Appendix E-1

Biological Resources Technical Report

DUDEK

November 22, 2023 15342

Adam Furman
Senior Manager, Permitting
AES Clean Energy

Subject: Biological Resources Letter Report and MSHCP Consistency Analysis for the Double Butte Battery Energy Storage System Project, City of Menifee, Riverside County, California

Dear Adam Furman:

This Biological Resources Letter Report and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency analysis describes the existing biological conditions of the proposed Double Butte Project (project) site. The proposed project is analyzed in the context of the California Environmental Quality Act (CEQA) and the MSHCP. This report is intended to describe the existing conditions of the approximate 27.2-acre project site. This report describes the general biological reconnaissance survey methods and results, discusses special-status biological resources present or potentially present on site, and analyzes potential impacts in terms of biological significance under both CEQA and the MSHCP. The report also includes avoidance, minimization, and mitigation measures to avoid and reduce potential impacts to special-status biological resources, if necessary, along with providing an MSHCP consistency analysis including the following requirements of the MSHCP (relevant MSHCP sections are identified in parentheses):

- Riparian/riverine, vernal pool, and fairy shrimp requirements (Section 6.1.2)
- Additional survey needs and procedures (Section 6.3.2)
- Urban/wildlife interface guidelines (Section 6.1.4)

1 Introduction

1.1 Project Location and Description

The project site is located in the City of Menifee. The project site is located at 28352–28392 Mathews Road. The project site is south of Mathews Road, east of San Jacinto Road, west of Palomar Road, and north of McLaughlin Road. The site is accessible from the intersection of Mathews Road and Palomar Road (Figure 1, Project Location; all figures can be found in Attachment A, Figures). The approximate center of the project site corresponds to 33.738205 latitude and -117.165467 longitude. The project occurs at an elevation that ranges from 1,440 to 1,456 feet above mean sea level and is located within Section 14 of Township 5 South, Range 3 West of the U.S. Geological Survey (USGS) 7.5-minute Romoland, California topographic quadrangle.

The project site for the proposed battery energy storage system (BESS) facility is a disturbed infill lot that has been heavily plowed in many areas. The project area is comprised of bare ground, disturbed areas, and areas where fill was previously discarded. This landcover type is considered disturbed. The project is located on Assessor's Parcel

Numbers 331-119-0017, 331-119-0060, 331-119-0011, 331-119-0047, 331-119-0010, 331-119-0056, and 331-119-0014. The BESS facility will interconnect to the Southern California Edison Valley Substation.

This Biological Resources Letter Report and MSHCP Consistency analysis will support future impact review pursuant to the CEQA that will identify potential constraints to developing the project.

1.2 Regional Planning Context

1.2.1 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multijurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in Western Riverside County. The MSHCP is one of several large, multijurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. The MSHCP allows Riverside County and its cities, including the City of Menifee, to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal endangered species acts (County of Riverside 2003).

The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (16 USC 1531 et seq.), as well as a Natural Communities Conservation Plan under the Natural Community Conservation Planning Act of 2001 (Fish and Game Code, Section 2800 et seq.). The MSHCP allows the participating jurisdictions to authorize "take" of plant and wildlife species identified within the Plan Area. The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the wildlife agencies have granted "take authorization" for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP conservation area, in exchange for the assembly and management of a coordinated MSHCP conservation area.

The project is a covered activity under the MSHCP and would receive authorization for project-related impacts to protected species. Specifically, the project is located in the MSHCP Plan Area and must comply with relevant sections of the MSHCP. The project site is not within an MSHCP Criteria Cell (Figure 2, Western Riverside County MSHCP Plan Area); therefore, no Reserve Assembly requirements would apply to the project.

The project site is not located within MSHCP Section 6.1.3 Narrow Endemic Species Survey Area and is not located within MSHCP Section 6.3.2 Additional Survey Needs and Procedures for Criteria Area Species Survey area for plants, small mammals, or amphibians. The project does not support Delhi sands or in areas that would trigger additional review for Delhi sands flower-loving fly. (*Rhaphiomidas terminates abdominalis*). However, the project is located in MSHCP Section 6.3.2, Additional Survey Needs and Procedures for Burrowing Owl. The project's compliance with the relevant sections of the MSHCP is further discussed in Section 4 of this report.

Local Development Mitigation Fee

In order to implement the goals and objectives of the Western Riverside MSHCP and to mitigate the impacts caused by new development, the MSHCP seeks to acquire and conserve certain lands that support covered species. A MSHCP Local Development Mitigation Fee is necessary to supplement the financing of the acquisition of lands

supporting species covered by the MSHCP and to pay for new development's fair share of this cost (County of Riverside 2003). The MSHCP Local Development Mitigation Fee assists in the maintenance of biological diversity and protects vegetation communities that are known to support threatened, endangered, or sensitive populations of plant and wildlife species.

1.2.2 Stephens' Kangaroo Rat Habitat Conservation Plan

The Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) describes the proposed conservation, mitigation, and monitoring measures to be implemented for the preservation of the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*). The Stephens' Kangaroo Rat HCP establishes a regional system of Core Reserves throughout western Riverside County for the specific conservation of Stephens' kangaroo rat and the ecosystem upon which it depends. A standard fee, known as the Development Mitigation Fee, is charged to development projects to supplement the financing of reserve management for the Stephens' Kangaroo Rat HCP.

The project is outside of the Stephens' Kangaroo Rat HCP Core Reserve Area; however, the project is located inside the Stephens' Kangaroo Rat HCP fee area. Therefore, the project is subject to the standard fee.

2 Methods

2.1 Literature Review

For this biological resources letter report, "special-status" species are those that are:

1. Listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act
2. Listed or candidates for listing as threatened or endangered under the California Endangered Species Act
3. A state fully protected species
4. A CDFW Species of Special Concern
5. A species listed on the California Native Plant Society Inventory of Rare and Endangered Plants with a California Rare Plant Rank of 1B or 2B
6. Species with additional requirements as stated by the MSHCP

Other special-status biological resources considered include sensitive vegetation communities; special consideration was given to vernal pools and ephemeral ponds due to their potential to occur at this site. Special-status vegetation communities are those communities identified as high priority for inventory in the List of Vegetation Alliances and Associations (CDFW 2020) by a state rarity ranking of S1, S2, or S3.

Special-status biological resources potentially present on the project site were identified through a literature search using the following sources:

- USFWS Critical Habitat and Occurrence Data (USFWS 2023a)
- CDFW California Natural Diversity Database (CDFW 2023)

- The California Native Plant Society's (CNPS) online Inventory of Rare, Threatened, and Endangered Plants (CNPS 2023a)
- The Calflora database, which compiles observation and plant data from both private and public institutions, including the Consortium of California herbaria (Calflora 2023)
- A Natural Resources Conservation Service soil map (USDA 2023a)
- USGS 7.5-minute topographic quadrangles (USGS 2023)
- U.S. Environmental Protection Agency Watershed Assessment, Tracking and Environmental Results System (EPA 2023), which includes the National Hydrography Dataset and the National Wetland Inventory (USFWS 2023b)

Searches were completed for the following USGS quadrangles (which include the quadrangle upon which the study area is depicted [Romoland] and the eight surrounding quadrangles): Lakeview, Perris, Steele Peak, Wildomar, Murrieta, Bahelor Mountain, Lake Elsinore, and Winchester.

2.2 Field Reconnaissance

Dudek Biologists Erin Bergman and Callie Amoaku conducted a general biological survey, rare plant survey, and jurisdictional delineation of the project site on November 11, 2022, from 9:05 a.m. to 3:50 p.m. The general biological survey and rare plant survey was conducted on foot. The site was walked thoroughly to complete the resource inventory and rare plant survey. The survey was conducted when weather conditions were favorable, with partly cloudy skies, wind speeds from 0 to 3 miles per hour, and temperatures ranging from 67°F to 81°F. All native and naturalized plant species encountered within the project were identified and recorded. Vegetation communities and land covers on site were mapped directly in the field. Dudek Biologist Erin Bergman conducted a vernal pool habitat assessment and rare plant survey on May 29, 2023, from 7:30 a.m. to 9:45 a.m., to determine if the site had vernal pool plant species after pooling water had dried and to determine if any rare plants were present in spring. Ms. Bergman recorded spring floral species and incidental wildlife observed during this study. The survey was conducted when weather conditions were favorable, with clear skies, wind speeds from 0 to 5 miles per hour, and temperatures ranging from 65°F to 70°F. The methodology and results of the jurisdictional delineation are provided under a separate cover and not further discussed in this report.

Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2023a). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2023), and common names follow the California Natural Community list (CDFW 2023) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2023b). Natural vegetation communities were mapped in the field following A Manual of California Vegetation, second edition (Sawyer et al. 2009) where feasible, with modifications to accommodate the lack of conformity of the observed communities to those of Oberbauer et al. (2008). Land cover types (i.e., areas that lack vegetation communities) were described in accordance with Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008). Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2023) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

Dudek used geographic information system software (ArcGIS) to map biological resources and prepare figures.

2.3 Burrowing Owl Survey Methods

To meet requirements in the MSHCP, a habitat assessment (Step I) was conducted during the November 11, 2022, visit to identify suitable habitat for burrowing owl (*Athene cunicularia*) within the project site. This assessment was conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (RCA 2006).

The burrowing owl is a California Species of Special Concern. With a relatively wide-ranging distribution throughout the west, burrowing owl is considered a habitat generalist (Lantz et al. 2004). In California, burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon–juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs; level to gently sloping topography; and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat, as they are required for nesting, roosting, cover, and caching prey. In California, western burrowing owl most commonly lives in burrows created by California ground squirrels. Burrowing owl may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse), useable burrows are available, and foraging habitat is close (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can also be used for nesting and roosting.

Due to the presence of suitable habitat and the requirements of the MSHCP, from April through June 2023, Biologist Michael Moon conducted a focused burrow survey (Step II-A) and focused burrowing owl surveys (Step II-B) in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (RCA 2006). Table 1 lists the dates and conditions of these surveys. The area surveyed on foot was limited to the project site boundary, and a 500-foot buffer was surveyed with binoculars.

The focused burrow survey consisted of pedestrian transects spaced approximately 30 meters (approximately 100 feet) apart to allow for 100% visual coverage of the project site. All burrows suitable for burrowing owl were mapped using GPS and then digitized using ArcGIS.

Michael Moon conducted a total of four focused burrowing owl surveys during the burrowing owl breeding season (March 1–August 31). The burrowing owl survey area was the entire site based on mapped marginally suitable habitat. This area totaled the entire project site, 27.2 acres. The surveys were conducted when conditions were suitable for detecting owls (i.e., no rain, no high winds [>20 mph], dense fog, or temperatures over 90°F). See Table 1 for survey information.

Table 1. Burrowing Owl Surveys

Date	Hours	Survey Type	Conditions (temperature, cloud cover, wind)
4/10/23	5:41 a.m.–8:00 a.m.	BUOW 1, Burrow Mapping	46°F–53°F, 0%–10% cc, 0–1 mph winds
5/13/23	5:46 a.m.–7:54 a.m.	BUOW 2	54°F–57°F, 0%–10% cc, 0–2 mph winds
6/04/23	5:19 a.m.–7:00 a.m.	BUOW 3	57°F–57°F, 0%–70% cc, 0–1 mph winds
6/19/23	5:00 a.m.–7:14 a.m.	BUOW 4	59°F, 100% cc, 0–1 mph winds

Notes: °F = ° Fahrenheit; BUOW = burrowing owl; cc = cloud cover; mph = miles per hour

2.4 Aquatic Resources Field Delineation

Dudek Biologists and Wetland Scientists Callie Amoaku and Erin Bergman performed a formal (routine) jurisdictional delineation within the study area on November 11, 2022, to determine potential jurisdictional resources under Section 404/401 of the Clean Water Act, Sections 1600–1616 of the California Fish and Game Code, and the Porter-Cologne Water Quality Control Act. Current U.S. Army Corps of Engineers (USACE) delineation procedures and guidance were used to identify and delineate any wetlands and/or waters of the United States potentially subject to USACE and Regional Water Quality Control Board jurisdiction (USACE 1987, 2008a, 2008b, 2010, 2018). Likewise, current CDFW procedures and guidance were used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction.

For potential wetland areas, data on vegetation, hydrology, and soils were collected on standardized wetland delineation data forms in representative locations to assess the potential for hydric soils, hydrophytic vegetation, and hydrology (Attachment B, Jurisdictional Delineation Report). The wetland indicator status was assigned to each plant species using the Wetland Plant List (USACE 2020), as shown in Table 2 below. Dominant plant species encountered within the study area were identified to the lowest taxonomic level needed to determine wetland plant indicator status.

Table 2. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67% to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34% to 66%
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability of 67% to 99%
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability of >99%)
No Indicator (NI)	—

Non-wetland waters of the United States are delineated based on the limits of an Ordinary High Water Mark (OHWM). During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, presence of surface water, wetland vegetation, and nexus to a traditional navigable water of the United States. If any of these criteria were met, transects were run to determine the extent of each regulatory agency's jurisdiction.

Features were mapped in the field based on the extent of their indicators. Sample points were collected in the field using an aerial photograph and topographic map of the study area, a Trimble R1 GNSS Receiver with sub-meter accuracy, and ArcGIS Collector app for iOS. A Dudek geographic information system (GIS) technician digitized the jurisdictional extents and GPS data into a project-specific GIS using ArcGIS software.

2.5 Protocol Fairy Shrimp and Other Wildlife Survey Methods

Brock Ortega conducted surveys in spring 2023; results will be provided in a separate report at a later date.

2.6 Survey Limitations

Conditions were suitable for detection of most wildlife species. Surveys were conducted during the daytime, which usually results in few observations of mammals, many of which may be active at night. However, while conducting the surveys, biologist studied the ground for tracks of mammal species.

The current survey effort provides an accurate representation of the potential for special-status species to occur on the project site. The surveys conducted to date were thorough and comprehensive, and the results of the study contained herein provide a reasonable, accurate assessment of the project site.

3 Results

3.1 Site Description

The project site is characterized as open, vacant lands, the entire site has been frequently disced, disturbed or developed. This is presumed to be for weed abatement and fire prevention. On November 11, 2022, the site looked disced, and the northwestern section had areas that were previously paved. Some of the minimally paved areas were under water. Based upon historical aerials the site has been disturbed, developed, or left fallow. In 2009, the northwestern section of the site had large piles of soil or gravel placed on site potentially as a storage site (Historical Aerials 2023). The northwestern section of the site was paved, potentially for access and placement of gravel or soil storage. The project site is surrounded by developed land to the west, east, and north. The southern boundary has a strip of fallow land but developed land continues past the narrow fallow field. Representative photographs of the project site are included in Attachment C, Site Photographs.

3.2 Soils

Five soil series are mapped within the project: Exeter sandy loam (2% to 8% slopes), eroded; Exeter sandy loam, deep (2% to 8% slopes), eroded; Greenfield sandy loan, deep, (2% to 8% slopes), eroded; Monserate sandy loam, (0% to 5% slopes); Monserate sandy loam, shallow, (5% to 15% slopes), eroded (USDA 2023a). The spatial distribution of these soils is depicted in Figure 3, Soils.

- Exeter Series consists of a moderately deep to a duripan, moderately well drained soil that is formed in alluvium mainly from granitic sources. Exeter soils are on alluvial fans and stream terraces and have slopes of 0% to 9%. Exeter soils are on hummocky, undulated to gently rolling alluvial fans and stream terraces at elevations of 20 to 700 feet. In most areas the hummocky relief has been smoothed by leveling. (USDA 2023a). This soil series dominates the most western and most eastern portions of the project site. The Exeter series is a member of the fine-loamy, mixed, superactive, thermic typic durixeralfs.
- Monserate Series consists of moderately well-drained soils to well-drained soils; slow to rapid runoff; permeability is moderately slow formed in alluvium from granitic rocks. These soils typically occur within alluvial fans and terraces (USDA 2023a). This soil series dominates the majority of the central portion of the project site. The Monserate series is a member of the fine-loamy, mixed, thermic family of typic durixeralfs.
- Greenfield Series consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. The Greenfield series have slow to medium runoff and moderate to rapid permeability. Greenfield soils are on alluvial fans and terraces and have slopes of 0% to 30% (USDA 2023a). The Greenfield series occurs within the central portion of the project site.

3.3 Vegetation Communities and Land Covers

One vegetation community and three non-natural land cover types were documented within the project: sparsely vegetated playa (ephemeral annuals/vernal pool), disturbed habitat, unvegetated channel, and urban/developed. Figure 4, Biological Resources and Vegetation Mapping, illustrates the distribution of vegetation communities and land covers, and Table 3 provides a summary of each vegetation community and land cover's extent within the project site.

Table 3. Vegetation Communities and Land Covers within the Project Site

Vegetation Community/Land Cover	Acreage
Vegetation Communities	
Sparsely Vegetated Playa (Ephemeral Annuals) (CDFW) Vernal Pools, Seeps and Meadows Southern -Hardpan Vernal Pool (Gray and Bramlet 1992)	0.12
Non-natural Land Covers	
Disturbed Habitat	20.25
Urban/Developed	6.83
Total	**27.20**

Note: Acreage may not total due to rounding.

3.3.1 Sparsely Vegetated Playa (Ephemeral Annuals) Southern Hardpan Vernal Pool

As defined by Gray and Bramlet (1992) southern hardpan vernal pools are defined as having an underlying deep clay or hardpan layer often time on a mesa. Seasonal surface water is present with water for insects, amphibians, shorebirds and invertebrates. Characteristic species that occur within the vernal pools include slender woolly-marbles (*Psilocarphus tenellus*), sedges (*Eleocharis* species), hairy waterclover (*Marsilea vestita*), American pillwort (*Pilularia americana*), pigmy weed (*Crassula aquatica*), California adder's tongue (*Ophioglossum californicum*), water starwort (*Callitriche* species), American waterwort (*Elatine* species), and hyssop loosestrife (*Lythrum hyssopifolia*). The Western Riverside County MSHCP defines vernal pools as 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.

Within the project site, the vernal pool consisted of having aquatic invertebrates and was covered in slender wooly-marbles with density of almost 90% cover. The vernal pool was monotypic with only slender woolly-marbles. A field analysis was conducted with a knife in the soils to determine if American pillwort and other species were present.

Vernal pools are considered a special-status vegetation community under CEQA even without listed species based upon the sensitivity of vernal pools to local and regional plans.

3.3.2 Disturbed Habitat

The classification of disturbed habitat is due to the predominance of bare ground, non-native plant species, and other disturbance-tolerant plant species. Oberbauer et al. (2008) describes disturbed habitat as areas that have been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association, but that continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native annual plant species.

Within the study area, disturbed habitat includes areas that were previously disced or have highly damaged soil crusts and contain a mix of non-native and ruderal species including low covers of redstem stork's bill (*Erodium cicutarium*), Maltese star-thistle (*Centaurea melitensis*), and little patches of red brome (*Bromus rubens*) that have undergone recent or repetitive disturbance.

Disturbed habitat is not recognized by CDFW (2023); therefore, this non-natural land cover is not considered a special-status vegetation community under CEQA.

3.3.3 Urban/Developed

Urban/developed is defined by Oberbauer et al. (2008) as areas that have been constructed on or disturbed so severely that native vegetation is no longer supported. Urban/developed lands includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials.

On site, urban/developed land takes the form of historical development that previously consisted of paved road and paved lands that are degrading in sections.

Urban/developed is not recognized by CDFW (2023); therefore, this non-natural land cover is not considered a special-status vegetation community under CEQA.

3.4 Floral Diversity

A total of 30 species of native or naturalized plants, 12 native (40%) and 18 non-native (60%), were recorded within the study area. This relatively low plant diversity and high non-native percent cover reflects the study area's location in an urbanized setting. Plant species observed within the study area are listed in Attachment D, Vascular Plant Species.

3.5 Wildlife

A total of 15 native wildlife species were observed on site. A total of 7 bird species were detected within the study area, including Anna's hummingbird (*Calypte anna*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), killdeer (*Charadrius vociferus*), mallard (*Anas platyrhynchos*), yellow rumped warbler (*Setophaga coronata),* and white crowned sparrow (*Zonotrichia leucophrys*). No active bird nests were observed within the project site; however, the few shrubs onsite could provide habitat for nesting birds. One amphibian species was observed: western spadefoot (*Spea hammondii*). One reptile species was observed during the survey: western fence lizard (*Sceloporus occidentalis*). Two mammal species were detected during the survey: coyote (*Canis latrans*) and

black-tailed jackrabbit (*Lepus californicus*). One invertebrate species was observed: versatile fairy shrimp (*Branchinecta lindahli).* Wildlife species observed within the study area are listed in Attachment E, Wildlife Species.

3.6 Special-Status Plant Species

Attachment F, Special-Status Plant Species Detected or Potentially Occurring on the Project Site, lists special-status plant species that have been documented in the USGS 7.5-minute Romoland quadrangle and the eight surrounding quadrangles; Lakeview, Perris, Steele Peak, Wildomar, Murrieta, Bachelor Moountain, Lake Elsinore, and Winchester (CDFW 2023; CNPS 2023). For each species listed, a determination was made regarding the potential for the species to occur in the study area based on information gathered during the field reconnaissance, including the location of the site, habitats present, current site conditions, and past and present land use. Listed species with a potential to occur and non-listed special-status species with a moderate or higher potential to occur, or species requiring additional survey requirements under the MSHCP, are discussed herein. Those special-status plant species that occur in the region, but that are not expected, or have low potential to occur in the study area due to a lack of suitable habitat, are also included in Attachment F; however, these species are not discussed further because no significant direct or indirect impacts are expected.

Focused special-status plant surveys were conducted on the reconnaissance survey November 11, 2022, and on May 29, 2023, during the vernal pool check and rare plant survey. No federally or state-listed special-status plant species were detected during the surveys. One CNPS California Rare Plant Rank 4.2 species—San Diego tarweed (*Deinandra paniculata*)—was observed and mapped. San Diego tarweed can typically occur in disturbed and highly disturbed areas as tarplants/tarweeds are tolerant of disturbance. No federally or state-listed species have high or moderate potential to occur within the study area. No other non-listed special-status plant species have high or moderate potential to occur.

3.7 Special-Status Wildlife Species

Attachment G, Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area, lists special-status wildlife species that have been documented in the USGS 7.5-minute Romoland quadrangle and the eight surrounding quadrangles: Lakeview, Perris, Steele Peak, Wildomar, Murrieta, Bachelor Mountain, Lake Elsinore, and Winchester (CDFW 2023). For each special-status wildlife species, a determination was made regarding potential use of the project site based on information gathered during the field reconnaissance, rare plant and wildlife surveys, known habitat preferences, and knowledge of the species' relative distributions in the area. Listed species with a potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status wildlife species that occur in the region, but that are not expected, or have low potential to occur in the study area due to a lack of suitable habitat, are also included in Attachment G; however, these species are not discussed further because no significant direct or indirect impacts are expected.

Focused special-status wildlife surveys were conducted. No federally or state-listed wildlife species were observed or incidentally observed during any of the surveys.

One species of special concern—western spadefoot—was detected within the project site; however, this species is a fully covered species under the MSHCP. Therefore, compliance with the MSHCP offsets potential direct and indirect impact to this species.

The federally and state-listed Stephen's kangaroo rat was determined to have a low potential to occur. Stephens' kangaroo rat is a fully covered species under the MSHCP; therefore, with MSHCP consistency, there will be no further requirements for this species. A fee is required and discussed further in Section 5, Impacts Analysis and Recommendations, of this report.

In addition, there is one non-listed special-status wildlife species with a moderate potential to occur: bobcat (*Lynx rufus*), a fully covered species under the MSHCP; therefore, with MSHCP consistency, there will be no further requirements for this species. While burrowing owl is covered under the MSHCP, there are additional requirements that are further discussed in Section 3.7.1 of this report.

3.7.1 Burrowing Owl Habitat Assessment and Focused Survey Results

The proposed project is located within the MSHCP Burrowing Owl Habitat Assessment Area. In accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006), a habitat assessment (Step I) was conducted for this species on November 11, 2022, which was determined to be marginally suitable.

The project site is vacant, consisting of open disturbed and developed land comprised of primarily non-native weed species. The open disturbed land provides potential for foraging habitat for burrowing owl. Some erosional features contain interstitial space marginally suitable for the nesting of burrowing owl, and adjacent grasslands are present for potential foraging. Therefore, burrowing owl has marginal potential to occur within the project site.

As described in Section 2.3 of this document, Step II-A focused burrow search and Step II-B focused burrowing owl surveys were conducted between April to June 2023 (Figure 6). No burrows greater than 4 inches in diameter, no human-made potential burrows (e.g., boulder piles, concrete, pipes, catch basins), and no burrowing owls or signs of burrowing owls (e.g., feathers, whitewash, pellets) were observed within the project site.

3.8 Nesting Birds

The project site provides potential nesting habitat for commonly occurring birds such as Anna's hummingbird or house finch (*Haemorhous mexicanus*). The project site did contain some shrubs and ornamental trees. No active nests were observed during wildlife surveys within the project site. No habitat for mud nesters like barn swallows (*Hirundo rustica*) is present.

3.9 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal. The project site and the surrounding environment to the north, east, west, and south contain developed lands, roads, commercial buildings, and disturbed lands. The disturbed lands likely function as open habitat. The project site may provide local movement for some urban-adapted wildlife species (i.e., coyote [*Canis latrans*], striped skunk [*Mephitis mephitis*], raccoon [*Procyon lotor*], and Virginia opossum [*Didelphis virginiana*]), but these species would be expected to continue to use the developed, disturbed spaces adjacent to the project site and the area post-project. The project would not alter any wildlife connections.

3.10 Jurisdictional Delineation

Results of the jurisdictional delineation are discussed in a separate report prior to the vernal pool analysis (Dudek 2022). Results after the vernal pool analysis are shown in figure 5. One vernal pool was present.

4 Western Riverside County MSHCP Consistency Analysis

The proposed project is located in the MSHCP Plan Area and is subject to consistency with relevant sections of the MSHCP. The project is not within an MSHCP Criteria Cell (Figure 2); therefore, no Reserve Assembly requirements would apply to the project. The project is located within MSHCP Section 6.3.2 Additional Survey Needs and Procedures for Criteria Area for Burrowing Owl. The project is not located in MSHCP Section 6.1.3 Narrow Endemic Species Survey Area or Section 6.3.2 Additional Survey Needs and Procedures for Criteria Area Species Survey area for plants, small mammals, and Delhi sands flower-loving fly; therefore, additional survey requirements for these biological resources would not apply to the project and are not further discussed. The project's compliance with the relevant sections of the MSHCP is detailed in the following sections.

4.1 MSHCP Section 6.1.2 Riparian/Riverine Resources

4.1.1 Riparian/Riverine Resources

The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." The MSHCP further clarifies those areas "demonstrating characteristics as described above which are artificially created are not included in these definitions" (County of Riverside 2003).

The project site does not support any riparian habitat. The project site supports a few scattered individuals of mulefat (*Baccharis salicifolia*). This riparian vegetation is small in its extent, lacks understory or closed-canopy features, lacks continuity with higher quality habitat, and is not contiguous. These scattered individuals are not considered a riparian/riparian resource as defined by the MSHCP.

A swale was mapped off Matthews Road and runs near the eastern and southern border of the project site. These areas contain freshwater flow during a portion of the year and lack any vegetation. Therefore, the swale within the project site would be considered a MSHCP Section 6.1.2 riparian/riverine resource. In total, the project site supports 0.11 acres of MSHCP Section 6.1.2 riparian/riverine resources. If the proposed project cannot demonstrate avoidance of riparian/riverine resources in perpetuity, a Determination of Biologically Equivalent or Superior Preservation (DBESP) Report would be required in which to propose mitigation that demonstrates equivalent or superior function and value.

4.1.2 Vernal Pools and Fairy Shrimp Habitat

The MSHCP defines vernal pools as the following (County of Riverside 2003):

> [S]easonal 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.

The MSHCP further clarifies "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" (County of Riverside 2003).

Fairy shrimp habitat also includes ephemeral pools and other features such as road ruts or stock ponds.

Vernal Pools

The project site contains one vernal pool where one vernal pool indicator species was observed to be abundant: slender woolly-marbles (Attachments B and D). The vernal pool consisted of almost 90% cover of slender woolly-marbles. An aerial desktop review was conducted using historical aerial imagery (Historical Aerials 2023). Based on this desktop review, the one ephemeral depression was observed immediately south of Matthews Road on site. This depression appears to have held water in 2020, 2016, and 2012. These records also depend on what season the aerial photography was performed. This area would meet the MSHCP vernal pool definition.

Fairy Shrimp Habitat

Brock Ortega conducted surveys in spring 2023; results will be provided in a separate report at a later date.

4.1.3 Riparian Birds

The proposed project supports a few scattered mulefat shrubs. These isolated individual plants are small in extent, lack understory or closed-canopy features, lack continuity with higher quality habitat, and are not contiguous; therefore, these areas are not sufficient to support riparian bird species such as least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), or yellow-billed cuckoo (*Coccyzus americanus*).

4.2 MSHCP Section 6.1.3 Narrow Endemic Plant Species Survey Area

The project is located outside a survey area for Narrow Endemic Plant Species; therefore, no further actions are needed under.

4.3 MSHCP Section 6.3.2 Additional Survey Needs and Procedures

The MSHCP establishes habitat assessment requirements for certain species of plants, birds, mammals, and amphibians. The project site is within a required habitat assessment area for burrowing owl. As discussed above under Section 2.3 and 3.7.1, Special-Status Wildlife Species, of this report, the habitat assessment (Step I) did identify potential burrowing owl habitat, including open areas that provide line of sight. As such, Step II (focused surveys, census, and mapping) was conducted with negative results; however, due to presence of suitable habitat, pre-construction surveys will be required to be consistent with the MSHCP.

4.4 MSHCP Section 6.1.4 Urban/Wildlife Interface Guidelines

According to the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area (County of Riverside 2003). The project site is not within any conserved areas. The proposed project features a swale that flows directly south and then west. This swale abates on site. Therefore, the project has no downstream connectivity to areas already conserved or that are described for conservation. Furthermore, no MSHCP Conserved Lands occur near the project site. No criteria cells with a conservation description are adjacent to the to the project site. The closest criteria cell with a conservation description is 3279, which is 2.16 miles away. The Urban/Wildlife Interface Guidelines are not applicable.

5 Impacts Analysis and Recommendations

This section addresses potential impacts to special-status biological resources that could result from implementation of the proposed project. This section follows the CEQA checklist for biological resources as identified below. For the impacts analysis, the project site plans were overlaid with biological resources (Table 4, Permanent Impacts to Vegetation Communities and Land Covers within the Project Site). All impacts on site are permanent. Table 4 summarizes the land covers within each project component and the total area of impact used in the impact analysis.

Significance Thresholds

The following are the significance thresholds for biological resources provided in the CEQA Appendix G Environmental Checklist, which states that project activities could potentially have a significant affect if they:

1. Impact-BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Threshold Bio-1).

2. **Impact-BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (Threshold Bio-2).
3. **Impact-BIO-3:** Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (Threshold Bio-3).
4. **Impact-BIO-4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites (Threshold Bio-4).
5. **Impact-BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Threshold Bio-5).
6. **Impact-BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan (Threshold Bio-6).

Table 4. Permanent Impacts to Vegetation Communities and Land Covers within the Project Site

Vegetation Community/Land Cover	Impact Acreage
Vegetation Communities	
Sparsely Vegetated Playa (Ephemeral Annuals) (CDFW) Vernal Pools, Seeps and Meadows Southern -Hardpan Vernal Pool (Gray and Bramlet 1992)	0.12
Non-Natural Land Covers	
Disturbed Habitat	6.83
Urban/Developed	20.25
Total	**27.20**

Note: Acreage may not total due to rounding.

5.1 Impact-Bio-1: Special-Status Species

5.1.1 Special-Status Plants

One non-listed special-status plant was documented on the project site: San Diego tarweed (CNPS 4.2). San Diego tarweed not considered significant. No other special-status listed, or non-listed plant species were detected within the project site. No listed or non-listed special-status plant species have moderate or high potential to occur within the project site.

5.1.2 Special-Status Wildlife

One species of special concern—western spadefoot—was detected within the project site; however, this species is a fully covered species under the MSHCP. Therefore, compliance with the MSHCP offsets potential direct and indirect impact to this species.

5.1.2.1 Burrowing Owl

The focused burrowing owl surveys concluded that burrowing owls were absent from the project site; however, burrowing owl could move into the project site prior to initiation of construction activities. The area is considered by the Riverside MSHCP as a Burrowing owl survey area (Figure 6). Direct impacts to burrowing owl would be significant if they occupy the site (Impact-BIO-1). Additionally, if burrowing owl occupy surrounding habitat within 500 feet of construction activities, indirect impacts could be significant. To avoid potential for significant impacts to burrowing owl during construction activities and to remain consistent with the MSHCP, a pre-construction burrowing owl survey should be conducted and avoidance measures implemented if burrowing owl are present (MM-BIO-1, Burrowing Owl Pre-Construction Surveys).

5.2 Impact-Bio-2: Riparian and Special Status Vegetation Communities

There are no special-status vegetation communities as defined by CDFW within the project site; therefore, the project would not result in direct or indirect impacts to special-status vegetation communities (Impact-Bio-2). The project would result in impacts to riparian/riverine resources as defined by the MSHCP and as summarized in Table 5. Impacts to riparian/riverine resources are further discussed in Section 4.1, of this report and in MSHCP Section 6.1.2, Riparian/Riverine Resources.

Table 5. Impacts to MSHCP Riverine Resources within the Project Site

Vegetation Community/Land Cover	Impacts to MSHCP Riverine Resources (Acres/Linear Feet)	Total Acreage/ Linear Feet
Vegetation Communities		
Sparsely Vegetated Playa (Ephemeral Annuals) (CDFW) Vernal Pools, Seeps and Meadows Southern -Hardpan Vernal Pool (Gray and Bramlet 1992)	0.12	0.12
Non-natural Land Covers		
Swale	0.11/1311.74	0.11/1,311
Disturbed Habitat	—	—
Urban/Developed	—	—
Total	**—**	**0.23/1,311**

Note: Acreage may not total due to rounding.

5.3 Impact-Bio-3: Jurisdictional Waters

Impacts to jurisdictional waters are discussed in a separate report (Dudek 2022).

5.4 Impact-BIO-4: Migratory Birds and Wildlife Corridor/Nursery Sites

5.4.1 Nesting Birds

Project construction could result in direct and indirect impacts to nesting birds, including the loss of nests, eggs, and fledglings (Impact-BIO-4) if ground-disturbing activities occur during the nesting season (generally February 15 through August 31). Construction activities during this time may result in reduced reproductive success and may violate the federal Migratory Bird Treaty Act and California Fish and Game Code. If construction (including any ground-disturbing activities) occurs during the nesting season, a nesting bird survey must be conducted by a qualified biologist prior to grading activities. If nesting birds are observed within or adjacent to the construction activities, avoidance of active bird nests should occur as determined by the qualified biologist to ensure compliance with these regulations. With implementation of MM-BIO-2 (Nesting Birds), no significant impacts to nesting birds would occur.

5.4.2 Wildlife Corridors and Nursery Sites

The project site currently does not function as a wildlife corridor and does not support any wildlife nursery sites. As a result, implementation of the proposed project would not result in impacts to these resources (Impact-Bio-4).

5.5 Impact-Bio-5: Other Local Ordinances

There are no applicable local ordinances related to biological resources; therefore, the project would be consistent with local ordinances.

5.6 Impact-Bio-6: Habitat Conservation Plans

The project site overlaps both the MSHCP and the Stephens' Kangaroo Rat Habitat Conservation Plan and must be consistent with each of these plans for compliance with Impact-Bio-6.

5.6.1 Western Riverside Multiple Species Habitat Conservation Plan

The project site is within the MSHCP Plan Area and must comply with applicable sections of the MSHCP as well as pay the applicable MSHCP Development Mitigation Fee and Stephen's Kangaroo Rat mitigation fee based upon the location of the site prior to accessing the grading permits (RCHCA 2023).

5.6.1.1 MSHCP Section 6.1.2 Riparian/Riverine Resources and Vernal Pool

As described in Section 4.1 of this letter report, the project site supports riparian/riverine resources and vernal pool as defined by the MSHCP. The proposed project would result in the permanent loss of approximately 0.11 acres of MSHCP riparian/riverine resources and 0.12 acres of vernal pool resource. There would be no temporary impacts to riparian/riverine resources or the vernal pool resource. To remain consistent with the MSHCP, the project must prepare a DBESP identifying avoidance, minimization, and mitigation measures for impacts to riverine resources.

With implementation of MM-BIO-3 (Determination of Biologically Equivalent or Superior Preservation), the project is consistent with Section 6.1.2 of the MSHCP.

5.6.1.2 MSHCP Section 6.3.2 Additional Survey Needs and Procedures

The project does support burrowing owl habitat, and burrowing owls have the potential to occupy the site in the future. With implementation of MM-BIO-1, which includes burrowing owl pre-construction surveys, and avoidance and minimization measures if applicable, the project would be consistent with the MSHCP burrowing owl requirements.

5.6.2 Stephens' Kangaroo Rat Habitat Conservation Plan

The project site is within the Stephens' Kangaroo Rat Habitat Conservation Plan boundary. With payment of the Stephens' Kangaroo Rat Habitat Conservation Plan Development Mitigation Fee, the proposed project would be consistent with the Stephens' Kangaroo Rat Habitat Conservation Plan (RCHCA 1996).

6 Avoidance, Minimization, and Mitigation Measures

MM-BIO-1 Burrowing Owl Pre-Construction Surveys

Due to the presence of potentially suitable habitat, a 30-day preconstruction survey for burrowing owls is required prior to initial ground-disturbing activities (including vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, grading, etc.) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Regional Conservation Authority (RCA) and the Wildlife Agencies and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing owl has not colonized the site since it was last disturbed. If burrowing owl is found, the same coordination described above will be necessary.

MM-BIO-2 Nesting Birds.

To maintain compliance with the Migratory Bird Treaty Act and California Fish and Game Code, if ground-disturbing and/or vegetation clearance activities are scheduled to occur during the avian nesting season (typically February 15 through August 31), a pre-construction nesting bird survey shall be conducted by a qualified biologist within the project site and a 500-foot buffer around the project site. Surveys shall be conducted within 3 days prior to initiation of activity and shall be conducted between dawn and noon.

If an active nest is detected during the nesting bird survey, avoidance buffers shall be implemented as determined by a qualified biologist. The buffer shall be of a distance to ensure avoidance of adverse effects to the nesting bird by accounting for topography, ambient

conditions, species, nest location, and activity type. All nests shall be monitored as determined by the qualified biologist until nestlings have fledged and dispersed or it is confirmed that the nest has been unsuccessful or abandoned.

MM-BIO-3 Determination of Biologically Equivalent or Superior Preservation

Prior to initiating construction activities, the applicant shall prepare and have reviewed by the wildlife agencies a Determination of Biologically Equivalent or Superior Preservation (DBESP) for impacts to vernal pool and riverine habitat in compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Section 6.1.2, Protection of Species Associated with Riparian/Riverine areas and Vernal Pools. The DBESP will ensure replacement of any lost functions and values of riparian/riverine habitat as it relates to vernal pool and riverine resources, and will include the following:

- Definition of the project area;
- A written project description, demonstrating why an avoidance alternative is not possible;
- A written description of biological information available for the project site, including the results of resource mapping;
- Quantification of unavoidable impacts to swale and vernal pool, associated with the project;
- A written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, minimization, and/or compensation through restoration or enhancement; and
- A finding demonstrating that, although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to an avoidance alternative without these measures, based on one of the following factors: 1) Effects on conserved habitats; 2) Effects on the species listed in Section 6.1.2 of the MSHCP; 3) Effects on riparian linkages and function of the MSHCP Conservation Area

MM-BIO-4 General Avoidance, Minimization Measures and MSHCP Best Management Practices

The following best management practices, as applicable, shall be implemented for the duration of construction:

- Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage onto the project site. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including, but not limited to, the applicable jurisdictional city, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and RWQCB, and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.
- To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

- Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

7 Conclusions

The proposed project has the potential to impact three special-status biological resources: burrowing owl, vernal pool, and riverine habitat. Since the project is within the boundary of Stephen's Kangaroo rat, payment of the Stephens' Kangaroo Rat Habitat Conservation Plan Development Mitigation Fee is required. After payment, the proposed project would be consistent with the Stephens' Kangaroo Rat Habitat Conservation Plan.

With implementation of the avoidance, minimization, and mitigation measures described in this report, the project would be consistent with the MSHCP and would result in less-than-significant impacts to biological resources under CEQA.

If you have any questions regarding this biological resources letter report, please feel free to contact me at ebergman@dudek.com or at 760.274.3927.

Sincerely,



Erin Bergman
Biologist

Att.: *Attachment A – Figures*
Attachment B – Jurisdictional Delineation Report
Attachment C – Site Photographs
Attachment D – Vascular Plant Species
Attachment E – Wildlife Species
Attachment F – Special-Status Plant Species Detected or Potentially Occurring in the Study Area
Attachment G – Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

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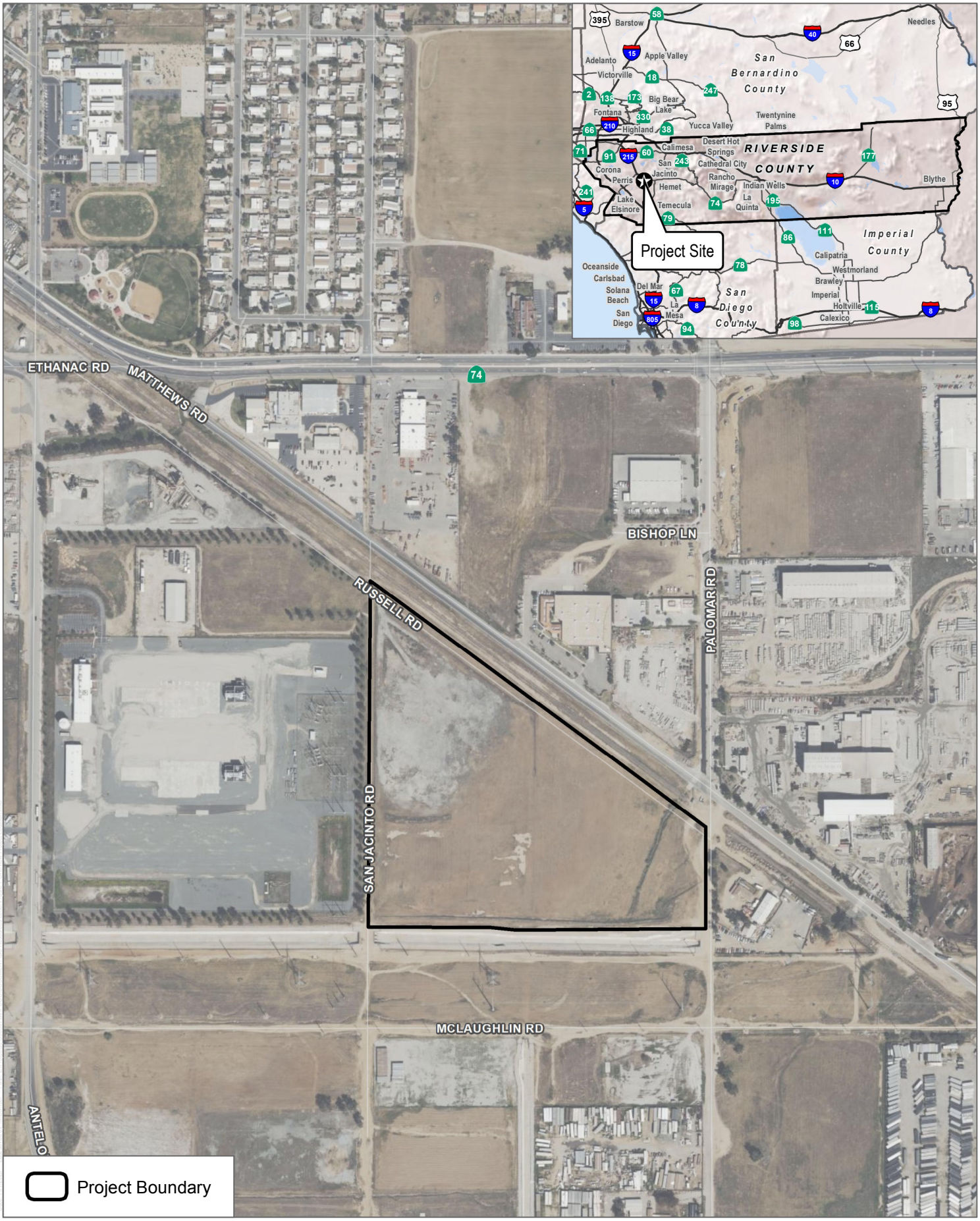
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Attachment A

Figures



SOURCE: Bing Maps; County of Riverside 2022

DUDEK

0 250 500 Feet

FIGURE 1

Overview Project Location

Double Butte Project

Project Site

Project Boundary

Project Boundary

Proposed Linkages:

- Constrained Linkage
- Linkage
- Existing Channel

Existing Cores & Linkages:

- Constrained Linkage
- Core
- Linkage
- Noncontiguous Habitat Block

Proposed Cores & Habitat Blocks:

- Core
- Proposed Extension of Existing Cores
- Noncontiguous Habitat Block

MSHCP Conserved Lands

- Conserved Lands

SOURCE: Western Riverside County Regional Conservation Authority 2015; County of Riverside 2015

DUDEK

0 12,500 25,000 Feet

FIGURE 2

Western Riverside County MSHCP Plan Area

Double Butte Project



SOURCE: Bing Maps; County of Riverside 2022; USDS SSURGO 2023

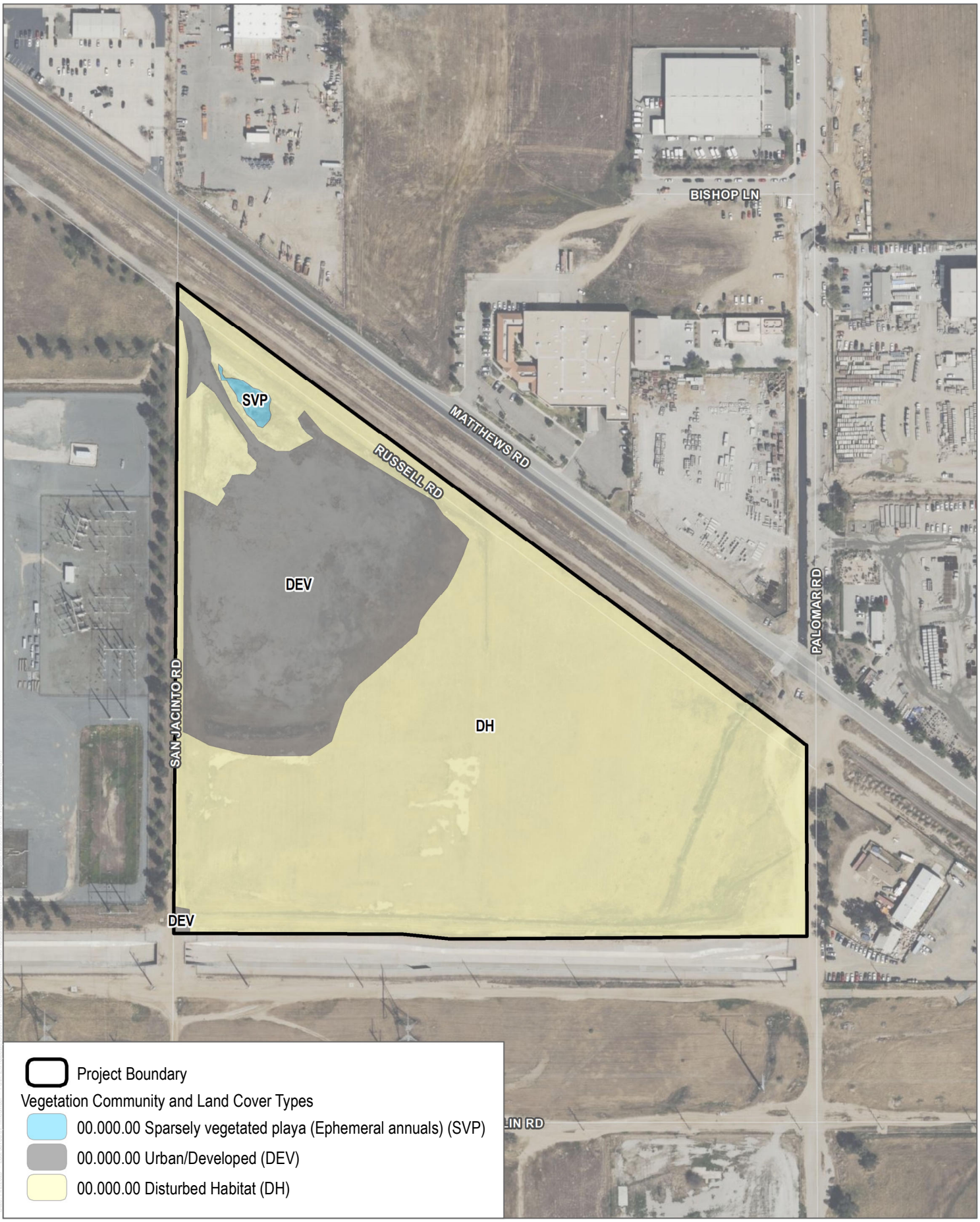
DUDEK

0 135 270 Feet

FIGURE 3

Soils

Double Butte Project



SOURCE: Bing Maps; County of Riverside 2022

DUDEK

0 135 270 Feet

FIGURE 4

Biological Resources and Vegetation Mapping

Double Butte Project



SOURCE: Bing Maps; Riverside County 2023

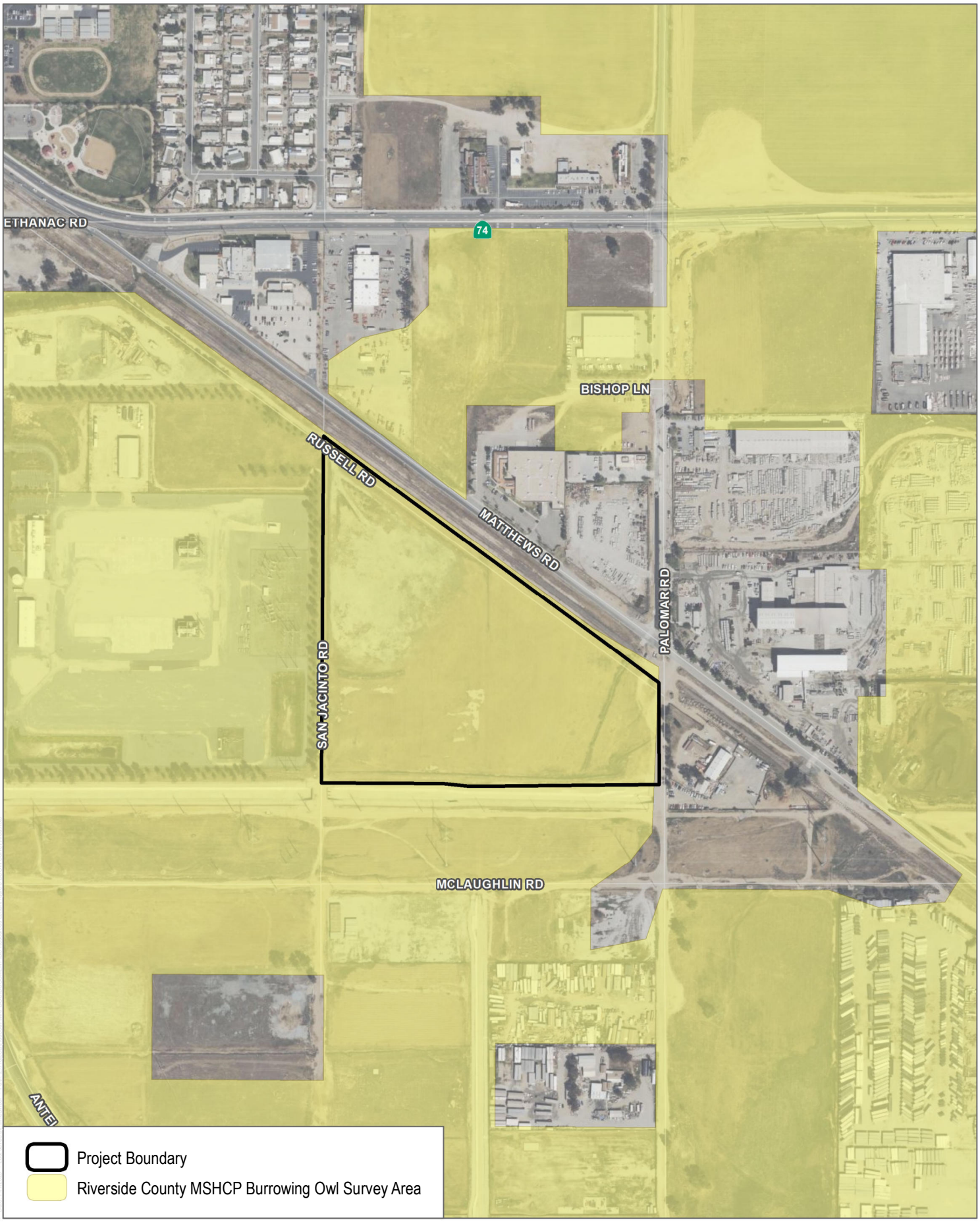
DUDEK

0 135 270 Feet

FIGURE 5

Riverine, Vernal Pool, and Fairy Shrimp Habitat

Double Butte Project



SOURCE: Bing Maps; County of Riverside 2022

DUDEK

0 250 500 Feet

FIGURE 6

Burrowing Owl Survey Area

Double Butte Project

Attachment B

Jurisdictional Delineation Report

DUDEK
2280 HISTORIC DECATUR ROAD, SUITE 200
SAN DIEGO, CALIFORNIA 92106
T 619.591.1370 F 619.591.1399

December 20, 2022

Adam Furman
Senior Manager, Permitting
AES Clean Energy

Subject: **Aquatic Resources Jurisdictional Delineation Report for the Double Butte Battery Energy Storage System, Riverside County, California**

Dear Adam Furman:

This technical report presents the findings of a jurisdictional delineation of aquatic resources conducted by Dudek for the proposed Double Butte Battery Energy Storage System (BESS) Project (project), located near the City of Menifee in Riverside County, California (all figures are provided in Attachment A). The purpose of this investigation was to evaluate the presence and extent of aquatic resources that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW). The investigation included an analysis of aquatic resources within the privately owned 500-megawatt BESS project site totaling approximately 27.1 acres (study area).

This report was prepared in accordance with the Corps Wetlands Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a), and A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the United States (USACE 2008b). The information herein is intended to identify and describe aquatic resources potentially regulated by USACE under Section 404 of the federal Clean Water Act, RWQCB under Section 401 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act, and CDFW per California Fish and Game Code Section 1600.

1 Study Area Location and Description

The study area for the proposed battery storage facility is a disturbed infill lot that has been heavily plowed in many areas. The project area is comprised of bar eground, disturbed areas, and areas where fill was previously discarded. This landcover type is considered disturbed and occurs within Sun City/Menifee, Riverside County, California. The study area is located on Assessor Parcel Numbers 331-119-0017, 331-119-0060, 331-119-0011, 331-119-0047, 331-119-0010, 331-119-0056, and 331-119-0014. The battery storage facility will interconnect to the Southern California Edison Valley Substation.

The study area occurs at an elevation that ranges from 1,440 to 1,456 feet above mean sea level and is located within Section 14 of Township 5 South, Range 3 West of the U.S. Geological Survey (USGS) 7.5-minute Romoland, California topographic quadrangle (Figure 1, Project Location, in Attachment A). The project site is located at 28352–28392 Mathews Road. The project site is south of Mathews Road, east of San Jacinto Road, west of Palomar Road, and north of McLaughlin Road within the city of Sun City/Menifee. The site is accessible from the intersection of Mathews Road and Palomar Road.

2 Methods

Data regarding aquatic resources present within the study area were obtained through a review of pertinent literature and field assessments. Both are described in detail below.

2.1 Literature Review

Prior to conducting field reviews for jurisdictional aquatic resources on site, Dudek reviewed aerial maps depicting the property boundary of the survey area. Dudek conducted an extensive desktop review of the survey area, which included historical land use, local and regional climatic data, and aerial photography (including historical aerials) with topographic configurations and vegetative signatures occurring within the survey area. The information was evaluated by consulting the following available resources:

- USGS 7.5-minute quadrangle map (and surrounding quads) (USGS 1975)
- Historical aerials
- The web-based National Wetlands Inventory Wetlands Mapper (NWI) (USFWS 2022)
- The web-based National Hydrography Dataset (USGS 2022)
- The web-based Web Soil Survey (USDA 2022a)
- The latest and available state and federal regulatory definitions, guidance document, and delineation manuals for state and federally regulated waters (including wetlands)

2.2 Aquatic Resources Field Delineation

Dudek senior biologists and wetland scientists Callie Amoaku and Erin Bergman performed a formal (routine) jurisdictional delineation within the study area on November 11, 2022, to determine potential jurisdictional resources under Section 404/401 of the Clean Water Act and Sections 1600–1616 of the California Fish and Game Code, and the Porter-Cologne Water Quality Control Act. Current USACE delineation procedures and guidance were used to identify and delineate any wetlands and/or waters of the United States potentially subject to USACE and RWQCB jurisdiction (USACE 1987, 2008a, 2008b; 2018; Lichvar and McColley 2008; Curtis and Lichvar 2010). Likewise, current CDFW procedures and guidance were used to identify and delineate any streambeds, rivers, or associated riparian habitat potentially subject to CDFW jurisdiction.

For potential wetland areas, data on vegetation, hydrology, and soils were collected on standardized wetland delineation data forms in representative locations to assess the potential for hydric soils, hydrophytic vegetation, and hydrology (Attachment B, Jurisdictional Delineation Forms). The wetland indicator status was assigned to each plant species using the Wetland Plant List (USACE 2020), as shown in Table 1 below. Dominant plant species encountered within the study area were identified to the lowest taxonomic level needed to determine wetland plant indicator status.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67% to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34% to 66%
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability of 67% to 99%
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability of >99%)
No Indicator (NI)	--

Non-wetland waters of the United States are delineated based on the limits of an Ordinary High Water Mark (OHWM). During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, presence of surface water, wetland vegetation, and nexus to a traditional navigable water of the United States. If any of these criteria were met, transects were run to determine the extent of each regulatory agency's jurisdiction.

Features were mapped in the field based on the extent of their indicators. Sample points were collected in the field using an aerial photograph and topographic map of the study area, a Trimble R1 GNSS Receiver with sub-meter accuracy, and ArcGIS Collector app for iOS. A Dudek geographic information system (GIS) technician digitized the jurisdictional extents and GPS data into a project-specific GIS using ArcGIS software.

3 Results

Dudek used the methods described above to determine the presence or absence of USACE, RWQCB, and CDFW jurisdictions within the study area. A swale and potential for wetlands and vernal areas were investigated within the study area. The determination of aquatic resources within the study area was supported by information obtained from the USGS topographic map, Web Soil Survey, USFWS, NWI, National Hydrography Dataset, and field assessments. Information obtained from each source is described below.

3.1 Landscape Setting

3.1.1 USGS Topographic Watershed Map Review

The USGS 7.5-minute Romoland, California, topographic maps (USGS 2015) were reviewed to identify natural and human-made features occurring within the vicinity of the study area. Information obtained from the maps included contour lines, streets, rivers, creeks, lakes, aqueducts, and reservoirs. The Romoland topographic map was based on National Agriculture Imagery Program imagery from 2012 and National Elevation Dataset contours from 1999.

The study area occurs within the Perris Valley San Jacinto River (Hydrologic Unit Code (HUC) 180702020306) of the Lower San Jacinto River watershed (HUC 1807020203) in the San Jacinto subbasin (HUC 18070202) (Data Basin 2019) (Figure 2, Hydrologic Resources, in Attachment A). Sources of hydrology in the study area include annual precipitation and runoff from surrounding areas.

3.1.2 Soil Survey Review

The U.S. Department of Agriculture, Natural Resources Conservation Service's Web Soil Survey for Riverside, California, was consulted, and four soil types were identified: Exeter sandy loam, 2% to 8% slopes, eroded (EnC2); Greenfield sandy loam, 2% to 8% slopes, eroded (GyC2); Monserate sandy loam, 0% to 5% percent slopes (MmB); and Exeter sandy loam, deep, 2% to 8% slopes, eroded (EpC2) (USDA 2022a). These soil types are listed as non-hydric soils (USDA 2022b).

3.1.3 National Wetlands Inventory Review

A review of the NWI dataset revealed no mapped wetlands within the project site or near the edges of the project site. The NWI dataset is based on coarse aerial mapping and may not capture aquatic resources that are obscured by tree canopy or are otherwise not visible in aerial photography.

3.1.4 Climate and Rainfall Data Review

The study area is located in the South Coast geographic subdivision of the California Floristic Province (Jepson Flora Project 2022). Average annual temperatures in the study area region range from 41°F to 92°F, and the average annual precipitation is 12 inches (NOAA 2022).

3.2 Aquatic Resources Field Delineation

3.2.1 History

A review of historical imagery shows that the proposed project site was historically upland habitat (grassland) from 1985–2002 (Historic Aerials 2022; Google Earth 2002). After 2002, the site became disturbed and actively graded within most of the site. Other areas were more heavily disturbed. For example, in 2007, a large portion of the western side of the site had been developed and utilized as a storage facility with roads. In 2009, this storage facility was abandoned.

Between 2002 and 2016, approximately 25% of the site (the northwestern corner) consisted of fill. Aerial images show sand fill, gravel fill, and large rock fill consistently changing at the site from year to year. Therefore, the site was actively utilized as a fill site. In 2016, fill was removed from the northwestern portion of the site leaving behind heavily compacted fill soils and uneven ground. In 2016, likely due to fill creating uneven ground a very small isolated ponded area formed on this compacted soil. Another potential scenario is that minimal ponding was already occurring that could not be observed through aerial photography. Ponded water is observed within this northwestern section in 2016, 2018, and 2019 on aerial imagery (Google Earth 2022).

On the eastern side of the site is a swale that drains into the site and abates into upland. Historical imagery shows the swale changing in length over time, likely based on water runoff from the road. From 2003–2012, the length of the swale ranged from 0.12 miles to 0.17 miles. From 2012–2016, the length ranged from 0.05 miles to 0.10 miles. From 2016–2022, the length ranged from 0.20 miles to 0.29 miles. Therefore, road runoff changed over time determining the length of the swale.

3.2.2 Aquatic Resources - Results

Wetland Sampling Points -Wetland sampling points were taken at two locations within the proposed site where minimal hydrophytic vegetation was present (see Figure 3, Aquatic Resources, in Attachment A). Both areas are within the northwestern corner of the site. No NWI or National Hydrography Dataset data was identified on site.

Data stations 1a and 1b. The first set of data stations were within a small, ponded area that was within a historical fill site. A data station could only be dug approximately 3 inches into fill before hitting "concrete like" material. No hydrophytic vegetation or hydrophytic soils were present at the edge of the small, ponded area. One caveat is that because the small, ponded area was full of water at the time of the jurisdictional delineation, potential vegetation could not be observed within the small, ponded area. Vegetation can only be observed after the pool is dry during spring. Therefore, a vegetation study when the pool is dry would determine if the small, ponded area could be considered an isolated vernal area or vernal pool feature. An isolated vernal area or vernal pool would be considered a water of the state (RWQCB and CDFW). It has been noted that brachiopods are present within the small, ponded area. Since the area was previously used as a fill site, the likelihood of a potential isolated vernal area or vernal pool is low.

Data stations 2a and 2b. The next set of data stations were dug in another historical fill site near some hydrophytic vegetation containing mulefat (*Baccharis salicifolia*). The soils consisted of fill materials including gravel, and no hydrology was present. This area did not have hydric soils, enough hydric vegetation, or hydrology; therefore, there are no wetlands within this study area. Attachment B contains the wetland data forms completed during the aquatic field delineation, which are also summarized in Section 3.2.3.

Figure 3, Aquatic Resources, in Attachment A illustrates the location and extent of feature 1 within the study area. A description of feature 1 is provided below, and representative photographs of this resource is provided in Attachment C.

Feature 1 Swale. The swale conveys flows from road run-off but does not demonstrate an OHWM or a defined bed and bank. Based upon the field site visit, aerial imagery, and the elevation profile from Google Earth, runoff from the road conveys water into a storm drain and past the storm drain into the swale. The swale eventually abates into upland. The swale totals approximately 0.11 acres on site. No water or soil saturation was present within the swale during the field site visit. The swale does not support any riparian or wetland vegetation. Most of the vegetation within the swale consists of tumbleweed (*Salsola tragus*). This feature is not considered a jurisdictional water of the United States as it does not contain an OHWM. The swale could be considered jurisdictional via the state (RWQCB, CDFW).

3.2.3 Data Summary

Results from observable field indicators from four wetland data stations based upon two potential wetland aquatic resources occur within the study area (see Figure 3 in Attachment A). The data collected at each data point are included in Attachment B and summarized in Table 2 below.

Table 2. Wetland Data Station Summary

Data Point	Wetland Determination Field Indicators			Location		Preliminary Determination
	Vegetation	Soils	Hydrology	Latitude	Longitude	
1a	No	No	Yes	33.7399941	-117.1670104	Non-wetland
1b	No	No	No	33.7407009	-117.1647368	Non-wetland
2a	No	No	No	33.7401640	-117.1668588	Non-wetland
2b	No	No	No	33.7399828	117.1670065	Non-wetland

3.2.4 Preliminary Jurisdictional Determination

As described in Section 3.2.2, one swale feature that doesn't have an OHWM or a defined bed and bank occurs on the eastern side of the site. This swale is considered a water of the state (RWQCB and CDFW) and is not considered a federal water due to the lack of a bed and bank, lack of OHWM, and lack of a nexus to a traditional navigable water.

Based on this information, the feature on site is likely not regulated by USACE (federal). However, the swale on site would likely be regulated by the state (RWQCB and CDFW). It should be noted that the results of the delineation have not been verified by the regulatory agencies. The results of this delineation are considered preliminary until each of these agencies can review the study area.

One potential small, ponded area should be studied during the dry season in spring to determine the status of the small, ponded area. If no vernal pool plant species or wetland indicator species are present, no further studies will be required. If this is the case, a swale would be the only jurisdictional feature on site.

3.3 Sensitive Plants and Wildlife

Incidental sensitive plants were observed during the aquatic resource delineation. San Diego tarplant (*Deinandra paniculata*) (California Native Plant Society sensitive species list 4.2) was observed in a variety of locations within the northwestern corner of the site. A rare plant survey report can further define these findings along with the spring study of the small, ponded area.

4 Conclusion

The purpose of this report is to identify and delineate all jurisdictional aquatic resources regulated by the USACE, RWQCB, and CDFW within the study area. This report represents existing conditions only and does not address any activities proposed within the study area. One swale regulated by the state (RWQCB and CDFW) is present on site. In addition, one small, ponded area should be reviewed during spring to determine if any wetland obligate or vernal pool plant species are present. It should be noted that the results of the delineation have not been verified by the regulatory agencies. The results of this delineation are considered preliminary until each of these agencies can review the study area.

If you have any questions regarding the contents of this report, please contact me by email ebergman@dudek.com or by phone at 760.274.3927.

Sincerely,



Erin Bergman
Biologist

Att.: *A – Figures 1–3*
B –Jurisdictional Delineation Forms
C – Representative Photographs
cc: *Keith Carwana, Dudek*
Callie Ford, Dudek
Brock Ortega, Dudek

5 References

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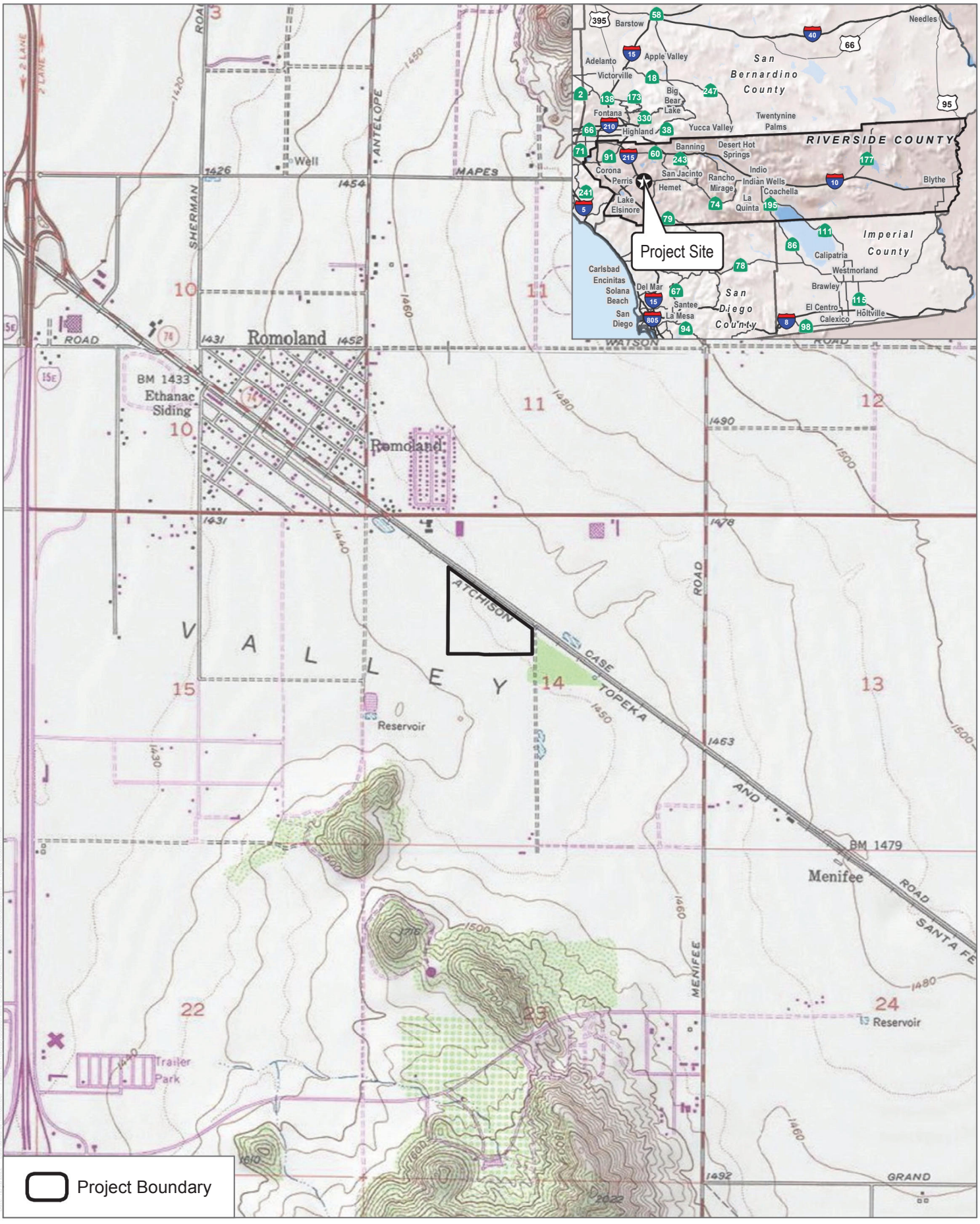
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Attachment A

Figures 1–3



SOURCE: USGS 7.5-Minute Series Romoland Quadrangle
Township 5S; Range 3W; Section 14

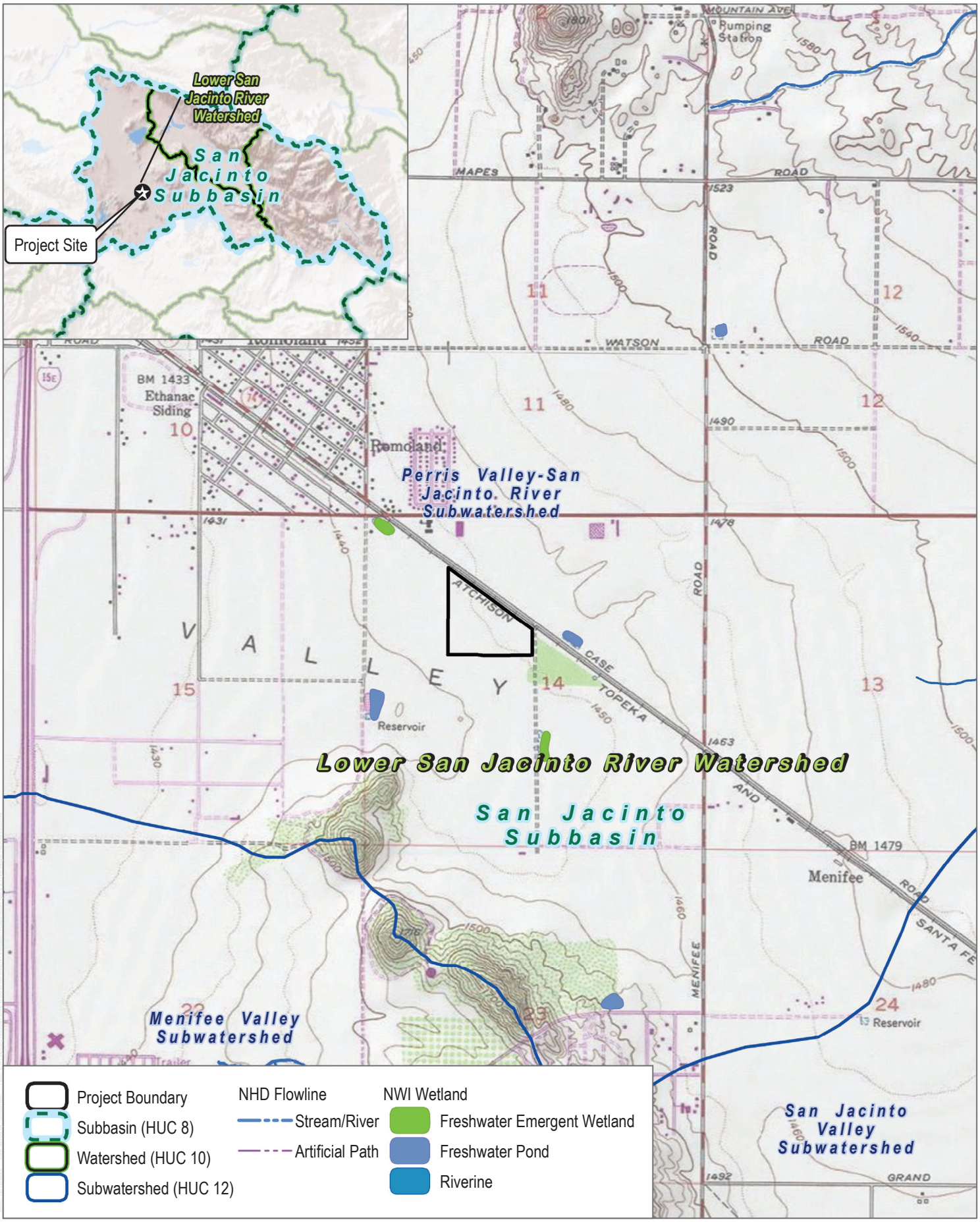
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Double Butte Project



SOURCE: USA Topo; NWI 2022; NHD 2022; USGS WBD 2022

DUDEK

0 1,000 2,000 Feet

FIGURE 2

Hydrologic Resouces

Double Butte Project



SOURCE: Bing Maps; Riverside County 202

DUDEK

0 100 200 Feet

FIGURE 3

Aquatic Resources

Double Butte Project

Attachment B

Jurisdictional Delineation Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Double Butte City/County: Menifee/Riverside Sampling Date: 2022-11-11

Applicant/Owner: State: California Sampling Point: WSP 01a

Investigator(s): Callie Amoaku, Erin Bergman Section, Township, Range:

Landform (hillslope, terrace, etc.): Upland, Depression Local relief (concave, convex, none): Slope (%): 2

Subregion (LRR): C 19 Lat: 33.7399941 Long: -117.1670104 Datum: WGS 84

Soil Map Unit Name: Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

The soil is fill material and the depression is in an area regularly graded and maintained. Rains occurred on 11/8/22.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1. Tamarix sp.	5	✓	FAC
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Ambrosia acanthocarpa	5	✓	UPL
2. Heliotropium curassavicum	5	✓	FACU
3. Deinandra paniculata	1		FACU
4.			
5.			
6.			
7.			
8.			
	11% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	6	x 4 =	24
UPL species	5	x 5 =	25
Column Totals:	16 (A)		64 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: WSP 01a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 3	5Y 4/2	100					Sandy Loam	Fill
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Fill material

Depth (inches): 3

Hydric Soil Present? Yes _____ No ✓

Remarks:

Unable to dig due to hard fill/rocky material

HYDROLOGY

Wetland Hydrology Indicators:

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

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): 1

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Double Butte City/County: Menifee/Riverside Sampling Date: 2022-11-11

Applicant/Owner: State: California Sampling Point: WSP 01b

Investigator(s): Callie Amoaku, Erin Bergman Section, Township, Range:

Landform (hillslope, terrace, etc.): Upland, Depression Local relief (concave, convex, none): Slope (%): 1

Subregion (LRR): C 19 Lat: 33.7407009 Long: -117.1647368 Datum: WGS 84

Soil Map Unit Name: Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

Fill material

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Ambrosia acanthocarpa	5	✓	UPL
2. Bromus rubens	5	✓	UPL
3. Heliotropium curassavicum	5	✓	FACU
4. Salsola tragus	1		FACU
5.			
6.			
7.			
8.			
	16% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	6	x 4 =	24
UPL species	10	x 5 =	50
Column Totals:	16 (A)		74 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: WSP 01b

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	5YR 2.5/2	100					Loamy Sand	Fill
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

None

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Double Butte City/County: Menifee/Riverside Sampling Date: 2022-11-11

Applicant/Owner: State: California Sampling Point: WSP 02a

Investigator(s): Callie Amoaku, Erin Bergman Section, Township, Range:

Landform (hillslope, terrace, etc.): Upland, Depression Local relief (concave, convex, none): Slope (%): 1

Subregion (LRR): C 19 Lat: 33.7401640 Long: -117.1668588 Datum: WGS 84

Soil Map Unit Name: Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

The soil is fill material and the depression is in an area regularly graded and maintained. Rains occurred on 11/8/22. No water at sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1. Baccharis salicifolia	7	✓	FAC
2.			
3.			
4.			
5.			
	7% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Ambrosia acanthocarpa	2	✓	UPL
2. Erigeron bonariensis	1	✓	FACU
3. Helianthus annuus	1	✓	FACU
4.			
5.			
6.			
7.			
8.			
	4% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	7	x 3 =	21
FACU species	2	x 4 =	8
UPL species	2	x 5 =	10
Column Totals:	11 (A)		39 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: WSP 02a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 5	7.5YR 4/4	100					Sandy Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Vis ble on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

None

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Double Butte City/County: Menifee/Riverside Sampling Date: 2022-11-11

Applicant/Owner: State: California Sampling Point: WSP 02b

Investigator(s): Callie Amoaku, Erin Bergman Section, Township, Range:

Landform (hillslope, terrace, etc.): Upland, Depression Local relief (concave, convex, none): Slope (%): 1

Subregion (LRR): C 19 Lat: 33.7399828 Long: -117.1670065 Datum: WGS 84

Soil Map Unit Name: Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ✓, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

The soil is fill material and the depression is in an area regularly graded and maintained. Rains occurred on 11/8/22. No water at sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Helianthus annuus	20	✓	FACU
2. Ambrosia acanthocarpa	2		
3. Deinandra paniculata	2		FACU
4.			
5.			
6.			
7.			
8.			
	24% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	22	x 4 =	88
UPL species	0	x 5 =	0
Column Totals:	22 (A)		88 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: WSP 02b

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	7.5YR 4/4	100						Gravel
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Gravel

Depth (inches): 4

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Vis ble on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

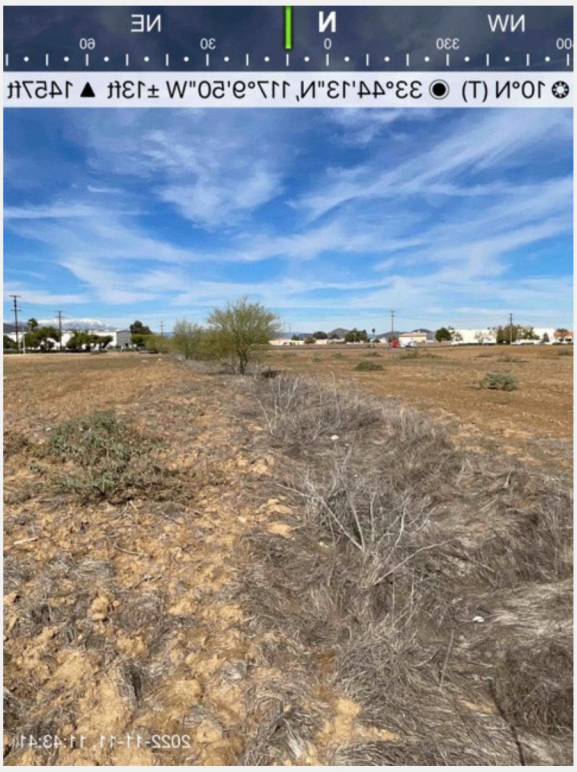
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

None

Attachment C

Representative Photographs



Swale on site facing north within central portion of the swale. Photo taken November 11, 2022.



Swale facing east at the lower portion of the swale. Photo taken November 11, 2022.



Area to be reviewed in spring. Photo taken November 11, 2022.



Data station 1a: Area holding water to be surveyed in spring. Photo taken November 11, 2022.



Data Station 2a: Soils consist of fill. Photo taken November 11, 2022.



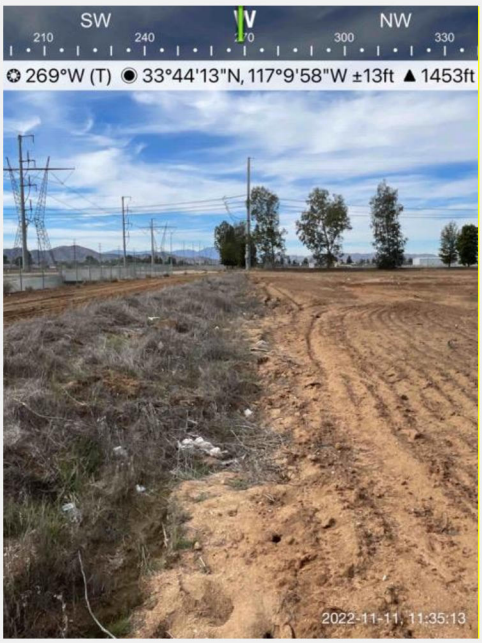
Data Station 2b: Soils consist of fill. Photo taken November 11, 2022.

Attachment C

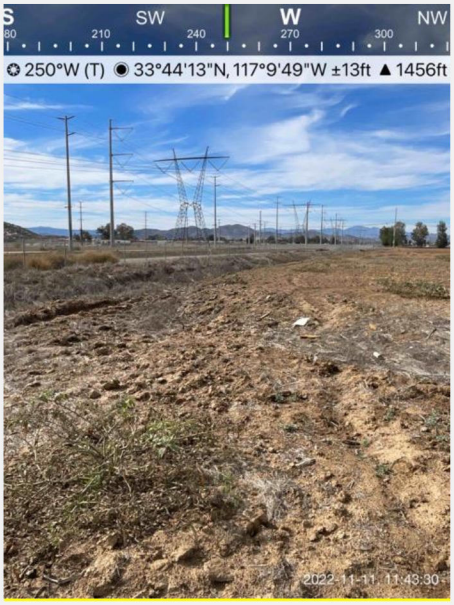
Site Photographs



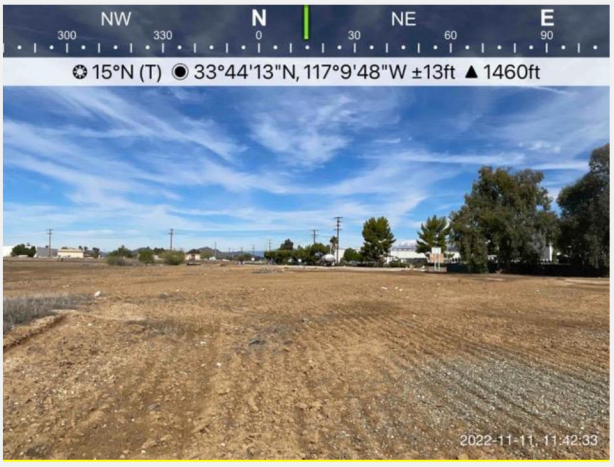
Location 1. View of developed area in the northwest portion of the project site, facing south. Photo taken November 11, 2022.



Location 2. View of swale from the southwestern portion of the project site, facing west. Photo taken November 11, 2022.



Location 3. Additional view of swale with the disturbed vegetation community in the foreground, facing west-southwest. Photo taken November 11, 2022.



Location 4. View of disturbed habitat (i.e., plowed/razed land), facing north. Photo taken November 11, 2022.



Location 5. View of disturbed vegetation from the eastern portion of the project site, facing west. Photo taken November 11, 2022.



Location 6. Additional view of disturbed vegetation from the eastern portion of the project site, facing northwest. Photo taken November 11, 2022.



Location 7. View of vernal pool in the northwestern portion of the project site, facing west. Photo taken May 29, 2023.



Location 8. View of the developed portion of the property in the northwestern portion of the project site. Photo taken May 29, 2023.



Location 9. Additional view of developed area in northwestern portion of the project site. Photo taken May 29, 2023.



Location 10. Additional view of developed area in northwestern portion of the project site. Photo taken May 29, 2023.



Location 11. Close view of vernal pool in northwestern portion of the project site. Photo taken May 29, 2023.



Location 12. Additional view of vernal pool in the northwestern portion of the study area. Photo taken May 29, 2023.

Attachment D

Vascular Plant Species

Angiosperms: Eudicots

AMARANTHACEAE – AMARANTH FAMILY

* *Amaranthus albus* – white tumbleweed

ASTERACEAE – SUNFLOWER FAMILY

Ambrosia acanthicarpa – annual bur-sage
Ambrosia psilostachya – western ragweed
Baccharis salicifolia ssp. *salicifolia* – mulefat, seep-willow
Deinandra paniculata – San Diego tarplant
Erigeron canadensis – horseweed
Helianthus annuus – western sunflower
Psilocarphus tenellus – slender woolly-marbles
Xanthium strumarium – cocklebur

* *Centaurea melitensis* – tocalote
* *Dittrichia graveolens* – stinkwort
* *Lactuca serriola* – prickly lettuce
* *Oncosiphon piluliferum* – stinknet

BORAGINACEAE – BORAGE FAMILY

Amsinckia intermedia – rancher's fiddleneck
Heliotropium curassavicum var. *oculatum* – salt heliotrope

BRASSICACEAE – MUSTARD FAMILY

* *Hirschfeldia incana* – short-pod mustard

CHENOPODIACEAE – GOOSEFOOT FAMILY

* *Chenopodium album* – lamb's quarters
* *Salsola tragus* – prickly russian-thistle, tumbleweed

EUPHORBIACEAE – SPURGE FAMILY

Croton setiger – doveweed

FABACEAE – LEGUME FAMILY

* *Parkinsonia aculeata* – Mexican palo verde

GERANIACEAE – GERANIUM FAMILY

* *Erodium cicutarium* – red-stem filaree/storksbill

MALVACEAE – MALLOW FAMILY

* *Malva parviflora* – cheeseweed

POLYGONACEAE – BUCKWHEAT FAMILY

* *Polygonum aviculare* – common knotweed, doorweed

SOLANACEAE – NIGHTSHADE FAMILY

Datura wrightii – western jimson weed

TAMARICACEAE – TAMARISK FAMILY

* *Tamarix ramosissima* – saltcedar

Angiosperms: Monocots

POACEAE – GRASS FAMILY

* *Br*omus diandrus – ripgut grass
* *Bromus hordeaceus* – soft chess
* *Polypogon monspeliensis* – annual beard grass
* *Bromus rubens* – foxtail chess, red brome
* *Hordeum murinum* – barley

* signifies introduced (non-native) species

Attachment E
Wildlife Species

Amphibians

Toads

PELOBATIDAE – SPADEFOOTS

Spea hammondii – western spadefoot

Birds

Blackbirds, Orioles and Allies

ICTERIDAE – BLACKBIRDS

Agelaius phoeniceus – red-winged blackbird

Sturnella neglecta – western meadowlark

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

Sayornis saya – Say's phoebe

Tyrannus verticalis – western kingbird

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Corvus corax – common raven

Mockingbirds and Thrashers

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Mimus polyglottos – northern mockingbird

Shorebirds

CHARADRIIDAE – LAPWINGS AND PLOVERS

Charadrius vociferus – killdeer

Waterfowl

ANATIDAE – DUCKS, GEESE, AND SWANS

Anas platyrhynchos – mallard

Wood Warblers and Allies

PARULIDAE – WOOD-WARBLERS

Setophaga coronata – yellow-rumped warbler

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Zonotrichia leucophrys – white-crowned sparrow

Invertebrates

Fairy Shrimp

BRANCHINECTIDAE – FAIRY SHRIMP

Branchinecta lindahli – versatile fairy shrimp

Mammals

Canids

CANIDAE – WOLVES AND FOXES

Canis latrans – coyote

Hares and Rabbits

LEPORIDAE – HARES AND RABBITS

Lepus californicus – black-tailed jackrabbit

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

Attachment F

Special-Status Plant Species Detected or Potentially Occurring in the Study Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, coastal scrub, desert dunes; Sandy/annual herb/(Jan.) Mar.–Sep./245–5,245	Not expected to occur. No suitable vegetation present. No chaparral sand verbena was observed during rare plant surveys. The site is highly disturbed. The closest collection is near Hemet, California (Calflora 2023; CCH 2023).
Allium marvinii	Yucaipa onion	None/None/1B.2	Chaparral (clay, openings)/ perennial bulbiferous herb/ Apr.–May/2,490–3,490	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present. Yucaipa onion was not observed during rare plant surveys. The site is highly disturbed. The closest collection is near Wildomar in the mountain habitat (Calflora 2023; CCH 2023).
Allium munzii	Munz's onion	FE/ST/1B.1	Chaparral, cismontane woodland, Coastal scrub, pinyon and juniper woodland, valley and foothill grassland; clay, mesic/perennial bulbiferous herb/Mar.–May/ 975–3,510	Not expected to occur. Munz's onion was not observed during rare plant survey or the vernal pool habitat assessment. The site is highly disturbed. The closest collection is near Diamond Valley Lake (Calflora 2023; CCH 2023).
Almutaster pauciflorus	alkali marsh aster	None/None/2B.2	Meadows and seeps; alkaline/ perennial herb/June–Oct./ 785–2,620	Not expected to occur. No suitable vegetation present. Alkali marsh aster was not observed during rare plant surveys or vernal pool assessment. One alkali marsh aster has been documented in Riverside County in 1937 near Temecula, California (Calflora 2023; CCH 2023).
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1	Chaparral, coastal scrub, valley and foothill grassland, Vernal pools; alkaline (sometimes), clay (sometimes), disturbed areas (often), loam (sometimes), sandy (sometimes)/perennial rhizomatous herb/Apr.–Oct./ 65–1,360	Not expected to occur. San Diego ambrosia was not observed during rare plant surveys or the vernal pool habitat assessment. The closest collection is north of Lake Elsinore, California (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Amsinckia douglasiana	Douglas' fiddleneck	None/None/4.2	Cismontane woodland, valley and foothill grassland; dry/annual herb/Mar.–May/0–6,395	Not expected to occur. Douglas' fiddleneck was not observed during rare plant surveys or the vernal pool assessment. No collections have been documented near the project site. The closest documented collection is near Wildomar, California (Calflora 2023; CCH 2023). In addition, the site is highly disturbed.
Arctostaphylos rainbowensis	rainbow manzanita	None/None/1B.1	Chaparral/perennial evergreen shrub/Dec.–March/675–2,195	Not expected to occur. No suitable vegetation present. The closest collection is near Temecula, California (Calflora 2023; CCH 2023).
Astragalus pachypus var. *jaegeri*	Jaeger's milk-vetch	None/None/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; rocky (sometimes), sandy (sometimes)/perennial shrub/Dec.–June/1,195–3,195	Not expected to occur. Jaeger's milk vetch was not observed during rare plant surveys or the vernal pool assessment. No Astragalus species were observed on site. The closest documented collection is east of Hemet, California (Calflora 2023; CCH 2023)
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE/None/1B.1	Playas, valley and foothill grassland (mesic), vernal pools; alkaline/annual herb/Apr.–Aug./ 455–1,640	Not expected to occur. San Jacinto Valley crownscale was not observed during rare plant surveys or the vernal pool assessment. The site is highly disturbed. The site is not highly alkaline. Documented collections occur closer to Nuevo in alkaline habitat (Calflora 2023; CCH 2023).
Atriplex parishii	Parish's brittlescale	None/None/1B.1	Chenopod scrub, playas, vernal pools; alkaline/annual herb/ June–Oct./80–6,230	Not expected to occur. Parish's brittlescale was not observed during rare plant surveys. The site is highly disturbed. The site is not alkaline. The closest collection is northeast of Double Butte Mountain (Calflora 2023; CCH 2023).
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, coastal scrub; alkaline/annual herb/Apr.–Oct./ 35–655	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present. The site is not alkaline. The closest collection is near Winchester, California (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Ayenia compacta	California ayenia	None/None/2B.3	Mojavean desert scrub, Sonoran desert scrub; rocky/perennial herb/Mar.–Apr./490–3,590	Not expected to occur. No suitable vegetation present. The closest collection is north of Lake Elsinore and was collected in 1929 (Calflora 2023; CCH 2023).
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub; gravelly (sometimes), sandy (sometimes)/perennial evergreen shrub/(Feb.) Mar.–June/ 230–2,705	Not expected to occur. No suitable vegetation present. The site is too disturbed. The closest collection is near Vail Lake (Calflora 2023; CCH 2023).
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; clay (often)/perennial bulbiferous herb/Mar.–June/80–3,670	Not expected to occur. Thread-leaved brodiaea was not observed during rare plant surveys or the vernal pool assessment. A rare plant reference check was performed on May 10 and May 17, 2023, and on both dates thread-leaved brodiaea was in full bloom (Socalrare_plants 2022).
Brodiaea santarosae	Santa Rosa Basalt brodiaea	None/None/1B.2	Valley and foothill grassland/ perennial bulbiferous herb/ May–June/1,850–3,425	Not expected to occur. The site is outside of the species' known elevation range. The closest collection is near Wildomar Campground (Calflora 2023; CCH 2023).
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial bulbiferous herb/(Feb.) Mar.–June/50–2,295	Not expected to occur. The habitat is highly disturbed onsite. Catalina mariposa lily requires minimally disturbed habitat.
Calochortus plummerae	Plummer's mariposa-lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland; granitic, rocky/ perennial bulbiferous herb/ May–July/330–5,575	Not expected to occur. The habitat is highly disturbed on site. Plummer's mariposa lily requires minimally disturbed habitat.
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; rocky/ perennial bulbiferous herb/ May–July/345–2,805	Not expected to occur. The habitat is highly disturbed on site. Intermediate mariposa lily requires minimally disturbed habitat.

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Carex buxbaumii	Buxbaum's sedge	None/None/4.2	Bogs and fens, marshes and swamps, meadows and seeps (mesic)/perennial rhizomatous herb/Mar.–Aug./10–10,825	Not expected to occur. No suitable vegetation present. No Carex species were observed onsite.
Caulanthus simulans	Payson's jewelflower	None/None/4.2	Chaparral, coastal scrub; granitic, sandy/annual herb/ (Feb.) Mar.–May (June)/ 295–7,215	Not expected to occur. No suitable vegetation present. The site is highly disturbed.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr.–Sep./ 0–2,095	Not expected to occur. Smooth tarplant survives well in disturbance. However, smooth tarplant was not observed during rare plant surveys or the vernal pool assessment. Smooth tarplant can easily be observed year-round. The closest documented collection is in Winchester, California (Calflora 2023; CCH 2023).
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2	Chaparral, coastal scrub, lower montane coniferous forest; granitic/annual herb/May–Aug./ 985–6,230	Not expected to occur. No suitable vegetation present. The site is highly disturbed. Peninsular spine flower was not observed during rare plant surveys.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; openings, rocky (sometimes), sandy (sometimes)/ annual herb/Apr.–June/ 900–4,000	Not expected to occur. The site is highly disturbed. Parry's spineflower was not observed during rare plant surveys.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; clay (often)/annual herb/ Apr.–July/100–5,015	Not expected to occur. The site is too highly disturbed. The site consists of sandy soils, and long-spined spineflower is more likely associated with clay soils. Long-spined spineflower was not observed during rare plant surveys. The closest collection is on Double Butte Mountain (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Clinopodium chandleri	San Miguel savory	None/None/1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; gabbroic (sometimes), rocky (sometimes)/perennial shrub/ Mar.–July/395–3,525	Not expected to occur. The site is too highly disturbed. San Miguel savory occurs in pristine habitat. The closest collection is west of Interstate 15 (Calflora 2023; CCH 2023). Gabbronic soils do not occur on site.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, seeps, serpentinite/annual herb/ Mar.–July/100–2,425	Not expected to occur. The site is too highly disturbed. Small-flowered morning glory is often associated with clay soils. The site consists of sandy soils. The closest locations are west of Interstate 215 (Calflora 2023; CCH 2023).
Cryptantha wigginsii	Wiggins' cryptantha	None/None/1B.2	Coastal scrub; clay (often)/annual herb/Feb.–June/65–900	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present. The site consists of sandy soils. No clay soils are present. The closest collection and only collection in Riverside County is south of Skinner Reservoir (Calflora 2023; CCH 2023).
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, valley and foothill grassland, vernal pools; sandy (sometimes), vernally mesic (usually)/annual herb/ (Mar.) Apr.–Nov./80–3,080	Observed throughout the site and mapped. Observed on both rare plant surveys November 11, 2022, and May 29, 2023. More were blooming in November when documented.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fans); sandy/annual herb/Apr.–June/ 655–2,490	Not expected to occur. No suitable vegetation present. The site is too highly disturbed. Slender-horned spineflower occurs in alluvial fans, which are not present on site. The closest collection occurs near Lake Elsinore (Calflora 2023; CCH 2023).
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; clay (often)/ perennial herb/Apr.–July/ 50–2,590	Not expected to occur. The site is too disturbed. Many-stemmed Dudleya requires pristine habitat. The closest collection is north of Lake Elsinore (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/1B.1	Coastal scrub, valley and foothill grassland, vernal pools; mesic/ annual/perennial herb/Apr.–June/ 65–2,030	Not expected to occur. San Diego button celery was not observed during rare plant surveys or during the vernal pool assessment.
Erythranthe diffusa	Palomar monkeyflower	None/None/4.3	Chaparral, lower montane coniferous forest; gravelly (sometimes), sandy (sometimes)/ annual herb/Apr.–June/ 4,000–6,000	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present.
Geothallus tuberosus	Campbell's liverwort	None/None/1B.1	Coastal scrub (mesic), vernal pools/ephemeral liverwort/ no bloom period/35–1,965	Not expected to occur. The site is disturbed. A rare plant survey was performed, and no liverworts were observed.
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	Chaparral, coastal scrub, valley and foothill grassland; clay, openings/annual herb/ Mar.–May/65–3,130	Not expected to occur. The site is too highly disturbed. The site consists of sandy soils, and Palmer's grapplinghook requires clay soils.
Hesperocyparis forbesii	Tecate cypress	None/None/1B.1	Chaparral, closed-cone coniferous forest; clay, gabbroic (sometimes)/ perennial evergreen tree/ no bloom period/260–4,920	Not expected to occur. No suitable vegetation present. Tecate cypress requires clay soils. The site consists of sandy soils. The closest collection is near San Mateo Peak (Calflora 2023; CCH 2023).
Holocarpha virgata ssp. *elongata*	graceful tarplant	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/annual herb/ May–Nov./195–3,605	Not expected to occur. Graceful tarplant was not observed during rare plant surveys. Graceful tarplant can tolerate some disturbance. However, no collections have been made near the site. Collections are west of Murrieta, California (Calflora 2023; CCH 2023).
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, coastal scrub, valley and foothill grassland (depressions, saline flats), vernal pools/annual herb/Mar.–June/ 15–3,280	Not expected to occur. Vernal barley was not observed during rare plant surveys. Most collections of vernal barley occur near Hemet, California. The closest collection is near Perris, California (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland/ perennial deciduous tree/ Mar.–Aug./165–2,950	Not expected to occur. No suitable vegetation present. Southern California black walnut was not observed during rare plant surveys.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt), meadows and seeps (alkaline seeps)/perennial rhizomatous herb/ (Mar.) May–June/10–2,950	Not expected to occur. No suitable vegetation present. Southwestern spiny rush was not observed during rare plant surveys.
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, meadows and seeps, Vernal pools/annual herb/Apr–July/ 985–6,690	Not expected to occur. No Juncus species were observed during rare plant surveys or vernal pool checks. The closest collection is near Monument Hill west of Interstate 15 (Calflora 2023; CCH 2023).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb.–June/5–4,000	Not expected to occur. Coulter's goldfields were not observed during rare plant surveys. The closest collection is near Egan, California (Calflora 2023; CCH 2023)
Lathyrus splendens	pride-of-California	None/None/4.3	Chaparral/perennial herb/ Mar.–June/655–5,000	Not expected to occur. No suitable vegetation present. No chaparral is present on site.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	Chaparral, coastal scrub/annual herb/Jan.–July/5–2,900	Not expected to occur. No suitable vegetation present.
Lilium humboldtii ssp. *ocellatum*	ocellated Humboldt lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, Lower montane coniferous forest, riparian woodland; openings/perennial bulbiferous herb/ Mar.–July (Aug.)/100–5,905	Not expected to occur. No suitable vegetation present. The site is too highly disturbed. The closest documented collection is northwest of Lake Elsinore close to Santiago Peak (Calfora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic/perennial bulbiferous herb/July–Aug./ 4,000–9,005	Not expected to occur. The site is outside of the species' known elevation range, and there is no suitable vegetation present. The closest collection is near Mt. San Jacinto State Park (Calflora 2023; CCH2023).
Limnanthes alba ssp. *parishii*	Parish's meadowfoam	None/SE/1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools; vernally mesic/annual herb/Apr.–June/1,965–6,560	Not expected to occur. The site is outside of the species' known elevation range. The closest collection is near Mt. San Jacinto State Park (Calflora 2023; CCH2023).
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	None/None/4.2	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/ annual herb/Mar.–May/50–3,510	Not expected to occur. The site is too disturbed. The soils on site are sandy. Small-flowered microseris requires clay soils. The closest collection is near the Perris airport (Calflora 2023; CCH 2023).
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	None/None/1B.3	Chaparral, cismontane woodland, Lower montane coniferous forest (sometimes)/perennial rhizomatous herb/Apr.–Sep/ 1,310–4,100	Not expected to occur. No suitable vegetation present. The closest collection is northwest of Lake Elsinore, California, in the Cleveland National Forest (Calflora 2023; CCH2023).
Myosurus minimus ssp. *apus*	little mousetail	None/None/3.1	Valley and foothill grassland, vernal pools (alkaline)/annual herb/Mar.–June/65–2,095	Not expected to occur. The site is not alkaline. Little mousetail was not observed during vernal pool surveys or rare plant surveys. Little mousetail is typically found within vernal pools. The closest collections are near Menifee Lakes (Calflora 2023; CCH 2023).
Nama stenocarpa	mud nama	None/None/2B.2	Marshes and swamps (lake margins, riverbanks)/annual/ perennial herb/Jan.–July/ 15–1,640	Not expected to occur. No suitable vegetation present. Mud nama was not observed during rare plant surveys or vernal pool surveys. The closest collection of mud name is east of Mystic Lake (Calflora 2023; CCH2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Navarretia fossalis	spreading navarretia	FT/None/1B.1	Chenopod scrub, marshes and swamps (shallow freshwater), playas, vernal pools/annual herb/Apr.–June/100–2,145	Not expected to occur. Spreading navarretia was not observed during vernal pool surveys. The closest collection is historical from 1998 near Menifee Lakes (Calflora 2023; CCH 2023).
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.2	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/ annual herb/Apr.–July/10–3,965	Not expected to occur. The project site is not alkaline. Prostrate vernal pool navarretia was not observed during rare plant surveys or the vernal pool studies. The closest collection is near the Santa Rosa Plateau South Trailhead (Calflora 2023; CCH 2023).
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/ Apr.–Aug./50–2,165	Not expected to occur. California Orcutt grass was not observed during rare plant surveys, vernal pool studies or vernal pool habitat assessment. The closest collections are near Menifee Lakes (Calflora 2023; CCH 2023).
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland; gravelly, sandy/perennial herb/ (July) Aug.–Nov. (Dec.)/0–6,885	Not expected to occur. No suitable vegetation present. White rabbit tobacco was not observed during rare plant surveys. The closest collections are near Alberhill and Temescal Valley, California (Calflora 2023; CCH 2023).
Quercus engelmannii	Engelmann oak	None/None/4.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/perennial deciduous tree/Mar.–June/ 165–4,265	Not expected to occur. Engelmann oak was not observed during rare plant surveys. Engelman oak can be observed year-round. No oak trees are present on site.
Romneya coulteri	Coulter's matilija poppy	None/None/4.2	Chaparral, coastal scrub; burned areas (often)/perennial rhizomatous herb/ Mar.–July (Aug.)/65–3,935	Not expected to occur. No suitable vegetation present. The closest collection is north of Lake Elsinore, California (Calflora 2023; CCH 2023).
Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	None/None/1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; mesic/perennial rhizomatous herb/June–Aug./1,390–6,560	Not expected to occur. No suitable vegetation present. The closest collection is west of Lake Elsinore, California (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Sibaropsis hammittii	Hammitt's clay-cress	None/None/1B.2	Chaparral (openings), valley and foothill grassland; clay/annual herb/Mar.–Apr./2,360–3,490	Not expected to occur. The site is outside of the species' known elevation range. Hammitt's clay cress occurs only in clay soils which are not found onsite. The site is too disturbed. Hammitt's clay cress requires pristine habitat.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/perennial herb/Mar.–June/50–5,015	Not expected to occur. No suitable vegetation present.
Sphaerocarpos drewiae	bottle liverwort	None/None/1B.1	Chaparral, coastal scrub; openings/ephemeral liverwort/ no bloom period/295–1,965	Not expected to occur. No suitable vegetation present.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland (vernally mesic); streambanks/perennial rhizomatous herb/July–Nov./ 5–6,690	Not expected to occur. San Bernardino aster was not observed during rare plant surveys. The site is too disturbed. Collections occur west of Interstate 215 (Calflora 2023; CCH 2023).
Texosporium sancti-jacobi	woven-spored lichen	None/None/3	Chaparral (openings)/crustose lichen (terricolous)/no bloom period/195–2,165	Not expected to occur. No suitable vegetation present. No lichen species were observed onsite. The site is too disturbed. Cryptogamic crusts were not present.
Tortula californica	California screw moss	None/None/1B.2	Chenopod scrub, valley and foothill grassland; sandy/moss// 35–4,790	Not expected to occur. No cryptogamic crusts were present during rare plant surveys. The site is too disturbed. The closest collection is near Ortega Falls (Calflora 2023; CCH 2023).
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	None/None/2B.1	Marshes and swamps, meadows and seeps, riparian forest, vernal pools; alkaline/annual herb/ May–Sep./15–1,425	Not expected to occur. Wright's trichocoronis was not observed during rare plant surveys or the vernal pool assessment. The closest collections of this species are near Perris Reservoir (Calflora 2023; CCH 2023).

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Viguiera laciniata	San Diego County viguiera	None/None/4.3	Chaparral, coastal scrub/perennial shrub/Feb.–June (Aug.)/ 195–2,460	Not expected to occur. No suitable vegetation present. San Diego county viguiera is rare in Riverside County. The only observation is west of Lake Elsinore, California. No collections have been made in Riverside County (Calflora 2023; CCH 2023).

Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SE: State listed as endangered
ST: State listed as threatened
CRPR: California Rare Plant Rank
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants about which more information is needed – A Review List
4: Plants of Limited Distribution – A Watch List
Threat Rank
0.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

References

Calflora. 2023. Calflora Search for Wild Plants. Accessed November 2023. https://www.calflora.org/.

CCH (Consortium of California Herbaria). 2023. CCH2 Data Portal. Accessed October 2023. https://www.cch2.org/portal/.

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Attachment G

Special-Status Wildlife Species Detected or Potentially Occurring in the Study Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and human-made pools if predatory fishes are absent	Not expected to occur. The site is approximately 200 miles south of the edge of this species' range in Central California.
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable vegetation present.
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. No suitable vegetation present.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Observed on site.**
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. No suitable vegetation present.
Reptiles				
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Arizona elegans occidentalis	California glossy snake	None/SSC	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	Not expected to occur. No suitable vegetation present.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable vegetation present.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. No suitable vegetation present.
Coleonyx variegatus abbotti	San Diego banded gecko	None/SSC	Rocky areas within coastal scrub and chaparral	Not expected to occur. No suitable vegetation present.
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. No suitable vegetation present.
Diadophis punctatus modestus	San Bernardino ring-necked snake	None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland	Not expected to occur. No suitable vegetation present.
Diadophis punctatus similis	San Diego ringneck snake	None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats	Not expected to occur. No suitable vegetation present.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No suitable vegetation present.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. No suitable vegetation present.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Low potential to occur. There is 1 occurrence within the nine 7.5-minute quadrangle search area, which is from 2001 and lies 12 miles south of the study area (CDFW 2023). The site is within this species' range, and it is a

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				fairly common species (CaliforniaHerps.com 2023). The fragmented and disturbed habitat makes their presence less likely.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No suitable vegetation present.
Accipiter striatus (nesting)	sharp-shinned hawk	None/WL	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	Not expected to occur. No suitable vegetation present.
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable vegetation present.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable vegetation present.
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No suitable vegetation present.
Ardea alba (nesting colony)	great egret	None/None	Nests and roosts in large trees over water or on islands, both in freshwater and marine estuarine habitats; forages in wetlands, including marshes, streams, ditches, and fish-rearing ponds, but also in irrigated pastures and croplands	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Ardea herodias (nesting colony)	great blue heron	None/None	Nests in large trees or snags; forages in wetlands, water bodies, watercourses, and opportunistically in uplands, including pasture and croplands	Low potential to occur. Habitat on site is fragmented and surrounded by urban development.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL	Nests and forages in coastal scrub and dry chaparral; typically, in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Low potential to occur. The nearest mapped occurrence is 3.3 miles west of the study area and is from 1999. Occurrences that are nearly as close are from approximately the same time. The habitat within the study area is a fragmented patch of disturbed land, and scrub and dry chaparral are not present.
Asio flammeus (nesting)	short-eared owl	BCC/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands	Not expected to occur. No suitable vegetation present.
Asio otus (nesting)	long-eared owl	None/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Not expected to occur. No suitable vegetation present.
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable vegetation present.
Aythya americana (nesting)	redhead	None/SSC	Nests in deep (>3 feet) permanent or semi-permanent wetlands of at least 1 acre; 75% open water; emergent tules, *Scirpus* spp., and *Typha* spp. 3 feet in height; winters in coastal estuaries and large, deep ponds, lakes, and reservoirs of the interior	Not expected to occur. No suitable vegetation present.
Aythya valisineria (nesting)	canvasback	None/None	Breeds in small lakes, deep-water marshes, alkali lake sheltered bays, permanent and semi-permanent ponds, sloughs, potholes, river impoundments; migrates in coastal marine and freshwater; winters in deep freshwater lakes, estuaries, and shallow bays	Not expected to occur. Suitably large habitat is not present on site.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Botaurus lentiginosus	American bittern	None/None	Nests in marshes with fairly tall freshwater vegetation (3–4 feet) and shallow water (less than 1 foot) near rivers, ponds, and lakes	Not expected to occur. No suitable vegetation present.
Branta bernicla (wintering and staging)	brant	None/SSC	Nesting habitat includes the edges of saltmarshes in the low Arctic region; migratory habitats include shallow marine lakes; winter range includes intertidal mudflats in shallow marine waters with abundant eelgrass and/or green algae	Not expected to occur. No suitable vegetation present.
Buteo regalis (wintering)	ferruginous hawk	None/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Not expected to occur. No suitable vegetation present.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. No suitable vegetation present.
Calypte costae (nesting)	Costa's hummingbird	BCC/None	Nests and forages in desert wash, edges of riparian and valley–foothill riparian, coastal scrub, desert scrub, desert succulent scrub, lower-elevation chaparral, and palm oasis	Low potential to occur. CNDDB returned no occurrences of this species. However, eBird shows observations within the vicinity of this site (eBird 2023a). On-site vegetation is disturbed and provides poor habitat.
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	None/SSC	Southern cactus scrub patches	Not expected to occur. No suitable vegetation present.
Chaetura vauxi (nesting)	Vaux's swift	None/SSC	Late-stage conifer forest and mixed-conifer/deciduous forest; nests in redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga* spp.), and other conifers, and occasionally buildings and chimneys	Not expected to occur. No suitable vegetation present.
Charadrius montanus (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Charadrius nivosus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren, or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable vegetation present.
Chlidonias niger (nesting colony)	black tern	BCC/SSC	Freshwater marsh with emergent vegetation; in the Central Valley primarily nests and forages in rice fields and other flooded agricultural fields with weeds and other residual aquatic vegetation	Not expected to occur. No suitable vegetation present.
Circus hudsonius (nesting)	northern harrier	BCC/SSC	Nests in open wetlands (marshy meadows, wet lightly grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Not expected to occur. No suitable vegetation present.
Cistothorus palustris clarkae	Clark's marsh wren	None/SSC	Nests and forages in freshwater and brackish marsh dominated by bulrushes and cattails	Not expected to occur. No suitable vegetation present.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable vegetation present.
Contopus cooperi (nesting)	olive-sided flycatcher	BCC/SSC	Nests in mixed-conifer, montane hardwood–conifer, Douglas-fir, redwood, red fir, and lodgepole pine habitats; usually close to water	Not expected to occur. No suitable vegetation present.
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	Not expected to occur. No suitable vegetation present.
Egretta thula (nesting colony)	snowy egret	None/None	Nests in dense marshes and trees; forages in wetlands or aquatic habitats, including estuaries, emergent wetlands, slow-moving rivers, irrigation ditches, and wet fields	Low potential to occur. One occurrence is mapped by CNDDB approximately 65 miles away at the north end of the Salton Sea. However, eBird shows the site to be within the range of this common species, though the on-site

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				nesting conditions are disturbed and of poor quality (eBird 2023b).
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No suitable vegetation present.
Empidonax traillii (nesting)	willow flycatcher	None/SE	Nests in wet meadow and montane willow riparian	Not expected to occur. No suitable vegetation present.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present.
Eremophila alpestris actia	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Not expected to occur. No suitable vegetation present.
Falco columbarius (wintering)	merlin	None/WL	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	Not expected to occur. No suitable vegetation present.
Falco mexicanus (nesting)	prairie falcon	None/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. No suitable vegetation present.
Falco peregrinus anatum (nesting)	American peregrine falcon	FPD/SCD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Low potential to occur. CNDDB returned no occurrences within 20 miles of the site (CDFW 2023). One observation is noted within 5 miles of the site: an individual in 2020 approximately 2.6 miles southeast of the study area (iNaturalist 2023). Site conditions are disturbed and poor for nesting.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur. No suitable vegetation present.
Hydroprogne caspia (nesting colony)	Caspian tern	None/None	Coastal estuarine, saltmarsh, and barrier islands; nests on islands in rivers and salt lakes	Not expected to occur. No suitable vegetation present.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable vegetation present.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Not expected to occur. No suitable vegetation present.
Larus californicus (nesting colony)	California gull	BCC/WL	Nests in alkali and freshwater lacustrine habitats; abundant in coastal and interior lowlands during non-nesting period	Not expected to occur. No suitable vegetation present.
Numenius americanus (nesting)	long-billed curlew	None/WL	Nests in grazed, mixed grass, and short-grass prairies; localized nesting along the California coast; winters and forages in coastal estuaries, mudflats, open grassland, and cropland	Not expected to occur. No suitable vegetation present.
Nycticorax nycticorax (nesting colony)	black-crowned night-heron	None/None	Nests in dense-foliaged trees and dense fresh or brackish emergent wetlands associated with marshes, ponds, reservoirs, and estuaries	Not expected to occur. No suitable vegetation present.
Pandion haliaetus (nesting)	osprey	BCC/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Not expected to occur. No suitable vegetation or bodies of water present.
Parabuteo unicinctus (nesting)	Harris' hawk	None/WL	Semi-open desert scrub, savanna, grassland, and wetland	Low potential to occur. Nesting habitat is poor on-site. No CNDDB occurrences were returned, but eBird shows the site to be within the species' range (CDFW 2023; eBird 2023c).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Pelecanus erythrorhynchos (nesting colony)	American white pelican	BCC/SSC	Nests colonially on sandy, earthen, or rocky substrates on isolated islands in freshwater lakes; minimal disturbance from predators; access to foraging areas on inland marshes, lakes, or rivers; winters on shallow coastal bays, inlets, and estuaries	Not expected to occur. Two CNDDB occurrences are mapped in the state, both near the Oregon/California border (CDFW 2023). Habitat within the study area is too small and fragmented for inland nesting.
Pelecanus occidentalis californicus (nesting colonies and communal roosts)	California brown pelican	FPD/SCD	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Not expected to occur. No coastal habitat present.
Piranga rubra (nesting)	summer tanager	None/SSC	Nests and forages in mature desert riparian habitats dominated by cottonwoods and willows	Not expected to occur. No suitable vegetation present.
Plegadis chihi (nesting colony)	white-faced ibis	None/WL	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. No suitable vegetation present.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable vegetation present.
Polioptila melanura	black-tailed gnatcatcher	None/WL	Nests and forages in wooded desert wash and desert scrub	Not expected to occur. No suitable vegetation present.
Pooecetes gramineus affinis (wintering)	Oregon vesper sparrow	BCC/SSC	Nests in sagebrush and other sparse shrub vegetation; winters in grassland and cropland	Not expected to occur. No suitable vegetation present.
Progne subis (nesting)	purple martin	None/SSC	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			Sacramento region often nests in weep holes under elevated freeways	
Pyrocephalus rubinus (nesting)	vermilion flycatcher	None/SSC	Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches, or pastures	Not expected to occur. No suitable vegetation present.
Selasphorus rufus (nesting)	rufous hummingbird	BCC/None	Does not nest in California; migrates through a wide variety of habitats including coastal scrub, valley–foothill hardwood, and valley–foothill riparian habitats, and residential areas with feeders	Not expected to occur. No suitable vegetation present.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation present.
Sphyrapicus ruber (nesting)	red-breasted sapsucker	None/None	Nests in montane riparian, aspen, montane hardwood–conifer, red fir; winters in woodlands, orchards, shade trees such as pepper (Schinus spp.) and poplar (Populus spp.)	Not expected to occur. No suitable vegetation present.
Spinus lawrencei (nesting)	Lawrence's goldfinch	BCC/None	Nests and forages in open oak, arid woodlands, and chaparral near water	Not expected to occur. No suitable vegetation present.
Spizella breweri (nesting)	Brewer's sparrow	None/None	Nests in treeless shrub habitat with moderate canopy, especially sagebrush; winters in open desert scrub and croplands in southern Mojave and Colorado Deserts	Not expected to occur. No suitable shrub or open desert scrub habitat present.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation present.
Xanthocephalus xanthocephalus (nesting)	yellow-headed blackbird	None/SSC	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			areas, croplands, and muddy shores of lacustrine habitat	
Nannopterum auritum (nesting colony)	double-crested cormorant	None/WL	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines; winter habitat includes lakes, rivers, and coastal areas	Not expected to occur. No suitable vegetation present.
Fish				
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. The study area does not contain suitable accessible aquatic habitat. One CNDDB occurrence is mapped from 1998, 15 miles south of the study area Temecula (CDFW 2023).
Mammals				
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Not expected to occur. No suitable vegetation present.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Not expected to occur. No suitable vegetation present.
Dasypterus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. No suitable vegetation present.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, SCE	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Not expected to occur. No suitable vegetation present.
Dipodomys simulans	Dulzura kangaroo rat	None/None	Coastal scrub, chaparral, grassland at elevation <4,500 feet above mean sea level	Not expected to occur. No suitable vegetation present.
Dipodomys stephensi	Stephens' kangaroo rat	FT/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. No suitable vegetation present.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	**Observed on site.**
Lynx rufus pallescens	pallid bobcat	None/None	Wide range of habitats; areas with broken, rocky terrain and/or dense brush	**Moderate potential to occur.** Rocky terrain and dense brush are not present on site, and CNDDB returned no occurrences, but this species can hold a large home range and variety of habitats (CDFW 2023).
Myotis yumanensis	Yuma myotis	None/None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. The nearest CNDDB occurrence is from 1997 and is approximately 19 miles west of the site. Suitable roosting habitat is not present, and foraging habitat on-site is poor due to surrounding urbanization and site disturbance (CDFW 2023).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable vegetation present.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. No suitable vegetation present.
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Not expected to occur. No suitable vegetation present.
Perognathus longimembris internationalis	Jacumba pocket mouse	None/SSC	Desert scrub and sparse sage scrub in areas with fine sandy soils	Not expected to occur. No suitable vegetation present.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable vegetation present.
Insects and Arachnids				
Bombus crotchii	Crotch bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	Low potential to occur. One CNDDB occurrence is from 2020 and mapped approximately 3 miles to the northwest of the site. Another is from 2001 and mapped approximately 5.5 miles southwest of the site. All other occurrences within 10 miles are over 40 years old (CDFW 2023).
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Low potential to occur. The study area contains suitable vernal pool habitat. However, the nearest mapped CNDDB occurrence is 6.3 miles east of the study area and was observed in 2005. Other occurrences are 12 miles or more from the study area (CDFW 2023). Targeted fairy shrimp surveys were conducted, and this species was not observed.
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Low potential to occur. One mapped CNDDB occurrence lies within the nine 7.5-minute quadrangle area. This is from 2017 and is 9.5 miles south of the study area. This occurrence is noted as a transplant outside of its native habitat/range (CDFW 2023). Targeted

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				fairy shrimp surveys were conducted, and this species was not observed.
Cicindela senilis frosti	senile tiger beetle	None/None	Inhabits marine shoreline, from central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	Not expected to occur. No suitable vegetation present.
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta*, *P. patagonica*, and *Antirrhinum coulterianum*, among others	Not expected to occur. No suitable vegetation present.
Linderiella occidentalis	California linderiella	None/None	Cool soft-water vernal pools in grasslands below 1,000 feet above mean sea level	Low potential to occur. The CNDDB search returned two occurrences from 1988, which are 14 and 17 miles south of the study area (CDFW 2023).
Linderiella santarosae	Santa Rosa Plateau fairy shrimp	None/None	Seasonal basalt vernal pools with clear to milky waters	Low potential to occur. The CNDDB search returned two occurrences from 2008 and 2009, 14 miles and 17 miles south of the project site (CDFW 2023). Targeted fairy shrimp surveys were conducted, and this species was not observed.
Neolarra alba	white cuckoo bee	None/None	Known only from 6 historical localities in Southern California; has not been collected since 1946	Not expected to occur. This only recorded observation of this species within the search area was at one site in 1938. This occurrence was 5 miles northwest of the study area (CDFW 2023).
Socalchemmis icenoglei	Icenogle's socalchemmis spider	None/None	Known only from the type locality in the vicinity of Winchester, Riverside County	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Low potential to occur. The nearest CNDDB occurrence is 4 miles south of the study area, recorded in 2004 (CDFW 2023).

Notes: CNDDB = California Natural Diversity Database.
Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
FPD: Federally proposed for delisting
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
State
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State listed as endangered
ST: State listed as threatened
SCE: State candidate for listing as endangered
SCD: State candidate for delisting

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