in non-desert areas of southern California. Also occurs in Baja California, Mexico.	Most active March through June (nocturnal)	Absent. Although suitable coastal sage scrub is present on site, suitable sandy or loose soils are absent on site.

LEGEND

CA: State Classifications

SSC Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.

12.4 WILDLIFE MOVEMENT, CORRIDORS AND NURSERY SITES

Wildlife movement includes seasonal migration along corridors, as well as daily movements for foraging. Migration corridors may include areas of unobstructed movement of deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and between roosting and feeding areas for birds.

The project site is bordered by existing paved roads and development on three of its sides that already restrict wildlife movement in the project vicinity. Although there is additional undeveloped land to the east of the property, similar in size to the project site, it also is bordered by existing development on all sides except that which it shares with the project site. Wildlife movement within the project site is anticipated to be limited to wildlife present on site or present on the undeveloped land to the east of the project site. Neither the site nor the adjacent property to the east connects with larger contiguous segments of land that could offer opportunities for wildlife movement or act as a corridor. The proposed project would not substantially limit wildlife movement.

12.5 NATURAL COMMUNITIES OF INTEREST

Riparian habitats, oak woodlands, and vernal pools are among the natural communities of interest to the CDFW. In addition, CDFW maintains a list of natural communities occurring in the state and identifies those that are sensitive as having ranks of S1-S3.

There are no riparian communities or other sensitive plant communities, including those that have a state rank of S1-S3, on the project site.

12.6 WETLANDS

No wetlands were present on site. One non-wetland WOTS (drainage D-1) was identified within the project site and will be temporarily impacted by project activities.

See Section 10 for additional details regarding impacts and mitigation to non-wetland WOTS.

12.7 LOCAL POLICIES AND ORDINANCES PROTECTING BIOLOGICAL RESOURCES

City and County General Plans and development ordinances may include regulations or policies governing biological resources. For example, policies may include tree preservation, locally designated species survey areas, local species of interest, and significant ecological areas.

No trees occur on the site and, therefore, the project will not be subject to the City of Menifee's tree removal ordinance. The project will not conflict with other local policies or ordinances applicable to biological resources.

12.8 INDIRECT EFFECTS

Indirect impacts to surrounding areas as a result of the project may include, but are not limited to, increased dust, noise, lighting, traffic, and storm water runoff. Because of the small scale of the project and its location within a landscape that is already highly disturbed or developed, substantial indirect impacts to sensitive biological resources are not anticipated.

12.9 CUMULATIVE EFFECTS

Project construction will contribute to the incremental loss of California sagebrush scrub in the region, including potential habitat for some special-status species. Cumulative impacts potentially include reduced habitat quality and increased wildlife mortality. Cumulative impacts to habitat fragmentation and edge effects are not anticipated as the project site is currently experiencing a high level of both. California sagebrush scrub present is ruderal in function and has been routinely maintained for fire suppression and weed control for decades. The project is not expected to result in substantial cumulative effects due to the following factors:

- Existing residential and commercial development that borders the project site to the north, south and west and within the general vicinity of the project;
- The project's proximity to Newport Road;
- The study area does not function as a corridor for wildlife movement;
- The study area's existing highly disturbed state, as evidenced by disking and impacts from regulated fire suppression/weed removal activities occurring on site; and
- The undeveloped lands bordering the project site to the east which is also nestled between residential areas and Newport Drive and is in similar size and condition as the project site.

The MSHCP provides a comprehensive approach to the regional conservation of these habitats and, as a regional plan, serves to provide mitigation for cumulative impacts to covered species. Project compliance and consistency with the MSHCP ensures that any cumulative impacts to covered species are effectively mitigated. Special-status species that are not covered by the MSHCP also benefit from the surveys, conservation, and other measures of the MSHCP because they occupy many of the same habitats.

13.0 REFERENCES

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- U.S. Fish and Wildlife Service (USFWS). 2012. Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Riverside Fairy Shrimp; Final Rule. Federal Register 77: 72070-72140 (December 4, 2012).
- _____. 2020. Wetlands Mapper. Website: <https://www.fws.gov/wetlands/data/mapper.html> (accessed September 2020).

14.0 CERTIFICATION STATEMENT

I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 4, 2021

Signature: _____



APPENDIX A

FIGURES

Figure 1: Project and Regional Location

Figure 2: Site Plan

Figure 3: Soils

Figure 4: Vegetation, Land Use, and Photo Locations

Figure 5: Site Photographs

Figure 6: Jurisdictional Delineation Map

Figure 7: Plant Survey Results

Figure 8: Burrowing Owl Survey Results



FIGURE 1

LSA

LEGEND

- Project Location
- Off-Site Work Areas

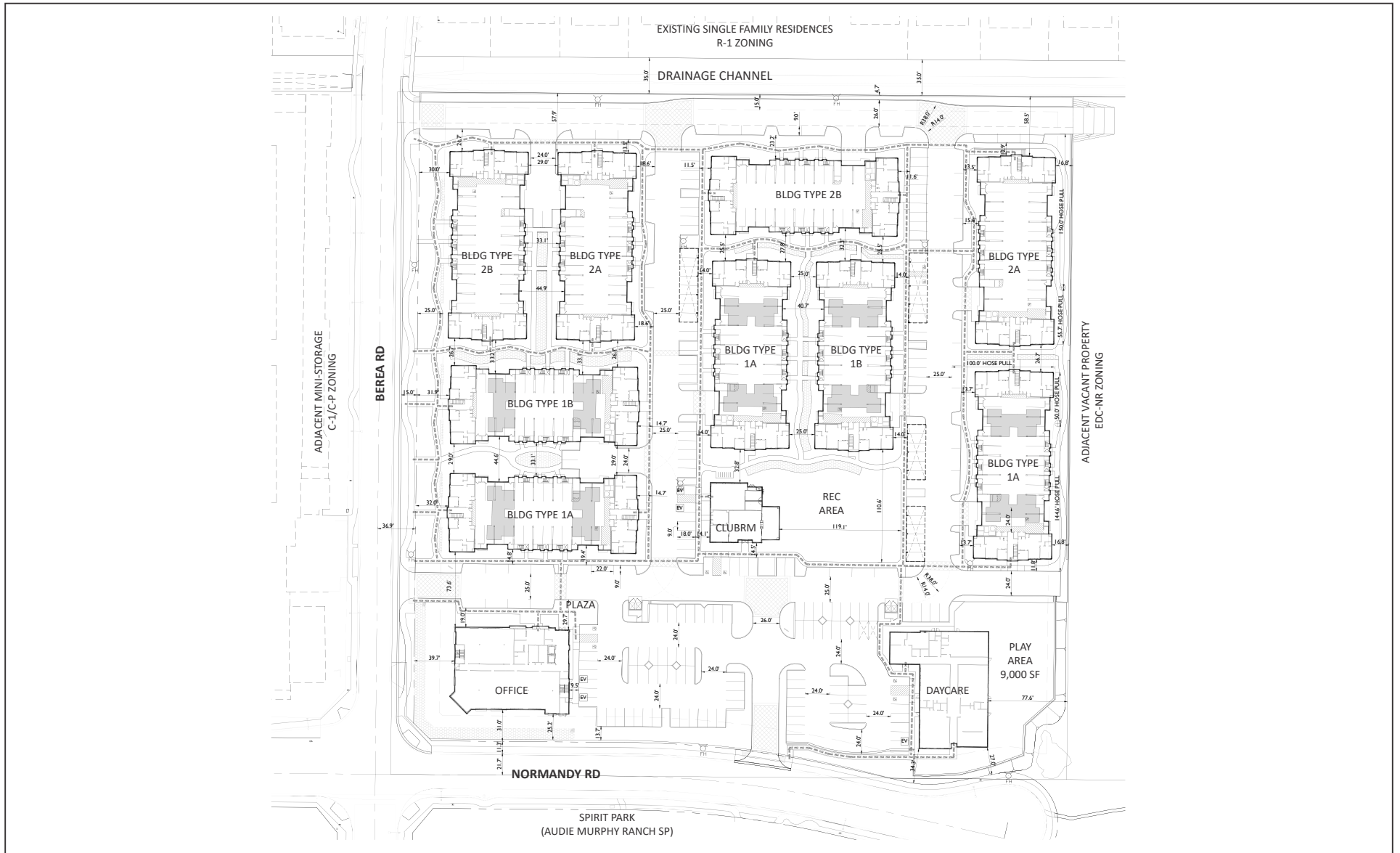


0 375 750
FEET

SOURCE: Google (2019)

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The Boulders Project
Project and Regional Location



LSA

FIGURE 2



0 90 180
FEET

SOURCE: Summa Architecture (12/28/2020)

I:\CIM2002\G\Site_Plan_v2.ai (4/19/2021)

Boulders Mixed-Use Project
City of Menifee
Site Plan

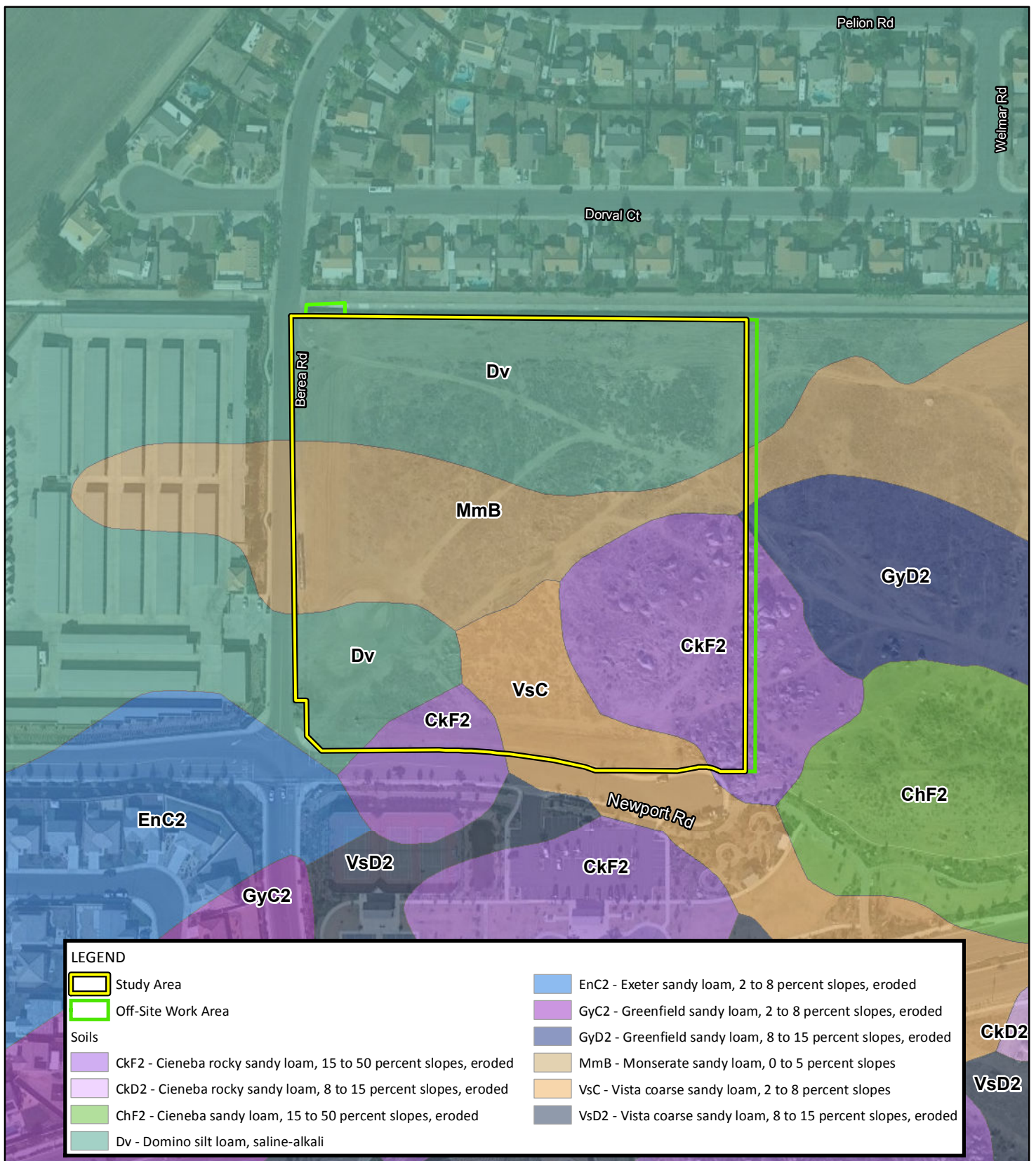


FIGURE 3

LSA

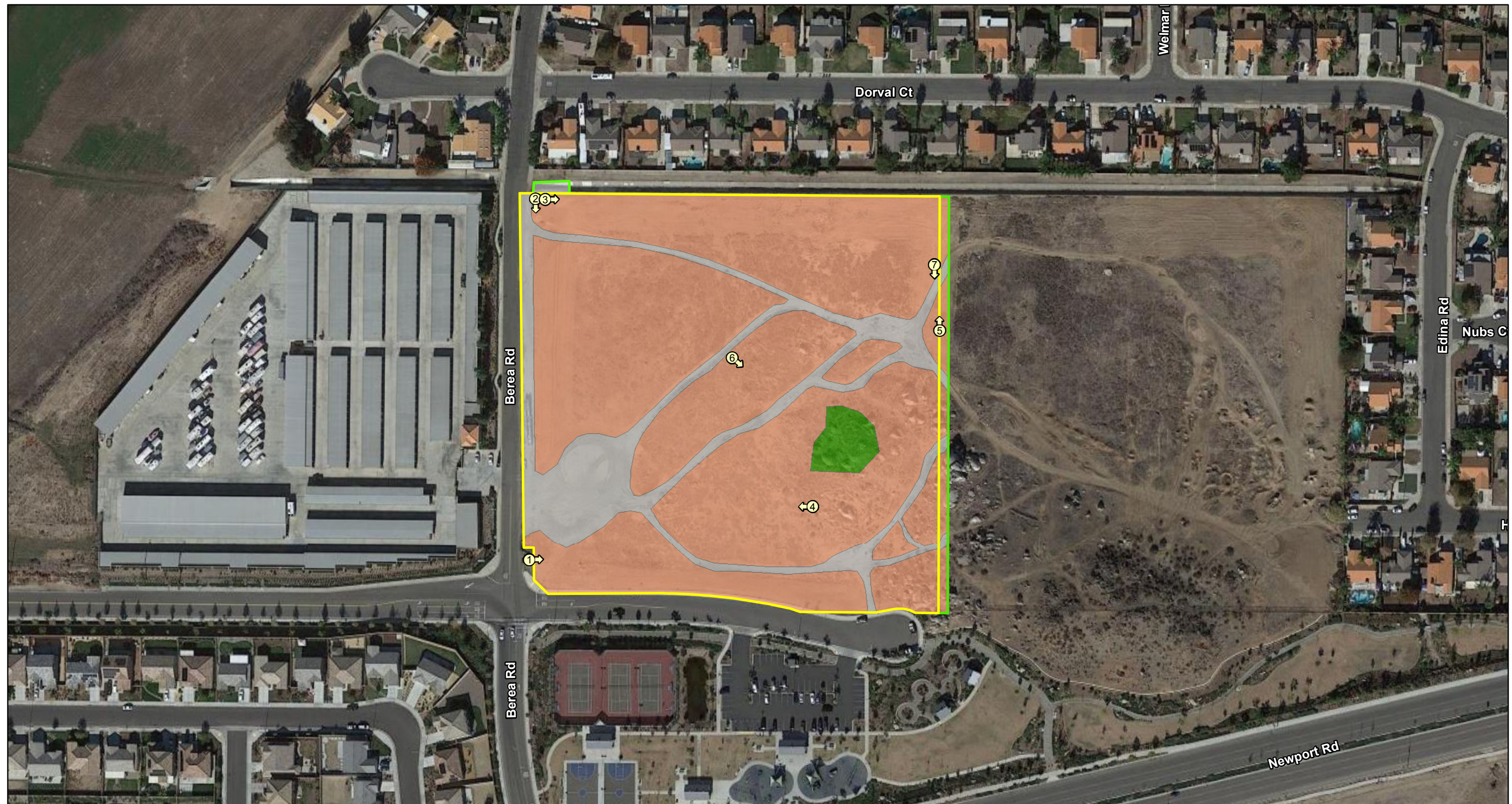


0 100 200
FEET

SOURCE: Google (2020); SSURGO (2019)

I:\TDM2101\GIS\MXD\Bio\BRA\Soils.mxd (10/4/2021)

The Boulders Project
Soils



LSA

LEGEND

- Project Location
- Off-Site Work Area
- Photograph Locations

- Vegetation
- Coastal Sage Scrub
 - Ruderal
 - Developed



0 75 150
FEET

SOURCE: Google (2020)

I:\TDM2101\GIS\MXD\Bio\BRA\Vegetation.mxd (10/4/2021)

FIGURE 4



Photo 1: View from southwestern corner of the site facing east.



Photo 2: View from northwestern corner of the site facing south.



Photo 3: View from northwestern corner of the site facing east.



Photo 4: View from southeastern portion of the site facing west.



Photo 5: View from eastern portion of the site facing north, suitable fairy shrimp habitat.



Photo 6: View from eastern portion of the site facing southeast, suitable fairy shrimp habitat.



Photo 7: View from eastern portion of the site facing south, suitable fairy shrimp habitat.



LSA

LEGEND

- Project Location
- Off-Site Work Area

Non-Jurisdictional (USACE/RWQCB/CDFW)

Shallow Depressions

Culvert

Nonwetland Waters of the State

Drainage D-1 (0.009 ac)



0 50 100
FEET

SOURCE: Google (2020)

I:\TDM2101\GIS\MXD\Bio\BRA\JD.mxd (10/4/2021)

FIGURE 6

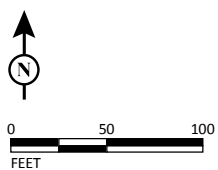


FIGURE 7

LSA

LEGEND

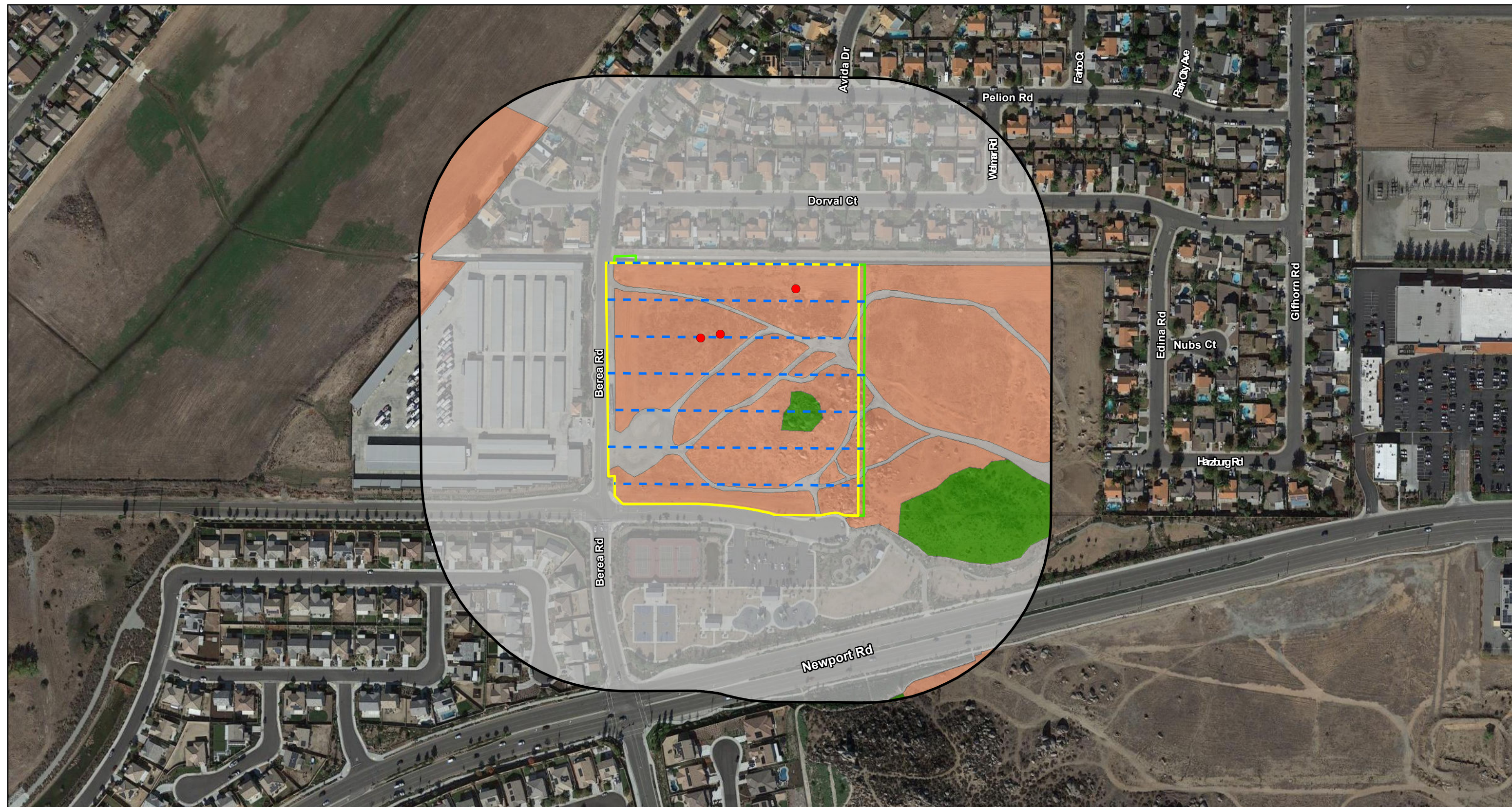
- Study Area
- Off-Site Work Areas
- Smooth Tarplant - 2020 Results (with # of individuals)
- Smooth Tarplant - 2021 Results (with # of individuals)



SOURCE: Nearmap (8/30/2020)

I:\TDM2101\GIS\MXD\Bio\BRA\SmoothTarplantSurveyResults.mxd (10/4/2021)

The Boulders Project
Plant Survey Results



LSA



0 125 250
FEET

SOURCE: Google (2020)

I:\TDM2101\GIS\MXD\Bio\BRA\VegetationBUOW_SurveyResults_and_Veg.mxd (10/4/2021)

LEGEND

- Project Location
- Off-Site Work Areas
- 500-ft Buffer
- 30-meter Transects
- Potential Burrowing Owl Burrow (no sign)

Vegetation

- Coastal Sage Scrub
- Ruderal
- Developed

FIGURE 8

APPENDIX B

PLANT AND ANIMAL SPECIES OBSERVED

PLANT AND ANIMAL SPECIES OBSERVED

Scientific Name	Common Name
MAGNOLIID FLOWERING PLANTS	
Amaranthaceae	Amaranth family
<i>Amaranthus albus</i> (non-native species)	Tumble pigweed
Apiaceae	Parsley family
<i>Bowlesia incana</i>	Hoary bowlesia
Asteraceae	Sunflower family
<i>Artemisia californica</i>	California sagebrush
<i>Centaurea melitensis</i> (non-native species)	Maltese star-thistle
<i>Centromadia pungens</i> ssp. <i>laevis</i>	Smooth tarplant
<i>Corethrogyne filaginifolia</i>	Common sand aster
<i>Deinandra paniculata</i>	Paniculate tarplant
<i>Deinandra fasciculata</i>	Clustered tarweed
<i>Encelia farinosa</i>	Brittlebush
<i>Ericameria</i> sp.	goldenbush
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Hedypnois cretica</i> (non-native species)	Crete weed
<i>Matricaria discoidea</i>	Disc mayweed
<i>Lasthenia gracilis</i>	Needle goldfields
<i>Isocoma menziesii</i>	Menzies' goldenbush
<i>Oncosiphon pilulifer</i> (non-native species)	Stinknet
<i>Pseudognaphalium californicum</i>	Ladies' tobacco
<i>Sonchus oleraceus</i> (non-native species)	Common sow thistle
<i>Stephanomeria exigua</i>	Small wire lettuce
<i>Tetradymia comosa</i>	Hairy horsebrush
Boraginaceae	Borage family
<i>Amsinckia intermedia</i>	Common fiddleneck
<i>Amsinckia retrorsa</i>	Rigid fiddleneck
<i>Heliotropium curassavicum</i>	Salt heliotrope
<i>Phacelia distans</i>	Distant phacelia
<i>Phacelia ramosissima</i>	Branching phacelia
<i>Plagiobothrys canescens</i>	Valley popcornflower
<i>Plagiobothrys leptocladus</i>	Finebranched popcornflower
Brassicaceae	Mustard family
<i>Hirschfeldia incana</i> (non-native species)	Shortpod mustard
<i>Lepidium dictyotum</i> var. <i>dictyotum</i>	Alkali peppergrass
Chenopodiaceae	Goosefoot family
<i>Chenopodium murale</i> (non-native species)	Nettleleaf goosefoot
Convolvulaceae	Morning glory family
<i>Cressa truxillensis</i>	Alkali weed
Crassulaceae	Stonecrop family
<i>Crassula connata</i>	Sand pygmyweed
Cucurbitaceae	Gourd family
<i>Marah macrocarpa</i>	Cucamonga manroot

PLANT AND ANIMAL SPECIES OBSERVED

Scientific Name	Common Name
Euphorbiaceae	Spurge family
<i>Croton setiger</i>	Turkey-mullein
<i>Euphorbia albomarginata</i>	Rattlesnake sandmat
Fabaceae	Pea family
<i>Medicago polymorpha</i> (non-native species)	California burclover
<i>Melilotus indicus</i> (non-native species)	Annual yellow sweetclover
Geraniaceae	Geranium family
<i>Erodium brachycarpum</i> (non-native species)	Foothill filaree
<i>Erodium cicutarium</i> (non-native species)	Red-stemmed filaree
Lamiaceae	Mint family
<i>Marrubium vulgare</i> (non-native species)	White horehound
<i>Trichostema lanceolatum</i>	Vinegar weed
Malvaceae	Mallow family
<i>Malacothamnus fasciculatus</i>	Chaparral bush mallow
<i>Malva parviflora</i> (non-native species)	Cheeseweed
Nyctaginaceae	Four o'clock family
<i>Mirabilis laevis</i>	Desert wishbone bush
Plantaginaceae	Plantain family
<i>Keckiella antirrhinoides</i>	Chaparral beard tongue
Polemoniaceae	Phlox family
<i>Navarretia atractylodes</i>	Holly leaf navarretia
Polygonaceae	Buckwheat family
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum gracile</i>	Slender buckwheat
Ranunculaceae	Buttercup family
<i>Clematis pauciflora</i>	Small leaved clematis
Rhamnaceae	Buckthorn family
<i>Rhamnus crocea</i>	Redberry buckthorn
Scrophulariaceae	Figwort family
<i>Scrophularia californica</i>	Coast figwort
Simaroubaceae	Quassia family
<i>Ailanthus altissima</i> (non-native species)	Tree of heaven
Solanaceae	Nightshade family
<i>Nicotiana glauca</i> (non-native species)	Tree tobacco
<i>Solanum xanti</i>	Chaparral nightshade
Tamaricaceae	Tamarisk family
<i>Tamarix ramosissima</i> (non-native species)	Mediterranean tamarisk
MONOCOTS FLOWERING PLANTS	
Poaceae	Grass family
<i>Bromus madritensis</i> (non-native species)	Foxtail chess
<i>Festuca myuros</i> (non-native species)	Rattail sixweeks grass
<i>Hordeum marinum</i> (non-native species)	Seaside barley
<i>Lamarckia aurea</i> (non-native species)	Goldentop
<i>Schismus barbatus</i> (non-native species)	Common Mediterranean grass

PLANT AND ANIMAL SPECIES OBSERVED

Scientific Name	Common Name
BIRDS	
Columbidae	Pigeons and Doves
<i>Zenaida macroura</i>	Mourning dove
Fringillidae	Finches, Euphonias, and Allies
<i>Haemorhous mexicanus</i>	House finch
<i>Spinus psaltria</i>	Lesser goldfinch
Parulidae	New World Warblers
<i>Setophaga coronata</i>	Yellow-rumped warbler
Passeridae	Old World Sparrows
<i>Passer domesticus</i>	House sparrow
Passerellidae	New World Sparrows
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Tyrannidae	Tyrant Flycatchers
<i>Sayornis nigricans</i>	Black phoebe
<i>Sayornis saya</i>	Say's phoebe
REPTILES	
Phrynosomatidae	Spiny Lizards
<i>Sceloporus orcutti</i>	Granite spiny lizard
<i>Uta stansburiana</i>	Common side-blotched lizard
MAMMALS	
Leporidae	Rabbits and Hares
<i>Sylvilagus audubonii</i>	Desert cottontail
Sciuridae	Squirrels
<i>Spermophilus beecheyi</i>	California ground squirrel

APPENDIX C

JURISDICTIONAL DELINEATION REPORT

DRAFT

JURISDICTIONAL DELINEATION REPORT

BOULDERS MIXED-USE PROJECT

CITY OF MENIFEE

RIVERSIDE COUNTY, CALIFORNIA

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INTRODUCTION

This Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Boulders Mixed-Use Project (project) in Menifee, California. The City of Menifee (City) proposes the construction of a 234-unit multifamily residential development, on-site recreational features (e.g., recreation area, pool, and fitness center), leasing office/clubhouse, parking, landscaping, and ancillary features. The project also plans for 30,000 square feet of commercial uses located in a single three-story structure located along Heroes Court.

The Jurisdictional Delineation Study Area (JDSA) covered herein extends across the entire project site. The purpose of this delineation report is to determine the extent of both State of California and federal jurisdiction within the JDSA. This includes the potential jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and/or the Porter-Cologne Water Quality Control Act, and the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code. This report has been prepared to inform the environmental planning and review process. All referenced figures are included in Appendix A.

SITE DESCRIPTION AND SETTING

The JDSA is located at the northeast corner of the intersection of Normandy Road and Berea Road in the City of Menifee, Riverside County, California within the United States Geological Survey (USGS) *Romoland, California* 7.5-minute series topographic quadrangle (refer to Appendix A, Figure 1). Elevations in the JDSA range from approximately 1,410 feet above mean sea level (amsl) to approximately 1,435 feet amsl. The topography within the JDSA is relatively flat (developed lands) with for boulder outcroppings located in the eastern portion of the study area. The JDSA is undeveloped and is bordered to the north by a concrete-lined storm water channel and residential development. There are no prominent natural areas within or adjacent to the JDSA.

The JDSA is located within the Menifee Valley Watershed, which is approximately 27.8 square miles extending westerly from its terminus at Canyon Lake to upstream portions of Salt Creek in Menifee. All surface waters within the JDSA are ultimately conveyed to Salt Creek via an extensive, artificially constructed, storm water drainage system. The Salt Creek channel discharges from Menifee into the East Bay section of Canyon Lake. Salt Creek is one of the primary tributaries to Canyon Lake, which continues as the San Jacinto River downstream of Canyon Lake.

Based on a review of historic aerial photographs of the project area extending back to the late 1960s (NETR 2021), there do not appear to have been any natural waterbodies or associated riparian/wetland habitat occurring within the JDSA that were displaced by subsequent development of the area. This includes the areas where existing storm water drainage channels occur within the JDSA. Therefore, all existing drainage channels in the JDSA were excavated on dry land for storm water drainage and flood control purposes.

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The average annual precipitation is approximately 11.11 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at other times of the year and can result in high levels of precipitation. Temperatures typically range between 36 and 98 degrees Fahrenheit (°F).

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The USACE regulates discharges of dredged or fill material into waters of the United States (WOTUS). These waters include wetland and nonwetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the waterbody in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

For several decades, the operable definition of WOTUS was provided at 33 Code of Federal Regulations (CFR) 328.3, but implementation of this definition has been shaped by the courts and subsequent guidance over the years, most substantially by the 2001 Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178 (SWANCC) and the 2006 Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are “waters of the United States” if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable.

Based, in part, on the *Rapanos* decision, a new rule defining WOTUS was promulgated in the *Federal Register* on June 29, 2015. Following a series of legal challenges and the former presidential administration’s attempt to delay the implementation of this rule, on August 16, 2018, the United States District Court for the District of South Carolina enjoined the delay of the WOTUS Rule implementation for failure to comply with the Administrative Procedure Act. This decision made the 2015 WOTUS definition effective in 26 states where federal district court judges did not stay it, including California.

However, pursuant to an Executive Order signed on February 28, 2017, “Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the ‘Waters of the United States Rule,’” the USACE and United States Environmental Protection Agency (EPA) embarked on a two-step process to revise the definition of “waters of the United States.” The first step was to repeal the 2015 WOTUS definition and revert to the operative definition that was shaped by previous regulations and subsequent court decisions. The *Federal Register* notice that effected this repeal was published on October 22, 2019, with an effective date of December 23, 2019. On February 14, 2019, as the second step of the comprehensive two-step process, the USACE and the EPA proposed to interpret the term “waters of the United States” to encompass traditional navigable waters, including the territorial seas; tributaries that contribute perennial or intermittent flow to such waters; certain ditches; certain lakes and ponds; impoundments of otherwise jurisdictional waters; and wetlands adjacent to other jurisdictional waters. The public comment period for the proposed revised definition of “waters of the United States” closed on April 15, 2019, and the agencies reviewed and considered approximately 620,000 comments they received.

The final Navigable Waters Protection Rule was published in the *Federal Register* on April 21, 2020 (EPA and USACE 2020), and became effective on June 22, 2020. The final definition clarifies that WOTUS do not include the following:

- Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse storm water runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Storm water control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store storm water runoff;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

Given the substantial changes in operable definitions that have occurred and may continue considering the regulatory revisions and potential court actions, it is not possible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the USACE. Therefore, this jurisdictional delineation focuses on identifying the boundaries of potentially jurisdictional waterbodies, using methods for determining the locations of ordinary high water marks (OHWMs) and wetland boundaries as described below. These methods for determining the boundaries of waterbodies in general have not substantially changed over the years and are not likely to change with any revised regulations. This delineation can then be used in combination with a companion jurisdictional analysis to determine which of the identified waterbodies are actually jurisdictional, based on the definition that is in effect at the time of a jurisdictional determination by the USACE. In some cases, it may be possible to identify waterbodies that are likely or unlikely to be jurisdictional under any scenario (i.e., based on previous regulations and *Rapanos* guidance) or on regulations that have been adopted and are to become effective in the future.

Any definition is likely to include the following categories of waters:

- (i) The territorial seas and all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

- (ii) Tributaries of waters identified in paragraph (i) above; however, the definition of tributary, based on the nature and amount of flow, is subject to change if regulations are revised;¹
- (iii) Certain lakes, ponds, and impoundments of waters otherwise identified as waters of the United States;
- (iv) Wetlands adjacent to any of the above that have a direct hydrologic surface connection in a typical year.

Similarly, certain waterbodies are likely to be excluded, pursuant to one of the following: (1) the current specific rule; (2) the preamble to the 1986 regulations; (3) the SWANCC decision; or (4) *Rapanos* guidance; examples include:

- (i) Isolated waters;
- (ii) Artificial, ephemeral ditches, excavated on dry land and draining only uplands;
- (iii) Erosional features that do not meet the definition of tributary;
- (iv) Storm water control features created in dry land;
- (v) Artificial reflecting pools or swimming pools and ornamental waters;
- (vi) Incidental depressions created in dry land.

As applicable, waters in the above categories are noted in this delineation; the relationships of waters in other categories to likely jurisdictional waters are also noted, but without speculation as to their future jurisdictional status.

The USACE typically considers any body of water displaying an OHWM for designation as WOTUS, subject to the applicable definition of WOTUS. USACE jurisdiction over nontidal WOTUS extends laterally to the OHWM or beyond the OHWM to the limit of any contiguous wetlands, if present.

The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

Waters found to be isolated and not subject to CWA regulation may still be regulated by the RWQCB under the State Porter-Cologne Water Quality Control Act.

¹ According to the Navigable Waters Protection Rule, effective June 22, 2020, ephemeral features (e.g., features that contain/convey surface storm water in direct response to precipitation with surface water present/flowing only during and shortly after rainfall) are not considered WOTUS.

Wetland Waters of the United States

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (*Regional Supplement*) (USACE 2008) and the *Corps of Engineers 1987 Wetland Delineation Manual* (*1987 Manual*) (USACE 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

The USACE and the EPA define wetlands as:

Those areas that are 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 to life in saturated soil conditions.

To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soil indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes lasted more than a few days or occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding, highly ephemeral stream systems, or in areas recently altered by anthropogenic activities. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas.

Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The *Regional Supplement* provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered

hydrophytic. Hydrophytic species are those included on the National Wetland Plant List published by the USACE (2018). Each species on the list is rated according to a wetland indicator category, as shown in Table A.

Table A: Hydrophytic Vegetation Ratings

Category	Rating	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability > 99 percent)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99 percent)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66 percent)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67–99 percent)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability > 99 percent)

Source: United States Army Corps of Engineers (2008).

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately); when more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the USACE recommends the use of the “50/20” rule (also known as the dominance test) from the *Regional Supplement* for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a sampling point. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, USACE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (USACE 2008). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibits morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils

Hydric soils¹ are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.² Soils are

¹ The hydric soils definition and criteria included in the *1987 Manual* are obsolete. Users of the *1987 Manual* are directed to the United States Department of Agriculture’s Natural Resources Conservation Service website for the most current information on hydric soils.

² Current definition as of 1994 (*Federal Register*, July 13, 1994).

considered likely to meet the definition of a hydric soil when they meet one or more of the following criteria:

- All Histels except Folistels and Histosols except Folists;
- Soils that are frequently ponded for a long duration or very long duration¹ during the growing season; and/or
- Soils that are frequently flooded for a long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. Although saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters [19.7 inches], below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria and on information gathered from the National Soil Information System (NASIS) database, the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) created a Soil Data Access Hydric Soils List that is updated annually.

The *Regional Supplement* has a number of field indicators that may be used to identify hydric soils. The NRCS (USDA 2016) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (USACE 1987). The wetland hydrology criterion is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

¹ "Long duration" is defined as a single event ranging from 7 to 30 days; "very long duration" is defined as a single event that lasts longer than 30 days.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic or intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

In obtaining CDFW agreements, the limits of wetlands are not typically determined. This is because the CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with USACE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream, away from frequently saturated soils).

REGIONAL WATER QUALITY CONTROL BOARD

The Porter-Cologne Water Quality Control Act of the California Water Code (Section 13000 et seq.) established nine RWQCBs to oversee water quality on a day-to-day basis at the local and/or regional level. Their duties include preparing and updating water quality control plans and associated requirements, and issuing water quality certifications under Section 401 of the CWA. The CWA grants ultimate authority to the State Water Resources Control Board (SWRCB) over State water rights and water quality policy. Under the Porter-Cologne Water Quality Control Act, the RWQCBs (or the SWRCB for projects that cross multiple RWQCB jurisdictions) are responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits for point-source discharges and waste discharge requirements for nonpoint-source discharges into jurisdictional waters of the State (WOTS).

The definition of waters under the jurisdiction of the State is broad and includes any surface water or groundwater, including saline waters within the boundaries of the State. Waters that meet the definition of WOTUS are also considered WOTS, but the jurisdictional limits of WOTS may extend beyond the limits of WOTUS. Isolated waters that may not be subject to regulations under federal law are considered to be WOTS and regulated accordingly.

While there is no formal statewide guidance for the delineation of nonwetland WOTS, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, and all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation. Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland WOTS.

Wetland Waters of the State

On August 28, 2019, the California Office of Administrative Law approved the SWRCB-proposed *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures)*. The *Procedures*, effective on May 28, 2020, apply to discharges of dredged or fill material to WOTS. The *Procedures* consist of four major elements: (1) a wetland definition; (2) a framework for determining whether a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submission, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

The SWRCB and RWQCBs define a wetland as:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The RWQCB will rely on the final aquatic resource report verified by the USACE for determining the extent of wetland WOTUS. However, if it is not delineated in a final aquatic report, the procedures will use the USACE *1987 Manual* and the *Regional Supplement* to determine whether the area meets the State definition of a wetland. As described in the *1987 Manual* and the *Regional Supplement*, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not prevent the determination of such an area that meets the State definition of wetland.

METHODOLOGY

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Historic and current aerial photographic imagery (NETR 2021);
- Historic and current USGS topographic maps (USGS 2021);
- United States Fish and Wildlife Service National Wetlands Inventory (NWI) wetland mapper (USFWS 2021); and
- Natural Resource Conservation Service Web Soil Survey (USDA 2019).

LSA Senior Biologist Stan Spencer conducted the fieldwork for a jurisdictional delineation on June 15, 2021. The JDSA was visually surveyed via a combination of vehicle and, when possible, on foot. All drainage features within the JDSA were evaluated according to the most current federal and/or State regulatory criteria and guidance and mapped using aerial photographs. This included the State wetland definition and delineation procedures recently enacted by the SWRCB, and the new USACE regulations pertaining to jurisdictional WOTUS. In addition, the general conditions and characteristics associated with each drainage feature were noted and photographed.

Under the new USACE definition of WOTUS, a potential jurisdictional drainage feature must be determined to be ephemeral, intermittent, or perennial. Intermittent and perennial drainages that are tributary to traditional navigable waters are considered jurisdictional WOTUS, whereas ephemeral drainages would no longer be considered jurisdictional WOTUS. This analysis can be accomplished using a variety of hydrology data (e.g., stream gauge data) or the quantitative approach of applying the New Mexico Streamflow-Duration Assessment Method (NM SDAM) (Mazor et al. 2019). The NM SDAM is a quantitative rating (or scoring) of specific hydrologic, biological, and/or geomorphological indicators of flow duration associated with the subject drainages based on observations made in the field. The total score for each drainage is compared to a predetermined scoring range for ephemeral, intermittent, and perennial drainage features (Table 2 of the NM SDAM [Mazor et al. 2019]).

The boundaries of drainage features observed within the JDSA during the fieldwork were mapped on a recent, high-resolution aerial photograph (on a scale of 1 inch = approximately 100 feet) showing the JDSA. The widths and lengths of these drainage features that were mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Features within the JDSA that are categorically excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as “non-jurisdictional features.” Since none of the drainage features in the JDSA exhibited characteristics indicative of wetlands (e.g., areas dominated by hydrophytic vegetation or hydric soils), wetland delineation procedures described in the *Regional Supplement* and those recently enacted by the SWRCB were not implemented.

RESULTS

The JDSA does not contain any NWI surface waters or wetlands based on the query conducted (Figure 4).

The soils mapped on the site include Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded, Domino silt loam, saline-alkali, Greenfield sandy loam, 8 to 15 percent slopes, eroded, Monserate sandy loam, 0 to 5 percent slopes, and Vista coarse sandy loam, 2 to 8 percent slopes (USDA 2019; Figure 5). Soil observed throughout the site appears to be consistent with this designation. None of the mapped soils are considered hydric soils and have a drainage class ranging from moderately well drained to somewhat excessively drained (Table B).

Table B: Mapped Soils Classifications

Soil	Drainage Class	Frequency of Flooding	Frequency of Ponding	Hydric Soil Rating
Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	Somewhat excessively drained	None	None	No
Domino silt loam, saline-alkali	Moderately well drained	Rare	None	No
Greenfield sandy loam, 8 to 15 percent slopes, eroded	Well drained	None	None	No
Monserate sandy loam, 0 to 5 percent slopes	Well drained	None	None	No
Vista coarse sandy loam, 2 to 8 percent slopes	Well drained	None	None	No

Source: USDA (2019).

DESCRIPTIONS OF DELINEATED FEATURES

A brief description of each delineated feature is provided below. Figure 2 shows the locations of each drainage feature and Figure 3 provides representative photographs of each drainage feature (see Appendix A).

Drainage Feature D-1 is a trapezoidal concrete-lined drainage channel constructed for the purpose of controlling and conveying storm water runoff from the immediately surrounding area. This feature flows in an east-to-west direction carrying storm water flows and nuisance flows from nearby developed areas directly into Salt Creek to the west of the project site. The feature measured 12 feet wide and lacked any standing or flowing water at the time of the fieldwork and appears to convey only ephemeral storm water runoff. This drainage feature lacked an accumulation of soils or dead vegetative material from adjacent vegetation and there was no vegetation growing in the drainage feature. Based on a review of historic aerial imagery, Drainage D-1 was built in an upland area between 1978 and 1996 to accommodate urban runoff associated with the adjacent residential development.

A metal culvert is located just outside the JDSA on the southwestern corner of the JDSA just east of Berea Road. The area around the culvert showed no sign of flow during the site visit or in historical

aerial imagery, lacked riparian habitat and aquatic resources, and is located in uplands. Vegetation in the area surrounding the culvert consisted of upland plants similar to surrounding areas.

Isolated, low-lying areas were observed in the eastern portion of the project site and, after further determination, are being classified as road ruts. Water was observed pooling in these areas, which resulted from the removal of large boulders and continued vehicular use along dirt access roads present, as observed on 2011 historic aerial imagery, which created up to two-foot deep depressions. A 16-inch-deep soil pit was excavated at the two most prominent road rut features because of the prevalence of wetland vegetation and presumed wetland hydrology. Prominent redox features or other indicators of hydric soils were not detected (refer to Wetland Data Form SP1 [Sampling Point 1] in Appendix B). Therefore, given the presence of indicators that wetland vegetation and wetland hydrology exist, wetland soils were found to be absent, and the road ruts would not be considered to be wetlands.

JURISDICTIONAL CONCLUSIONS

One distinct drainage feature (D-1) was identified within the JDSA (refer to Figure 2) and, in this case, was determined to be jurisdictional. All remaining features identified on site, including a metal culvert and road ruts were all determined to be non-jurisdictional. The regulatory basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency.

United States Army Corps of Engineers

D-1 is an artificially constructed, concrete-lined storm water control feature designed to collect and convey storm water and other urban runoff out of the immediate residential areas and into Salt Creek. The metal culvert is an artificially constructed storm water control feature designed to collect and convey storm water off the project site and areas west of Berea Road. Under the current definition of WOTUS (EPA and USACE 2020), WOTUS do not include storm water control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store storm water runoff. In addition, Drainage D-1 and the metal culvert are ephemeral and also constructed or excavated in uplands and, as such, do not correspond to previously existing natural waterbodies or wetlands.

Road ruts present on site were inadvertently created due to vehicular travel and the removal of large boulders. The road ruts are isolated, ephemeral features that do not convey flows off site or connect to features that convey flows off site. Under the current definition of WOTUS (EPA and USACE 2020), WOTUS do not include ephemeral features including ephemeral streams, swales, gullies, rills, and pools.

Furthermore, none of these features supports jurisdictional wetlands. Therefore, based on current regulations, these features are categorically excluded from federal jurisdiction and do not meet the criteria for WOTUS pursuant to the Navigable Waters Protection Rule.

California Department of Fish and Wildlife

In accordance with Section 1602 of the California Fish and Game Code, CDFW asserts jurisdiction over rivers, streams, and lakes. There are no “rivers” or “lakes” within or adjacent to the JDSA. The features within the JDSA are concrete-lined, lack bed and bank, and lack associated riparian habitat. Although these features appear to convey flows periodically during or for a short period following a storm event, they do not provide associated aquatic resource values for fish and wildlife species. Therefore, based on the conditions of the features as well as their lack of aquatic functions and values, these features are not considered to be “streams” or “lakes” subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code.

Regional Water Quality Control Board

Since these features are currently excluded from federal jurisdiction subject to Section 404 of the CWA and thus do not meet the definitions of WOTUS pursuant to the Navigable Waters Protection Rule, these drainage features would likewise not be considered WOTS subject to Section 401 of the CWA. Furthermore, no wetlands according to the State’s new wetlands definition and procedures (SWRCB 2019) were identified in any of the features. In addition, since these features are not considered jurisdictional streams and lack associated riparian habitat subject to CDFW jurisdiction, it is expected that the RWQCB would not assert jurisdiction over these drainage features pursuant to the Porter-Cologne Water Quality Control Act, with the exception of D-1.

D-1 is considered jurisdictional under the Porter-Cologne Water Quality Control Act as it conveys ephemeral surface flows directly into Salt Spring Creek. This equates to approximately 0.009 acre of non-wetland WOTS within the JDSA.

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of features subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the appropriate regulatory agencies.

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APPENDIX A

FIGURES

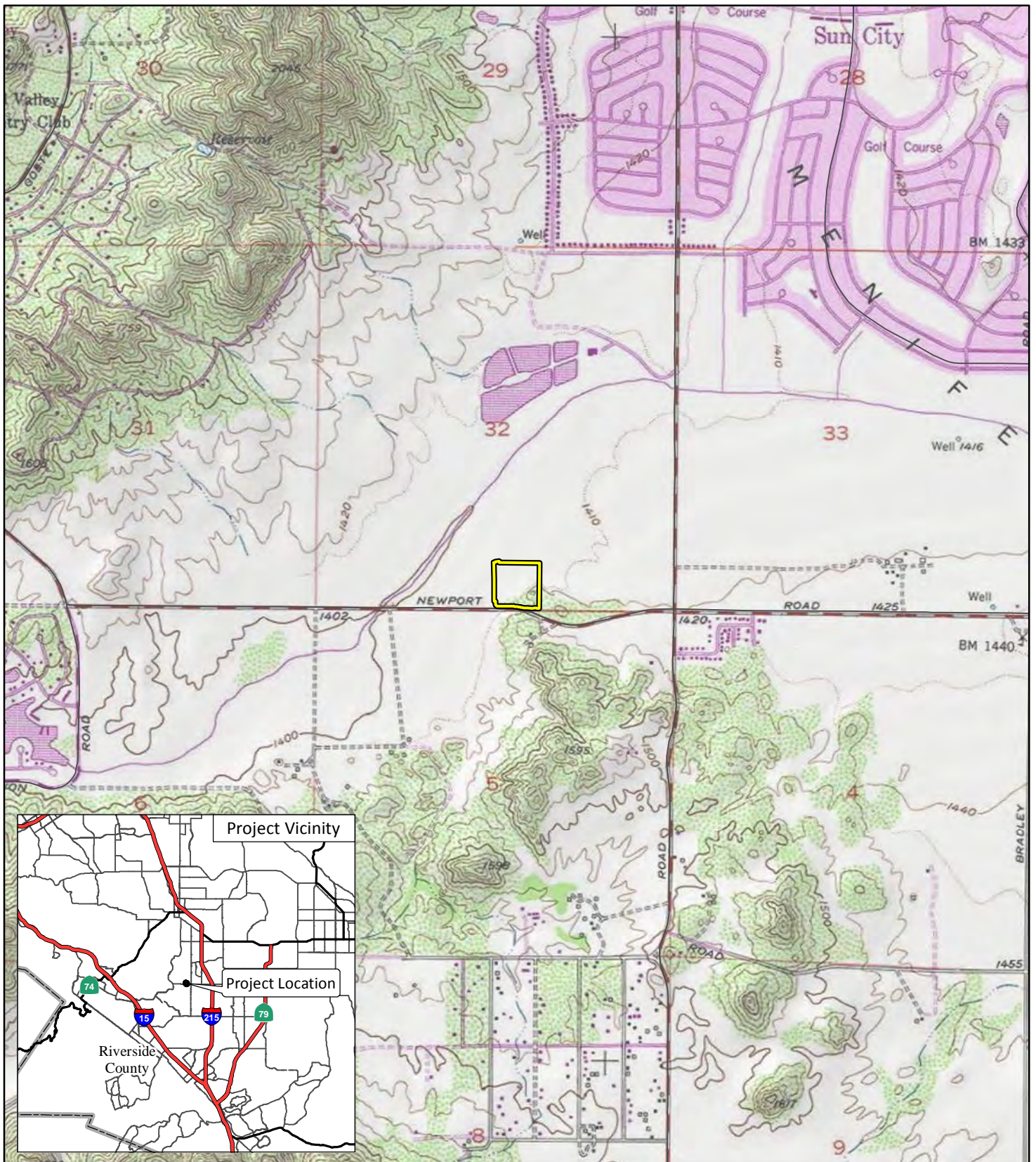
Figure 1: Project Location and Vicinity

Figure 2: Jurisdictional Delineation Map

Figure 3: Representative Site Photographs

Figure 4: National Wetland Inventory

Figure 5: Soils



LSA

LEGEND

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Romoland (1979), CA

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Boulders Mixed-Use Project
Project Location and Vicinity



LSA



0 50 100
FEET

SOURCE: Google (2020)

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LEGEND

- | | |
|--|---|
| Project Location | Non-Jurisdictional (USACE/RWQCB/CDFW) |
| Off-Site Work Area | Road Ruts |
| ▲ Soil Pit | Culvert |
| ↻ Photograph Location | Nonwetland Waters of the State |
| | Drainage D-1 (0.009 ac) |

FIGURE 2



Photo 1. View of Drainage D-1, facing east.



Photo 2. View of area surrounding the metal culvert, facing east.



Photo 3. View of road ruts, facing northeast.

LSA

FIGURE 3

Boulders Mixed-Use Project
Site Photographs

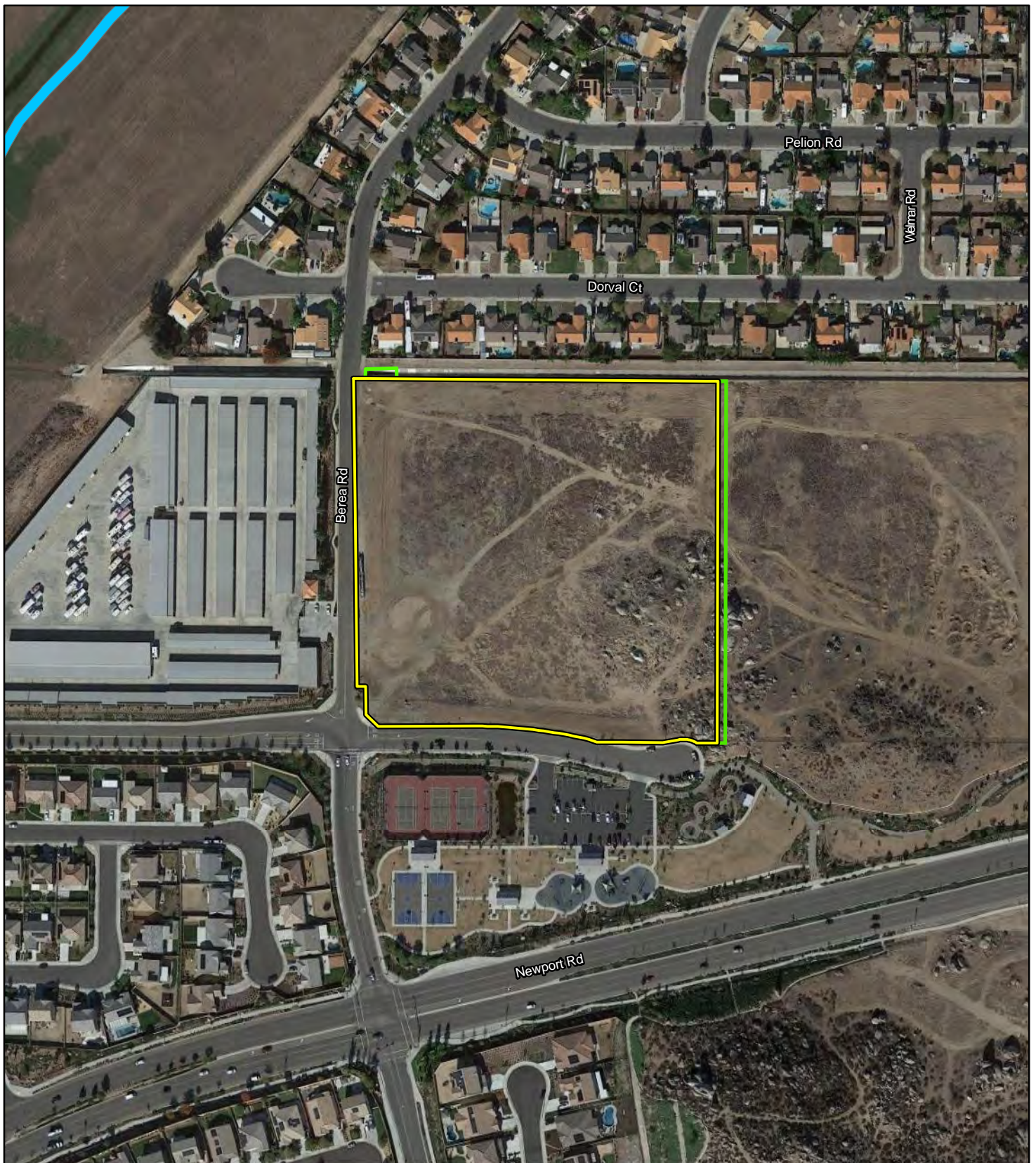


FIGURE 4

LSA



0 125 250
FEET

LEGEND

Study Area

Off-Site Work Area

National Wetland Inventory (NWI)

Freshwater Emergent Wetland

SOURCE: Google (2020); NWI (20120

I:\TDM2101\GIS\MXD\Bio\JD\NWI.mxd (9/3/2021)

Boulders Mixed-Use Project
National Wetland Inventory

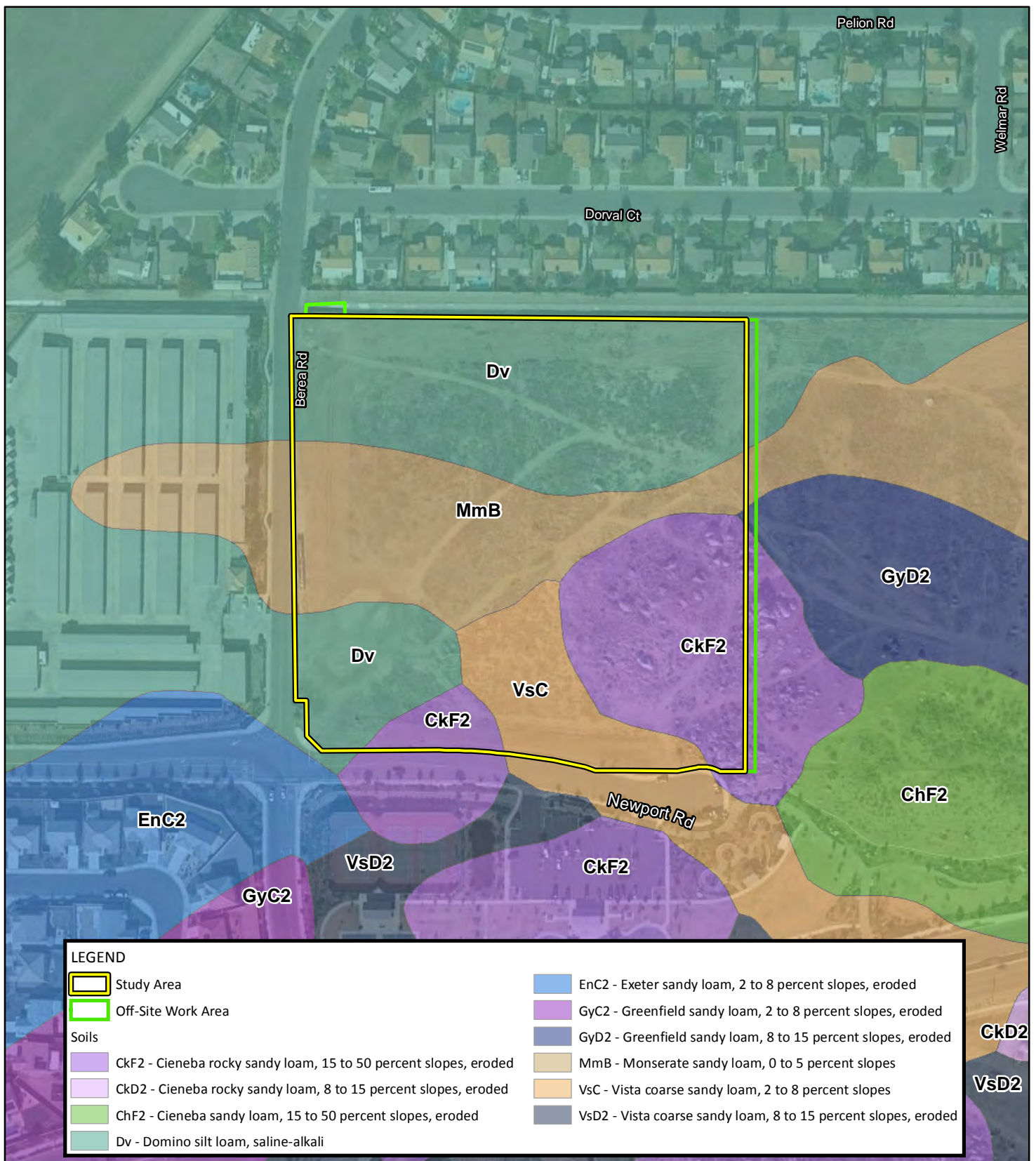


FIGURE 5

LSA



0 100 200
FEET

SOURCE: Google (2020); SSURGO (2019)

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Boulders Mixed-Use Project
Soils

APPENDIX B

WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Boulders Mixed-Use (TDM2101) City/County: Menifee/Riverside Sampling Date: 4/21/2021
 Applicant/Owner: _____ State: CA Sampling Point: 1
 Investigator(s): Stan Spencer, Ryan Villanueva Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): LRR C Lat: 33.68634192 Long: -117.21256723 Datum: WGS 1984
 Soil Map Unit Name: Monserate sandy loam, 0 to 5 percent slopes (MmB) NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)
 Are Vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>x</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>x</u>	No _____			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>N/A</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____					
2. _____					That Are OBL, FACW, or FAC: <u>3</u> (A)
3. _____					Total Number of Dominant
4. _____					Species Across All Strata: <u>4</u> (B)
		<u>0</u>	= Total Cover		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: <u>10'x10'</u>)					That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____					Prevalence Index worksheet:
2. _____					
3. _____					Total % Cover of:
4. _____					Multiply by:
5. _____					OBL species <u>10</u> x 1= <u>10</u>
		<u>0</u>	= Total Cover		FACW species <u>0</u> x 2= <u>0</u>
Herb Stratum (Plot size: <u>N/A</u>)					FAC species <u>20</u> x 3= <u>60</u>
1. <i>Centromadia pungens</i>		<u>10</u>	<u>Y</u>	<u>FAC</u>	FACU species <u>15</u> x 4= <u>60</u>
2. <i>Oncosiphon piluliferum</i>		<u>15</u>	<u>Y</u>	<u>FACU</u>	UPL species <u>0</u> x 5= <u>0</u>
3. <i>Lepidium dictyotum</i>		<u>10</u>	<u>Y</u>	<u>FAC</u>	Column Totals: <u>45</u> (A) <u>130</u> (B)
4. <i>Plagiobothrys leptocladus</i>		<u>10</u>	<u>Y</u>	<u>OBL</u>	Prevalence Index = B/A = <u>2.888888889</u>
5. _____					Hydrophytic Vegetation Indicators: _____ 1- Rapid Test For Hydrophytic Vegetation x _____ 2- Dominance Test is >50% x _____ 3- Prevalence Index is ≤3.0 ¹ _____ 4- Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ 5- Wetland Non-Vascular Plants ¹ _____ 6- Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		<u>45</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>N/A</u>)					
1. _____					
2. _____					
		<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>55</u> % Cover of Biotic Crust <u>0</u>					
Remarks:					

SOIL

Sampling Point: 1**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/4	100		0			sandy loam	
6-16	10YR 3/3	100		0			loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

- ☐ Histosol (A1) ☐ Sandy Redox (S5)
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1)
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)
☐ Stratified Layers (A5) (**LRR C**) ☐ Depleted Matrix (F3)
☐ 1 cm Muck (A9) (**LRR D**) ☐ Redox Dark Surface (F6)
☐ Depleted Below Dark Surface (A11) ☐ Depleted Dark Surface (F7)
☐ Thick Dark Surface (A12) ☐ Redox Depressions (F8)
☐ Sandy Mucky Mineral (S1) ☐ Vernal Pools (F9)
☐ Sandy Gleyed Matrix (S4)

- ☐ 1 cm Muck (A9) (**LRR C**)
☐ 2 cm Muck (A10) (**LRR B**)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input checked="" type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No x Depth (Inches): _____
 Water Table Present? Yes _____ No x Depth (Inches): _____
 Saturation Present? Yes _____ No x Depth (Inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes x No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Although no surface was present during the April 21, 2021 site visit, surface water to a depth of 4 inches was documented in March 2021.

APPENDIX D

2020–2021 WET SEASON FAIRY SHRIMP SURVEY REPORT



July 6, 2021

Ms. Stacey Love, Recovery Permit Coordinator
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: Results of the 2020–2021 Wet Season Fairy Shrimp Survey for the Boulders Mixed-Use Project (LSA Project No. TDM2101)

Dear Stacey:

This letter provides the results of a 2020–2021 wet season presence/absence survey for vernal pool branchiopods for the Boulders Mixed-Use Project site. The survey area is located at Universal Transverse Mercator (UTM) coordinates 3707445 Northing/500615 Easting within projected Section 32, Township 5 South, Range 3 West, in the City of Menifee, Riverside County, as shown on the U.S. Geological Survey (USGS) 7.5 minute series *Romoland, California* quadrangle (attached Figure 1). The survey area includes several small ponding features totaling less than 1 acre (attached Figures 2 and 3).

METHODS

The fairy shrimp survey was conducted for Riverside fairy shrimp (*Streptocephalus woottoni*) and vernal pool fairy shrimp (*Branchinecta lynchi*) by LSA Senior Biologist Stanley Spencer under LSA Federal 10(a)(1)(A) Permit TE 777965 and in accordance with the November 13, 2017, Survey Guidelines for the Listed Vernal Pool Branchiopods. Site checks were conducted on January 27, February 3, 10, and 18, March 17, 19, 22, and 28, and April 6, 2021, to determine if water was present in ponding features following storm events. Ponded features were sampled at required intervals until they had dried and remained dry.

Features were sampled by drawing a handheld net through the water column, occasionally bumping the bottom to stir up any benthic organisms. The net was periodically removed from the water to check for aquatic species.

Table A provides the dates and weather conditions for each site visit during which features were sampled. Wet season data sheets are attached.

Table A: Survey Dates, Weather Conditions, and Features Sampled

Date	Water Temperature (°C)	Air Temperature (°C)	Cloud Cover	Feature Sampled
2/3/21	18	19	0	1
2/10/21	17	18	0	2
3/17/21	14	14	2%	1, 2, 3, 4, 5, 6
3/19/21	13	16	0	1, 6
3/22/21	24	21	5%	1, 2, 3, 4, 5, 7, 8
3/29/21	17	18	1%	3

7/6/21 (R:\TDM2101\01 FS Wet\sent to client for review\FS Wet_Boulders 2021.docx)

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

LSA is a business name of LSA Associates, Inc.

Features 1 and 2 filled and then dried in February, refilling along with the remaining features in March.

RESULTS AND CONCLUSIONS

Table B provides characteristics of the sampled features. Feature 1 is a broad, apparently natural, low area, made deeper by tire tracks and by ruts in a dirt road. The remaining features were artificially created. Feature 6 was created when a large boulder was extracted. The remaining features are road ruts. Water enters the features as direct rainfall and as sheet flow from adjacent compacted areas. Feature 4 is unvegetated. The other features have a mix of native and non-native, mostly hydrophytic, plants.

Table B: Characteristics of Feature Sampled

Feature	Estimated Maximum Depth (centimeters)	Estimated Maximum Length × Width (meters)	Origin	Vegetation	Fairy Shrimp Species Observed
1	15	25 × 8	natural topography, tire tracks, road ruts	<i>Amsinckia retrorsa</i> <i>Calandrinia menziesii</i> <i>Centromadia pungens</i> <i>Hirschfeldia incana</i> <i>Lepidium dictyotum</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	<i>Branchinecta lindahli</i>
2	15	10 × 4	road ruts	<i>Centaurea melitensis</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	<i>Branchinecta lindahli</i>
3	15	10 × 1	road ruts	<i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	<i>Branchinecta lindahli</i>
4	15	6 × 6	road ruts	none	<i>Branchinecta lindahli</i>
5	15	13 × 3	road ruts	<i>Amsinckia retrorsa</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Lythrum hyssopifolia</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i> <i>Trichostema lanceolatum</i>	<i>Branchinecta lindahli</i>
6	30	6 × 4	boulder extraction	<i>Amaranthus albus</i> <i>Calandrinia menziesii</i> <i>Centromadia pungens</i> <i>Hirschfeldia incana</i> <i>Plagiobothrys leptocladus</i>	<i>Branchinecta lindahli</i>

Table B: Characteristics of Feature Sampled

Feature	Estimated Maximum Depth (centimeters)	Estimated Maximum Length × Width (meters)	Origin	Vegetation	Fairy Shrimp Species Observed
7	15	9 × 2	road ruts	<i>Centromadia pungens</i> <i>Crassula connata</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Lasthenia gracile</i> <i>Lythrum hyssopifolia</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i> <i>Trichostema lanceolatum</i>	<i>Branchinecta lindahli</i>
8	15	20 × 1	road ruts	<i>Amsinckia retrorsa</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	<i>Branchinecta lindahli</i>

Versatile fairy shrimp (*Branchinecta lindahli*) was observed in all features. No other invertebrate or amphibian species was observed in the features.

Please contact me if you require any additional information.

Sincerely,

LSA ASSOCIATES, INC.




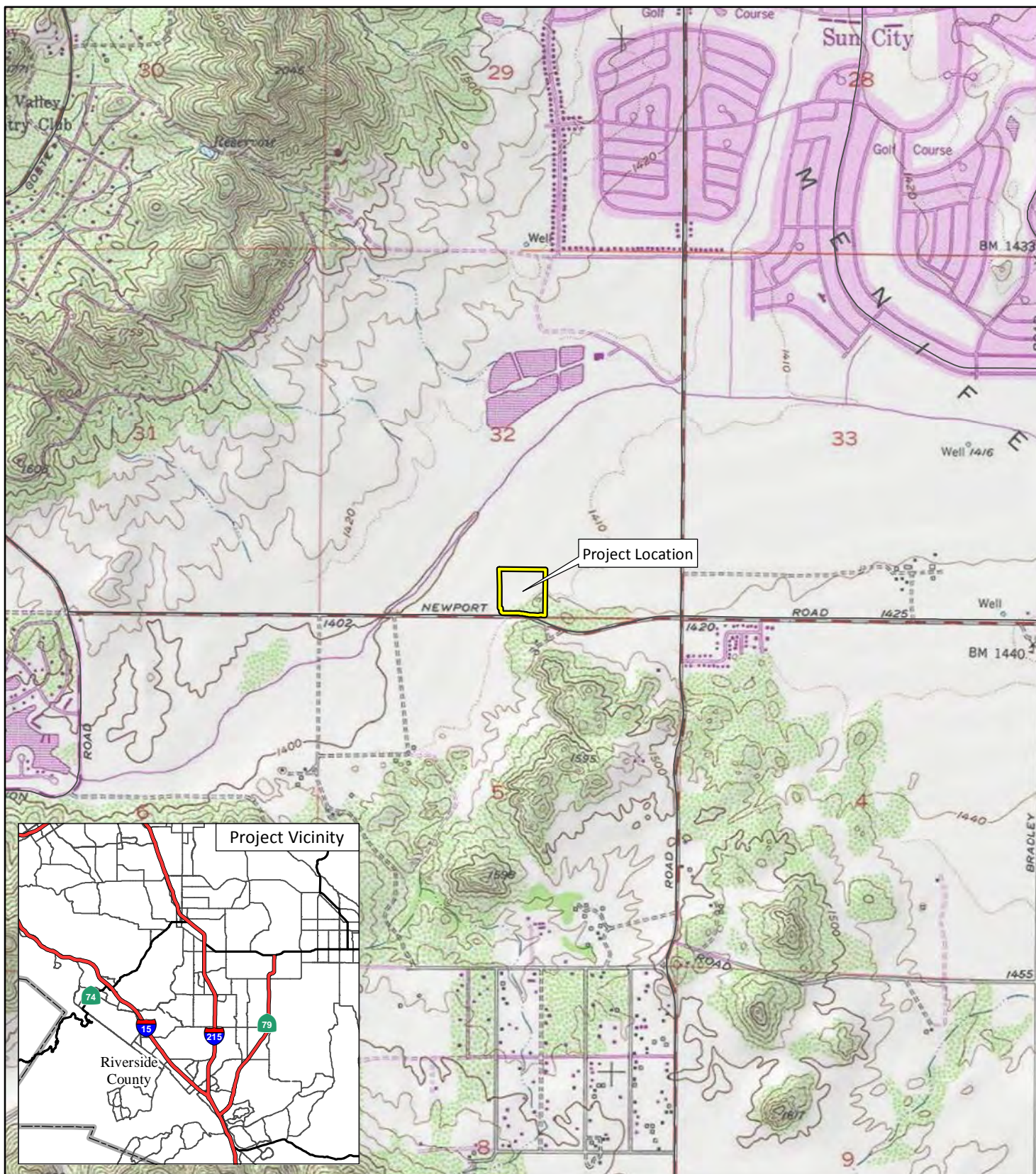
Stanley C. Spencer, Ph.D.
Associate/Senior Botanist

Attachments: Figure 1: Fairy Shrimp Survey Area
Figure 2: Feature Sampled
Figure 3: Site Photographs
Data Sheets

cc: Karin Cleary-Rose, U.S. Fish and Wildlife Service
Melody Aimar, Western Riverside County MSHCP Biological Monitoring Program

I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENTS MY WORK:

SURVEYOR:	PERMIT NUMBER	DATE:
 Stanley Spencer	TE-777965	July 6, 2021



LSA

LEGEND

Project Location

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Romoland (1979), CA

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Boulders Mixed-Use Project
Project Location and Vicinity



LSA



0 50 100
FEET

LEGEND

- Project Location
- Off-Site Work Area
- Feature Sampled
- ↻ Photograph Locations

SOURCE: Nearmap (1/14/2021)

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FIGURE 2

Boulders Mixed-Use Project
Features Sampled



Photo 1. Overview of site, facing east (11/19/20).



Photo 2. Overview of east portion of site, facing southwest (4/27/21).



Photo 3. Overview of east portion of site, facing south (4/27/21).



Photo 4. View of Feature 1, facing north (2/3/21).

LSA

FIGURE 3

Page 1 of 2

Boulders Mixed-Use Project
Site Photographs



Photo 5. View of Feature 4, facing north (3/17/21).



Photo 6. View of Feature 6, facing north (3/17/21).



Photo 7. View of Feature 7, facing north (3/19/21).



Photo 8. View of Feature 8, facing northeast (3/22/21).

Site or Project Name:			County:		Quad:		Township:		Range:		Section:	
Boulders Mixed-Use Project			RIV		Romoland		5S		3W		32	
SURVEYOR / Permit Number:			Stan Spencer / TE-777965									
Date:	2/3/21		Time:	1615		Weather Conditions:		clear				

[illegible]

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Site or Project Name:			County:	Quad:	Township:	Range:	Section:
Boulders Mixed-Use Project			RIV	Romoland	5S	3W	32
SURVEYOR / Permit Number:		Stan Spencer / TE-777965					
Date:	2/10/21	Time:		Weather Conditions:	0% cloud cover		

[illegible]

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U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name:		County:	Quad:	Township:	Range:	Section:
Boulders Mixed-Use Project		RIV	Romoland	5S	3W	32
SURVEYOR / Permit Number:		Stan Spencer / TE-777965				
Date:	3/17/21	Time:	1000	Weather Conditions:	2% cloud cover	

Feature ID #	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m × m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomida			
1	33.6863, -117.2125 WGS84 (all)	14	14	6	15	15 × 0.3	25 × 8	BRLI									D TT		
2	33.6863, -117.2131	14	15	6	15	8 × 3	10 × 4	BRLI									D TT		
3	33.6862, -117.2130	14	18	6	15	8 × 0.6	10 × 1	BRLI									D TT		
4	33.6862, -117.2126	14	19	6	15	4 × 4	6 × 6	BRLI									D TT		
5	33.6859, -117.2135	15	21	6	15	8 × 2	13 × 3	BRLI									D TT		
6	33.6860, -117.2135	15	21	6	30	4 × 2	6 × 4										D	formed by extraction of large boulder	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLI = Branchinecta lindahl). For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present. (Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Site or Project Name:			County:	Quad:	Township:	Range:	Section:
Boulders Mixed-Use Project			RIV	Romoland	5S	3W	32
SURVEYOR / Permit Number:		Stan Spencer / TE-777965					
Date:	3/19/21	Time:	1615	Weather Conditions:	clear		

[illegible]

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U.S. Fish and Wildlife Service – Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name:		County:	Quad:	Township:	Range:	Section:
Boulders Mixed-Use Project		RIV	Romoland	5S	3W	32
SURVEYOR / Permit Number:		Stan Spencer / TE-777965				
Date:	3/22/21	Time:	1200	Weather Conditions:	5 % cloud cover	

Feature ID #	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m × m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes/Voucher Information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomida			
1	33.6863, -117.2125 WGS84 (all)	21	27		15	1 × 0.5	25 × 8	BRLI										D TT	
2	33.6863, -117.2131	21	27		15	2 × 1	10 × 4	BRLI										D TT	
3	33.6862, -117.2130	21	24		15	5 × 1	10 × 1	BRLI										D TT	
4	33.6862, -117.2126	21	25		15	4 × 0.5	6 × 6	BRLI										D TT	
5	33.6859, -117.2135	21	28		15	11 × 1	13 × 3	BRLI										D TT	
7	33.6856, -117.2141	21	26		15	7 × 1	9 × 2	BRLI										D TT	
8	33.6863, -117.2128	21	25		15	1 × 0.5	20 × 1	BRLI										D TT	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLI = Branchinecta lindahli). For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present. (Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Site or Project Name:			County:	Quad:	Township:	Range:	Section:
Boulders Mixed-Use Project			RIV	Romoland	5S	3W	32
SURVEYOR / Permit Number:		Stan Spencer / TE-777965					
Date:	3/29/21	Time:	0920	Weather Conditions:	1% cloud cover		

[illegible]

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APPENDIX E

2021 DRY SEASON FAIRY SHRIMP SURVEY REPORT

September 17, 2021

Ms. Stacey Love, Recovery Permit Coordinator
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: Results of the 2021 Dry Season Fairy Shrimp Survey for the Boulders Mixed-Use Project
(LSA Project No. TDM2101)

Dear Stacey:

This letter provides the results of a 2021 season presence/absence survey for vernal pool branchiopods for the Boulders Mixed-Use Project site. The survey area is located at Universal Transverse Mercator (UTM) coordinates 3707445 Northing/500615 Easting within projected Section 32, Township 5 South, Range 3 West, in the City of Menifee, Riverside County, as shown on the U.S. Geological Survey (USGS) 7.5 minute series *Romoland, California* quadrangle (attached Figure 1). The survey area includes 8 small ponding features totaling less than 1 acre (attached Figures 2 and 3).

METHODS

The 2020 dry season survey was conducted in accordance with the terms of Federal 10(a)(1)(A) Permits TE-777965 issued to LSA biologist Stan Spencer and TE-839213-3 issued to LSA biologist David Muth, and the May 31, 2015, *Survey Guidelines for the Listed Large Branchiopods*.

Soil samples were collected by Dr. Spencer (TE-777965) and processed by Mr. Muth (TE-839213). Dr. Spencer collected a series of 140 0.05-liter samples of soil from the 8 ponding features on August 4, 2021. The soil was dry at the time of collection. The 140 samples were combined and stored in a plastic zip-lock bag marked to indicate the site and date of collection.

Samples were processed by placing the collected material into 5-gallon buckets filled with 1 to 2 gallons of 5 percent brine solution to hydrate soils. During the approximately 10- to 15-minute hydration period, the bucket was occasionally stirred to ensure all biological material was released and floated to the surface. In small aliquots, the biological material was poured through a series of four sieves with mesh sizes of 710, 355, 212, and 150 microns. The sieves were stacked with the largest mesh size at the top and the smallest mesh size on the bottom. Material was washed through the set with water. Particles trapped in the three smallest sieve sizes were saved for analysis by washing them onto blotter paper to dry.

The sieved material was examined by Mr. Muth on August 24 and 25, 2021, using a 10- to 40-power Olympus stereo microscope. A reference cyst collection was available for comparison of any cysts found in the samples. Soil material will be stored with LSA until final disposition can be arranged.

RESULTS AND CONCLUSIONS

Feature 1 is a broad, apparently natural, low area, made deeper by tire tracks and by ruts in a dirt road. The remaining features were artificially created. Feature 6 was created when a large boulder was extracted. The remaining features are road ruts. Water enters the features as direct rainfall and as sheet flow from adjacent compacted areas. Feature 4 is unvegetated. The other features have a mix of native and non-native, mostly hydrophytic, plants. Table A provides characteristics of the sampled features.

Table A: Characteristics of Feature Sampled

Estimated Maximum Depth	Estimated Maximum Length × Width	Origin	Vegetation	Soil Sample Volume	Fairy Shrimp Egg Abundance (Number)
Feature 1					
15 cm	25 × 8 m	natural topography, tire tracks, road ruts	<i>Amsinckia retrorsa</i> <i>Calandrinia menziesii</i> <i>Centromadia pungens</i> <i>Hirschfeldia incana</i> <i>Lepidium dictyotum</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	1.25 L	<i>Branchinecta</i> – Low (32)
Feature 2					
15 cm	10 × 4 m	road ruts	<i>Centaurea melitensis</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	1.25 L	<i>Branchinecta</i> – Low(69)
Feature 3					
15 cm	10 × 1 m	road ruts	<i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	0.5 L	<i>Branchinecta</i> – High(259)
Feature 4					
15 cm	6 × 6 m	road ruts	none	1.25 L	<i>Branchinecta</i> – Medium(515)
Feature 5					
15 cm	13 × 3 m	road ruts	<i>Amsinckia retrorsa</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Lythrum hyssopifolia</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i> <i>Trichostema lanceolatum</i>	1.25 L	<i>Branchinecta</i> – Medium(350)

Table A: Characteristics of Feature Sampled

Estimated Maximum Depth	Estimated Maximum Length × Width	Origin	Vegetation	Soil Sample Volume	Fairy Shrimp Egg Abundance (Number)
Feature 6					
30 cm	6 × 4 m	boulder extraction	<i>Amaranthus albus</i> <i>Calandrinia menziesii</i> <i>Centromadia pungens</i> <i>Hirschfeldia incana</i> <i>Plagiobothrys leptocladus</i>	0.5 L	<i>Branchinecta</i> – Medium(107)
Feature 7					
15 cm	9 × 2 m	road ruts	<i>Centromadia pungens</i> <i>Crassula connata</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Lasthenia gracile</i> <i>Lythrum hyssopifolia</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i> <i>Trichostema lanceolatum</i>	0.5 L	<i>Branchinecta</i> – Medium(186)
Feature 8					
15 cm	20 × 1 m	road ruts	<i>Amsinckia retrorsa</i> <i>Centromadia pungens</i> <i>Erodium cicutarium</i> <i>Hirschfeldia incana</i> <i>Oncosiphon pilulifer</i> <i>Plagiobothrys leptocladus</i>	0.5 L	<i>Branchinecta</i> – Medium(177)

A total of 1,695 *Branchinecta* eggs were found in the sampled features. *Branchinecta* eggs are not considered differentiated enough to make a species determination. Based on the results of the wet season survey, the eggs most likely belong to versatile fairy shrimp (*Branchinecta lindahli*). No eggs of *Streptocephalus* were found. Other invertebrates detected include ostracods and ants.

Please contact me if you require any additional information.

Sincerely,

LSA ASSOCIATES, INC.


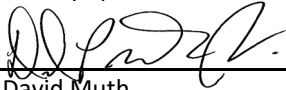


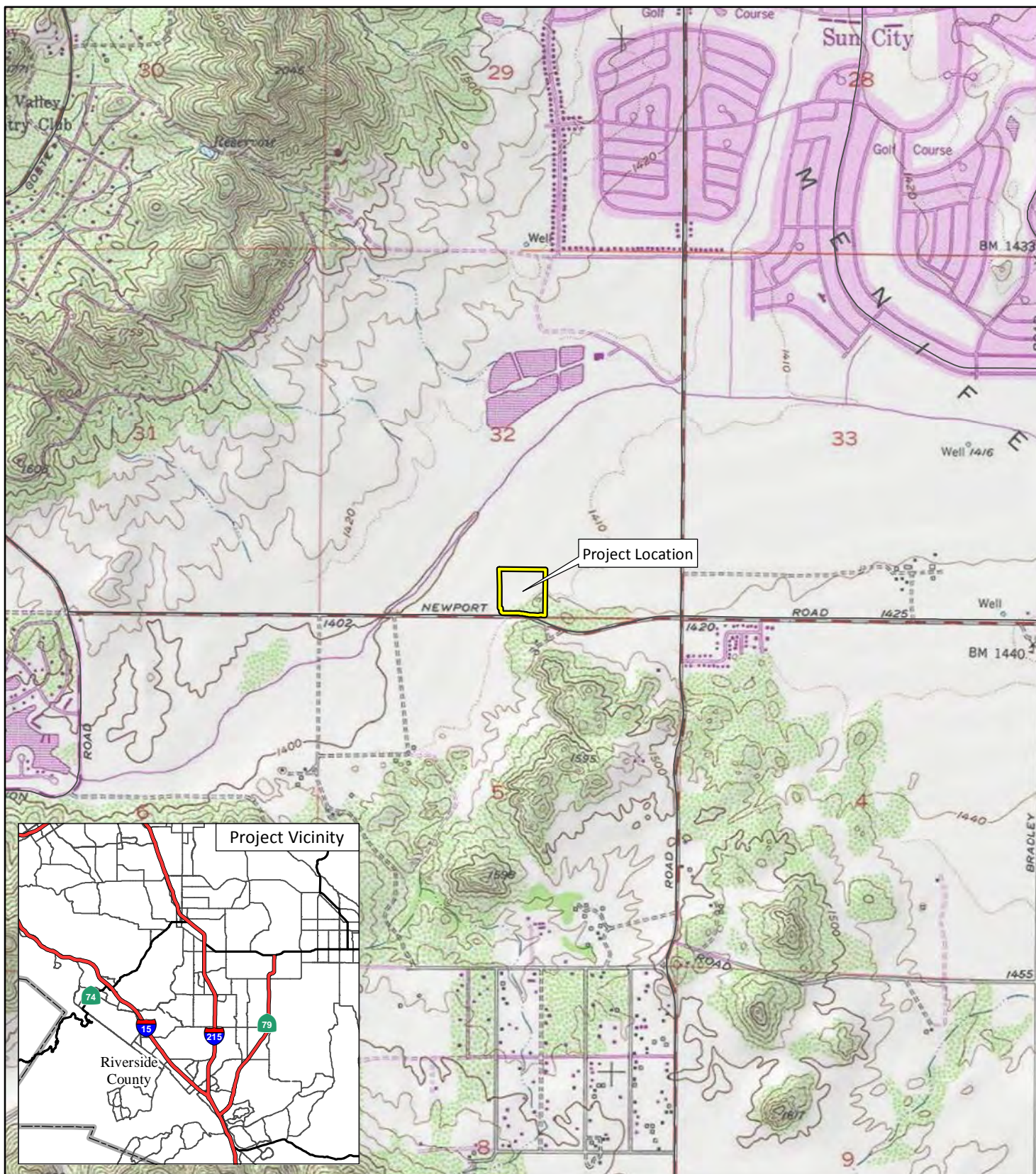
Stanley C. Spencer, Ph.D.
Associate/Senior Botanist

Attachments: Figure 1: Fairy Shrimp Survey Area
Figure 2: Feature Sampled
Data Sheet

cc: Melody Aimar, Western Riverside County MSHCP Biological Monitoring Program

WE CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENTS OUR WORK:

SURVEYOR:	PERMIT NUMBER	DATE:
 Stanley Spencer	TE-777965	September 17, 2021
 David Muth	TE-839213	September 17, 2021



LSA

LEGEND

Project Location

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Romoland (1979), CA

I:\TDM2101\GIS\MXD\ProjectLocation_USGS.mxd (6/14/2021)

Boulders Mixed-Use Project
Project Location and Vicinity



LSA



0 50 100
FEET

LEGEND

- Project Location
- Off-Site Work Area
- Feature Sampled
- Photograph Locations

SOURCE: Nearmap (1/14/2021)

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FIGURE 2

Boulders Mixed-Use Project
Features Sampled

Project Information		Biologist Information
Project Name: Boulders	Quad : Romoland	<u>Name and Permit Numbers of Person Who Conducted the Following Tasks:</u>
USFWS Project Number: None issued	Township: 5S	Soil Collection: Dr. Stanley Spencer TE-777965
County: Riversidemenniffee	Range: 3W	Soil Processing: David Muth TE- 839213 and TE-797234
UTMs for center of site: 4801400E/3727310N	Section: SW1/4 of the SE1/4 of 32	Soil Analysis/Cysts ID: David Muth TE-839213 and TE-797234
		Soil Collection Date: August 4, 2021

[illegible]

APPENDIX F

BURROWING OWL SURVEY REPORT

August 23, 2021

Mr. Ryan Fowler, Senior Planner
Community Development Department/Planning Division
29844 Haun Road
Menifee, California 92586
rfowler@cityofmenifee.us

Subject: Results of a Burrowing Owl Survey for the Boulders Mixed-Use Project in the City of Menifee, Riverside County, California (LSA Project No. CIM2002)

Dear Mr. Fowler:

This report documents the results of a burrowing owl (*Athene cunicularia*) survey for the Boulders Mixed-Use Project (project). The approximately 9.92-acre project is located at northeast corner of Normandy Road and Berea Road in the City of Menifee (City), Riverside County, California (Figure 1; all figures attached).

The survey results were negative for burrowing owl as no owls or their sign were observed. Three suitable burrows were observed during the survey but showed no sign of burrowing owl use.

BACKGROUND

Burrowing owls are found in open, dry grasslands; agricultural and range lands; desert habitats; and grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other animals, in pipes, rock and debris piles, and in other similar features.

Burrowing owls and their nests and eggs are protected from “take” under the Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Activities that cause destruction of active nests, or that cause nest abandonment and subsequent death of eggs or young, may constitute violations of these laws.

Burrowing owl is a species of special concern as determined by the California Department of Fish and Wildlife (CDFW) and is a covered species under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). In addition, the MSHCP has established survey areas for burrowing owl where focused surveys are required if suitable habitat is determined to be present.

SURVEY AREA

The area surveyed with transects (Figure 2) is approximately 9.92 acres and includes the entire project site, which is potentially suitable for burrowing owl. The entire project site is within the MSHCP burrowing owl survey area. The topography of this area is a mix of flat terrain and hillsides.

Vegetation within the project site is undeveloped and highly disturbed due to current and historic routine maintenance for fire suppression and/or weed control and resource extraction. The site is bordered to the north by a concrete-lined storm water channel and residential development, to the west by Berea Road and commercial development, to the east by undeveloped areas, and to the south by Heroes Court and Spirit Park. The site is more or less flat and level except for boulder outcroppings and a low hilly area located in the southeastern portion of the study area. The site elevation ranges from approximately 1,410 to 1,435 feet above mean sea level.

Vegetation and land cover on the site is primarily sparse and ruderal in nature (Figure 2). Vegetation and land cover present on site consists of coastal sage scrub, ruderal vegetation, and developed. There are no native or non-native trees within the project site. Dominant species within coastal sage scrub include California buckwheat (*Eriogonum fasciculatum*) and shortpod mustard (*Hirschfeldia incana*). Dominant species within ruderal areas are limited to non-native species and include shortpod mustard, tocalote (*Centaurea melitensis*), stinknet (*Oncosiphon pilulifer*), foxtail barley (*Hordeum murinum*), foxtail brome (*Bromus madritensis*), rattail sixweeks grass (*Festuca myuros*), and red-stemmed filaree (*Erodium cicutarium*). There are no other plant communities on the site. Areas mapped as “developed” in Figure 2 consist of well-traveled dirt roads and residential, commercial, and paved areas that do not allow for the establishment of vegetation. Figure 3 shows recent photographs of on-site conditions.

METHODS

The surveys were conducted by LSA biologist Stan Spencer according to the *County of Riverside Guidelines for Burrowing Owl Surveys* (revised March 29, 2006). A total of four surveys were conducted from March to July 2021. The surveys were conducted by walking approximately 30-meter transects throughout areas of suitable habitat to look for burrowing owls, potential burrows (burrows greater than 11 centimeters [cm] in diameter and 150 cm deep), and burrowing owl sign. Burrows encountered during the survey were examined for owl sign (e.g., feathers, pellets, whitewash, and prey remnants). Burrows with presence of burrowing owl sign and/or burrowing owls were to be recorded using a handheld global positioning system (GPS) unit and mapped onto an aerial photograph. Potential habitat within 500 feet and visible from the site was surveyed using binoculars.

Table A provides dates, times, and weather conditions of site visits. Surveys were conducted during weather conducive to observing owls outside their burrows and to detecting burrowing owl sign. No rain had occurred within five days prior to the site visits.

Table A: Focused Survey Dates, Times, and Weather Conditions

Survey	Personnel	Date (2021)	Time (24-Hour) (start/finish)	Temp. (°F) (start/finish)	Wind (mph)	Sky
Burrow Survey, Burrowing Owl Survey 1	Stan Spencer	March 29	0730/0840	53/64	<1	1% cloud cover
Burrowing Owl Survey 2	Stan Spencer	April 27	0613/0753	48/52	1–3	15% cloud cover
Burrowing Owl Survey 3	Stan Spencer	June 10	0555/0738	50/60	<1	0% cloud cover

Table A: Focused Survey Dates, Times, and Weather Conditions

Survey	Personnel	Date (2021)	Time (24-Hour) (start/finish)	Temp. (°F) (start/finish)	Wind (mph)	Sky
Burrowing Owl Survey 4	Stan Spencer	July 14	0632/0752	70/76	1–3	2–30% cloud cover

RESULTS

No burrowing owls or burrowing owl sign were found to be present within the survey area. Three burrows suitable for burrowing owl occupation were observed within the survey area but showed no sign of burrowing owl use. Suitable habitat is present throughout the project site consisting of ruderal and coastal sage scrub as both vegetation communities contain low-growing plant species. Although coastal sage scrub is not always considered suitable for burrowing owl due to shrub density and height, shrubs present within coastal sage scrub on site are generally spaced far apart and are relatively short due to past maintenance disturbances making the community suitable. Some areas within the southeastern portion of the project site lack suitability for burrowing owl due to the presence of large boulders that prevent the creation of burrows. Developed areas on site generally lack suitable habitat for burrowing owl as they consist of well-traveled dirt roads that have been maintained in their current location and condition since at least 2016 and are subject to vehicular and pedestrian travel, illegal dumping, and inundation in some areas due to the presence of road ruts.

Areas within 500 feet of the project site generally lack suitable habitat for burrowing owl as they primarily consist of developed land cover including residential and commercial uses and a park. There is suitable habitat for burrowing owl adjacent to and east of the project site where the area is undeveloped and consists of similarly composed ruderal and coastal sage scrub vegetation communities as can be found on the project. Suitable habitat also occurs within Salt Creek to the west of the project site. Based on historic aerial imagery, vegetation within Salt Creek has been maintained since at least 2009 and is considered ruderal.

Wildlife species detected during the survey included granite spiny lizard (*Sceloporus orcutti*), common side-blotched lizard (*Uta stansburiana*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), lark sparrow (*Chondestes grammacus*), white-crowned sparrow (*Zonotrichia leucophrys*), western meadowlark (*Sturnella neglecta*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), and desert cottontail (*Sylvilagus audubonii*).

DISCUSSION

Since the project site is suitable for burrowing owl and burrowing owl could occupy the site prior to construction, a pre-construction burrowing owl survey will be required within 30 days prior to ground disturbance. If burrowing owl is found during the pre-construction survey, the project proponent will

need to inform the CDFW and U.S. Fish and Wildlife Service (USFWS) and prepare a Burrowing Owl Protection and Relocation Plan for approval by these agencies prior to initiating ground disturbance.

If you have any questions concerning the report, I can be contacted at (626) 257-0215 or ryan.villanueva@lsa.net.

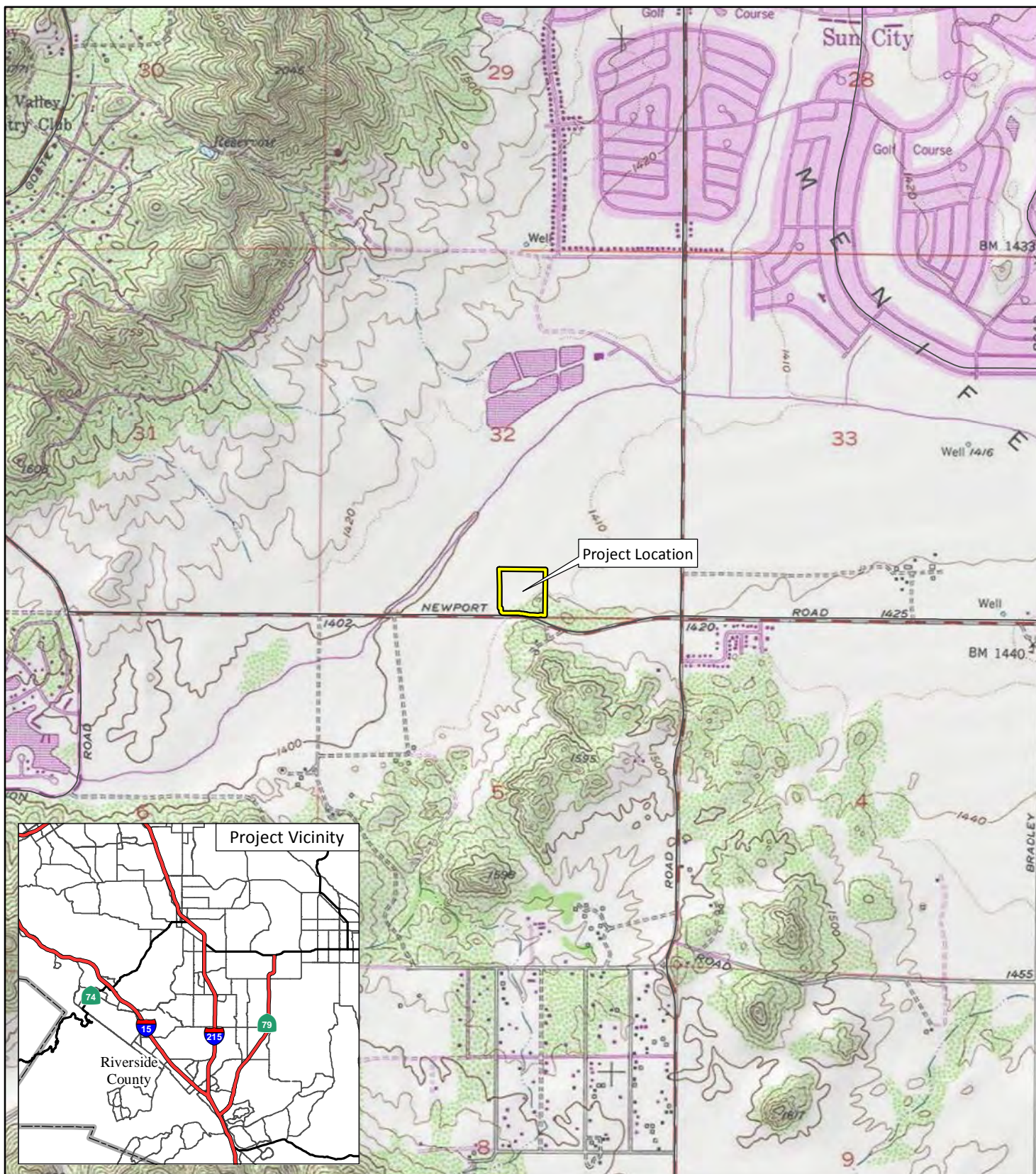
Sincerely,

LSA ASSOCIATES, INC.



Ryan Villanueva
Senior Biologist

Attachments: Figure 1: Regional and Project Location
Figure 2: Survey Results and Vegetation Map
Figure 3: Site Photographs



LSA

LEGEND

Project Location

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Romoland (1979), CA

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Boulders Mixed-Use Project
Project Location and Vicinity



LSA



0 100 200
FEET

SOURCE: Google (2020)

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LEGEND

- Project Location
- Off-Site Work Area
- 500-ft Buffer
- 30-meter Transects
- Potential Burrowing Owl Burrow (no sign)
- 📷 Photograph Locations

Vegetation

- Coastal Sage Scrub
- Ruderal
- Developed

FIGURE 2



Photo 1: View of ruderal areas and dirt access roads, facing northeast.



Photo 2: View of ruderal areas and dirt access roads, facing northwest.



Photo 3: View of ruderal areas, dirt access roads and coastal sage scrub (in the background), facing southeast.



Photo 4: View of ruderal areas and dirt access roads, facing southwest.

LSA

FIGURE 3

*Boulders Mixed-Use Project
City of Menifee
Site Photographs*