

# **APPENDIX C**

## ***Biological Resources Technical Report***





June 7, 2019

10624

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**Subject:** *Biological Resources Technical Report and MSHCP Consistency Analysis for the Kaiser Permanente Moreno Valley Medical Center Master Plan Project, City of Moreno Valley, Riverside County, California*

Dear Mr. Denniston:

This biological resources technical report documents the existing biological conditions for the Kaiser Permanente Moreno Valley Medical Center property located at 27300 Iris Avenue, Moreno Valley, California. The property is comprised of 30 acres that is currently developed with a 130,000 square-foot 100-bed hospital, two medical office buildings totaling approximately 89,500 square feet, a central energy center, modular trailers/conference rooms, and surface parking. The proposed project involves a series of phases to achieve ultimate buildout of the hospital campus through the year 2038. Assessor Parcel Numbers (APN) for the project site are: 486-310-023 and -024. Portions of these APNs will be developed and redeveloped as part of the proposed project. This report includes a discussion of the biological resources observed on the project site, an analysis of potential impacts to sensitive biological resources as a result of project implementation, and recommendations to avoid or minimize impacts below a level of significance.

The project site is also located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Therefore, this report also describes the consistency of the project with the requirements of the MSHCP administered by the Regional Conservation Authority (RCA). The biological significance of these resources and potential project impacts are evaluated, and measures are recommended to avoid, minimize, or mitigate potential impacts to less-than-significant levels.

## 1 Project Location

The project site is located within the city of Moreno Valley, generally east of Interstate 215 (I-215), south of State Route 60 (SR-60), and north of Lake Perris (Attachment A: Figure 1). The project site is specifically located on the north side of Iris Avenue, west of Oliver Street, and east of Nason Street at 27300 Iris Avenue, Moreno Valley California, 92555. For the purpose of this report, the area investigated included the entire approximately 30-acre project site, plus a 100-foot buffer around the project site boundary, for a total of 43.4 acres that will comprise the study area. The study area for the proposed project accounts for both on-site and off-site biological resources that may be impacted by the proposed project.

The study area is currently comprised of approximately 30 acres of developed land with a 130,000 square-foot 100-bed hospital, two medical office buildings totaling approximately 89,500 square feet, a central energy center, modular trailers/conference rooms, and surface parking. The general vicinity surrounding the study area contains a mix of residential development and previously disturbed but undeveloped land. Single-family residential development occurs to the south, east, and west of the hospital. Iris Avenue forms the southern boundary, and an undeveloped disturbed lot surrounds the hospital on the northern, eastern, and western boundaries. Undeveloped open space occurs to the northwest.

## 2 Project Description

Kaiser Foundation Hospitals (also known as Kaiser Permanente) is proposing to expand the existing Kaiser Permanente Moreno Valley Medical Center campus. The proposed project would be a multiphased, state-of-the-art medical center campus, which would include the following at ultimate project buildout: an approximately 460-bed hospital, hospital support buildings, outpatient medical office buildings, an energy center, and surface and structured parking (approximately 1,125,000 square feet).

The project would be developed in up to three phases, with the first phase (Phase I) to be evaluated at the project level. Phase I, which would occur beginning in 2020 and completing construction in approximately 2023, and would include the following components (Attachment A: Figure 2-1):

- Construction of an approximately 95,000-square-foot expansion of the existing hospital for a Diagnostic and Treatment building
- Construction of an approximately 22,000-square-foot Energy Center

Phases II and III will be analyzed at a programmatic level. Phase II, which would occur beginning in 2026 and completing construction in approximately 2032 and would include the following components (Attachment A: Figure 2-2):

- Construction of a new hospital tower with approximately 220 beds
- An approximately 380,000 square foot expansion of the Diagnostic and Treatment building constructed in Phase I
- New 65,000 square foot outpatient medical office building
- An approximately 8,000 square foot expansion of the Energy Center constructed in Phase I
- Two new multi-level parking structures with a total of 1,800 new parking spaces

Phase III, which would occur beginning in 2032 and completing construction in approximately 2038, and would include the following components (Attachment A: Figure 2-3):

- Demolition, replacement and expansion of the existing hospital tower to accommodate an additional approximately 240 beds (approximately 375,000 square feet)

- Construction of a new approximately 95,000 square foot outpatient medical office building
- Construction of a third multi-level parking structure with a total of approximately 600 parking spaces

This biological resources technical report will provide a general assessment of biological conditions on the entire study area that includes all three Phases, and will analyze potential project-level impacts to biological resources resulting from implementation of Phase I. For Phases II and III, this report will provide a general assessment of potential impacts and provide a framework of how impacts and mitigation will be addressed in the future when those components of the project are submitted to the City for consideration.

### 3 Project Site Relationship to the MSHCP

The project site is within the boundaries of the MSHCP. A geographic information system (GIS) overlay of MSHCP data with the project site boundary shows that the project site lies within the Reche Canyon/Badlands Plan Area, but outside any Criteria Cells (Figure 3). The entire project site occurs within a mandatory survey area for burrowing owl (*Athene cunicularia*), which requires suitable habitat determinations and possible focused surveys to determine presence or absence of the species. The project site is not located within the MSHCP Survey Areas for Narrow Endemic Plants, mammals, amphibian, or criteria area species. Additionally, the project site does not occur within any designated Core areas, Linkages, or Habitat Blocks mapped by the MSHCP.

## 4 Regulatory Setting

### 4.1 Federal

#### 4.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 U.S.C. 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under FESA, it is unlawful to “take” any listed species, and “take” is defined as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of Habitat Conservation Plans (HCPs) on private property without any other federal agency involvement.

#### 4.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the “indiscriminate slaughter” of migratory birds by market hunters and others. The MBTA protects over 800 species of birds (including their parts, eggs, and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted.

### 4.2 State

#### 4.2.1 State of California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by the project applicant from the California Department of Fish and Wildlife (CDFW) under the CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. Where a take of a listed species is proposed, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

#### 4.2.2 California Native Plant Protection Act

The Native Plant Protection Act of 1977 directed the CDFW to carry out the Legislature's intent to “preserve, protect and enhance rare and endangered plants in this State.” The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as “endangered” or “rare” and protect endangered and rare plants from take. The CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the Fish and Game Code. To align with federal regulations, the CESA created the categories of “threatened” and “endangered” species. It converted all “rare” animals into the act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the CESA, any mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

#### 4.2.3 Other Sections of the California Fish and Game Code

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the “take” of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of the CDFW to maintain viable populations of all native species. Toward that end, the CDFW has designated certain vertebrate

species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

#### 4.2.4 California Environmental Quality Act

California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the FESA, CESA, and other Fish and Game Code provisions, and includes lists developed by other organizations, including for example the Audubon Watch List Species. Guidance documents prepared by other agencies, including the BLM Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species included on the California Native Plant Society's (CNPS's) California Rare Plant Rank (CRPR) List 1 and 2, and potentially some List 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

### 4.3 Local

#### 4.3.1 Moreno Valley General Plan

The Moreno Valley General Plan was approved in 2006 and includes the long-term strategy for the physical development of the city. It determines how land may be used and the infrastructure and public services that are needed or desired by the community. The Moreno Valley General Plan is a reflection of what the community considers necessary to create a safe, healthful, prosperous and desirable place to live, work and play. Chapter 7 of the General Plan (Conservation) provides goals and policies for the conservation and protection of native habitats and biological resources within the city. The following goals and policies pertain to the proposed project and will be adhered to during construction of the proposed project.

Goal 7.1: To achieve the wise use of natural resources within the City of Moreno Valley, its sphere of influence and planning area.

**Objective 7.1 Minimize erosion problems resulting from development activities.**

Policies:

7.1.1 Require that grading plans include appropriate and feasible measures to minimize erosion, sedimentation, wind erosion and fugitive dust.

7.1.2 Circulation patterns within newly developing portions of Moreno Valley, particularly in hillside areas, should follow natural contours to minimize grading.

**Objective 7.2 Maintain surface water quality and the supply and quality of groundwater.**

Policies:

7.2.1 New development may use individual wells only where an adequate supply of good quality groundwater is available.

7.2.2 The City shall comply with the provisions of its permit(s) issued by the Regional Water Quality Control Board for the protection of water quality pursuant to the National Pollutant Discharge Elimination System.

7.2.3 In concert with the water purveyor identify aquifer recharge areas and establish regulations to protect recharge areas and regulate new individual wells.

**Objective 7.4 Maintain, protect, and preserve biologically significant habitats where practical, including the San Jacinto Wildlife Area, riparian areas, habitats of rare and endangered species, and other areas of natural significance.**

Policies:

7.4.1 Require all development, including roads, proposed adjacent to riparian and other biologically sensitive habitats to provide adequate buffers to mitigate impacts to such areas.

7.4.2 Limit the removal of natural vegetation in hillside areas when retaining natural habitat does not pose threats to public safety.

7.4.3 Preserve natural drainage courses in their natural state and the natural hydrology, unless the protection of life and property necessitate improvement as concrete channels.

7.4.4 Incorporate significant rock formations into the design of hillside developments.

7.4.5 The City shall fulfill its obligations set forth within any agreement(s) and permit(s) that the City may enter into for the purpose of implementing the Western Riverside County Multispecies Habitat Conservation Plan.

#### 4.3.2 City of Moreno Valley Tree Management Policy

Ordinance No. 923 of the City of Moreno Valley amends the municipal code to add chapter 14.40 adopting regulations for the planting and maintenance of trees within the city. Public right-of-way and Park Trees shall be maintained by the responsible party or entity. For the City of Moreno Valley, the responsibility and authority for public tree care shall be vested with the Public Works and Parks and Community Services Departments. It is unlawful for any person to cause Tree Topping to any Street Tree, Park Tree, or other tree on public property. It is also unlawful for any person to vandalize or damage any parkway tree, public right-of-way tree, or park tree, or violate any provision contained in the Ordinance with regard to such trees. Any violation of this Ordinance shall be punishable by a fine not to exceed \$1,000.00. Trees severely damaged by storms or other causes, or certain trees under utility wires or other obstructions where other pruning practices are impractical may be subject to Tree Topping at the discretion of the City.

#### 4.3.2 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional 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 will allow Riverside County and its cities, including the City of Moreno Valley, 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 an HCP pursuant to Section 10(a)(1)(B) of FESA (16 U.S.C. 1531 et seq.), as well as a Natural Communities Conservation Plan (NCCP) 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 USFWS and 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 MSHCP is a “criteria-based plan” and does not rely on a hardline preserve map. Instead, within the MSHCP area, the MSHCP reserve will be assembled over time from a smaller subset of the Plan Area referred to as the Criteria Area. The Criteria Area consists of Criteria Cells (Cells) or Cell Groupings, and flexible guidelines (Criteria) for the assembly of conservation within the Cells or Cell Groupings. Cells and Cell Groupings also may be included within larger units known as Cores, Linkages, or Non-contiguous Habitat Blocks.

#### Western Riverside MSHCP Mitigation Fee

In order to implement to 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 development mitigation fee is necessary in order 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 development mitigation fee assists in the maintenance of biological diversity and protects vegetation communities which are known to support threatened, endangered or sensitive populations of plant and wildlife species.

## 5 Methods

Data regarding biological resources present within the study area were obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and focused surveys, which are described in detail below.

For purposes of this report, special-status resources are defined as follows:

Special-status plant species include (1) species designated as either rare, threatened, or endangered by the CDFW or USFWS and are protected under either the California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.) or federal Endangered Species Act (FESA) (16 U.S.C. 1531 et seq.); (2) species that are candidate species being considered or proposed for listing under CESA or FESA; (3) species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2018) or species with a California Rare Plant Rank (CRPR) of 1 or 2 in the CNPS Inventory of Rare and Endangered Plants of California; and (4) Narrow Endemic Plant Species and Criteria Area Species as defined by the MSHCP.

Special-status wildlife species include (1) species designated as either rare, threatened, or endangered by the CDFW or USFWS and are protected under either the California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.) or federal Endangered Species Act (FESA) (16 U.S.C. 1531 et seq.); (2) species that are candidate species being considered or proposed for listing under CESA or FESA; (3) species that are included on the CDFW Special Animals List (CDFW 2018); (4) species with additional survey requirements under the MSHCP.

Special-status vegetation communities are those designated as sensitive by CDFW or those that provide habitat for special-status species.

### 5.1 Literature Review

Prior to field surveys, special-status biological resources present or potentially present within the project site were identified through queries of the CNDDDB (CDFW 2019), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants (CNPS 2019), MSHCP species occurrence data (County of Riverside 2003), and USFWS occurrence data (USFWS 2019). The CNPS Inventory was queried based on the USGS 7.5-minute quadrangle on which the project site is located (Sunnymead) and the eight surrounding quadrangles (San Bernardino South, Redlands, Yucaipa, Riverside East, El Casco, Steele Peak, Perris, and Lakeview) (i.e., 9-quad search). The remaining databases were queried using GIS software based on a 10-mile buffer around the project site.



## 5.2 Soil Survey Review

According to the Natural Resource Conservation Service (NRCS) Web Soil Survey (USDA 2019a), the study area occurs within the Western Riverside Area, California (Version 11, September 12, 2018). Five soil types are mapped within the study area: Gorgonio loamy sand, deep, 2% to 8% slopes; Greenfield sandy loam, 2% to 8% slopes, eroded; Hanford coarse sandy loam, 2% to 8% slopes; and San Emigdio loam, 0% to 2% slopes, and 2% to 8% slopes (Attachment A: Figure 3).

Gorgonio soils consist of gravelly loamy fine sand, and somewhat stratified. Gorgonio soils commonly occur in Riverside County on nearly level to moderate slopes and alluvial fans.

Greenfield soils consist of deep, well-drained soils formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield soils typically occur on fans and terraces with slopes ranging from 0 to 30 percent.

Hanford soils consist of very deep, well-drained soils formed in moderately coarse textured alluvium dominantly from granite. Hanford soils typically occur on stream bottoms, floodplains, and alluvial fans with slopes ranging from 0 to 15 percent.

San Emigdio soils consist of very deep, well-drained soils formed in dominantly sedimentary alluvium. San Emigdio soils commonly occur in Riverside County on alluvial fans, floodplains, and in narrow valleys with slopes ranging from 0 to 15 percent. No soils mapped within the study area are listed as a hydric soil by the NRCS for the Western Riverside Area, California (USDA 2019b).

## 5.3 National Wetlands Inventory Review

A review of the National Wetland Inventory (NWI) dataset revealed there is one wetland type, riverine habitat, mapped within the southern portion of the study area, and is classified as riverine, intermittent, streambed, seasonally flooded wetlands (R4SBC) (USFWS 2019b). This mapped wetland feature historically drained a local watershed from the south towards the project site, but was piped underground during construction of the residential development and Iris Avenue to the south of the project site. Two freshwater ponds are mapped approximately 420 feet to the north and approximately 460 feet to the west of the study area, and both are classified as palustrine, unconsolidated bottom, artificially flooded wetlands (PUBK). One riverine feature is mapped approximately 410 feet to the northwest of the study area, and is classified as riverine, intermittent, streambed, temporarily flooded wetlands (R4SBA).

## 5.4 Biological Reconnaissance

Dudek biologist Tommy Molioo conducted a general biological reconnaissance of the study area on December 20, 2018. The survey was conducted from 0900 to 1200; weather conditions were favorable with clear skies, wind speeds from 0 to 2 miles per hour, and a temperature of 70° Fahrenheit (°F) at the beginning of the survey and rising to 75°F by the end of the survey. All native and naturalized plant species encountered in the study area were identified and recorded. The potential for special-status plant and wildlife species to occur within the study area was evaluated based on the vegetation communities and soils present. Dudek used CDFW's *Protocols for Surveying*

and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009) and List of Vegetation Alliances and Associations (CDFW 2010), also referred to as the Natural Communities List, to map the entire study area. Vegetation communities and land covers were delineated to the vegetation alliance level and, where appropriate, the association level. Some modifications, such as the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986, and Oberbauer update 2008), were incorporated to accommodate the lack of conformity of the observed communities to those included in these references.

#### 5.4.1 Vegetation Communities and Land Covers

Vegetation communities and land covers were mapped in the field directly onto 100-scale (1 inch = 100 feet) topographic or aerial photographic base and later digitized into a GIS format using ArcGIS. Vegetation communities used in this report follow the MSHCP uncollapsed vegetation community classifications (County of Riverside 2003).

#### 5.4.2 Plants

The plant species encountered during the field survey were identified and recorded directly into a field notebook. Samples of those species that could not be identified immediately were brought into the laboratory for further investigation. A compiled list of plant species observed in the Project Alternatives study area is presented in Appendix A, Plant Compendium. Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) follow the CNPS *On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2018). For plant species without a CRPR, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2018) and common names follow the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2018b).

##### 5.4.2.1 Special-Status Plants Focused Surveys

The biological reconnaissance identified potentially suitable habitat to support several special-status plant species that may occur in grasslands, scrub, and disturbed habitats. Therefore, due to the presence of suitable habitat for special-status plant species, Anna Cassady conducted a focused plant survey of the project site on May 2, 2019. The survey occurred from 7:50 a.m. to 9:05 a.m. Temperature ranged from 54 to 62 degrees Fahrenheit, there was between 25 and 65 percent cloud cover, and winds ranged from 1-2 miles per hour.

Surveys for special-status species were conducted in conformance with the *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (CDFG 2009), *CNPS Botanical Survey Guidelines* (CNPS 2001), and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996). Surveys focused on the detection of white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), California satintail (*Imperata brevifolia*), crowned muilla (*Muilla coronata*), and salt spring checkerbloom (*Sidalcea neomexicana*).

Latin and common names for plant species with a California Rare Plant Rank (CRPR; formerly CNPS List) follow the *CNPS Online Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2015). For plant species without a CRPR, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and*

Naturalized Plants of California (Jepson Flora Project 2015), and common names follow the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2015).

Special-status plant observations were mapped in the field using a Global Positioning System (GPS) receiver or were mapped on maps with aerial photography to record the location of special-status plant populations. Special-status plant observations were downloaded and digitized using ArcGIS software. All plant locations and number of individuals or population estimates were recorded. All plant species encountered during the field surveys were identified and recorded for inclusion within a plant compendium (Attachment C).

### 5.4.3 Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other signs were recorded. Binoculars (10 x 50 power) were used to aid in the identification of observed wildlife throughout the project site. In addition to species actually detected, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area.

Latin and common names of animals follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU) (2017) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2016) or SDNHM (2002) for butterflies, and Moyle (2002) for fish.

#### 5.4.3.1 Burrowing Owl Focused Survey

To meet requirements in the MSHCP, a habitat assessment (Step I) was conducted during the December 20, 2018 visit to identify suitable habitat for burrowing owl (*Athene cunicularia*) within the project site and a 500-foot buffer. This assessment was conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (RCA 2006). Due to private properties, the 500-foot buffer was visually inspected with binoculars.

Due to the presence of suitable habitat, Dudek biologist Anna Cassady 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). The focused surveys were conducted between March through May 2019, Table 1 lists the dates and conditions of these surveys. The area surveyed on foot was limited to the project site boundary, as entry was not granted for adjacent parcels. All buffer areas were surveyed visually.

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. For a 500-foot buffer, only visual surveys were conducted as access to the privately owned parcels had not been granted. All burrows suitable for burrowing owl were mapped using a Global Positioning System (GPS) and then digitized using ArcGIS.

Dudek conducted a total of four focused burrowing owl surveys during March – May , 2019, which is within the burrowing owl breeding season (March 1–August 31). The burrowing owl survey area was based on mapped suitable habitat and presence of suitable burrows. The surveys were conducted when conditions were suitable for detecting owls (no rain, high winds (>20 miles per hour [mph]), dense fog, or temperatures over 90 degrees Fahrenheit [°F]).

Although there had been recent rainfall in the region, there were no rain events within 5 days prior to any of the burrowing owl surveys.

**Table 1**  
**Burrowing Owl Survey Information**

Date	Sunrise	Hours	Survey Type	Conditions (temperature, cloud cover, wind)
3/15/19	7:00 a.m.	7:15 a.m.–8:55 a.m.	BUOW 1, Burrow Mapping	41°F–52°F, 5% cc, 0–2 mph winds
4/2/19	6:34 a.m.	6:50 a.m.–8:15 a.m.	BUOW 2	50°F–58°F, 0%–40% cc, 1–2 mph winds
4/18/19	6:15 a.m.	5:55 a.m.–7:10 a.m.	BUOW 3	50°F, 5–10% cc, 0–1 mph winds
5/2/19	5:58 a.m.	6:25 a.m.–7:50 a.m.	BUOW 4	46°F–54°F, 25% cc, 1–2 mph winds

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

#### 5.4.4 Jurisdictional Wetlands and Waters

A formal jurisdictional waters delineation was completed by Dudek on March 4, 2019. The jurisdictional waters delineation was conducted in accordance with the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the federal Clean Water Act (CWA) as “waters of the United States,” including wetlands; CDFW pursuant to Section 1602 of the California Fish and Game Code; or the California Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the federal CWA and the Porter-Cologne Water Quality Act as “waters of the State.”

Prior to visiting the study area, potential and/or historic drainages and aquatic features were investigated based on a review of the following: USGS topographic maps (1:24,000 scale), aerial photographs, the NWI database, and the NRCS soil survey map (USDA 2019a). Following the initial data collection, all areas that were identified as being potentially subject to the jurisdiction of the ACOE, RWQCB, and CDFW were field verified and mapped.

The ACOE wetlands delineation was performed in accordance with the 1987 ACOE Wetlands Delineation Manual (ACOE 1987); the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (ACOE 2008); Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (ACOE 2010); and guidance provided by the ACOE and U.S. Environmental Protection Agency on the geographic extent of jurisdiction based on the U.S. Supreme Court’s interpretation of the CWA (ACOE and EPA 2008). Non-wetland waters of the U.S. were delineated based on the limits of an OHWM. During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, permanence of surface water, wetland vegetation, and nexus to a traditional navigable water of the U.S. If any of these criteria were met, transects were run to determine the extent of each regulatory agencies’ jurisdiction.

Transects were taken every 50 feet. Data on transect widths, dominant vegetation present within the drainage and in the adjacent uplands, and channel morphology were recorded on field forms. In areas where ACOE jurisdictional wetlands were suspected, data on vegetation, hydrology, and soils were collected along transects.

Areas regulated by the RWQCB are generally coincident with the ACOE, but include features isolated from navigable waters of the U.S. that have evidence of surface water inundation. The CDFW jurisdiction was defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation.

Drainage features were mapped during the field observation to obtain characteristic parameters and detailed descriptions using standard measurement tools. The location of transects, upstream and downstream extents of each feature, and sample points were collected in the field using a 1:2,400 scale (1 inch = 200 feet) aerial photograph, topographic base, and GPS equipment with sub-meter accuracy. Dudek GIS staff digitized the jurisdictional extents based on the GPS data and transect width measurements into a project-specific GIS using ArcGIS software.

#### 5.4.5 Riparian/Riverine, Vernal Pool Assessment

According to Section 6.1.2 of the MSHCP, “Riparian/Riverine Areas are lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby freshwater source; or areas with fresh water flow during all or a portion of the year.” Additionally, vernal pools are “seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season.”

On March 3, 2019, Dudek biologists Tommy Molioo and Anna Cassidy conducted an evaluation of riparian/riverine resources within the study area, concurrent with the jurisdictional delineation. To determine the presence/absence of wetlands, data was collected at three data stations. Hydrology, vegetation, and soils were assessed, and data were collected on an approved ACOE Arid West Wetland Determination Data form. The site was evaluated for wetland vegetation, wetland hydrology, and hydric soils. The results of these data stations, as well as the focused special-status plant surveys, were used in the site assessment for vernal pools.

## 6 Results

### 6.1 Study Area Description

The study area is predominantly developed with the existing Kaiser Permanente Moreno Valley Medical Center campus and associated paved parking lots. The southern boundary of the study area includes residential development to the south of Iris Avenue, and undeveloped land occurs along the northern, eastern, and western boundaries of the study area. A dialysis center is also located to the east of the study area. Restored native scrub vegetation is located within the western portion of the study area, associated with a water quality detention basin and adjacent undeveloped land to the south of the basin. Non-native grasses and compacted bare ground, with a temporary construction yard, characterize the northern portion of the study area. Scattered ornamental landscaped trees and grass sod occur throughout the developed portions of the study area associated with the medical campus.

Iris Avenue borders the study area to the south, and undeveloped grassland fields occur to the north, east, and west. Land use in the vicinity of the study area includes residential development to the south across Iris Avenue, to the east across Oliver Street, and to the west across Nason Street. A concrete-lined flood control channel is located

north of the study area, and several water quality basins have been previously installed between the study area and the flood control channel.

Land use within the study area is currently zoned for community commercial, neighborhood commercial, office district, office commercial, specific plan 218 LM and specific plan 193 ML (City of Moreno Valley 2017). The land use designation for the property is for medical use and the current use within the property consists of a hospital campus. No significant topographic features occur on the study area. The study area is relatively flat and occurs at an elevation range of 1,510 feet above mean sea level (AMSL) to 1,560 feet AMSL. Representative photographs of the study area are included in Attachment B.

### 6.1.1 Hydrology

The study area is located within the San Jacinto River Watershed, specifically within the Moreno Valley subwatershed (HUC 12) within the lower San Jacinto River watershed (HUC 10) (Figure 4, Hydrologic Units). The San Jacinto River watershed encompasses approximately 732 square miles and drains to the Santa Ana River through Lake Elsinore and Temescal Wash. Major tributaries include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain, and Salt Creek. The San Jacinto River is the major drainage course within the San Jacinto Valley. According to the Water Quality Control Plan for the Santa Ana River Basin (RWQCB 2016), the San Jacinto River collects flows from its headwaters in the San Bernardino Mountains and then passes through sandy washes where flow typically percolates into groundwater basins on its way to Canyon Lake, where remaining flows are dammed. From Canyon Lake, the San Jacinto River continues west to cross beneath I-15 to Lake Elsinore, which typically acts as a “sink” for inland flows. During years with high rainfall, however, Lake Elsinore overflows into Temescal Creek, which confluences with the Santa Ana River near the City of Corona. The Santa Ana River flows west until it reaches the Pacific Ocean (RWQCB 2016).

The nearest waterbody to the study area is a canal located approximately 0.15 miles to the northwest. This canal appears to convey flow collected from Mount Russell on the north side of Lake Perris. The canal then joins a series of additional canals before its confluence with the San Jacinto River just east of Highway 74. The National Hydrography Dataset (USGS 2019) depicts an intermittent stream entering the study area from the south and terminating within the existing hospital footprint.

A review of the National Wetland Inventory dataset revealed there is one wetland type—riverine habitat—mapped within the southern portion of the study area, and is classified as riverine, intermittent, streambed, seasonally flooded wetlands (R4SBC) (USFWS 2018). Two freshwater ponds are mapped approximately 420 feet to the north and approximately 460 feet to the west of the study area, and both are classified as palustrine, unconsolidated bottom, artificially flooded wetlands (PUBFx). One riverine feature is mapped approximately 410 feet to the northwest of the study area, and is classified as riverine, intermittent, streambed, temporarily flooded wetlands (R4SBA).

Beneficial uses for ephemeral streams within San Jacinto River Basin, in which the study area is located, include municipal and domestic supply, agricultural supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. All beneficial uses are on an intermittent basis (RWQCB 2016).



A review of the NWI dataset revealed one aquatic resources within the study area (USFWS 2019a). This feature is historic and does not correspond with the NHD dataset.

- **R4SBC (Riverine, intermittent, streambed, seasonally flooded)** – This type of wetland includes natural or artificial channels/streambeds that support flowing water periodically. Surface water is present for extended periods, but absent by the end of the growing season in most years. The water table typically occurs well below the soil surface. This resource was mapped in the southern portion of the project site associated with the Bernasconi Hills located south of the study area. This feature was mapped as discontinuous and occurred next to other wetland features associated with Bernasconi Hills.

## 6.2 Vegetation Communities and Land Covers

The study area consists of a combination of an upland native scrub community and unvegetated land covers. The following natural vegetation communities were mapped within the study area: Riversidean sage scrub, desert saltbush scrub, southern riparian scrub, and non-native grassland (Attachment A: Figure 4). Two other non-natural and unvegetated land covers are mapped on the study area including disturbed habitat, and urban/developed land. These natural vegetation communities and land covers were mapped based on general physiognomy, species composition, and/or ground cover and are discussed in detail further below. Table 2 summarizes the extent of each vegetation community or land cover within the study area.

**Table 2**  
**Vegetation Communities and Land Covers within the Study Area**

Vegetation Community or Land Cover	Map Code	Acreage
<b>Natural Vegetation Communities</b>		
Riversidean Sage Scrub	RS	0.62
Desert Saltbush Scrub	DSAS	1.55
Southern Riparian Scrub	SRS	0.38
Non-Native Grassland	NNG	12.28
<b>Non-Natural and Unvegetated Land Covers</b>		
Disturbed Habitat	DH	2.68
Urban/Developed	DEV	25.58
<b>Total</b>		<b>43.09</b>

### 6.2.1 Natural Vegetation Communities

**Riversidean Sage Scrub (*Encelia farinosa*-*Artemisia californica* association).** This community includes California sagebrush (*Artemisia californica*) as the dominant species in the shrub canopy, with a co-dominance of California buckwheat (*Eriogonum fasciculatum*) and California brittlebush (*Encelia farinosa*). This community contains an open to intermittent canopy less than 2 meters in height, with an herbaceous layer that is open with seasonal annuals (Sawyer et al. 2009). This community typically occurs within the drought-tolerant end of the coastal sage scrub and the creosote bush scrub types. Other species observed within this community include common sunflower

(*Helianthus annuus*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and shortpod mustard (*Hirschfeldia incana*). The complete list of plant species observed is included in Attachment C.

**Desert Saltbush Scrub (*Atriplex lentiformis* association).** This community is dominated by quailbush (*Atriplex lentiformis*) with a sub-dominance of fourwing saltbush (*Atriplex canescens* var. *canescens*). Desert saltbush scrub contains the large, fast-growing quailbush shrub that tolerates very alkaline soils and can succeed in hot, dry climates (Sawyer et al. 2009). This community also commonly occurs in disturbed areas. Other species observed in this community include seasonal annuals such as rat-tail fescue (*Festuca myuros*), longbeak stork's bill (*Erodium botrys*), and red brome (*Bromus madritensis* ssp. *rubens*). There are some areas of open bare ground within the western portion of this community.

**Southern Riparian Scrub (*Salix lasiolepis* shrubland alliance).** This community includes a dominance of arroyo willow (*Salix lasiolepis*), with a co-dominance of black willow (*Salix gooddingii*), and Fremont cottonwood (*Populus fremontii*). This community contains an open to continuous canopy less than 10 meters in height, with an herbaceous layer that is variable and emergent trees present at low cover (Sawyer et al. 2009). This community typically occurs along stream banks, benches, slope seeps, and stringers along drainages. Other species observed in this community include creeping wild rye (*Elymus triticoides*), narrowleaf willow (*Salix exigua* var. *hindsiana*), mulefat (*Baccharis salicifolia*), western ragweed (*Ambrosia psilostachya*), and tamarisk (*Tamarix ramosissima*).

**Non-Native Grassland (*Bromus madritensis* ssp. *rubens*-*Schismus barbatus* alliance).** This community includes a dominance of red brome with a co-dominance of other non-native annual grasses such as common Mediterranean grass (*Schismus barbatus*), Bermuda grass (*Cynodon dactylon*), and rat-tail fescue. This herbaceous community contains an intermittent to continuous canopy less than 75 cm in height (Sawyer et al. 2009). This community typically occurs in previously disturbed or grazed areas. Other species observed in this community include fountain grass (*Pennisetum setaceum*), shortpod mustard, prickly Russian thistle (*Salsola tragus*), stinknet (*Oncosiphon piluliferum*), and a lone narrowleaf willow. Additionally, a small row of mulefat shrubs occurs along the northern project site boundary within the non-native grassland community.

## 6.2.2 Non-Natural and Unvegetated Land Covers

**Disturbed Habitat.** The disturbed (or barren) mapping unit is not recognized by the Natural Communities List (CDFG 2010), but is described by Oberbauer (2008). The disturbed or barren mapping unit refers to areas that lack vegetation but still retain a pervious surface, or that are dominated by a sparse cover of ruderal vegetation such as Maltese star-thistle (*Centaurea melitensis*), wild oat, black mustard (*Brassica nigra*), spiny sowthistle (*Sonchus asper*), and prickly lettuce (*Lactuca serriola*). Disturbed habitat is mapped for the northeastern portion of the study area associated with a maintenance yard and facilities, as well as the surrounding dirt lot. The disturbed habitat within the study area is characterized mainly by compacted bare ground and scattered non-native weedy species such as rattail fescue, and Russian thistle.

**Developed mapping unit.** The developed mapping unit is not recognized by the Natural Communities List (CDFG 2010) but is described by Oberbauer (2008). Developed land typically includes areas that have been constructed upon and do not contain any naturally occurring vegetation. These areas are generally characterized as graded land with asphalt and concrete placed upon it. Developed areas mapped for the study area include existing hospital medical campus buildings, parking lots, and paved access roads. Ornamental shrubs and trees were observed



within landscaped areas associated the developed land. Tree species observed include Mexican fan palm (*Washingtonia robusta*) and Peruvian peppertree (*Schinus molle*). No native vegetation was observed within developed areas on the study area.

### 6.3 Floral Diversity

A total of 56 species of vascular plants were recorded within the study area, consisting of 26 native (46%) and 30 non-native (54%) species. Dominant plant species detected within the study area included Bermuda grass, California sagebrush, big saltbush, and. Plant species observed within the study area are listed in Attachment D.

### 6.4 Wildlife

The study area mainly consists of disturbed and developed land that supports mostly unvegetated communities and scattered native habitat. Wildlife use was limited during the reconnaissance. A total of seven bird species were detected within the study area, including American goldfinch (*Spinus tristis*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*). No active bird nests were observed during the field visit; however, the study area could support nesting migratory birds. A single mammal species, desert cottontail (*Sylvilagus audubonii*), was observed during the survey. One reptile species, western fence lizard (*Sceloporus occidentalis*), was observed within the study area. No amphibian species were observed within the study area. Wildlife species observed within the study area are listed in Attachment D. Details regarding the potential for special-status species to occur within the study area are discussed in Section 6.6.

### 6.5 Special-Status Plant Species

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS or CDFW, or species covered by the MSHCP, or species identified as rare by CNPS (particularly CRPR 1A – Presumed extinct in California; CRPR 1B – Rare, threatened, or endangered throughout its range; and CRPR 2 – Rare or Endangered in California, more common elsewhere). A total of 64 special-status plant species were reported in the CNDDDB, USFWS, and CNPS databases as occurring in the vicinity of the study area. Attachment D includes the species lists provided from these database searches that were evaluated as part of this assessment. For each species evaluated, a determination was made regarding the potential for the species to occur on site 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.

Of the 64 special-status plant species listed in the CNDDDB, CNPS, and USFWS databases as occurring in the vicinity of the study area, 51 species were determined to have no potential to occur within the study area based on an evaluation of species ranges/elevation and known habitat preferences. Six special-status species was determined to have a low potential to occur due to limited suitable habitat within the study area. However, six species were determined to have at least a moderate potential to occur within the study area: thread-leaved brodiaea (*Brodiaea filifolia*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), California satintail (*Imperata brevifolia*), San Bernardino aster (*Symphyotrichum defoliatum*), and California screw-moss (*Tortula californica*). Table 3 summarizes the special-status plant species evaluated in Attachment E that have at least a moderate potential to occur within the study area. Species with a low potential or are not expected to occur are omitted from further discussion in this report. No special-status plant species were

detected within the study area. Additionally, there is no USFWS-designated critical habitat for listed plant species within the study area (USFWS 2019a).

**Table 3**  
**Special-Status Plant Species with a**  
**Moderate to High Potential to Occur within the Study Area**

Scientific Name	Common Name	Federal/State/CNPS Status	Potential to Occur within Study Area
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1	Moderate
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/None/1B.1	Moderate
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	None/None/1B.2	Moderate
<i>Imperata brevifolia</i>	California satintail	None/None/2B.1	Moderate
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	None/None/1B.2	Moderate
<i>Tortula californica</i>	California screw-moss	None/None/1B.2	Moderate

**Federal Status**

FT: Federal listed as threatened

**State Status**

SE: State listed as endangered

**CNPS Status (California Native Plant Society)****California Rare Plant Rank (CRPR)**

1B: Plants rare, threatened, or endangered in California and elsewhere

2B: Plants rare, threatened, or endangered in California, but more common elsewhere

**Threat Ranks:**

.1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 Moderately threatened in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat)

## 6.6 Special-Status Wildlife Species

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS or CDFW, or designated as a Species of Special Concern by CDFW, or covered species under the MSHCP. A total of 61 special-status wildlife species were reported in the CNDDDB and USFWS databases as occurring in the vicinity of the study area. Attachment E summarizes the special-status wildlife species that were included in these databases and evaluated as part of this assessment. For each species evaluated, a determination was made regarding the potential use of the site based on information gathered during the field reconnaissance, known habitat preferences, and knowledge of their relative distributions in the area.

Of the 61 special-status wildlife species listed in the CNDDDB and USFWS databases as occurring in the vicinity of the study area, 35 species were determined to have no potential to occur within the study area based on an evaluation of species ranges/elevation and known habitat preferences. A total of 19 special-status species were determined to have a low potential to occur due to limited suitable habitat within the study area. Five special-status

wildlife species have a moderate potential to occur within the study area based on the vegetation communities (habitat) present, elevation range, and previous known locations. These species include California glossy snake (*Arizona elegans occidentalis*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). Additionally, burrowing owl (*Athene cunicularia*) is the only species with a high potential to occur within the study area. Table 4 summarizes the special-status plant species evaluated in Attachment E that have at least a moderate potential to occur within the study area. Species with a low potential or are not expected to occur are omitted from further discussion in this report. No wildlife species listed or proposed for listing as rare, threatened, or endangered by either CDFW or USFWS were detected within the study area during the site reconnaissance.

**Table 4**  
**Special-Status Wildlife Species with a**  
**Moderate to High Potential to Occur within the Study Area**

Scientific Name	Common Name	Federal/State Status	Potential to Occur within Study Area
<b>Reptiles</b>			
<i>Aspidoscelis hyperythra</i>	California glossy snake	None/WL	Moderate
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None/SSC	Moderate
<b>Birds</b>			
<i>Athene cunicularia</i>	burrowing owl	None/SSC	High
<b>Mammals</b>			
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC	Moderate
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC	Moderate

**State Status**

SSC: California special concern species

WL: California Watch List

### 6.6.1 California Glossy Snake

California glossy snake is a state Watch List species that occurs in desert habitats and also chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass at an elevation from below sea level to 1,830 meters (6,000 feet) (CDFW 2016). This snake is common throughout southern California especially in desert regions, and less common to the north, in the interior Coast Ranges as far as Mount Diablo. This species is primarily nocturnal, glossy snakes spend periods of inactivity during the day and during winter in mammal burrows and rock outcrops, and to a lesser extent under surface objects such as flat rocks and vegetation residue. California glossy snake will occasionally burrow in loose soil.

California glossy snake has a moderate potential to occur within the open sandy areas and scattered sage scrub vegetation on the study area. Suitable habitat for this species extends further to the north, east, and west from the study area, within offsite areas. This species was not observed on the study area during any of the biological reconnaissance or focused surveys for other special-status species conducted for the project.

### 6.6.2 Coastal Whiptail

Coastal whiptail is found throughout the state except in the humid northwest, along the humid outer Coast Ranges, or mountainous regions above 2,290 meters (7,500 feet) (CDFW 2000). This whiptail is widely distributed but uncommon over much of its range in California, except in desert regions where it is abundant in suitable habitats. The species occurs in a variety of habitats including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chamise-redshank chaparral, mixed chaparral, desert scrub, desert wash, alkali scrub, and annual grassland. Whiptails forage actively on the ground near the base of vegetation and are always most common in and around dense vegetation. Whiptails are primarily diurnal, and in the deserts most activity occurs in the morning.

Coastal whiptail has a moderate potential to occur within the sage scrub and grassland vegetation on the study area. Suitable habitat for this species extends further to the north, east, and west from the study area, within offsite areas. This species was not observed on the study area during any of the biological reconnaissance or focused surveys conducted for the project.

### 6.6.3 Burrowing Owl

Burrowing owl is a California Species of Special Concern that occurs in open, sparse vegetation with few shrubs on level to gentle topography and well-drained soils (CDFW 2012). Typical habitats include grasslands, shrub steppe, and desert scrub with perches and open areas for foraging. This species also forages within habitat mosaics of short-growing vegetation where prey such as arthropods, small rodents, reptiles, and carrion occur (CDFW 2012). The burrowing owl requires underground burrows, dug by small mammals, or other cavities for nesting during breeding, and for roosting cover year round. They may also use adjacent satellite burrows to reduce the risk of predation. Threats to burrowing owls include habitat loss, degradation, and fragmentation related to urbanization throughout California.

Burrowing owl has a high potential to occur within the non-native grassland and undeveloped disturbed habitat areas that are characterized by low-growing sparse vegetation. Suitable habitat for this species extends further to the east and north from the study area, within offsite areas. Therefore, focused surveys for burrowing owl were initiated in March 2019 and identified several burrows on the northern portion of the study area, however, this species was not observed on the study area during focused surveys conducted for the project.

### 6.6.4 Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse is a common resident of sandy herbaceous areas, usually in association with rocks or coarse gravel, and occurs mainly in arid coastal and desert border areas (CDFW 2006b). This pocket mouse occurs at an elevational range from sea level to 1,350 meters (4,500 feet). This species associated habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland. The highest densities of this species occur in rocky/gravelly areas with a yucca overstory, and in desert scrub near or in the pine-juniper belt. Burrows are excavated in gravelly or sandy soil and used for daytime resting, predator escape, and care of young.

The northwestern San Diego pocket mouse has a moderate potential to occur within the sage scrub and grassland vegetation on the study area. Suitable habitat for this species extends further to the north, east, and west from the study area, within grassland areas offsite. This species was not observed on the study area during any of the biological reconnaissance or focused surveys conducted for the project.

#### 6.6.5 San Diego Black-tailed Jackrabbit

The San Diego black-tailed jackrabbit is common throughout California, except at the highest elevations, and it is abundant at lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats (CDFW 2006c). It uses shrubs for cover in the intermediate canopy stages of shrub habitats, and open shrub/herbaceous and tree/herbaceous edges provide suitable habitat. The San Diego black tailed jackrabbit has a moderate potential to occur within the sage scrub and grassland vegetation on the study area. Suitable habitat for this species extends further to the north, east, and west from the study area, within grassland areas offsite. This species was not observed on the study area during any of the biological reconnaissance or focused surveys conducted for the project.

### 6.7 Jurisdictional Features

One basin and one spillway were recorded within the study area. These features are described in more detail below. The limits of jurisdictional waters are provided on Attachment A: Figure 5, and representative photos are provided in Attachment B. The results of all data stations are listed in Attachment B of the Jurisdictional Delineation report that is included as Attachment F to this report.

#### 6.7.1 Waters of the United States

The study area does not contain jurisdictional waters of the United States because no features were determined to connect downstream to any relatively permanent water (RPW) or traditional navigable water (TNW) that would be considered waters of the United States.

#### 6.7.2 Waters of the State

##### Basin

A detention basin was installed in the northwestern portion of the study area, within the project site boundary, sometime between January 2006 and June 2008. The construction of the basin appears to have been associated with the previous expansion of the Medical Center (prior to Kaiser Permanent's ownership) that constructed a new building and additional surface parking. The basin appears to have also been associated with the preparation of land north of the study area for residential development and its associated flood control features. It appears that the basin remained mostly unvegetated after it was constructed, but vegetation started to become established between 2014 and 2016 based upon available aerial imagery (Google Earth 2019).

This feature appears to detain runoff from Kaiser Permanente Moreno Valley Medical Center hospital parking lots via storm drains that enter the basin from the south and the east. Outlet structures are located in the northwest corner and in the center of the basin. The central outlet is assumed to lead to a storm drain, while the northwestern outlet leads to a series of flood control basins located north of the study area. The flood control basins do not have

an apparent outlet, but seem to act as overflow from Riverside County Flood Control District Facility (Line F) and appear to have been installed in coordination with the development project north of the study area that has not been built out.

The basin exhibits a defined bed and bank, with the banks vegetated with sage scrub species such as California sagebrush and quailbush. The basin bottom contains bare ground, but is also vegetated with a meandering trail of beardless wild rye. The beardless wild rye appears to be installed and leads from each basin inlet towards the outlet in the center. A small patch of riparian vegetation, including black willow and mulefat, is located in the southwestern corner, adjacent to the basin inlet. Due to the presence of riparian vegetation, the basin was evaluated for federal and state wetlands. Two data stations were taken within the basin. Each supported a dominance of hydrophytic vegetation, comprised of mulefat, black willow, and salt cedar, but did not support wetland hydrology indicators or hydric soils.

The basin serves as a waterbody in the immediate area. As such, it demonstrates the following intermittent beneficial uses as described for ephemeral streams in the region: groundwater recharge, warm freshwater habitat, and wildlife habitat.

Due to absence of hydric soils and hydrology, the lack of connectivity to downstream waters of the U.S., and based on substantial beneficial use and the presence of an OHWM (defined bed and bank), the basin is determined to be non-wetland waters of the State under the jurisdiction of the RWQCB. Additionally, CDFW may assert jurisdiction over this feature as a streambed with riparian vegetation.

#### Spillway

A concrete spillway is located in the northern portion of the study area. It appears that this feature was originally created to facilitate flows from the Kaiser property into the flood control basins north of the study area, as described for the basin in the previous section. The flood control basins to the north do not have an apparent outlet, but seem to act as overflow from Riverside County Flood Control District's Facility Line F and appear to have been installed in coordination with the development project north of the study area that has not been built out. The spillway contains a defined bed and bank, but does not appear to currently convey flows into the flood control basins.

The flood control basins north of the study area serve as a waterbody in the immediate area. As such, they demonstrate the following intermittent beneficial uses as described for ephemeral streams in the region: groundwater recharge, warm freshwater habitat, and wildlife habitat. While the spillway by itself does not demonstrate these beneficial uses, it facilitates these uses through the flood control basins through which it is attached.

Due to the lack of connectivity to downstream waters of the U.S., and based on substantial beneficial use and the presence of an OHWM (defined bed and bank), the basin is determined to be non-wetland waters of the State under the jurisdiction of the RWQCB. Additionally, CDFW may assert jurisdiction over this feature as a streambed.

### 6.7.3 Non-jurisdictional Features

#### Swale

A swale is located on the northern side of the proposed project in the northwestern corner. This feature is a round bottom grassy swale created in uplands. The purpose of the swale appears to be to collect runoff from the Kaiser property to the east and convey it to the detention basins to the north; however, no evidence of flow was present in



the swale at the time of the visit. A ditch is evident at this approximate location in aerials from 1978 to 2004 (Nationwide Environmental Title Research 2019, Google Earth 2019) and appears to be part of a series of ditches presumably used for irrigation. An intermittent stream is depicted on the USGS topographic map and National Hydrography Dataset immediately south of the swale. This stream is depicted as flowing from the hills to the south, continuing north, and terminating on the property. Development occurs to the south where this stream was mapped as occurring historically. On historic aerials, indicators of sheetflow are evident on the 1978 aerial photograph in the approximate location of this mapped stream. Both the irrigation ditch and the sheetflow are present and do not appear to be connected. The stream and/or associated sheetflow are not visible on photographs subsequent to the 1978 photograph.

The present day swale may be a remnant of the historic irrigation ditch; however, it does not appear to have been a part of the historic mapped drainage that flowed north from the hills adjacent to the Perris Reservoir, south of the study area. The Kaiser Permanente Moreno Valley Medical Center has since been designed so that stormwater from the parking lots can sheet flow into the undeveloped land to the north. This feature resembled a swale, with no defined bed or bank, and no other OHWM indicators. A spillway is present at the northern end of the swale at the northwest corner of the Kaiser property and was developed between 2014 and 2016. This spillway leads to the constructed basins north of the study area. It is possible that this spillway was created at the time as a part of a large plan for the hospital to tie their storm drain system into the basins; however, there are no remaining indicators that this feature ties into the basin.

Due to the presence of a single sandbar willow sapling (*Salix exigua*), the swale was assessed for federal and state wetlands. One data station was taken within the swale. This data station did not support wetland hydrology indicators, hydric soils, or a dominance of hydrophytic vegetation. Table 5 summarizes the results of the data stations and is followed by further description of the indicators observed. Attachment F provides the data collected at each data station on the ACOE's Wetland Determination Data Forms for the Arid West Region.

**Table 5. Data Station Point Summary**

Data Station	Wetland Determination Field Indicators			Vegetation Community	Determination	Jurisdiction
	Vegetation	Hydric Soils	Hydrology			
1	None	None	None	California annual grassland	Non-Jurisdictional	None
2	✓	None	None	Southern riparian scrub	Non-Jurisdictional	Non-Wetland
3	✓	None	None	Southern riparian Scrub	Non-Jurisdictional	Non-Wetland

The swale is not a water of the U.S. due to lack of OHWM indicators and characteristics of a swale. Due to the lack of OHWM indicators and absence of a dominance of hydrophytic vegetation, hydric soils, and hydrology, the swale is not a waters of the State and is not under RWQCB jurisdiction. The swale has a round bottom and no defined bed or bank. It also does not support riparian vegetation; therefore, it is not a streambed and is not under CDFW jurisdiction.

#### 6.7.4 Jurisdictional Delineation Conclusion

The study area supports one feature that is considered waters of the State under the jurisdiction of the RWQCB and CDFW, the basin. Table 6 summarizes the total acreage of this feature within the study area.

**Table 6. Jurisdictional Waters within the Study Area**

Feature	Vegetation Community	Non-Wetland Waters of the State (RWQCB/CDFW) (Acres/Linear Feet)	Additional Streambed (CDFW-Only) (Acres)
Basin	Riversidean Sage Scrub	—	0.54
	Southern Riparian Scrub	0.38/248	—
	Non-Native Grassland	0.10/220	—
	Urban/Developed	0.03/255	—
	<b>Total*</b>	<b>0.51</b>	<b>0.54</b>

**Notes:**

\* Acreage may not total due to rounding.

RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

#### 6.8 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. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

The entire study area is located in the southern portion of Moreno Valley, just north of Lake Perris. Undeveloped land surrounding Lake Perris to the south of the study area provides opportunities for wildlife movement from the badlands and the San Jacinto Wildlife Refuge in the east towards Lake Perris in the west. However, residential development is located between the study area and the undeveloped land to the south, restricting the potential for wildlife to use the study area as part of this regional movement corridor. To the north, a concrete-line flood control channel and surrounding undeveloped land facilitates the movement of wildlife from the badlands and agricultural land to the east towards a series of concrete-lined channels and lakes to the west. A brick and chain-link fence borders the property boundary to the north, restricting the passage of medium-sized mammals from the study area to undeveloped land to the north. Although local wildlife and raptors could use the undeveloped portions of the study area for foraging and stop over when flying through the region, there are no portions of the study area that would facilitate the movement of wildlife or function as a corridor between larger blocks of habitat.



## 6.9 MSHCP Consistency Analysis

This section addresses the consistency of the proposed project with the requirements of the MSHCP. The project site is located within the Reche Canyon/Badlands Area Plan, which has portions of 10 conservation areas: Existing Core K, Proposed Core 4, Proposed Core 5, Proposed Core 6, Proposed Core 7, Proposed Linkage 11, Proposed Linkage 13, Proposed Linkage 14, Proposed Linkage 15, and Proposed Linkage 16. The project site is not located within any existing Core Areas or Linkages, and is not mapped within any criteria cells (Attachment A: Figure 6a).

Chapter 6 of the MSHCP outlines additional implementation measures with which permittees must comply. The relevant section of the MSHCP, requirements, and proposed project's consistency with the requirement are outlined below.

- MSHCP Section 6.1.2, Riparian/Riverine and Vernal Pools Guidelines: Compliance is discussed in Section 6.9.1 of this report.
- MSHCP Section 6.1.3, Narrow Endemic Plant Species: The project site is within a Narrow Endemic Plant Species Survey Area. Compliance is discussed in Section 6.9.2 of this report.
- MSHCP Section 6.1.4, Urban Wildlands/Interface Guidelines: Compliance is discussed in Section 6.9.3 of this report.
- MSHCP Section 6.3.2, Additional Survey Requirements: This section of the MSHCP outlines survey requirements for criteria area plant species, burrowing owl, mammals, and amphibians. The project site is within the burrowing owl survey area. Compliance is discussed in Section 6.9.4 of this report.

### 6.9.1 Riparian/Riverine and Vernal Pool Habitat

The MSHCP defines riparian/riverine areas as “lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.” In addition, riverine areas (streams) include areas that “do not contain riparian vegetation, but that have water flow for all or a portion of the year, and contain biological functions and values that contribute to downstream habitat values for covered species inside the MSHCP Conservation Area.”

#### Riparian/Riverine Habitat

A detention basin occurs in the northwest corner of the study area that was surveyed by Dudek as part of the jurisdictional delineation in March 2019 to determine if it contains riparian/riverine habitat. The detention basin contains 0.38 acre of southern riparian scrub vegetation within the bottom of the basin consisting of hydric grasses and mature trees, and surrounded by Riversidean sage scrub vegetation on the upland slopes. The detention basin receives storm water flows from Iris Avenue to the south, as well as sheet flow during storm events from adjacent upland areas within the study area. The basin serves as a first-flush water quality detention basin that will outlet to the storm drain system and flood control basins to the north when water levels reach the height of the outlet drains. Although the detention basin contains southern riparian scrub vegetation, it does not provide habitat to support riparian species covered by the MSHCP. Additionally, the basin does not contribute to downstream habitat values for covered species inside the MSHCP

Conservation Area. Therefore, by definition the vegetation within the detention basin does not meet the MSHCP definition of riparian/riverine areas, and no additional steps are required under the MSHCP.

#### Vernal Pools and Fairy Shrimp Habitat

There are no soils associated with vernal pools within the project site, including clay soils or soils of the Willows/Travers/Domino series. No stock ponds, ephemeral pools, or other similar features that would provide potential habitat were observed during biological surveys within the study area.

The detention basin located in the northwestern portion of the study area temporarily contains water only during storm events and therefore would not support vernal pool species that are dependent on the alternation of seasonal drying and ponding. Outside of the detention basin, no other undeveloped areas showed signs of inundation even after recent rainfall and showed no indicators of prolonged ponding that would support vernal pools and fairy shrimp habitat. Additionally, based on the soils present and the history of the site, the project site does not support vernal pools or fairy shrimp habitat.

#### 6.9.2 Narrow Endemic Plant Species

The project site is not mapped within the survey area for any narrow endemic plant (NEP) species. However, focused rare plant surveys were conducted on the study area for thread-leaved brodiaea, Parry's spineflower, white-bracted spineflower, California satintail, San Bernardino aster, and California screw-moss. Thread-leaved brodiaea and Parry's spineflower are both covered species under the MSHCP, but are not listed as NEP species. No NEP species or other rare plants were found on the study area and no additional actions are required.

#### 6.9.3 Urban/Wildlands Interface Guidelines

As discussed above, the project site is not located within any Core areas and does not overlap any criteria cells. Development within or in proximity to MSHCP Conservation Areas requires compliance with the MSHCP Section 6.1.4 Urban/Wildlands Interface Guidelines to address potential indirect effects. Standard construction BMPs and construction-related minimization measures to control dust, erosion, and runoff, including, but not limited to, straw bales and silt fencing, will be implemented during the proposed project improvements to minimize these effects. Specific elements addressed in the proposed project design include:

**Drainage.** The project would not adversely alter the quantity or quality of runoff discharged to the MSHCP Conservation Area. An isolated detention basin occurs in the northwest corner of the study area that receive upland stormwater flows and outlets to the storm drain system during high flows. Therefore, no drainage flows will enter into or adversely affect the MSHCP Conservation Areas to the north and further to the south within Lake Perris.

**Toxics.** There would be no change to the handling and use of toxic chemicals (such as pesticides and fertilizers) currently used on the project site. As a result, no toxic discharges that would adversely affect the MSHCP Conservation Area are anticipated.

**Lighting.** There would be no change to the use or type of night lighting currently used on the project site. As a result, no adverse lighting effects to the MSHCP Conservation Area are anticipated.

**Noise.** Noise levels during and after construction will not exceed residential noise standards. The proposed improvements will complement the project design and not result in adverse noise effects to the MSHCP Conservation Area.

**Invasives.** There would be no change to the use or type of landscaping currently used on the project site. Use of non-native, invasive plant species would be avoided. As a result, no adverse invasive effects to the MSHCP Conservation Area are anticipated.

**Barriers.** There would be no change to the use or type of fencing currently used on the project site. As a result, no adverse barrier effects to the MSHCP Conservation Area are anticipated.

**Grading and Land Development.** Land clearing and minor grading is anticipated to implement the proposed project. However, standard construction BMPs and construction-related minimization measures will be implemented to minimize potential dust, erosion, and runoff effects. Additionally, no manufactured slopes within the MSHCP Conservation Area are proposed as part of the project design. As a result, no adverse grading effects to the MSHCP Conservation Area are anticipated.

The proposed project would not result in long-term adverse edge effects that may affect biological resources within areas proposed for conservation for the MSHCP that are located in offsite areas. The project would not facilitate unauthorized public access, domestic animal predation, illegal trespass, or dumping into any MSHCP Conservation Areas. Therefore, the proposed project is consistent with the MSHCP Urban/Wildlands Interface Guidelines.

#### 6.9.4 Additional Survey Requirements

The project site is located within a survey area for burrowing owl (Attachment A: Figure 6b). A focused survey for burrowing owl was conducted by Dudek in March through May 2019, as described in Section 6.6.3. The results of the survey were negative, therefore, burrowing owl is currently considered absent from the study area. However, due to the presence of suitable burrows and habitat, there is a potential for burrowing owl to move onto the site prior to construction and a pre-construction survey should be conducted. No other additional focused survey areas were mapped for the study area according to the MSHCP.

## 7 Impacts and Avoidance Measures

This section addresses the anticipated impacts (direct, indirect, and cumulative) to biological resources that would result from implementation of the proposed project. The significance determinations for proposed or potential impacts follow the thresholds provided in the California Environmental Quality Act Guidelines Section 15064(b) and Appendix G Environmental Checklist. The evaluation of the project's impacts using the thresholds of significance presented is organized by the resource potentially affected: special-status species, riparian and special-status (sensitive) vegetation communities, jurisdictional wetlands and waters, wildlife movement, local policies and ordinances, and habitat conservation plans.

## 7.1 Impacts to Special-Status Plant Species

No special-status plant species were detected within the study area during focused surveys. Therefore, there will be no impact to special-status plants through implementation of the proposed project, and no mitigation is required.

## 7.2 Impacts to Special-Status Wildlife Species

Although there is a moderate potential for California glossy snake, coastal whiptail, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and burrowing owl to occur, none of these species were observed during general and focused surveys conducted for the study area. Coastal whiptail, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and burrowing owl are all covered species under the MSHCP, and compliance with the MSHCP would reduce impacts to less than significant. Additionally, the site is considered absent of all special-status wildlife species, including California glossy snake that is not covered under the MSHCP, and no project-related impacts are anticipated to occur, and no mitigation is required.

However, due to the presence of suitable small mammals burrows and vegetation that could support burrowing owls, the potential for owls to move onto the site prior to construction cannot be completely ruled out. Therefore, a pre-construction survey for burrowing owl should be conducted within 30 days prior to the start of construction as stipulated by the MSHCP (RCA 2005). Mitigation measure MM BIO-1 will be implemented prior to construction to reduce potential impacts to burrowing owl to a less than significant level.

However, the study area provides suitable nesting habitat for ground, shrub, and tree nesting bird species that are protected by the MBTA and California Fish and Game (CFG) Code Section 3500. If construction activities occur during the avian nesting season (February 1 through August 30), direct and indirect impacts could occur during construction if an active nest is present on the project site, which would be considered significant. Therefore, mitigation measures MM BIO-2 and MM BIO-3 shall be implemented into the construction phase of the project to reduce potential impacts to nesting birds to a less than significant level.

**MM BIO-1      Pre-Construction Burrowing Owl Survey.** Within 30 days prior to the start of construction, a one-day burrowing owl survey will be conducted in order to determine the presence/absence of burrowing owl on the project site. If no owls are observed then construction may proceed. If owls are observed, then construction must halt until the owl(s) can be relocated to artificial burrows as detailed in a relocation plan that will require approval from the MSHCP.

**MM BIO-2      Nesting Season Avoidance.** Construction of the proposed project shall be conducted outside of the avian nesting season (February 1 through August 30) in order to reduce the potential for direct or indirect impacts to occur to an active nest.

**MM BIO-3      Pre-Construction Surveys.** If construction activities cannot avoid the avian nesting season (February 1 through August 30), a pre-construction clearance survey shall be conducted by a biologist in order to determine if any active nests or sign of nesting activity is present on the project site and within a 500-foot buffer. The pre-construction clearance survey shall be conducted within three days prior to the start of construction. If no active nests are encountered, construction activities may resume. However, if an active nest or sign of nesting activity is found, then a suitable buffer will be

established around the active nest based on the species' sensitive to disturbance and distance from construction impact areas. Additionally, a biological monitor may be on site during construction if it is determined that the nest proximity to active construction may result in nest failure. The avoidance buffer will remain in place for the duration the nest is active. Construction activities may encroach into the buffer only at the discretion of a monitoring biologist, and the buffer can be removed when the nestlings have fledged as determined by a biologist.

### 7.3 Impacts to Sensitive Natural Communities

The proposed project will be implemented over three phases, with Phase I limited to a 2.15-acre area within the entire approximately 30-acre project site (Attachment A: Figure 7a). Phases II and III will result in the remaining buildout of the proposed project and will result in a total of 10.8 acres of impacts to vegetation communities and land covers within the study area. For the purpose of this report, the impacts to vegetation have been calculated for Phase I and for the combined impact area of Phase II and Phase III as reflected in Table 7 below. These impacts to vegetation communities are considered permanent impacts to upland and riparian vegetation communities, and unvegetated land covers. Project impacts to unvegetated land covers would not be considered significant due to having minimal habitat value to plants and wildlife. Project impacts to native scrub vegetation communities within the project site that are considered sensitive by CDFW and the MSHCP, such as Riversidean sage scrub, desert saltbush scrub, and southern riparian scrub would be considered significant. However, payment of the MSHCP development fee to comply with project construction within the boundary of the MSHCP will mitigate for the loss of native vegetation communities, and therefore, project impacts to sensitive vegetation communities would be considered less than significant.

**Table 7**  
**Vegetation Communities and Land Covers Impacts**

Vegetation Community or Land Cover	Map Code	Phase I (acres)	Phases II and III (acres)
<b>Natural Vegetation Communities</b>			
Riversidean Sage Scrub	RS	0.0	0.11
Desert Saltbush Scrub	DSAS	0.0	1.12
Southern Riparian Scrub	SRS	0.0	0.11
Non-Native Grassland	NNG	0.0	1.43
<b>Non-Natural and Unvegetated Land Covers</b>			
Disturbed Habitat	DH	0.47	0.89
Urban/Developed	DEV	1.68	7.14
<b>Total</b>		<b>2.15</b>	<b>10.8</b>

## 7.4 Impacts to Jurisdictional Wetlands and Waters

The proposed project includes installing two basins in the northern portion of the project site during Phase I of the project that will provide the same functions and values as the current basin, which will remain in place until Phases II and III of the project (Attachment A: Figure 7b). Therefore, impacts to jurisdictional waters would be less than significant during Phase I of the project, and additional mitigation is not required. However, potentially jurisdictional waters contained within the existing detention basin will be impacted during Phases II and III of the project, which would be considered significant and require mitigation for impacts. Therefore, mitigation measure MM-BIO-4 will be required to reduce project impacts in Phases II and III to a less than significant level.

**MM-BIO-4 Regulatory Agency Permitting.** A Waste Discharge Requirement (WDR) from the RWQCB and a Streambed Alteration Agreement from CDFW may be required by the regulatory agencies prior to the start of construction of Phases II and III of the project. The Applicant should coordinate with the RWQCB and CDFW to confirm permit requirements and mitigation expectations prior to the start of Phases II and III. Mitigation required for these permits would include compensatory habitat-based mitigation at a minimum 2:1 ratio for impacts to non-wetland waters of the State and CDFW streambed. Mitigation may include onsite restoration of waters through implementation of an approved Habitat Mitigation Monitoring Plan or purchase of offsite credits through an agency-approved mitigation bank such as the Soquel Canyon Mitigation Bank. Coordination with the resource agencies will determine the final mitigation ratio and strategy.

## 7.5 Impacts to Wildlife Corridors and Migratory Routes

No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with project activities. Existing habitat linkages and wildlife corridor functions would remain intact while project activities are conducted and following completion. Project activities would not result in impacts to wildlife movement because no new structures that would impede wildlife movement are proposed. Additionally, no wildlife corridors exist on or immediately adjacent to the site that could be impacted by the project. Therefore, there would be no permanent indirect impacts to wildlife movement corridors as a result of project activities and no mitigation is required.

## 7.6 Impacts to Local Policies and Ordinances

As currently designed, the proposed project will not result in an impact to trees protected by the City of Moreno Valley Tree Management Policy. Any trees that will be removed by the project will be on private property and no street, parkway, or right-of-way trees will be removed. Therefore, the project will not result in an impact to local policies and ordinances, and no mitigation is required.

## 7.7 Impacts to Regional Resource Planning Context

The project site occurs within the boundaries of the Western Riverside County MSHCP, but is not located within any Criteria Cells, Habitat Blocks, Linkages, or any other conservation area. There are no MSHCP-covered species on the project site that would be impacted by the project. There are also no riparian/riverine habitats or impacts to the

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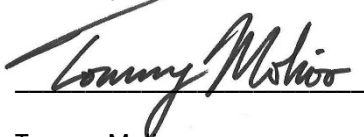
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urban/wildlands interface that could occur as a result of project implementation. With payment of the MSHCP development fee, the proposed project would be considered consistent with the goals and provisions of the MSHCP, and project-related impacts would be considered less than significant. No further mitigation is required.

If you have any questions regarding the contents of this report, please call me at 949.373.8321 or [tmoloo@dudek.com](mailto:tmoloo@dudek.com).

Sincerely,



Tommy Moloo  
Sr. Biologist

Att.: A – Figures 1-7  
B – Site Photographs  
C – Species Compendium  
D – Special-Status Species Lists  
E – PTO Tables  
F – Jurisdictional Delineation Report



## References

- AOU (American Ornithologists' Union). 2017. "Check-List of North and Middle American Birds." Accessed July 20, 2017. <http://checklist.aou.org/>. CDFG (California Department of Fish and Game). 2010. "List of Vegetation Alliances and Associations (Natural Communities List)." Sacramento, California: CDFG, Vegetation Classification and Mapping Program. September 2010. [http://www.dfg.ca.gov/biogeodata/vegcamp/natural\\_communities.asp](http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp).
- CDFW (California Department of Fish and Wildlife). 2000. California Wildlife Habitat Relationships System. Tiger Whiptail *Aspidoscelis tigris*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2725&inline=1>
- CDFW. 2016a. California Wildlife Habitat Relationships System. Glossy Snake. *Arizona elegans*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2763&inline=1>
- CDFW. 2016b. California Wildlife Habitat Relationships System. San Diego Pocket Mouse *Chaetodipus fallax*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2763&inline=1>
- CDFW. 2016c. California Wildlife Habitat Relationships System. Black-Tailed Jackrabbit *Lepus californicus*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2375&inline=1>
- CDFW. 2019a. Special Vascular Plants, Bryophytes, and Lichens List. California Natural Diversity Database. March 2019. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline=1>.
- CDFW. 2019b. "State and Federally Listed Endangered, Threatened, and Rare Plants of California." California Natural Diversity Database. CDFW, Biogeographic Data Branch. March 2019. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline=1>.
- CDFW. 2019c. "State and Federally Listed Endangered and Threatened Animals of California." California Natural Diversity Database. CDFW, Biogeographic Data Branch. March 2019. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline=1>.
- CDFW. 2019d. California Natural Diversity Database. RareFind, Version 5.1.1 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed January 2019. <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.
- CDFW. 2018. "Special Animals List." California Natural Diversity Database. CDFW, Biogeographic Data Branch. March 2019. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline=1>.
- City of Moreno Valley. 2011. City of Moreno Valley Zoning Map. Compiled from Riverside County GIS and City of Moreno Valley GIS. November 2, 2017. <http://www.moreno-valley.ca.us/cdd/pdfs/ZoningMap.pdf>
- CNPS (California Native Plant Society). 2018. Inventory of Rare, Threatened, and Endangered Plants of California (online ed., version 8-02). Sacramento, California: CNPS, Rare Plant Program. Accessed July 2018. <http://www.rareplants.cnps.org>.



- Crother, B.I. 2012. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding. 7th ed. Herpetological Circular No. 39. Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles. Jepson Flora Project. 2018. Jepson eFlora. Berkeley, California: University of California. Accessed August 2018. <http://ucjeps.berkeley.edu/IJM.html>.
- Moyle, P.B. 2002. Inland Fishes of California, University of California Press, Berkeley and Los Angeles, 502 pp.
- NABA (North American Butterfly Association). 2016. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies. 2nd ed. Morristown, New Jersey: NABA. <http://www.naba.org/pubs/checklst.html>.
- Nationwide Environmental Title Research. 2019. Historic Aerials by NETROnline, web-based application. Accessed July 2018. <https://www.historicaerials.com/viewer>.
- Regional Conservation Authority (RCA). 2005. Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area.
- RWQCB (California Regional Water Quality Control Board). 2016. Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin. Revised February 2016. [https://www.waterboards.ca.gov/santaana/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/).
- Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. A Manual of California Vegetation. 2nd ed. Sacramento, California: California Native Plant Society.
- SDNHM (San Diego Natural History Museum). 2002. "Butterflies of San Diego County. Revised September 2002." Accessed October 14, 2016. <http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html>.
- USDA (United States Department of Agriculture). 2018a. Web Soil Survey [web application]. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed July 2018. <http://websoilsurvey.nrcs.usda.gov/app/>.
- USDA. 2018b. "List of Hydric Soils." (Angeles National Forest Area) [web application]. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed July 2018. [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1316620.html](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html).
- USFWS (United States Fish and Wildlife Service). 2018a. "Critical Habitat and Occurrence Data." Available at <http://www.fws.gov/data>.
- USFWS. 2019. National Wetlands Inventory, Wetlands Mapper (online edition). Accessed April 2019. <http://www.fws.gov/wetlands/Data/Mapper.html>.
- USGS (United States Geological Survey). 2018. National Hydrography Dataset: GIS Online viewer. Accessed April 2019. <http://nhd.usgs.gov/>.

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Moreno Valley Medical Center Master Plan Project*

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Wilson, D.E. and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*.  
3rd ed. Baltimore, Maryland: Johns Hopkins University Press



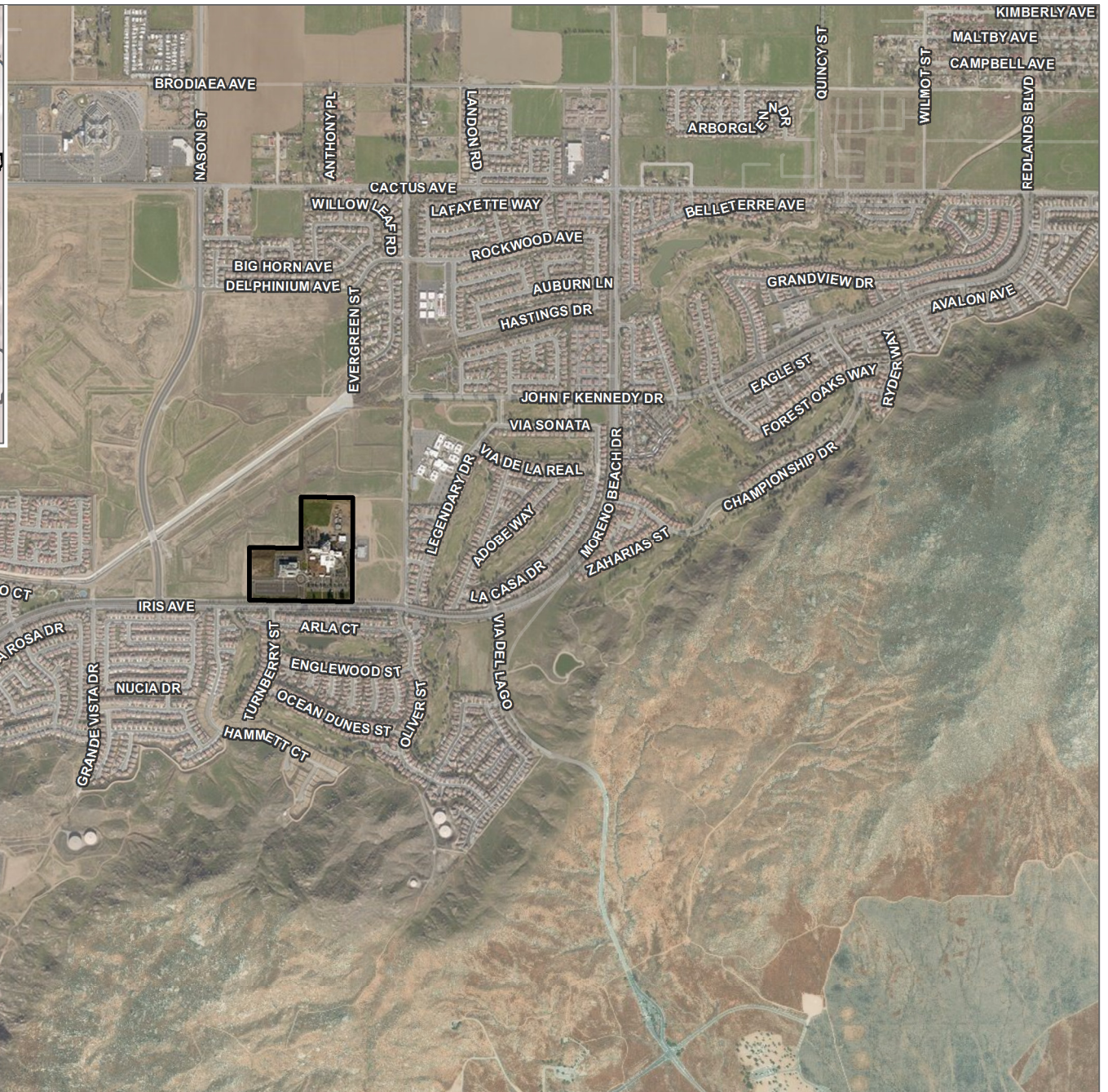
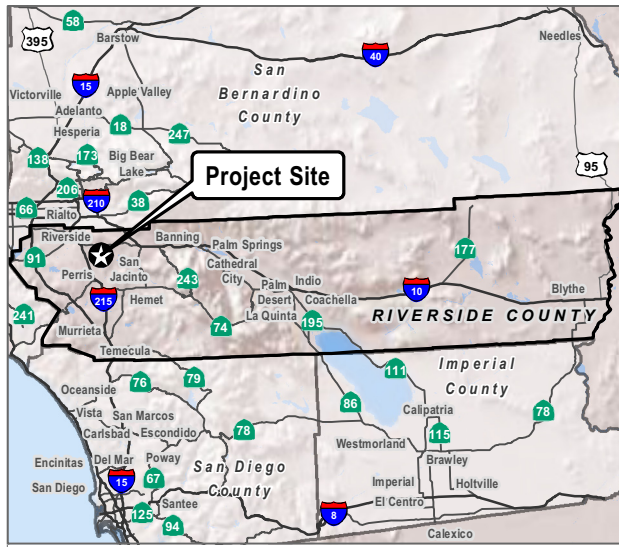
# Attachment A


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Figures 1-7







 Project Boundary

SOURCE: Bing

**DUDEK**



**FIGURE 1**

**Project Location**

Kaiser Permanente Moreno Valley





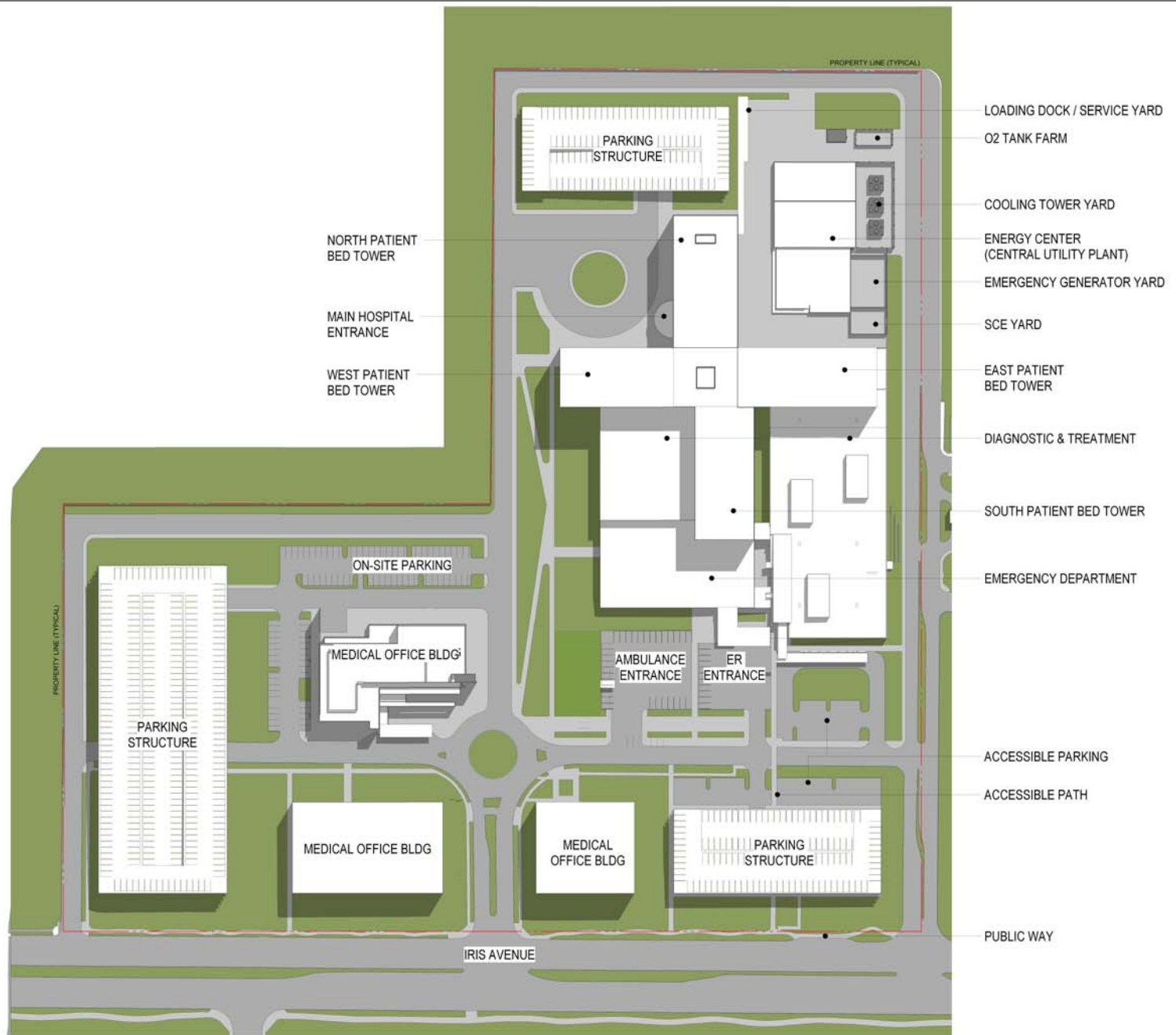










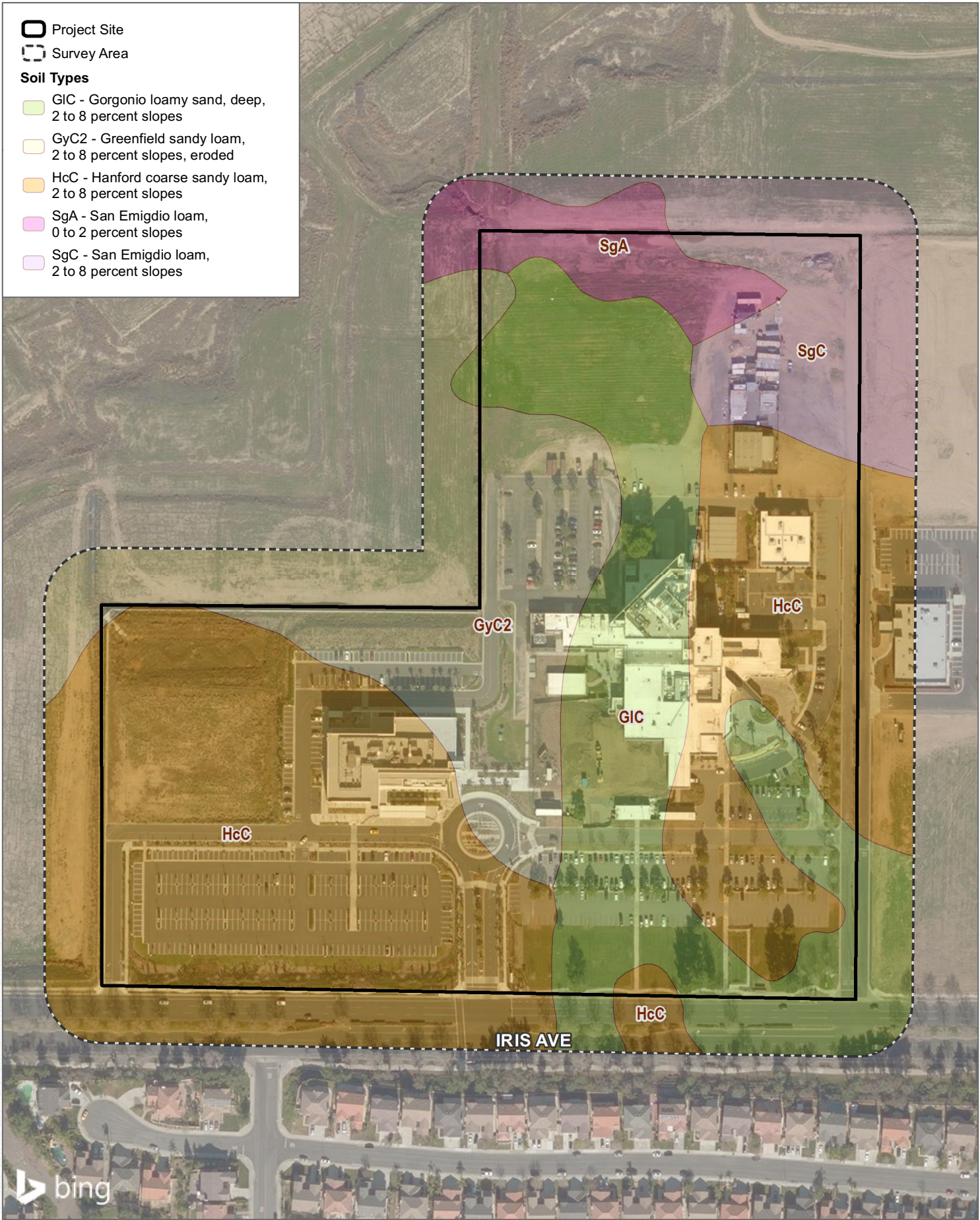


SOURCE: CO Architects, 2018

**FIGURE 2-3**  
**Site Plan - Phase 3**  
 Kaiser Permanente Moreno Valley







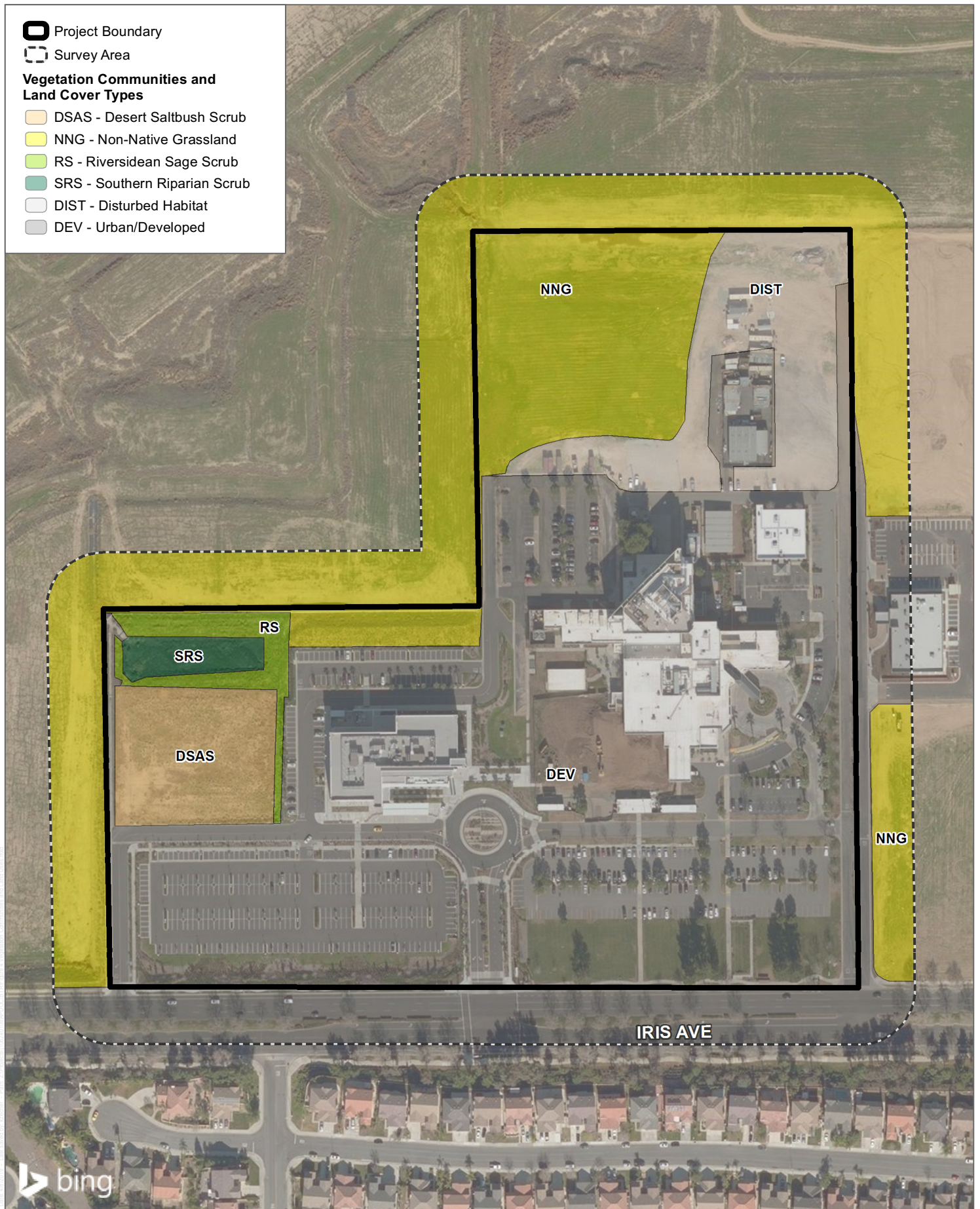
SOURCE: BING Maps; USDA NRCS

FIGURE 3

Soils







SOURCE: BING Maps

**DUDEK**



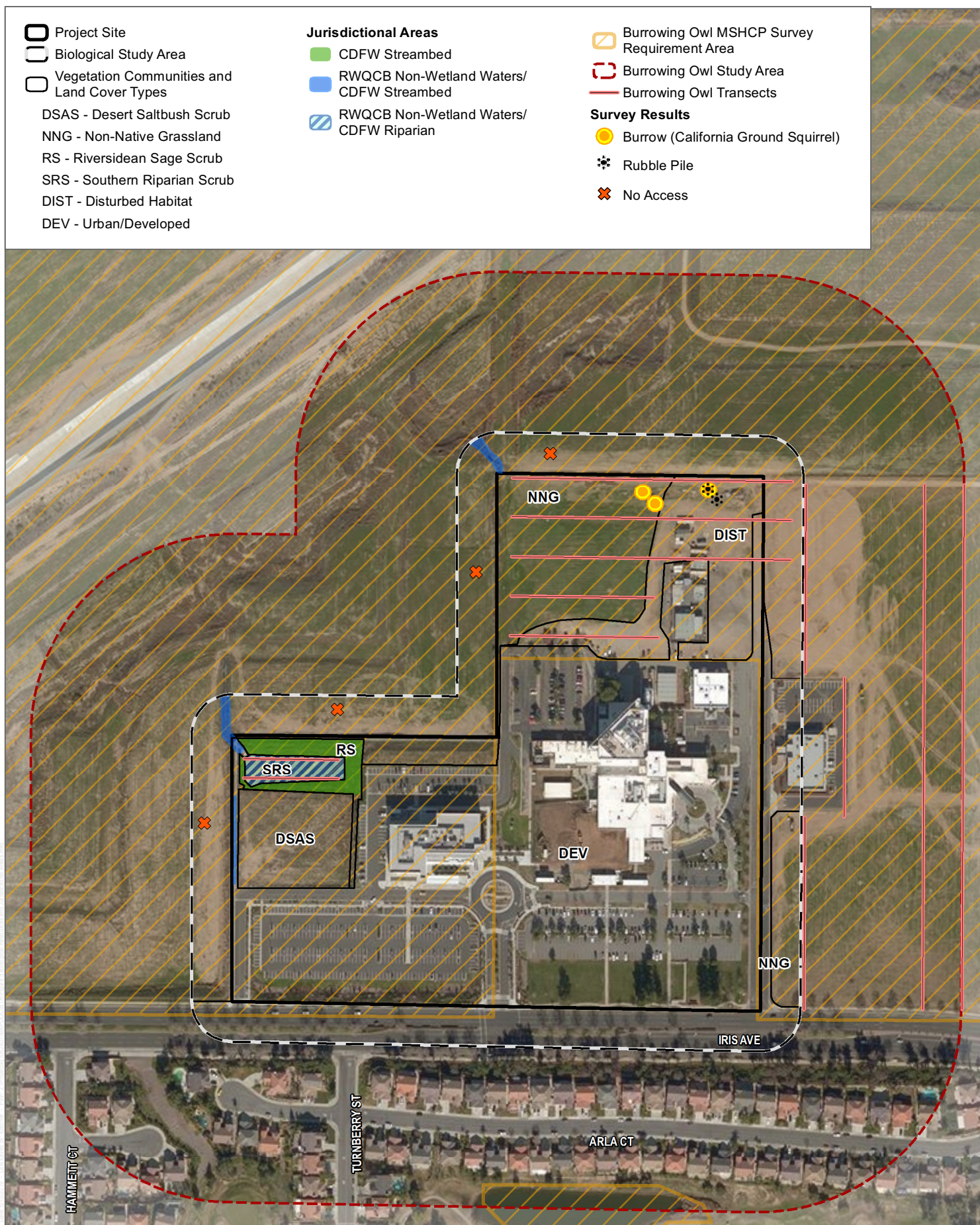
0 110 220 Feet

**FIGURE 4**  
**Vegetation Communities and Land Cover Types**

Kaiser Permanente Moreno Valley







SOURCE: Bing Maps 2018

**DUDEK**



0 160 320 Feet

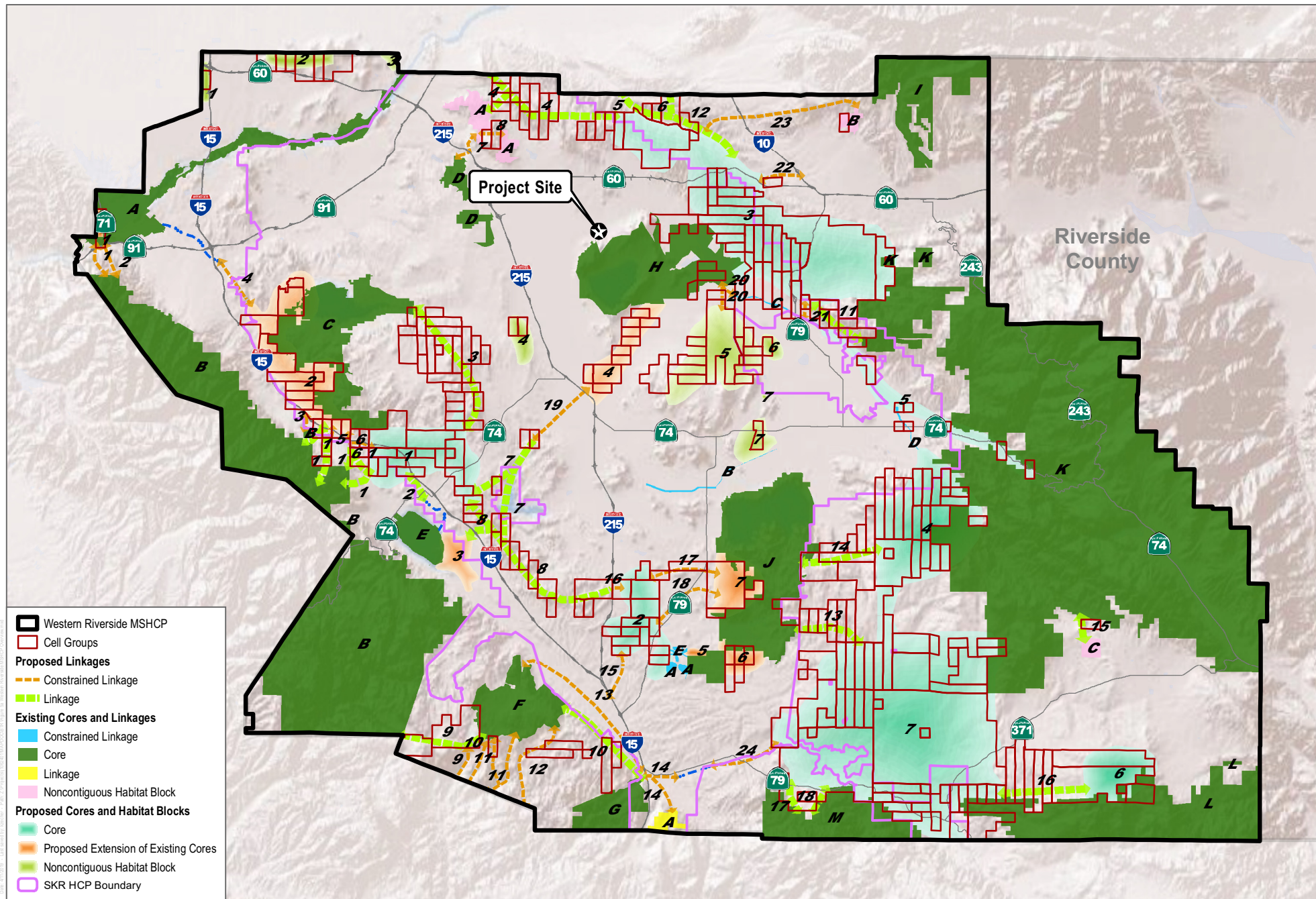
**FIGURE 5**

Biological Resources and Jurisdictional Areas

Kaiser Permanente Moreno Valley



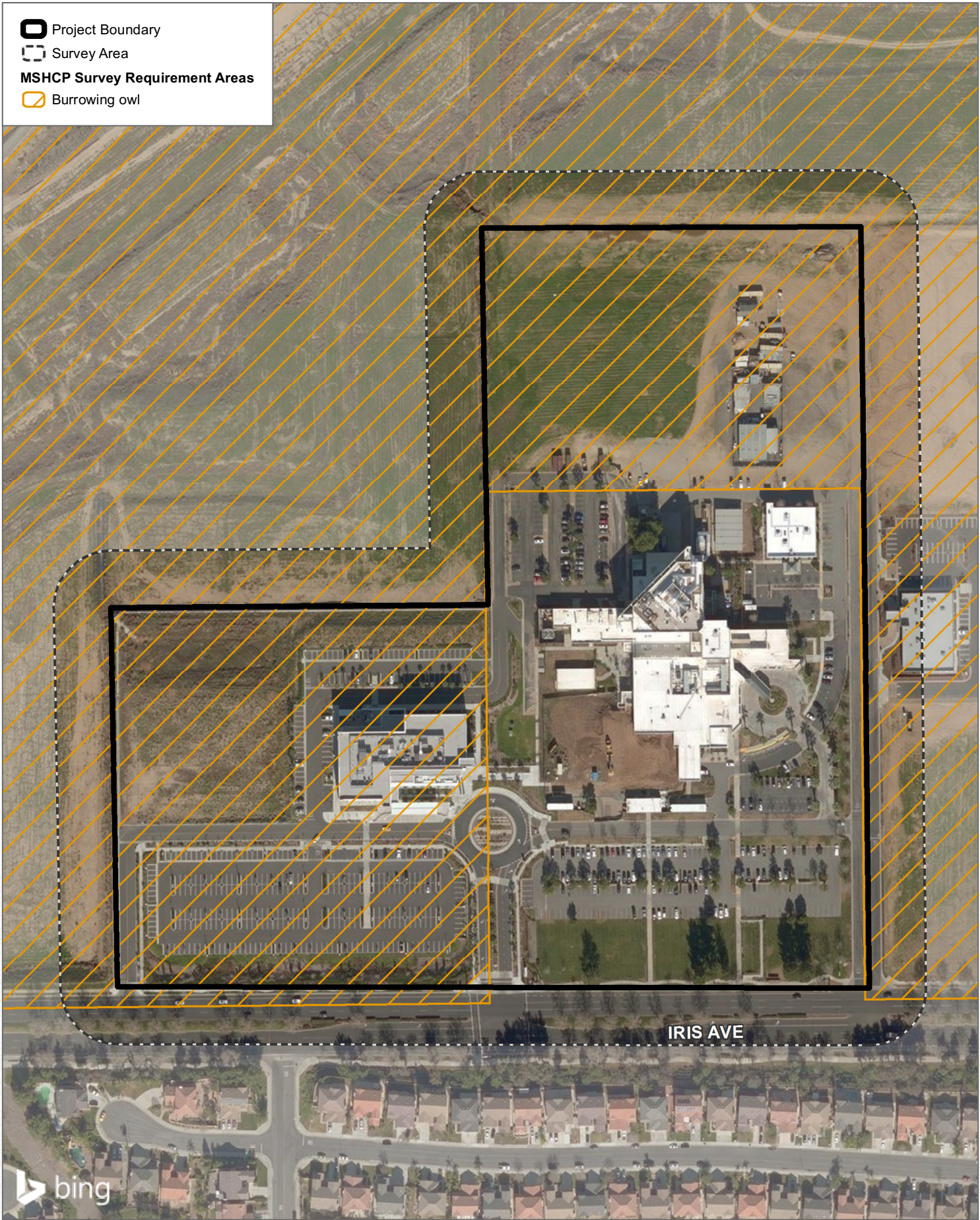




SOURCE: Western Riverside County Regional Conservation Authority 2018; Riverside County 2018



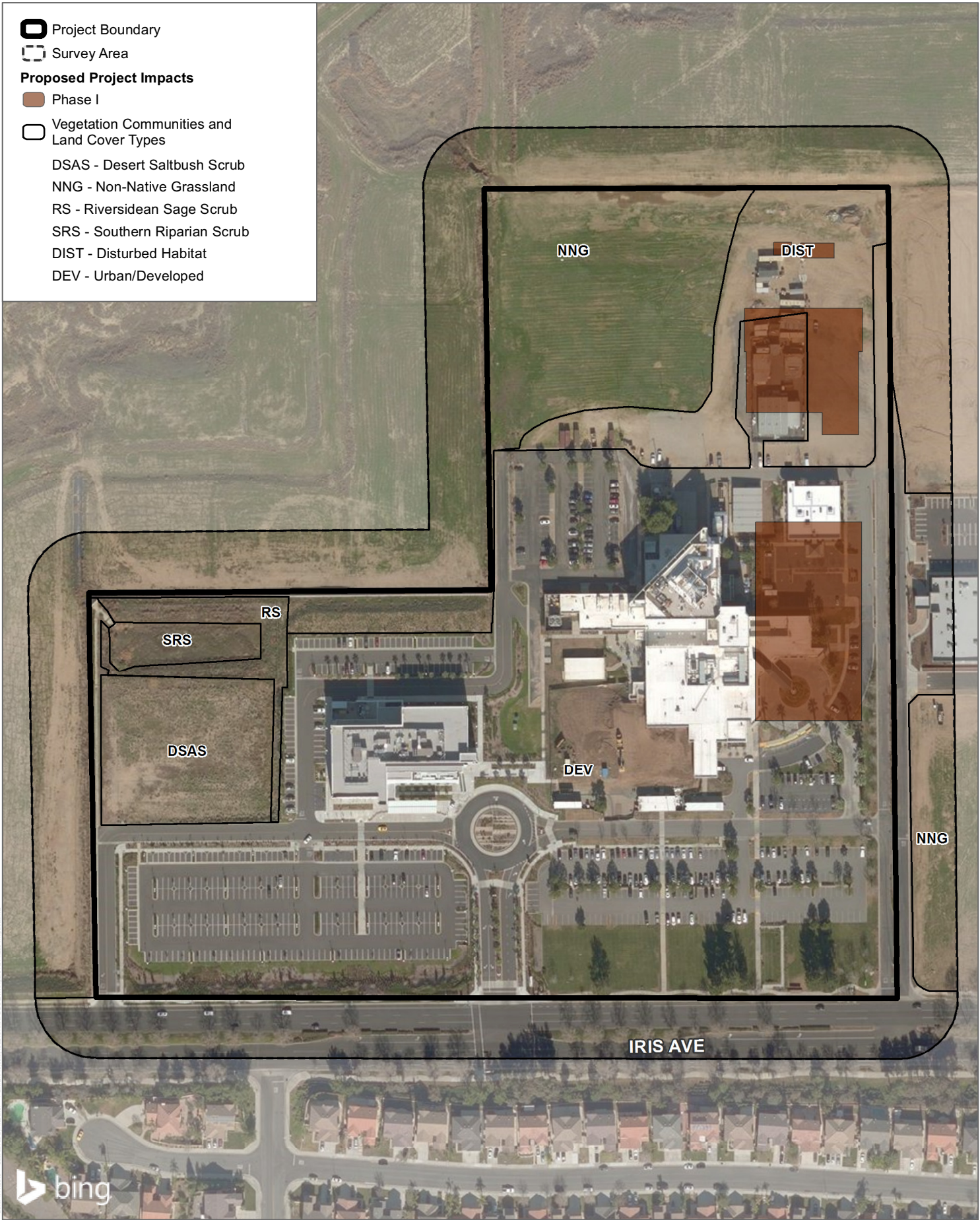




SOURCE: BING Maps, Western Riverside County MSHCP





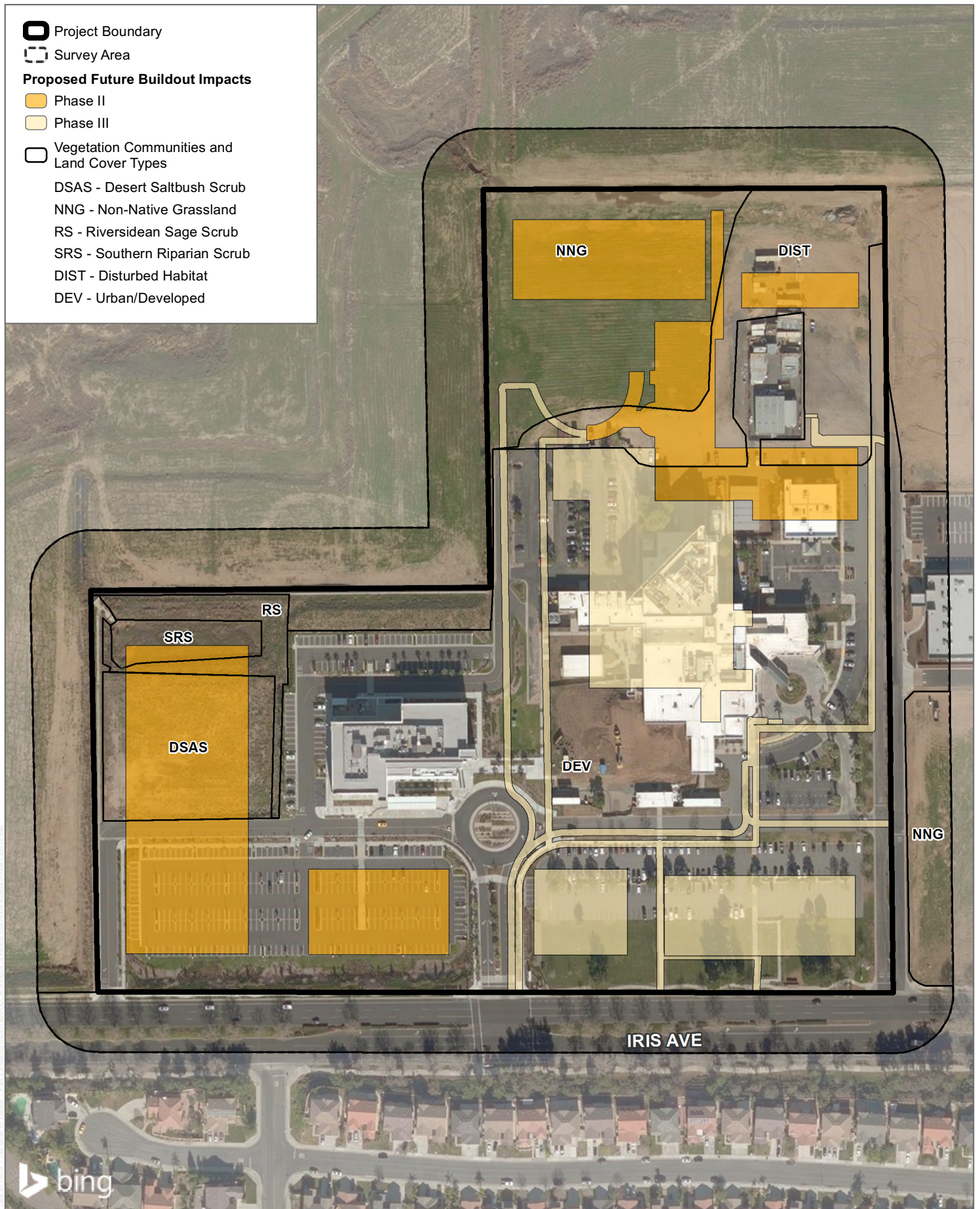


SOURCE: BING Maps

**FIGURE 7a**  
**Phase I Impacts**  
Kaiser Permanente Moreno Valley







SOURCE: BING Maps





# Attachment B

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Site Photographs





## ATTACHMENT B

### Photo Documentation

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**Photo 1:** Facing west from the northern portion of the study area.



**Photo 2:** Facing south from the northern portion of the study area.



**Photo 3:** Facing northwest from the western portion of the study area. Note, detention basin to the right in fenced off area.



**Photo 4:** Facing northeast from the southwestern portion of the study area.

## ATTACHMENT B (Continued)

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# Attachment C

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Species Compendium



# ATTACHMENT C

## Species Compendium

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### PLANTS

#### EUDICOTS

##### VASCULAR SPECIES

##### ***ASTERACEAE—SUNFLOWER FAMILY***

- Ambrosia confertiflora*—wealeaf bur ragweed
- Ambrosia psilostachya*—western ragweed
- Artemisia californica*—California sagebrush
- Baccharis salicifolia*—mulefat
- \* *Centaurea melitensis*—Maltese star-thistle
- \* *Centaurea solstitialis*—yellow star-thistle
- Corethrogyne filaginifolia*—common sandaster
- Encelia californica*—California brittle bush
- Encelia farinosa*—brittle bush
- \* *Erigeron bonariensis*—asthmaweed
- Helianthus annuus*—common sunflower
- Helianthus gracilentus*—slender sunflower
- Heterotheca grandiflora*—telegraphweed
- \* *Lactuca serriola*—prickly lettuce
- \* *Oncosiphon piluliferum*—stinknet
- \* *Sonchus oleraceus*—common sowthistle

##### ***BORAGINACEAE—BORAGE FAMILY***

- Amsinckia intermedia*—common fiddleneck
- Heliotropium curassavicum*—salt heliotrope

##### ***BRASSICACEAE—MUSTARD FAMILY***

- \* *Brassica tournefortii*—Asian mustard
- \* *Hirschfeldia incana*—shortpod mustard
- \* *Raphanus sativus*—cultivated radish
- \* *Sisymbrium irio*—London rocket

##### ***CHENOPODIACEAE—GOOSEFOOT FAMILY***

- Atriplex canescens* var. *canescens*—fourwing saltbush
- Atriplex lentiformis*—quailbush
- \* *Chenopodium album*—lambsquarters
- \* *Salsola tragus*—prickly Russian thistle

## ATTACHMENT C (Continued)

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### **CONVOLVULACEAE—MORNING-GLORY FAMILY**

- \* *Convolvulus arvensis*—field bindweed

### **EUPHORBIACEAE—SPURGE FAMILY**

- \* *Ricinus communis*—castorbean

### **FABACEAE—LEGUME FAMILY**

- Acemisson glaber*—deer weed
- Lupinus bicolor*—miniature lupine
- \* *Medicago polymorpha*—burclover
- \* *Melilotus indicus*—annual yellow sweetclover

### **GERANIACEAE—GERANIUM FAMILY**

- \* *Erodium botrys*—longbeak stork's bill
- \* *Erodium cicutarium*—redstem stork's bill

### **LAMIACEAE—MINT FAMILY**

- Salvia apiana*—white sage
- Salvia mellifera*—black sage

### **MALVACEAE—MALLOW FAMILY**

- \* *Malva parviflora*—cheeseweed mallow

### **MYRSINACEAE—MYRSINE FAMILY**

- \* *Lysimachia arvensis*—scarlet pimpernel

### **POLYGONACEAE—BUCKWHEAT FAMILY**

- Eriogonum fasciculatum*—California buckwheat
- \* *Rumex crispus*—curly dock

### **SALICACEAE—WILLOW FAMILY**

- Populus fremontii*—Fremont cottonwood
- Salix exigua* var. *hindsiana*—narrowleaf willow
- Salix gooddingii*—black willow
- Salix lasiolepis*—arroyo willow

### **SOLANACEAE—NIGHTSHADE FAMILY**

- Datura wrightii*—sacred thorn-apple

### **TAMARICACEAE—TAMARISK FAMILY**

- \* *Tamarix ramosissima*—tamarisk



## ATTACHMENT C (Continued)

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### MONOCOTS

#### VASCULAR SPECIES

##### ***AGAVACEAE—AGAVE FAMILY***

*Chlorogalum pomeridianum*—wavyleaf soap plant

##### ***POACEAE—GRASS FAMILY***

- \* *Avena barbata*—slender oat
- \* *Bromus madritensis* ssp. *rubens*—red brome
- \* *Cynodon dactylon*—Bermudagrass
- Elymus triticoides*—creeping rye grass
- \* *Festuca myuros*—rat-tail fescue
- \* *Hordeum murinum*—mouse barley
- \* *Pennisetum setaceum*—fountain grass
- \* *Polypogon monspeliensis*—annual rabbitsfoot grass
- \* *Schismus barbatus*—common Mediterranean grass

## ATTACHMENT C (Continued)

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### WILDLIFE

#### BIRD

##### BLACKBIRDS, ORIOLES & ALLIES

###### ***ICTERIDAE—BLACKBIRDS***

*Sturnella neglecta*—western meadowlark

##### CARDINALS, GROSBEAKS & ALLIES

###### ***CARDINALIDAE—CARDINALS & ALLIES***

*Passerina caerulea*—blue grosbeak

#### FALCONS

###### ***FALCONIDAE—CARACARAS & FALCONS***

*Falco sparverius*—American kestrel

#### FINCHES

###### ***FRINGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES***

*Haemorhous mexicanus*—house finch

*Spinus psaltria*—lesser goldfinch

*Spinus tristis*—American goldfinch

#### FLYCATCHERS

###### ***TYRANNIDAE—TYRANT FLYCATCHERS***

*Tyrannus verticalis*—western kingbird

*Tyrannus vociferans*—Cassin's kingbird

#### HAWKS

###### ***ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES***

*Buteo jamaicensis*—red-tailed hawk

#### HUMMINGBIRDS

###### ***TROCHILIDAE—HUMMINGBIRDS***

*Calypte anna*—Anna's hummingbird

## ATTACHMENT C (Continued)

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### JAYS, MAGPIES & CROWS

#### ***CORVIDAE—CROWS & JAYS***

*Corvus corax*—common raven

### MOCKINGBIRDS & THRASHERS

#### ***MIMIDAE—MOCKINGBIRDS & THRASHERS***

*Mimus polyglottos*—northern mockingbird

### PIGEONS & DOVES

#### ***COLUMBIDAE—PIGEONS & DOVES***

*Zenaida macroura*—mourning dove

### SHOREBIRDS

#### ***CHARADRIIDAE—LAPWINGS & PLOVERS***

*Charadrius vociferus*—killdeer

### SHRIKES

#### ***LANIIDAE—SHRIKES***

*Lanius ludovicianus*—loggerhead shrike

### STARLINGS & ALLIES

#### ***STURNIDAE—STARLINGS***

\* *Sturnus vulgaris*—European starling

### WOOD WARBLERS & ALLIES

#### ***PARULIDAE—WOOD-WARBLERS***

*Geothlypis trichas*—common yellowthroat

### NEW WORLD SPARROWS

#### ***PASSERELLIDAE—NEW WORLD SPARROWS***

*Melospiza melodia*—song sparrow

*Melospiza crissalis*—California towhee

*Pipilo maculatus*—spotted towhee

*Zonotrichia leucophrys*—white-crowned sparrow

## ATTACHMENT C (Continued)

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### MAMMAL

#### DOMESTIC

##### ***CANIDAE—WOLVES & FOXES***

\* *Canis lupus familiaris*—domestic dog

#### HARES & RABBITS

##### ***LEPORIDAE—HARES & RABBITS***

*Sylvilagus audubonii*—desert cottontail

#### RACCOONS

##### ***PROCYONIDAE—RACCOONS & RELATIVES***

*Procyon lotor*—raccoon

### REPTILE

#### LIZARDS

##### ***PHRYNOSOMATIDAE—IGUANID LIZARDS***

*Sceloporus occidentalis*—western fence lizard

\* signifies introduced (non-native) species



# Attachment D

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Species Lists







## Plant List

### Inventory of Rare and Endangered Plants

63 matches found. *Click on scientific name for details*

#### Search Criteria

Found in Quads 3411713, 3411712, 3411711, 3311783, 3311782, 3311781, 3311773 3311772 and 3311771;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Abronia villosa var. aurita</a>	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	1B.1	S2	G5T2?
<a href="#">Allium marvinii</a>	Yucaipa onion	Alliaceae	perennial bulbiferous herb	Apr-May	1B.2	S1	G1
<a href="#">Allium munzii</a>	Munz's onion	Alliaceae	perennial bulbiferous herb	Mar-May	1B.1	S1	G1
<a href="#">Arenaria paludicola</a>	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	1B.1	S1	G1
<a href="#">Artemisia palmeri</a>	San Diego sagewort	Asteraceae	perennial deciduous shrub	(Feb)May-Sep	4.2	S3?	G3?
<a href="#">Asplenium vespertinum</a>	western spleenwort	Aspleniaceae	perennial rhizomatous herb	Feb-Jun	4.2	S4	G4
<a href="#">Astragalus hornii var. hornii</a>	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	1B.1	S1	G4G5T1T2
<a href="#">Astragalus pachypus var. jaegeri</a>	Jaeger's bush milk-vetch	Fabaceae	perennial shrub	Dec-Jun	1B.1	S1	G4T1
<a href="#">Atriplex coronata var. notator</a>	San Jacinto Valley crowscale	Chenopodiaceae	annual herb	Apr-Aug	1B.1	S1	G4T1
<a href="#">Atriplex pacifica</a>	South Coast saltscale	Chenopodiaceae	annual herb	Mar-Oct	1B.2	S2	G4
<a href="#">Atriplex parishii</a>	Parish's brittlescale	Chenopodiaceae	annual herb	Jun-Oct	1B.1	S1	G1G2
<a href="#">Atriplex serenana var. davidsonii</a>	Davidson's saltscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S1	G5T1
<a href="#">Berberis nevinii</a>	Nevin's barberry	Berberidaceae	perennial evergreen shrub	(Feb)Mar-Jun	1B.1	S1	G1
<a href="#">Brodiaea filifolia</a>	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	Mar-Jun	1B.1	S2	G2
<a href="#">Calochortus plummerae</a>	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	4.2	S4	G4
<a href="#">Carex comosa</a>	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
<a href="#">Caulanthus simulans</a>	Payson's jewelflower	Brassicaceae	annual herb	(Feb)Mar-May(Jun)	4.2	S4	G4
	smooth tarplant	Asteraceae	annual herb	Apr-Sep	1B.1	S2	G3G4T2

<a href="#"><u>Centromadia pungens ssp. laevis</u></a>							
<a href="#"><u>Chloropyron maritimum ssp. maritimum</u></a>	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct(Nov)	1B.2	S1	G4?T1
<a href="#"><u>Chorizanthe leptotheca</u></a>	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	4.2	S3	G3
<a href="#"><u>Chorizanthe parryi var. parryi</u></a>	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S2	G3T2
<a href="#"><u>Chorizanthe polygonoides var. longispina</u></a>	long-spined spineflower	Polygonaceae	annual herb	Apr-Jul	1B.2	S3	G5T3
<a href="#"><u>Chorizanthe xanti var. leucotheca</u></a>	white-bracted spineflower	Polygonaceae	annual herb	Apr-Jun	1B.2	S3	G4T3
<a href="#"><u>Convolvulus simulans</u></a>	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	4.2	S4	G4
<a href="#"><u>Cuscuta obtusiflora var. glandulosa</u></a>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	2B.2	SH	G5T4?
<a href="#"><u>Cylindropuntia californica var. californica</u></a>	snake cholla	Cactaceae	perennial stem succulent	Apr-May	1B.1	S1	G3T2
<a href="#"><u>Deinandra paniculata</u></a>	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov(Dec)	4.2	S4	G4
<a href="#"><u>Dodecahema leptoceras</u></a>	slender-horned spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S1	G1
<a href="#"><u>Eriastrum densifolium ssp. sanctorum</u></a>	Santa Ana River woollystar	Polemoniaceae	perennial herb	Apr-Sep	1B.1	S1	G4T1
<a href="#"><u>Galium californicum ssp. primum</u></a>	Alvin Meadow bedstraw	Rubiaceae	perennial herb	May-Jul	1B.2	S2	G5T2
<a href="#"><u>Harpagonella palmeri</u></a>	Palmer's grapplinghook	Boraginaceae	annual herb	Mar-May	4.2	S3	G4
<a href="#"><u>Helianthus nuttallii ssp. parishii</u></a>	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb	Aug-Oct	1A	SH	G5TH
<a href="#"><u>Hordeum intercedens</u></a>	vernal barley	Poaceae	annual herb	Mar-Jun	3.2	S3S4	G3G4
<a href="#"><u>Horkelia cuneata var. puberula</u></a>	mesa horkelia	Rosaceae	perennial herb	Feb-Jul(Sep)	1B.1	S1	G4T1
<a href="#"><u>Imperata brevifolia</u></a>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
<a href="#"><u>Juglans californica</u></a>	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	4.2	S4	G4
<a href="#"><u>Juncus duranii</u></a>	Duran's rush	Juncaceae	perennial rhizomatous herb	Jul-Aug	4.3	S3	G3
<a href="#"><u>Lasthenia glabrata ssp. coulteri</u></a>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	1B.1	S2	G4T2
<a href="#"><u>Lepechinia cardiophylla</u></a>	heart-leaved pitcher sage	Lamiaceae	perennial shrub	Apr-Jul	1B.2	S2S3	G3
<a href="#"><u>Lepidium virginicum var. robinsonii</u></a>	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	4.3	S3	G5T3
<a href="#"><u>Lilium humboldtii ssp. ocellatum</u></a>	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	4.2	S4?	G4T4?
<a href="#"><u>Malacothamnus parishii</u></a>	Parish's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jul	1A	SX	GXQ

<a href="#"><u>Monardella macrantha ssp. hallii</u></a>	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	1B.3	S3	G5T3
<a href="#"><u>Monardella pringlei</u></a>	Pringle's monardella	Lamiaceae	annual herb	May-Jun	1A	SX	GX
<a href="#"><u>Muilla coronata</u></a>	crowned muilla	Themidaceae	perennial bulbiferous herb	Mar-Apr(May)	4.2	S3	G3
<a href="#"><u>Myosurus minimus ssp. apus</u></a>	little mousetail	Ranunculaceae	annual herb	Mar-Jun	3.1	S2	G5T2Q
<a href="#"><u>Nama stenocarpa</u></a>	mud nama	Namaceae	annual / perennial herb	Jan-Jul	2B.2	S1S2	G4G5
<a href="#"><u>Nasturtium gambelii</u></a>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	Apr-Oct	1B.1	S1	G1
<a href="#"><u>Navarretia fossalis</u></a>	spreading navarretia	Polemoniaceae	annual herb	Apr-Jun	1B.1	S2	G2
<a href="#"><u>Piperia leptopetala</u></a>	narrow-petaled rein orchid	Orchidaceae	perennial herb	May-Jul	4.3	S4	G4
<a href="#"><u>Ribes divaricatum var. parishii</u></a>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	Feb-Apr	1A	SX	G5TX
<a href="#"><u>Romneya coulteri</u></a>	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	Mar-Jul(Aug)	4.2	S4	G4
<a href="#"><u>Rupertia rigida</u></a>	Parish's rupertia	Fabaceae	perennial herb	Jun-Aug	4.3	S4	G4
<a href="#"><u>Senecio aphanactis</u></a>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
<a href="#"><u>Senecio astephanus</u></a>	San Gabriel ragwort	Asteraceae	perennial herb	May-Jul	4.3	S3	G3
<a href="#"><u>Sidalcea hickmanii ssp. parishii</u></a>	Parish's checkerbloom	Malvaceae	perennial herb	(May)Jun-Aug	1B.2	S1	G3T1
<a href="#"><u>Sidalcea neomexicana</u></a>	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	2B.2	S2	G4
<a href="#"><u>Sphenopholis obtusata</u></a>	prairie wedge grass	Poaceae	perennial herb	Apr-Jul	2B.2	S2	G5
<a href="#"><u>Streptanthus campestris</u></a>	southern jewelflower	Brassicaceae	perennial herb	(Apr)May-Jul	1B.3	S3	G3
<a href="#"><u>Symphyotrichum defoliatum</u></a>	San Bernardino aster	Asteraceae	perennial rhizomatous herb	Jul-Nov(Dec)	1B.2	S2	G2
<a href="#"><u>Texosporium sancti-jacobi</u></a>	woven-spored lichen	Caliciaceae	crustose lichen (terricolous)		3	S1	G3
<a href="#"><u>Tortula californica</u></a>	California screw-moss	Pottiaceae	moss		1B.2	S2S3	G2G3
<a href="#"><u>Trichocoronis wrightii var. wrightii</u></a>	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	2B.1	S1	G4T3

### Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 08 May 2019].

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**Questions and Comments**

[rareplants@cnps.org](mailto:rareplants@cnps.org)

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## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad< IS </span>(Sunnymead (3311782)<span style='color:Red'> OR </span>Riverside East (3311783)<span style='color:Red'> OR </span>El Casco (3311781)<span style='color:Red'> OR </span>San Bernardino South (3411713)<span style='color:Red'> OR </span>Redlands (3411712)<span style='color:Red'> OR </span>Yucaipa (3411711)<span style='color:Red'> OR </span>Steele Peak (3311773)<span style='color:Red'> OR </span>Perris (3311772)<span style='color:Red'> OR </span>Lakeview (3311771))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
<i>Allium munzii</i> Munz's onion	PMLIL022Z0	Endangered	Threatened	G1	S1	1B.1
<i>Anniella stebbinsi</i> southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Artemisiospiza belli belli</i> Bell's sage sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
<i>Asio otus</i> long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	PDFAB0F421	None	None	G4G5T1T2	S1	1B.1
<i>Astragalus pachypus</i> var. <i>jaegeri</i> Jaeger's milk-vetch	PDFAB0F6G1	None	None	G4T1	S1	1B.1
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crowscale	PDCHE040C2	Endangered	None	G4T1	S1	1B.1



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Atriplex parishii</i></b> Parish's brittle scale	PDCHE041D0	None	None	G1G2	S1	1B.1
<b><i>Atriplex serenana</i> var. <i>davidsonii</i></b> Davidson's salt scale	PDCHE041T1	None	None	G5T1	S1	1B.2
<b><i>Berberis nevinii</i></b> Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
<b><i>Bombus crotchii</i></b> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<b><i>Brodiaea filifolia</i></b> thread-leaved brodiaea	PMLIL0C050	Threatened	Endangered	G2	S2	1B.1
<b><i>Buteo regalis</i></b> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>Calochortus plummerae</i></b> Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
<b><i>Campylorhynchus brunneicapillus sandiegensis</i></b> coastal cactus wren	ABPBG02095	None	None	G5T3Q	S3	SSC
<b><i>Canyon Live Oak Ravine Forest</i></b> Canyon Live Oak Ravine Forest	CTT61350CA	None	None	G3	S3.3	
<b><i>Carex comosa</i></b> bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
<b><i>Carolella busckana</i></b> Busck's gall moth	IILEM2X090	None	None	G1G3	SH	
<b><i>Catostomus santaanae</i></b> Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
<b><i>Caulanthus simulans</i></b> Payson's jewelflower	PDBRA0M0H0	None	None	G4	S4	4.2
<b><i>Centromadia pungens</i> ssp. <i>laevis</i></b> smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
<b><i>Ceratochrysis longimale</i></b> Desert cuckoo wasp	IIHYM71040	None	None	G1	S1	
<b><i>Chaetodipus fallax fallax</i></b> northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
<b><i>Chloropyron maritimum</i> ssp. <i>maritimum</i></b> salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
<b><i>Chorizanthe parryi</i> var. <i>parryi</i></b> Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
<b><i>Chorizanthe polygonoides</i> var. <i>longispina</i></b> long-spined spineflower	PDPGN040K1	None	None	G5T3	S3	1B.2
<b><i>Chorizanthe xanti</i> var. <i>leucotheca</i></b> white-bracted spineflower	PDPGN040Z1	None	None	G4T3	S3	1B.2





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<b><i>Coccyzus americanus occidentalis</i></b> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b><i>Coleonyx variegatus abbotti</i></b> San Diego banded gecko	ARACD01031	None	None	G5T3T4	S1S2	SSC
<b><i>Crotalus ruber</i></b> red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
<b><i>Cuscuta obtusiflora</i> var. <i>glandulosa</i></b> Peruvian dodder	PDCUS01111	None	None	G5T4T5	SH	2B.2
<b><i>Diadophis punctatus modestus</i></b> San Bernardino ringneck snake	ARADB10015	None	None	G5T2T3	S2?	
<b><i>Dipodomys merriami parvus</i></b> San Bernardino kangaroo rat	AMAFD03143	Endangered	None	G5T1	S1	SSC
<b><i>Dipodomys stephensi</i></b> Stephens' kangaroo rat	AMAFD03100	Endangered	Threatened	G2	S2	
<b><i>Dodecahema leptoceras</i></b> slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Empidonax traillii extimus</i></b> southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S1	
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Eremophila alpestris actia</i></b> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<b><i>Eriastrum densifolium</i> ssp. <i>sanctorum</i></b> Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
<b><i>Eumops perotis californicus</i></b> western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
<b><i>Euphydryas editha quino</i></b> quino checkerspot butterfly	IILEPK405L	Endangered	None	G5T1T2	S1S2	
<b><i>Falco columbarius</i></b> merlin	ABNKD06030	None	None	G5	S3S4	WL
<b><i>Galium californicum</i> ssp. <i>primum</i></b> Alvin Meadow bedstraw	PDRUB0N0E6	None	None	G5T2	S2	1B.2
<b><i>Gila orcuttii</i></b> arroyo chub	AFCJB13120	None	None	G2	S2	SSC
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Harpagonella palmeri</i></b> Palmer's grapplinghook	PDBOR0H010	None	None	G4	S3	4.2
<b><i>Helianthus nuttallii</i> ssp. <i>parishii</i></b> Los Angeles sunflower	PDAST4N102	None	None	G5TH	SH	1A



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<b><i>Horkelia cuneata</i> var. <i>puberula</i></b> mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
<b><i>Icteria virens</i></b> yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
<b><i>Imperata brevifolia</i></b> California satintail	PMPOA3D020	None	None	G4	S3	2B.1
<b><i>Lampropeltis zonata</i> (<i>parvirubra</i>)</b> California mountain kingsnake (San Bernardino population)	ARADB19062	None	None	G4G5	S2?	WL
<b><i>Lanius ludovicianus</i></b> loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
<b><i>Lasiurus xanthinus</i></b> western yellow bat	AMACC05070	None	None	G5	S3	SSC
<b><i>Lasthenia glabrata</i> ssp. <i>coulteri</i></b> Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<b><i>Lepidium virginicum</i> var. <i>robinsonii</i></b> Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
<b><i>Leptonycteris yerbabuenae</i></b> lesser long-nosed bat	AMACB03030	Delisted	None	G4	S1	
<b><i>Lepus californicus bennettii</i></b> San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	SSC
<b><i>Lycium parishii</i></b> Parish's desert-thorn	PDSOL0G0D0	None	None	G3?	S1	2B.3
<b><i>Malacothamnus parishii</i></b> Parish's bush-mallow	PDMAL0Q0C0	None	None	GXQ	SX	1A
<b><i>Monardella macrantha</i> ssp. <i>hallii</i></b> Hall's monardella	PDLAM180E1	None	None	G5T3	S3	1B.3
<b><i>Monardella pringlei</i></b> Pringle's monardella	PDLAM180J0	None	None	GX	SX	1A
<b><i>Myosurus minimus</i> ssp. <i>apus</i></b> little mouseltail	PDRAN0H031	None	None	G5T2Q	S2	3.1
<b><i>Nama stenocarpa</i></b> mud nama	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
<b><i>Nasturtium gambelii</i></b> Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<b><i>Navarretia fossalis</i></b> spreading navarretia	PDPLM0C080	Threatened	None	G2	S2	1B.1
<b><i>Neotoma lepida intermedia</i></b> San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
<b><i>Nyctinomops femorosaccus</i></b> pocketed free-tailed bat	AMACD04010	None	None	G4	S3	SSC



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<b><i>Oncorhynchus mykiss irideus</i> pop. 10</b> steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
<b><i>Onychomys torridus ramona</i></b> southern grasshopper mouse	AMAFF06022	None	None	G5T3	S3	SSC
<b><i>Perognathus longimembris brevinasus</i></b> Los Angeles pocket mouse	AMAFD01041	None	None	G5T1T2	S1S2	SSC
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<b><i>Plegadis chihi</i></b> white-faced ibis	ABNGE02020	None	None	G5	S3S4	WL
<b><i>Polioptila californica californica</i></b> coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
<b><i>Rana muscosa</i></b> southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S1	WL
<b><i>Rhaphiomidas terminatus abdominalis</i></b> Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	
<b><i>Rhinichthys osculus</i> ssp. 3</b> Santa Ana speckled dace	AFCJB3705K	None	None	G5T1	S1	SSC
<b><i>Ribes divaricatum</i> var. <i>parishii</i></b> Parish's gooseberry	PDGRO020F3	None	None	G5TX	SX	1A
<b><i>Riversidian Alluvial Fan Sage Scrub</i></b> Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
<b><i>Salvadora hexalepis virgultea</i></b> coast patch-nosed snake	ARADB30033	None	None	G5T4	S2S3	SSC
<b><i>Senecio aphanactis</i></b> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<b><i>Setophaga petechia</i></b> yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
<b><i>Sidalcea hickmanii</i> ssp. <i>parishii</i></b> Parish's checkerbloom	PDMAL110A3	None	Rare	G3T1	S1	1B.2
<b><i>Sidalcea neomexicana</i></b> salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
<b><i>Southern Coast Live Oak Riparian Forest</i></b> Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
<b><i>Southern Cottonwood Willow Riparian Forest</i></b> Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
<b><i>Southern Riparian Forest</i></b> Southern Riparian Forest	CTT61300CA	None	None	G4	S4	
<b><i>Southern Riparian Scrub</i></b> Southern Riparian Scrub	CTT63300CA	None	None	G3	S3.2	
<b><i>Southern Sycamore Alder Riparian Woodland</i></b> Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	



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<b><i>Southern Willow Scrub</i></b> Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<b><i>Sphenopholis obtusata</i></b> prairie wedge grass	PMPOA5T030	None	None	G5	S2	2B.2
<b><i>Spinus lawrencei</i></b> Lawrence's goldfinch	ABPBY06100	None	None	G3G4	S3S4	
<b><i>Streptanthus campestris</i></b> southern jewelflower	PDBRA2G0B0	None	None	G3	S3	1B.3
<b><i>Streptocephalus woottoni</i></b> Riverside fairy shrimp	ICBRA07010	Endangered	None	G1G2	S1S2	
<b><i>Symphyotrichum defoliatum</i></b> San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Texosporium sancti-jacobi</i></b> woven-spored lichen	NLTEST7980	None	None	G3	S1	3
<b><i>Thamnophis hammondi</i></b> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<b><i>Tortula californica</i></b> California screw moss	NBMUS7L090	None	None	G2G3	S2S3	1B.2
<b><i>Trichocoronis wrightii</i> var. <i>wrightii</i></b> Wright's trichocoronis	PDAST9F031	None	None	G4T3	S1	2B.1
<b><i>Vireo bellii pusillus</i></b> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
<b><i>Xanthocephalus xanthocephalus</i></b> yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 116



# Attachment E

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PTO Table





## ATTACHMENT E

### Plants PTO Table

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand- verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5250	Not expected to occur. No suitable coastal scrub or desert dunes vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Allium marvinii</i>	Yucaipa onion	None/None/1B.2	Chaparral (clay, openings)/perennial bulbiferous herb/Apr–May/2490–3495	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable chaparral vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Allium munzii</i>	Munz's onion	FE/ST/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; mesic, clay/perennial bulbiferous herb/Mar–May/970–3510	Low potential to occur. There is suitable grassland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Arenaria paludicola</i>	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwater or brackish); sandy, openings/perennial stoloniferous herb/May–Aug/5–560	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Artemisia palmeri</i>	San Diego sagewort	None/None/4.2	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb)May–Sep/45–3000	Low potential to occur. There is minimal suitable riparian scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Asplenium vespertinum</i>	western spleenwort	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial rhizomatous herb/Feb–June/590–3280	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	None/None/1B.1	Meadows and seeps, Playas; lake margins, alkaline/annual herb/May–Oct/195–2790	Not expected to occur. There is no suitable meadow and seeps vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's bush milk- vetch	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky/perennial shrub/Dec–June/1195–3200	Low potential to occur. There is suitable grassland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crownscale	FE/None/1B.1	Playas, Valley and foothill grassland (mesic), Vernal pools; alkaline/annual herb/Apr–Aug/455–1640	Not expected to occur. There is suitable grassland vegetation present, however there are no playas or vernal pools present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Atriplex pacifica</i>	South Coast saltscale	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable coastal dune vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/1B.1	Chenopod scrub, Playas, Vernal pools; alkaline/annual herb/June–Oct/80–6235	Not expected to occur. No suitable vernal pools present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; alkaline/annual herb/Apr–Oct/30–655	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Berberis nevinii</i>	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2705	Not expected to occur. There is no suitable coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar–June/80–3675	Medium expected to occur. No vernal pools are present on site, but this species could occur in the coastal sage scrub or grassland habitats on site. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Calochortus plummerae</i>	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/325–5575	Low potential to occur. There is suitable grassland present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Carex comosa</i>	bristly sedge	None/None/2B.1	Coastal prairie, Marshes and swamps (lake margins), Valley and foothill grassland/perennial rhizomatous herb/May–Sep/0–2050	Low potential to occur. There is suitable grassland vegetation present, however no suitable marsh vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Caulanthus simulans</i>	Payson's jewelflower	None/None/4.2	Chaparral, Coastal scrub; sandy, granitic/annual herb/(Feb)Mar–May(June)/295–7220	Not expected to occur. No suitable coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2100	Low potential to occur. There is suitable grassland vegetation present, however there are no playas or meadows present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	None/None/4.2	Chaparral, Coastal scrub, Lower montane coniferous forest; alluvial fan, granitic/annual herb/May–Aug/980–6235	Not expected to occur. No suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/900–4005	Medium potential to occur. There is suitable grassland vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; often clay/annual herb/Apr–July/95–5020	Low potential to occur. No suitable meadows or vernal pools present, and the site lacks clay soils. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	None/None/1B.2	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–June/980–3935	Medium potential to occur. No suitable coastal scrub vegetation present but the site contains suitable sandy/gravelly soils. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2430	Low potential to occur. There is suitable grassland vegetation present, however there are no clay soils present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	None/None/2B.2	Marshes and swamps (freshwater)/annual vine (parasitic)/July–Oct/45–920	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable marsh vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	None/None/1B.1	Chaparral, Coastal scrub/perennial stem succulent/Apr–May/95–490	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernal mesic, sometimes sandy/annual herb/(Mar)Apr–Nov/80–3085	Not expected to occur. There are no vernal pools present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan); sandy/annual herb/Apr–June/655–2495	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).



## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, Coastal scrub (alluvial fan); sandy or gravelly/perennial herb/Apr–Sep/295– 2000	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Galium californicum</i> ssp. <i>primum</i>	Alvin Meadow bedstraw	None/None/1B.2	Chaparral, Lower montane coniferous forest; granitic, sandy/perennial herb/May– July/4425–5575	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable forest vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; Clay; open grassy areas within shrubland/annual herb/Mar–May/65–3135	Low potential to occur. There is suitable grassland vegetation present, however there are no clay soils on site. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None/None/1A	Marshes and swamps (coastal salt and freshwater)/perennial rhizomatous herb/Aug– Oct/30–5005	Not expected to occur. No suitable marsh vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Hordeum intercedens</i>	vernal barley	None/None/3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/annual herb/Mar– June/15–3280	Not expected to occur. There is no suitable saline grassland depressions or vernal pools present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2655	Not expected to occur. There is no suitable coastal scrub and woodland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Imperata brevifolia</i>	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3985	Medium potential to occur. This species could occur within the coastal scrub and riparian scrub habitat located within the detention basin in the northwest portion of the study area. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Juglans californica</i>	Southern California black walnut	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; alluvial/perennial deciduous tree/Mar–Aug/160–2955	Not expected to occur. There is no suitable riparian vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Juncus duranii</i>	Duran's rush	None/None/4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; mesic/perennial rhizomatous herb/July–Aug/5800–9200	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable meadows vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Lasthenia glabrata</i> <i>ssp. coulteri</i>	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/0–4005	Not expected to occur. No suitable marsh vegetation present. The closest known CNDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/None/1B.2	Closed-cone coniferous forest, Chaparral, Cismontane woodland/perennial shrub/Apr–July/1705–4495	Not expected to occur. No suitable forest vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Lepidium virginicum</i> <i>var. robinsonii</i>	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/0–2905	Not expected to occur. There is no suitable coastal scrub vegetation present. The closest known CNDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	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)/95–5905	Not expected to occur. No suitable riparian or coastal scrub vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Lycium parishii</i>	Parish's desert-thorn	None/None/2B.3	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar–Apr/440–3280	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Malacothamnus parishii</i>	Parish's bush-mallow	None/None/1A	Chaparral, Coastal scrub/perennial deciduous shrub/June–July/1000–1495	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/June– Oct/2395–7200	Not expected to occur. The site is outside of the species' known elevation range. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Monardella pringlei</i>	Pringle's monardella	None/None/1A	Coastal scrub (sandy)/annual herb/May– June/980–1310	Not expected to occur. There is no suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Muilla coronata</i>	crowned muilla	None/None/4.2	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland/perennial bulbiferous herb/Mar– Apr(May)/2195–6430	Low potential to occur. No suitable woodland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mouseltail	None/None/3.1	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2100	Not expected to occur. There is suitable grassland vegetation present, however there are no vernal pools on site. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Nama stenocarpa</i>	mud nama	None/None/2B.2	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan– July/15–1640	Not expected to occur. There is no suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Nasturtium gambelii</i>	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr– Oct/15–1085	Not expected to occur. There is no suitable marsh vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/95–2150	Not expected to occur. There is no suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Piperia leptopetala</i>	narrow-petaled rein orchid	None/None/4.3	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest/perennial herb/May–July/1245–7300	Not expected to occur. No suitable woodland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Ribes divaricatum</i> <i>var. parishii</i>	Parish's gooseberry	None/None/1A	Riparian woodland/perennial deciduous shrub/Feb–Apr/210–985	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable woodland vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Romneya coulteri</i>	Coulter's matilija poppy	None/None/4.2	Chaparral, Coastal scrub; Often in burns/perennial rhizomatous herb/Mar–July(Aug)/65–3935	Not expected to occur. No suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Rupertia rigida</i>	Parish's rupertia	None/None/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland/perennial herb/June–Aug/2295–8200	Low potential to occur. There is suitable grassland present, however no suitable meadow vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2625	Not expected to occur. There is no suitable coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Senecio astephanus</i>	San Gabriel ragwort	None/None/4.3	Coastal bluff scrub, Chaparral; rocky slopes/perennial herb/May–July/1310–4920	Not expected to occur. No suitable coastal bluff scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Sidalcea hickmanii</i> <i>ssp. parishii</i>	Parish's checkerbloom	None/SR/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial herb/(May)June–Aug/3280–8200	Not expected to occur. No suitable forest vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5020	Medium potential to occur. No suitable coastal scrub and forest vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Sphenopholis obtusata</i>	prairie wedge grass	None/None/2B.2	Cismontane woodland, Meadows and seeps; mesic/perennial herb/Apr–July/980–6560	Not expected to occur. No suitable woodland or meadows vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Streptanthus campestris</i>	southern jewelflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; rocky/perennial herb/(Apr)May–July/2950–7545	Not expected to occur. No suitable forest vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Symphiotrichum defoliatum</i>	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov/5–6695	Medium potential to occur. No suitable marsh vegetation present, however, potentially suitable riparian scrub habitat occurs within the detention basin on site. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Texosporium sancti-jacobi</i>	woven-spored lichen	None/None/3	Chaparral (openings); On soil, small mammal pellets, dead twigs, and on Selaginella spp/crustose lichen (terricolous)/N.A./195–2165	Not expected to occur. There is no suitable chaparral vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Tortula californica</i>	California screw-moss	None/None/1B.2	Chenopod scrub, Valley and foothill grassland; sandy, soil/moss/N.A./30–4790	Medium potential to occur. There is suitable grassland vegetation present on sandy soils. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	None/None/2B.1	Meadows and seeps, Marshes and swamps, Riparian forest, Vernal pools; alkaline/annual herb/May–Sep/15–1425	Not expected to occur. This species occurs at an elevation range less than 100 feet from the site's range, and there is no suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).

- <sup>1</sup> **Status Legend:**  
FE: Federally listed as endangered  
FT: Federally listed as threatened  
FC: Federal Candidate for listing  
DL: Delisted  
CE: State listed as endangered  
CT: State listed as threatened  
CR: State Rare  
CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere  
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere  
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere  
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

## ATTACHMENT E (Continued)

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CRPR 3: Plants About Which More Information is Needed - A Review List

CRPR 4: Plants of Limited Distribution - A Watch List

- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

*City Subarea Plan (City of Santee)*

Covered: City Subarea Plan Covered Species

<sup>2</sup> Previous studies include Dudek Resources and Impact Analysis Reports (Dudek 1997, 2005, 2006, 2007).

<sup>3</sup> Vicinity refers to records within the La Mesa, El Cajon, Poway, and/or San Vicente Reservoir quadrangles, which overlap the project site (CDFW 2017).



## ATTACHMENT E Wildlife PTO Table

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Amphibians</i>				
<i>Rana muscosa</i>	mountain yellow-legged frog	FE/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. No suitable ponds or meadow vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Spea hammondi</i>	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	Not expected to occur. No suitable vernal pools present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Reptiles</i>				
<i>Actinemys marmorata</i>	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable streams present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Anniella stebbinsi</i>	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	Low potential to occur. No suitable dune habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Moderate potential to occur. There is suitable open sandy areas with scattered brush present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Moderate potential to occur. There is suitable scrub habitat present. The closest known CNDDDB occurrence is less than 1.0 mile south of the project study area along Upper Lake Shore Drive (CDFW 2019).
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Moderate potential to occur. There is suitable scrub habitat present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/SSC	Rocky areas within coastal scrub and chaparral	Not expected to occur. No suitable coastal scrub vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Crotalus ruber</i>	red diamond rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Low potential to occur. There is suitable scrub habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Diadophis punctatus modestus</i>	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 moist habitat present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Lampropeltis zonata (parvirubra)</i>	California mountain kingsnake (San Bernardino population)	None/WL	Wide range of habitats including conifer forest, oak–pine woodlands, riparian woodland, chaparral, manzanita, and coastal scrub	Not expected to occur. No suitable vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Phrynosoma blainvillii</i>	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	Moderate potential to occur. There is suitable open sandy areas present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Low potential to occur. There is suitable scrub habitat present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable streams present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Birds</i>				
<i>Accipiter cooperii</i> (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 nest; no suitable dense stands of trees present. Low potential to forage; minimal scrub habitat present for foraging. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/PSE, SSC	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to nest. No suitable freshwater vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Aimophila ruficeps canescens</i>	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 coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Aquila chrysaetos</i> (nesting & wintering)	golden eagle	BCC/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 nest; no suitable large trees present. Low potential to forage; there are open areas present suitable for foraging. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	BCC/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	Not expected to occur. No suitable unfragmented coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Asio otus</i> (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 nest. No suitable riparian oak thickets habitat present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Athene cunicularia</i> (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	High potential to occur. There is suitable open scrub and grassland habitat present. The closest known CNDDDB occurrence is less than 1.0 mile south of the project study area along Upper Lake Shore Drive (CDFW 2019; USFWS 2019).
<i>Buteo regalis</i> (wintering)	ferruginous hawk	BCC/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Low potential to occur. There is suitable open habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/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 nest. There are no large trees present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego & Orange Counties only)	coastal cactus wren	BCC/SSC	Southern cactus scrub patches	Not expected to occur. There are no cactus scrub patches present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable riparian woodland vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Elanus leucurus</i> (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 nest. No suitable riparian trees present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Empidonax traillii eximius</i> (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 dense riparian vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019; USFWS 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Eremophila alpestris actia</i>	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Low potential to occur. There is suitable grassland vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Falco columbarius (wintering)</i>	merlin	None/WL	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	Not expected to occur. This species prefers coastal areas. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Haliaeetus leucocephalus (nesting &amp; wintering)</i>	bald eagle	FDL, BCC/SE, FP	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 large bodies of water present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Icteria virens (nesting)</i>	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 dense riparian woodland present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Lanius ludovicianus (nesting)</i>	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Low potential to occur. There is suitable open scrub habitat present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Laterallus jamaicensis coturniculus</i>	California black rail	BCC/ST, FP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable freshwater vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Plegadis chihi (nesting colony)</i>	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 nest. No suitable marsh vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Polioptila californica californica</i>	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 coastal scrub vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Setophaga petechia (nesting)</i>	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to nest. No suitable riparian and oak woodland vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Spinus lawrencei (nesting)</i>	Lawrence's goldfinch	BCC/None	Nests and forages in open oak, arid woodlands, and chaparral near water	Not expected to nest. No suitable oak and woodland vegetation present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Vireo bellii pusillus (nesting)</i>	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 nest. No suitable riparian thickets vegetation present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Xanthocephalus xanthocephalus (nesting)</i>	yellow-headed blackbird	None/SSC	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open areas, croplands, and muddy shores of lacustrine habitat	Not expected to nest. No suitable marsh vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Fishes</i>				
<i>Catostomus santaanae</i>	Santa Ana sucker	FT/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. No suitable waters present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Gila orcuttii</i>	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. No suitable waters present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).



## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Oncorhynchus mykiss irideus</i>	southern steelhead - southern California DPS	FE/None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. No suitable waters present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Rhinichthys osculus</i> ssp. 3	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. No suitable waters present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<b>Mammals</b>				
<i>Antrozous pallidus</i>	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Low potential to roost. There is suitable open, dry habitat, however there are no rocky outcrops or abandoned man-made structures or trees for foraging. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Moderate potential to occur. There is suitable scrub habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	FE/SSC	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Low potential to occur. There is scrub habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Low potential to occur. There is suitable grassland and disturbed open scrub habitat present. The closest known CNDDDB occurrence is less than 1.0 mile south and east of the project study area (CDFW 2019; USFWS 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Eumops perotis californicus</i>	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	Low potential to roost. No suitable woodland, rocky canyons or cliffs present. The closest known CNDDDB occurrence overlaps the entire project study area (CDFW 2019).
<i>Lasiurus xanthinus</i>	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	Low potential to roost. No suitable riparian or palms vegetation present. The closest known CNDDDB occurrence overlaps the entire project study area (CDFW 2019).
<i>Leptonycteris yerbabuenae</i>	lesser long-nosed bat	FE/None	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands	Low potential to occur. There is suitable grassland and scrub habitat present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Moderate potential to occur. There is suitable grassland and disturbed areas present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Low potential to occur. There is desert scrub habitat present, however no suitable coastal scrub or rocky areas present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).
<i>Nyctinomops femorosaccus</i>	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	Low potential to roost. No suitable cliffs or rock outcrops present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	Low potential to occur. There is suitable grassland habitat present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Low potential to occur. There is suitable grassland and scrub habitat present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).
<i>Taxidea taxus</i>	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Low potential to occur. There is suitable dry, open areas present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019).
<i>Invertebrates</i>				
<i>Carolella busckana</i>	Busck's gallmoth	None/None	Coastal scrub dunes	Not expected to occur. No suitable coastal scrub dunes vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Ceratochrysis longimala</i>	Desert cuckoo wasp	None/None	Most species are external parasites of wasp and bee larvae; desert habitats with nectar sources	Low potential to occur. No suitable vegetation present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Euphydryas editha quino</i>	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 <i>Plantago erecta</i> , <i>Antirrhinum coulterianum</i> , and <i>Plantago patagonica</i> (Silverado Occurrence Complex)	Not expected to occur. No suitable vegetation or host plants present. There are no known CNDDDB occurrences within 10.0 miles of the project study area (CDFW 2019).
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	FE/None	Delhi fine sandy soils and dunes, scrub and ruderal vegetation in the sand verbena series with <50% cover	Not expected to occur. No suitable dune vegetation or Delhi fine sandy soils present. The closest known CNDDDB occurrence is less than 10.0 miles from the project study area (CDFW 2019).

## ATTACHMENT E (Continued)

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No vernal pools present. The closest known CNDDDB occurrence is less than 5.0 miles from the project study area (CDFW 2019; USFWS 2019).

<sup>1</sup> **Status Notes:**

FE: Federally Endangered  
 FT: Federally Threatened  
 FC: Federal Candidate  
 BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern  
 SSC: California Species of Special Concern  
 FP: California Fully Protected Species  
 WL: California Watch List Species  
 SE: State Endangered  
 ST: State Threatened  
 SS: List Special Animals List, but no other status  
 City Subarea Plan (City of Santee)  
 Covered: City Subarea Plan Covered Species  
 WBWG: Western Bat Working Group  
 H: High  
 HM: High-Medium  
 M: Medium  
 LM: Low-Medium  
 L: Low

<sup>2</sup> Previous studies include Dudek Resources and Impact Analysis Reports (Dudek 1997, 2005, 2006, 2007).

<sup>3</sup> Vicinity refers to records within the La Mesa, El Cajon, Poway, and San Vicente Reservoir quadrangles (CDFW 2017).

<sup>4</sup> San Diego ringneck snake and monarch are not addressed in the biological technical report given lack of special status.



# Attachment F

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## Jurisdictional Delineation Report





May 1, 2019

10624

Skyler Denniston  
Kaiser Permanente  
393 East Walnut Street, 4th Floor  
Pasadena, California 91188

**Subject:** *Jurisdictional Waters Delineation Report for the Kaiser Permanente Moreno Valley Medical Center Master Plan, City of Moreno Valley, Riverside County, California*

Dear Skyler Denniston:

This report documents the results of a jurisdictional waters delineation for the Kaiser Permanente Moreno Valley Medical Center Master Plan Project (project). The approximately 30.3-acre project site is located at 27300 Iris Avenue in the City of Moreno Valley in Riverside County (Figure 1, Project Location; figures are provided in Attachment A). The study area consists of the proposed project and a 100-foot buffer, totaling approximately 43.4 acres.

This letter report is intended to (1) describe the existing conditions of jurisdictional waters within the study area, (2) quantify impacts to jurisdictional waters that would result from implementation of the proposed project, and (3) provide a discussion of potential water resource permits required for construction of the project.

## 1 Project Location and Description

The project site is located within the City of Moreno Valley, generally east of Interstate (I) 215, south of State Route 60, and north of Lake Perris (Figure 1). The project site is specifically located on the north side of Iris Avenue, west of Oliver Street, and east of Nason Street, at 27300 Iris Avenue, Moreno Valley California, 92555 (Figure 1). For the purpose of this report, the area investigated included the entire 30.3-acre project site plus a 100-foot buffer around the project site boundary, for a total of 43.42 acres that comprises the study area.

The study area is currently comprised of approximately 30 acres of developed land with a 130,000-square-foot, 100-bed hospital; two medical office buildings totaling approximately 89,500 square feet; a central energy center; modular trailers/conference rooms; and surface parking. The general vicinity surrounding the study area is primarily undeveloped to the north, east, and west, with residential development located to the south. Residential development is also located further to the east of the study area on the other side of an undeveloped lot that forms the eastern boundary of the study area. The undeveloped land to the north appears to have been previously disturbed in preparation for development, but currently remains fallow.

## 2 Regulatory Background

### 2.1 Federal Statutes and Regulations – U.S. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, any person or public agency proposing to discharge dredged or fill material into waters of the United States, including jurisdictional wetlands, must obtain a permit from the U.S. Army

Corps of Engineers (ACOE). Title 33 of the Code of Federal Regulations, Part 328.3, defines waters of the United States with an amendment published in the Federal Register on June 29, 2015, effective on August 28, 2015. The newly modified Section 328.3(a) defines waters of the United States as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. The territorial seas;
4. All impoundments of waters otherwise identified as water of the United States under this section;
5. All tributaries, as defined in this section;
6. All waters adjacent to a water identified in 1 through 5 above;
7. Additional waters (as defined in the section) where they are determined, on a case-specific basis, to have a significant nexus to a water in 1 through 3 above.

For non-tidal waters of the United States, the lateral limits of ACOE jurisdiction extend to the ordinary high water mark (OHWM) when no adjacent wetlands are present. As defined in 33 Code of Federal Regulations 328.3(c)(6), the OHWM is “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” If adjacent wetlands are present, the jurisdiction extends to the limit of the wetlands.

Wetlands are “those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). Wetlands are jurisdictional if they meet this definition as well as the definition of waters of the United States. Three criteria must be satisfied to classify an area as a wetland under ACOE jurisdiction: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology). The ACOE uses the methodology in the Regional Supplements to the Corps of Engineers Wetland Delineation Manual to determine whether an area meets these three criteria. In the project area, the supplement for the Arid West Region (ACOE 2008a) is used.

### **ACOE-Regulated Activities**

Under Section 404 of the Clean Water Act, the ACOE regulates activities that involve a discharge of dredged or fill material, including but not limited to grading, placing riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material into waters of the United States. Activities that generally do not involve a regulated

discharge (if performed specifically in a manner to avoid discharges) include driving pilings, providing some drainage channel maintenance activities, and excavating without stockpiling.

## 2.2 State Statutes and Regulations – Regional Water Quality Control Board

The State of California has concurrent jurisdiction with the federal government over Section 401 Water Quality Certification for jurisdictional waters and wetlands of the United States. Where isolated waters and wetlands (not subject to federal jurisdiction) are involved, the state will exert independent jurisdiction via the Porter-Cologne Water Quality Control Act.

### Section 401 of the Clean Water Act

Section 401 of the Clean Water Act requires that any applicant for a federal permit for activities that involve a discharge to waters of the United States shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act. Therefore, in California, before the ACOE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification or waiver from the Regional Water Quality Control Board (RWQCB).

Under Section 401 of the Clean Water Act, the RWQCB regulates at the state level all activities that are regulated at the federal level by ACOE.

### Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state” (California Water Code, Section 13260(a)), pursuant to provisions of the state Porter-Cologne Water Quality Control Act. “Waters of the state” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code, Section 13050(e)).

Under the Porter-Cologne Water Quality Control Act, the RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into waters of the state, that are not regulated by the ACOE due to a lack of connectivity with a navigable water body.

## 2.3 State Statutes and Regulations – California Department of Fish and Wildlife

The California Fish and Game Code, Sections 1600–1616, mandates that “it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.”

California Department of Fish and Wildlife (CDFW) jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and

(2) existing fish or wildlife resources. Furthermore, CDFW jurisdiction extends to riparian habitat and may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under the California Fish and Game Code, Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects.

## 3 Methods

### 3.1 Literature Review

The following available resources were reviewed to assess the potential for jurisdictional waters: aerial photographs (Google Earth 2019; Historic Aerials 2019); the U.S. Geological Survey 7.5-minute topographic quadrangle (USGS 2019); a Natural Resources Conservation Service soil map (USDA 2019a); U.S. Environmental Protection Agency Watershed Assessment, Tracking & Environmental Results System (EPA 2019), which includes the National Hydrography Dataset; and the National Wetland Inventory (USFWS 2018).

### 3.2 Jurisdictional Delineation

On March 4, 2019, Dudek biologists Tommy Molioo and Anna Cassady conducted a formal delineation of potentially jurisdictional waters and wetlands within the study area, where access was available. The study area was surveyed on foot where potential jurisdictional features were observed and was surveyed for the following types of features:

- Waters of the United States, including wetlands, under the jurisdiction of the ACOE, pursuant to Section 404 of the federal Clean Water Act
- Waters of the state under the jurisdiction of the RWQCB, pursuant to Section 401 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act as wetlands or drainages
- Streambeds under the jurisdiction of the CDFW, pursuant to Section 1602 of the California Fish and Game Code

Non-wetland waters of the United States were delineated based on the presence of an OHWM as determined using the methodology in A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (ACOE 2008b). Wetland waters of the United States were delineated based on methodology described in the 1987 Corps of Engineers Wetland Delineation Manual (ACOE 1987) and the ACOE Regional Supplement (ACOE 2008a). Pursuant to the federal Clean Water Act, ACOE and RWQCB jurisdictional areas include those supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. Areas regulated by the RWQCB are generally coincident with the ACOE, but can also include

isolated features that have evidence of surface water inundation pursuant to the state Porter-Cologne Water Quality Control Act. Isolated features are delineated at the OHWM, at the outer limits of hydrophytic vegetation, or at the outer rim of depressional features if relevant.

Streambeds are typically delineated from top of bank to top of bank or the extent of associated riparian vegetation beyond the top of bank. For shallow drainages and washes that do not support riparian vegetation, the top-of-bank measurement may be the same as the OHWM measurement.

To aid in the delineation, data was collected at three data stations (Attachment B, Jurisdictional Delineation Forms). Hydrology, vegetation, and soils were assessed, and data were collected on an approved ACOE Arid West Wetland Determination Data form. The site was evaluated for wetland vegetation, wetland hydrology, and hydric soils. Photos of the jurisdictional features were taken in accordance with ACOE guidelines and are provided in Attachment C, Site Photos.

## 4 Environmental Setting

### 4.1 Land Uses

The study area is predominantly developed from the existing Kaiser Permanente Moreno Valley Medical Center campus and residential development. Apart from the developed areas, the study area is characterized with native scrub and non-native grassland habitat to the north, east, and west. Residential development comprises the southern portion of the study area. The study area is relatively flat and occurs at the elevation range of 1,510 feet above mean sea level (AMSL) to 1,560 feet AMSL. Lake Perris is approximately 2.3 miles to the south, and the San Jacinto River is located approximately 4.7 miles to the southeast.

According to historic aerials, the study area was modified with agricultural activities from 1966 until between 1978 and 1996, sometime during which Kaiser Permanente Moreno Valley Medical Center was built. Between March 2011 and June 2012, an eastern expansion of the hospital was constructed. Finally, between the end of 2005 and June 2008, flood control basins were created north of the study area adjacent to the canal. The creation of the flood control basins appears to be associated with large-scale grading that was conducted at the same time on either side of Nason Street north of the study area. This land has remained undeveloped until present day, but there are remnant building pads still visible on aerial imagery (Google Earth 2019, Historic Aerials 2019).

### 4.2 Climate

The San Jacinto Valley, within which the project is located, has an arid climate characterized by hot, dry summers with mild winters. Average yearly temperatures near Moreno Valley range from approximately 45°F to 78°F, with the lowest average temperatures in December and January being 35°F and the highest average temperatures in July and August being 96°F. The area generally receives an average rainfall of approximately 10 inches per year. Precipitation occurs primarily from September through April (WRCC 2019). Prior to the March 4 site visit, 0.53 inches of rain was recorded between March 2 and March 3. Moreno Valley has recorded 9.42 inches of rain since the start of the rainy season (Weather Underground 2019).

## 4.3 Soils

According to the Natural Resource Conservation Service Web Soil Survey (USDA 2019a), the study area occurs within the Western Riverside Area, California (). Four soil types are mapped within the study area: Gorgonio loamy sand, deep, 2% to 8% slopes; Greenfield sandy loam, 2% to 8% slopes, eroded; Hanford coarse sandy loam, 2% to 8% slopes; and San Emigdio loam, 0% to 2% slopes and 2% to 8% slopes (Figure 2, Soils).

- **Gorgonio Series** soils consist of gravelly loamy fine sand, and somewhat stratified. Gorgonio soils commonly occur in Riverside County on nearly level to moderate slopes and alluvial fans.
- **Greenfield Series** soils consist of deep, well-drained soils formed in moderately coarse and coarse-textured alluvium derived from granitic and mixed rock sources. Greenfield soils typically occur on fans and terraces with slopes ranging from 0% to 30%.
- **Hanford Series** soils consist of very deep, well-drained soils formed in moderately coarse textured alluvium dominantly from granite. Hanford soils typically occur on stream bottoms, floodplains, and alluvial fans with slopes ranging from 0% to 15%.
- **San Emigdio Series** soils consist of very deep, well-drained soils formed in dominantly sedimentary alluvium. San Emigdio soils commonly occur in Riverside County on alluvial fans, floodplains, and in narrow valleys with slopes ranging from 0% to 15%.

No soils mapped within the study area are listed as a hydric soil by the Natural Resource Conservation Service for the Western Riverside Area, California (USDA 2019b).

## 4.4 Vegetation

The study area consists of a combination of an upland native scrub community and unvegetated land covers. The following natural vegetation communities were mapped within the study area (Dudek 2019): Riversidean sage scrub, desert saltbush scrub, southern riparian scrub, and non-native grassland (Figure 3, Vegetation Communities and Land Cover Types). Two other non-natural and unvegetated land covers are mapped on the study area including disturbed habitat and urban/developed land. These natural vegetation communities and land covers were mapped based on general physiognomy, species composition, and/or ground cover and are discussed in detail further below. Table 1 summarizes the extent of each vegetation community or land cover within the study area.

**Table 1**  
**Vegetation Communities and Land Covers within the Study Area**

Vegetation Community or Land Cover	Map Code	Acreage
<b>Natural Vegetation Communities</b>		
Riversidean Sage Scrub	RS	0.62
Desert Saltbush Scrub	DSAS	1.55
Southern Riparian Scrub	SRS	0.38
Non-Native Grassland	NNG	12.28
<b>Non-Natural and Unvegetated Land Covers</b>		
Disturbed Habitat	DH	2.68
Urban/Developed	DEV	25.58
<b>Total</b>		<b>43.08</b>

## 6.2.1 Natural Vegetation Communities

### Riversidean Sage Scrub (*Encelia farinosa*–*Artemisia californica* association)

This community includes California sagebrush (*Artemisia californica*) as the dominant species in the shrub canopy, with a co-dominance of California buckwheat (*Eriogonum fasciculatum*) and California brittlebush (*Encelia farinosa*). This community contains an open to intermittent canopy less than 2 meters in height, with an herbaceous layer that is open with seasonal annuals (Sawyer et al. 2009). This community typically occurs within the drought-tolerant end of the coastal sage scrub and the creosote bush scrub types. Other species observed within this community include common sunflower (*Helianthus annuus*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and shortpod mustard (*Hirschfeldia incana*).

### Desert Saltbush Scrub (*Atriplex lentiformis* association)

This community is dominated by quailbush (*Atriplex lentiformis*) with a sub-dominance of fourwing saltbush (*Atriplex canescens* var. *canescens*). Desert saltbush scrub contains the large, fast-growing quailbush shrub that tolerates very alkaline soils and can succeed in hot, dry climates (Sawyer et al. 2009). This community also commonly occurs in disturbed areas. Other species observed in this community include seasonal annuals such as rat-tail fescue (*Festuca myuros*), longbeak stork's bill (*Erodium botrys*), and red brome (*Bromus madritensis* ssp. *rubens*). There are some areas of open bare ground within the western portion of this community.

### Southern Riparian Scrub (*Salix lasiolepis* shrubland alliance)

This community includes a dominance of arroyo willow (*Salix lasiolepis*), with a co-dominance of black willow (*Salix gooddingii*), and Fremont cottonwood (*Populus fremontii*). This community contains an open to continuous canopy less than 10 meters in height, with an herbaceous layer that is variable and emergent trees present at low cover



(Sawyer et al. 2009). This community typically occurs along stream banks, benches, slope seeps, and stringers along drainages. Other species observed in this community include creeping wild rye (*Elymus triticoides*), narrowleaf willow (*Salix exigua* var. *hindsiana*), mulefat (*Baccharis salicifolia*), western ragweed (*Ambrosia psilostachya*), and tamarisk (*Tamarix ramosissima*).

#### Non-Native Grassland (*Bromus madritensis* ssp. *rubens*–*Schismus barbatus* alliance)

This community includes a dominance of red brome with a co-dominance of other non-native annual grasses such as common Mediterranean grass (*Schismus barbatus*), Bermuda grass (*Cynodon dactylon*), and rat-tail fescue. This herbaceous community contains an intermittent to continuous canopy less than 75 centimeters in height (Sawyer et al. 2009). This community typically occurs in previously disturbed or grazed areas. Other species observed in this community include fountain grass (*Pennisetum setaceum*), shortpod mustard, prickly Russian thistle (*Salsola tragus*), stinknet (*Oncosiphon piluliferum*), and a lone narrowleaf willow. Additionally, a small row of mulefat shrubs occurs along the northern project site boundary within the non-native grassland community.

#### Disturbed Habitat

The disturbed (or barren) mapping unit is not recognized by the Natural Communities List (CDFW 2018) but is described by Oberbauer et al. (2008). The disturbed or barren mapping unit refers to areas that lack vegetation but still retain a pervious surface, or that are dominated by a sparse cover of ruderal vegetation such as Maltese star-thistle (*Centaurea melitensis*), wild oat (*Avena fatua*), black mustard (*Brassica nigra*), spiny sowthistle (*Sonchus asper*), and prickly lettuce (*Lactuca serriola*). Disturbed habitat is mapped for the northeastern portion of the study area associated with a maintenance yard and facilities, as well as the surrounding dirt lot. The disturbed habitat within the study area is characterized mainly by compacted bare ground and scattered non-native weedy species such as rattail fescue (*Festuca myuros*), and Russian thistle.

#### Urban/Developed Land

The developed mapping unit is not recognized by the Natural Communities List (CDFW 2018) but is described by Oberbauer et al. (2008). Developed land typically includes areas that have been constructed upon and do not contain any naturally occurring vegetation. These areas are generally characterized as graded land with asphalt and concrete placed upon it. Developed areas mapped for the study area include existing hospital medical campus buildings, parking lots, and paved access roads. Ornamental shrubs and trees were observed within landscaped areas associated with the developed land. Tree species observed include Mexican fan palm (*Washingtonia robusta*) and Peruvian peppertree (*Schinus molle*). No native vegetation was observed within developed areas on the study area.

## 4.5 Topography

The study area is located within the San Jacinto Valley. The San Jacinto Valley is generally bounded by the Santa Ana Mountains to the west and the San Jacinto Mountains to the east. Elevation within the study area ranges from approximately 1,510 feet AMSL to 1,560 feet AMSL.

The study area is relatively flat; however, the northwestern corner is comprised of a constructed, revegetated retarding basin that was coordinated with the Riverside County Flood Control and Water Conservation District as a water quality control basin (TTG 2011).

## 4.6 Hydrology

The study area is located within the San Jacinto River Watershed, specifically within the Moreno Valley subwatershed (HUC 12) within the lower San Jacinto River watershed (HUC 10) (Figure 4, Hydrologic Units). The San Jacinto River watershed encompasses approximately 732 square miles and drains to the Santa Ana River through Lake Elsinore and Temescal Wash. Major tributaries include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain, and Salt Creek. The San Jacinto River is the major drainage course within the San Jacinto Valley. According to the Water Quality Control Plan for the Santa Ana River Basin (RWQCB 2016), the San Jacinto River collects flows from its headwaters in the San Bernardino Mountains and then passes through sandy washes where flow typically percolates into groundwater basins on its way to Canyon Lake, where remaining flows are dammed. From Canyon Lake, the San Jacinto River continues west to cross beneath I-15 to Lake Elsinore, which typically acts as a “sink” for inland flows. During years with high rainfall, however, Lake Elsinore overflows into Temescal Creek, which confluences with the Santa Ana River near the City of Corona. The Santa Ana River flows west until it reaches the Pacific Ocean (RWQCB 2016).

The nearest waterbody to the study area is a canal located approximately 0.15 miles to the northwest. This canal appears to convey flow collected from Mount Russell on the north side of Lake Perris. The canal then joins a series of additional canals before its confluence with the San Jacinto River just east of Highway 74. The National Hydrography Dataset (USGS 2019) depicts an intermittent stream entering the study area from the south and terminating within the existing hospital footprint (Figure 5, Hydrology).

A review of the National Wetland Inventory dataset revealed there is one wetland type—riverine habitat—mapped within the southern portion of the study area, and is classified as riverine, intermittent, streambed, seasonally flooded wetlands (R4SBC) (USFWS 2018). Two freshwater ponds are mapped approximately 420 feet to the north and approximately 460 feet to the west of the study area, and both are classified as palustrine, unconsolidated bottom, artificially flooded wetlands (PUBFx). One riverine feature is mapped approximately 410 feet to the northwest of the study area, and is classified as riverine, intermittent, streambed, temporarily flooded wetlands (R4SBA).

Beneficial uses for ephemeral streams within San Jacinto River Basin, in which the study area is located, include municipal and domestic supply, agricultural supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. All beneficial uses are on an intermittent basis (RWQCB 2016).

## 5 Results of Survey

### 5.1 Jurisdictional Delineation

One basin and one trough were recorded within the study area. These features are described in more detail below. The limits of jurisdictional waters are provided on Figure 6, Jurisdictional Delineation, and representative photos are provided in Attachment C. The results of all data stations are listed in Table 2, Data Station Point Summary, and included in Attachment B.

## 5.1.1 Jurisdictional Features

### 5.1.1.1 Waters of the United States

The study area does not contain jurisdictional waters of the United States because no features were determined to connect downstream to waters of the United States.

### 5.1.1.2 Waters of the State

#### **Basin**

A vegetated basin was installed in the northwestern portion of the study area sometime between January 2006 and June 2008. The creation of the basin appears to have been in association with the previous expansion of Kaiser Permanente Moreno Valley Medical Center that created a new building and additional surface parking. Additionally, the basin appears to have been associated with the preparation of land north of the study area for residential development and its associated flood control features. It appears that the basin remained mostly unvegetated once it was created, but appears to have been landscaped between 2014 and 2016 (Google Earth 2019).

This feature appears to convey runoff from Kaiser Permanente Moreno Valley Medical Center hospital parking lots. Storm drains enter the basin from the south and from the east. An outlet lies in the northwest corner and in the center of the basin. The central outlet is assumed to lead to a storm drain, while the northwestern outlet leads to a series of flood control basins located north of the study area. The flood control basins do not have an apparent outlet, but seem to act as overflow from Riverside County Flood Control District Facility, Line F, and appear to have been installed in coordination with the stalled development project north of the study area.

The basin exhibits a defined bed and bank with the banks vegetated with sage scrub species such as California sagebrush and quailbush. The basin bottom contains open ground, but is also vegetated with a meandering trail of beardless wild rye (*Elymus triticoides*). The beardless wild rye appears to be installed and leads from each basin inlet towards the outlet in the center. A small patch of riparian vegetation, including black willow, and mulefat is located in the southwestern corner, adjacent to the basin inlet. Due to the presence of riparian vegetation, the basin was evaluated for federal and state wetlands. Two data stations were taken within the basin. Each supported a dominance of hydrophytic vegetation, comprised of mulefat, black willow, and salt cedar, but did not support wetland hydrology indicators or hydric soils.

The basin serves as a waterbody in the immediate area. As such, it demonstrates the following intermittent beneficial uses as described for ephemeral streams in the region: groundwater recharge, warm freshwater habitat, and wildlife habitat.

Due to absence of hydric soils and hydrology, the lack of connectivity to downstream waters of the United States, and based on substantial beneficial use and the presence of an OHWM (defined bed and bank), the basin is determined to be non-wetland waters of the state under the jurisdiction of the RWQCB. Additionally, CDFW may assert jurisdiction over this feature as a streambed with riparian vegetation.

## Spillway

A concrete spillway is located in the northern portion of the study area. It appears that this feature was originally created to facilitate flows from the Kaiser property into the flood control basins north of the study area, as described for the Basin in the previous section. The flood control basins to the north do not have an apparent outlet, but seem to act as overflow from Riverside County Flood Control District Facility Line F, and appear to have been installed in coordination with the stalled development project north of the study area. The spillway contains a defined bed and bank and does not appear to currently convey flows into the flood control basins, but has been designed to do so.

The flood control basins north of the study area serve as a waterbody in the immediate area. As such, they demonstrate the following intermittent beneficial uses as described for ephemeral streams in the region: groundwater recharge, warm freshwater habitat, and wildlife habitat. While the spillway by itself does not demonstrate these beneficial uses, it facilitates these uses through the flood control basins through which it is attached.

Due to the lack of connectivity to downstream waters of the United States, and based on substantial beneficial use and the presence of an OHWM (defined bed and bank), the basin is determined to be non-wetland waters of the state under the jurisdiction of the RWQCB. Additionally, CDFW may assert jurisdiction over this feature as a streambed.

### 5.1.2 Non-jurisdictional Features

#### Swale

A swale is located on the northern side of the proposed project in the northwestern corner. This feature is a round bottom grassy swale created in uplands. The purpose of the swale appears to be to collect runoff from the Kaiser property to the east and convey it to the detention basins to the north; however, no evidence of flow was present in the swale at the time of the visit. A ditch is evident at this approximate location in aerials from 1978 to 2004 (historicaerials.com and Google Earth) and appears to be part of a series of ditches presumably used for irrigation. An intermittent stream is depicted on the USGS topographic map and National Hydrography Dataset immediately south of the swale. This stream is depicted as flowing from the hills to the south, continuing north, and terminating on the property. Development occurs to the south where this stream was mapped as occurring historically. On historic aerials, indicators of sheetflow are evident on the 1978 aerial photograph in the approximate location of this mapped stream. Both the irrigation ditch and the sheetflow are present and do not appear to be connected. The stream and/or associated sheetflow are not visible on photographs subsequent to the 1978 photograph.

The present day swale may be a remnant of the historic irrigation ditch; however, it does not appear to have been a part of the historic mapped drainage that flowed north from the hills adjacent to the Perris Reservoir, south of the study area. The Kaiser Permanente Moreno Valley Medical Center has since been designed so that stormwater from the parking lots can sheet flow into the undeveloped land to the north. This feature resembled a swale, with no defined bed or bank, and no other OHWM indicators. A spillway is present at the northern end of the swale at the northwest corner of the Kaiser property and was developed between 2014 and 2016. This spillway leads to the constructed basins north of the study area. It is possible that this spillway was created at the time as a part of a large plan for the hospital to tie their storm drain system into the basins; however, there are no remaining indicators that this feature ties into the basin.

Due to the presence of a single sandbar willow sapling (*Salix exigua*), the swale was assessed for federal and state wetlands. One data station was taken within the swale. This data station did not support wetland hydrology indicators, hydric soils, or a dominance of hydrophytic vegetation. Table 2 summarizes the results of the data stations and is followed by further description of the indicators observed. Appendix B provides the data collected at each data station on the ACOE's Wetland Determination Data Forms for the Arid West Region.

**Table 2. Data Station Point Summary**

Data Station	Wetland Determination Field Indicators			Vegetation Community	Determination	Jurisdiction
	Vegetation	Hydric Soils	Hydrology			
1	None	None	None	California annual grassland	Non-Jurisdictional	None
2	✓	None	None	Southern riparian scrub	Non-Jurisdictional	Non-Wetland
3	✓	None	None	Southern riparian Scrub	Non-Jurisdictional	Non-Wetland

The swale is not a water of the United States due to lack of OHWM indicators and characteristics of a swale. Due to the lack of OHWM indicators and absence of a dominance of hydrophytic vegetation, hydric soils, and hydrology, the swale is not a waters of the state and is not under RWQCB jurisdiction. The swale has a round bottom and no defined bed or bank. It also does not support riparian vegetation; therefore, it is not a streambed and is not under CDFW jurisdiction.

### 5.3 Jurisdictional Delineation Conclusion

The study area supports one feature that is a waters of the state under the jurisdiction of the RWQCB and CDFW, the basin. Table 3 summarizes the total acreage of this feature within the study area.

**Table 3. Jurisdictional Waters within the Study Area**

Feature	Vegetation Community	Non-Wetland Waters of the State (RWQCB/CDFW) (Acres/Linear Feet)	Additional Streambed (CDFW-Only) (Acres)
Basin	Riversidean Sage Scrub	—	0.54
	Southern Riparian Scrub	0.38/248	—
	Non-Native Grassland	0.10/220	—
	Urban/Developed	0.03/255	—
	<b>Total*</b>	<b>0.51</b>	<b>0.54</b>

**Notes:**

\* Acreage may not total due to rounding.

RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Skyler Denniston

Subject: *Jurisdictional Waters Delineation Report for the Kaiser Permanente Moreno Valley Medical Center Master Plan, City of Moreno Valley, Riverside County, California*

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## 6 Impacts and Recommendations

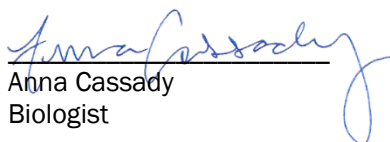
The proposed project includes the phased redevelopment of the Kaiser Permanente Moreno Valley Medical Center. As depicted in Figure 7a, Phase I Project Impacts and Figure 7b, Impacts from Future Buildout, construction and other project activities are expected to impact jurisdictional waters. As such, the following may be required by the regulatory agencies prior to project construction: a Waste Discharge Requirement from the RWQCB and a Streambed Alteration Agreement from CDFW.

The proposed project includes installing two basins in the northern portion of the project site during Phase 1 of the project that will provide the same functions and values as the current basin, which will remain in place until Phases 2 and 3 of the project (Figure 7c, Preliminary Grading and Drainage Plan). Therefore, impacts to jurisdictional waters would be less than significant during Phase 1 of the project, and additional mitigation is not anticipated. However, potentially jurisdictional waters contained within the existing detention basin will be impacted during Phases 2 and 3 of the project, which would be considered significant and require mitigation for impacts. The applicant should coordinate with the RWQCB and CDFW to confirm permit requirements and mitigation expectations prior to the start of Phases 2 and 3 of the proposed project.

Should you have any questions regarding this report or require additional information, please do not hesitate to contact me at [tmoloo@dudek.com](mailto:tmoloo@dudek.com) or 949.373.8308.

Sincerely,

  
Tommy Moloo  
Senior Biologist

  
Anna Cassidy  
Biologist

Att.: Attachment A – Figures  
Attachment B – Jurisdictional Delineation Forms  
Attachment C – Site Photos

## 7 References

- ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetland Delineation Manual*. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. Accessed December 2018. [http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge\\_id=1606](http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606).
- ACOE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. Accessed December 2018. [http://www.usace.army.mil/CECW/Pages/reg\\_supp.aspx](http://www.usace.army.mil/CECW/Pages/reg_supp.aspx).
- ACOE. 2008b. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. Cold Region Research and Environmental Laboratory, ERDC/CRREL TR-08-12. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center. August 2008.
- CDFW (California Department of Fish and Wildlife). 2018. *Natural Communities List Arranged Alphabetically by Life Form*. October 2018. Accessed April 2019. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List>.
- Dudek. 2019. *Biological Resources Technical report and MSHCP Consistency Analysis for the Kaiser Permanente Moreno Valley Medical Center Master Plan Project*. In preparation, April 2019.
- EPA (U.S. Environmental Protection Agency). 2019. "Watershed Assessment, Tracking & Environmental Results (WATERS)." Last updated February 05, 2014. Accessed April 2019. <https://www.epa.gov/waterdata/viewing-waters-data-using-google-earth>.
- Google Earth. 2019. Aerial photograph. 1:200 scale.
- Historic Aerials. 2019. [www.historicaerials.com](http://www.historicaerials.com).
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. March 2008. Accessed April 2019. [http://www.sdcanyonlands.org/pdfs/veg\\_comm\\_sdcounty\\_2008\\_doc.pdf](http://www.sdcanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf).
- RWQCB (California Regional Water Quality Control Board). 2016. *Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin*. Revised February 2016. [https://www.waterboards.ca.gov/santaana/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/).



Sawyer J., T. Keeler-Wolf., and J.M. Evens. 2009. *A Manual of California Vegetation*. 2nd ed. Sacramento, California: California Native Plant Society.

TTG (TMAD Taylor & Gaines). 2011. *On-Site Hydrology Study for Kaiser Permanente Iris MOB*. May 17, 2011.

USDA (U.S. Department of Agriculture). 2019a. Web Soil Survey. USDA, Natural Resources Conservation Service, Soil Survey Staff. Accessed December 2018. <http://websoilsurvey.nrcs.usda.gov>.

USDA. 2019b. Wetland Indicator Status Search. Accessed April 2019. <https://plants.usda.gov/core/wetlandSearch>.

USFWS (U.S. Fish and Wildlife Service). 2018. National Wetland Inventory. Last updated June 25, 2018. Accessed April 2019. <http://www.fws.gov/wetlands/Data/Mapper.html>.

USGS (U.S. Geological Survey). 2019. National Hydrography Dataset. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.

Weather Underground Inc. 2019. "Moreno Valley, California Weather History." Monthly History. [https://www.wunderground.com/history/daily/us/ca/moreno-valley/KSBD/date/2019-4-26?cm\\_ven=localwx\\_history](https://www.wunderground.com/history/daily/us/ca/moreno-valley/KSBD/date/2019-4-26?cm_ven=localwx_history).

WRCC (Western Regional Climate Center). 2019. "March Field Air Reserve Base, California." <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5326>.

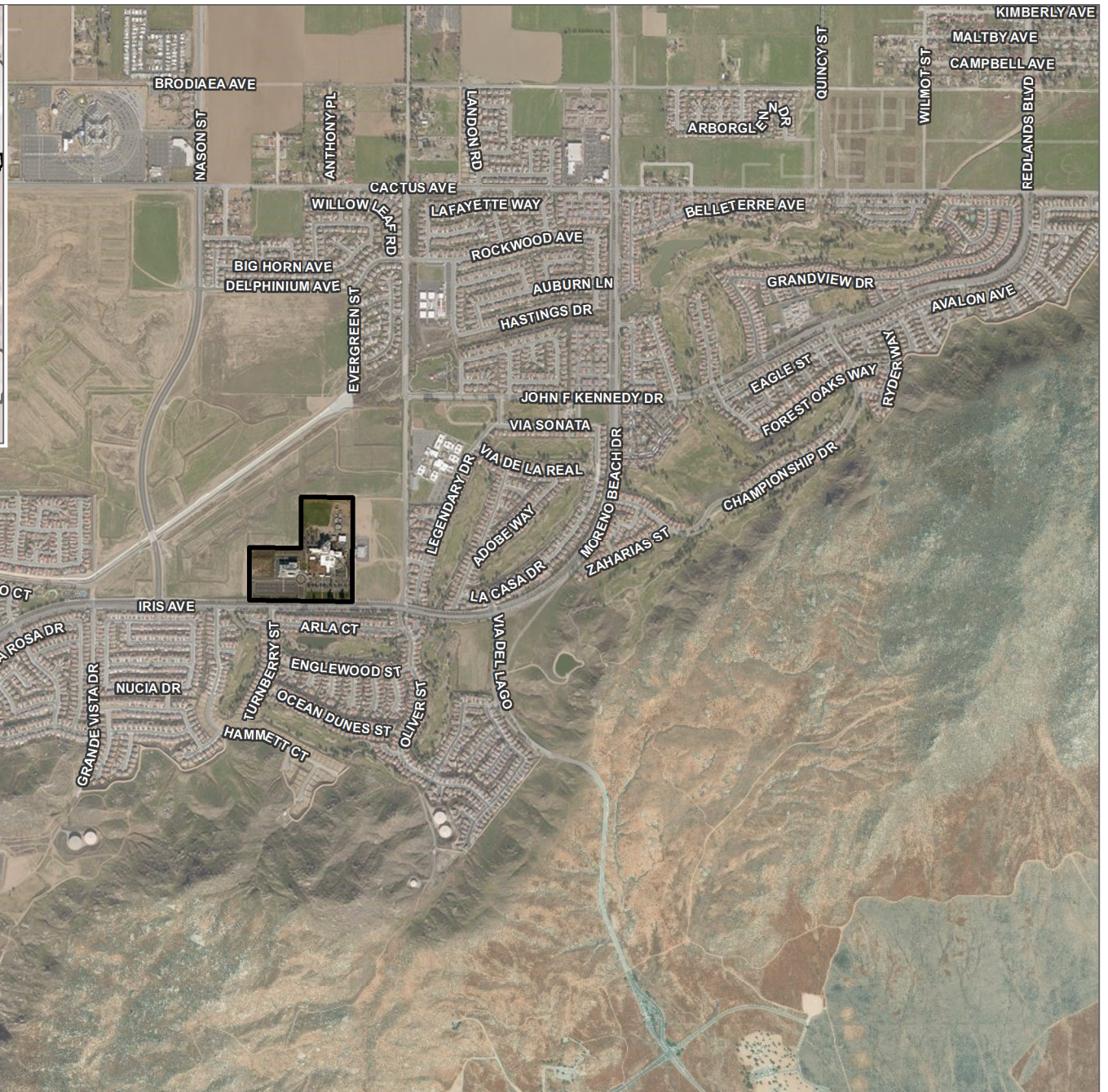
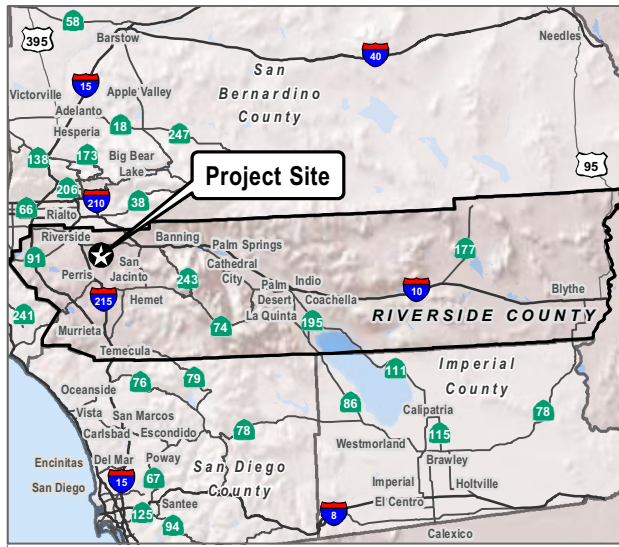



# Attachment A

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Figures





 Project Boundary

SOURCE: Bing

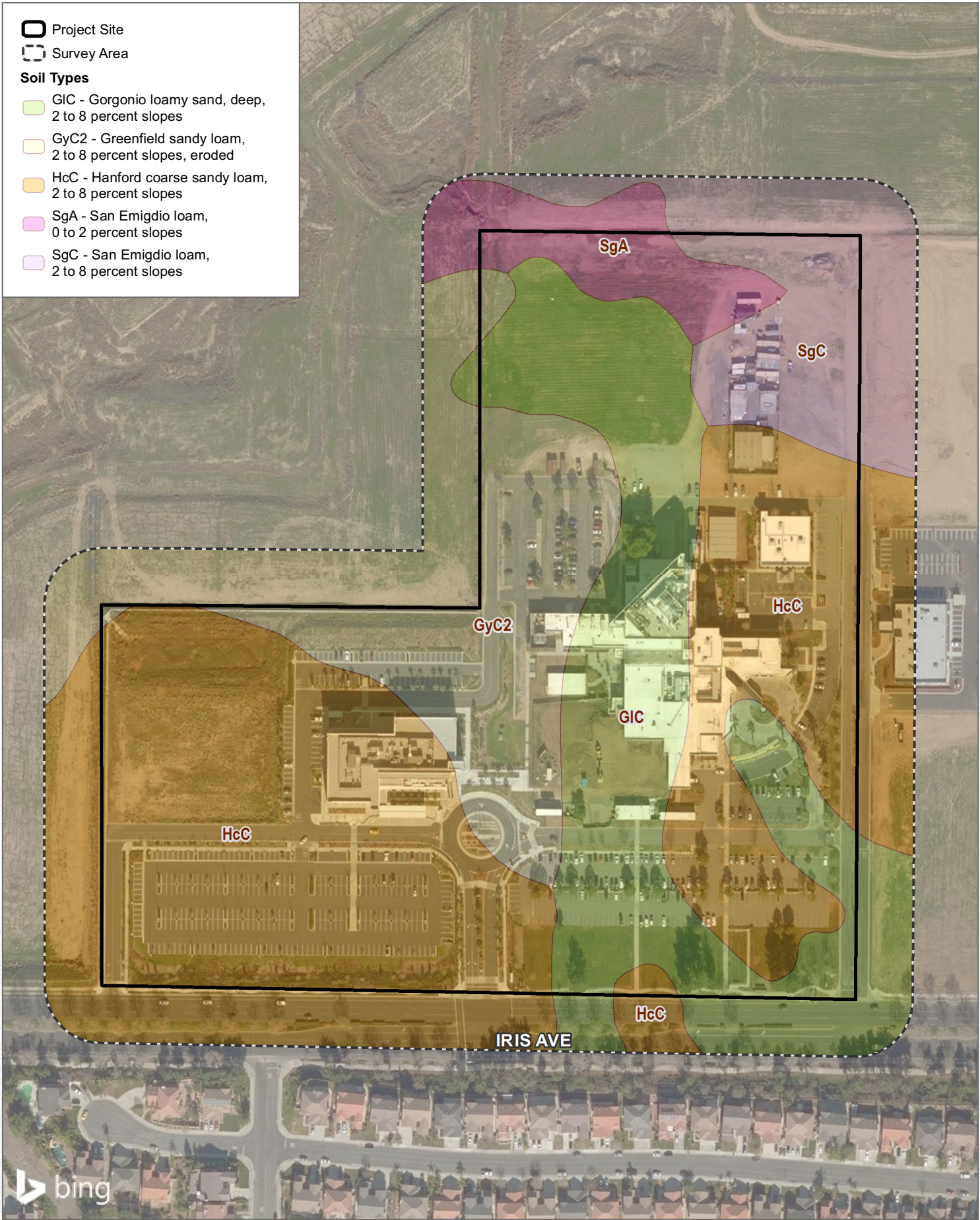
**DUDEK**



**FIGURE 1**

**Project Location**

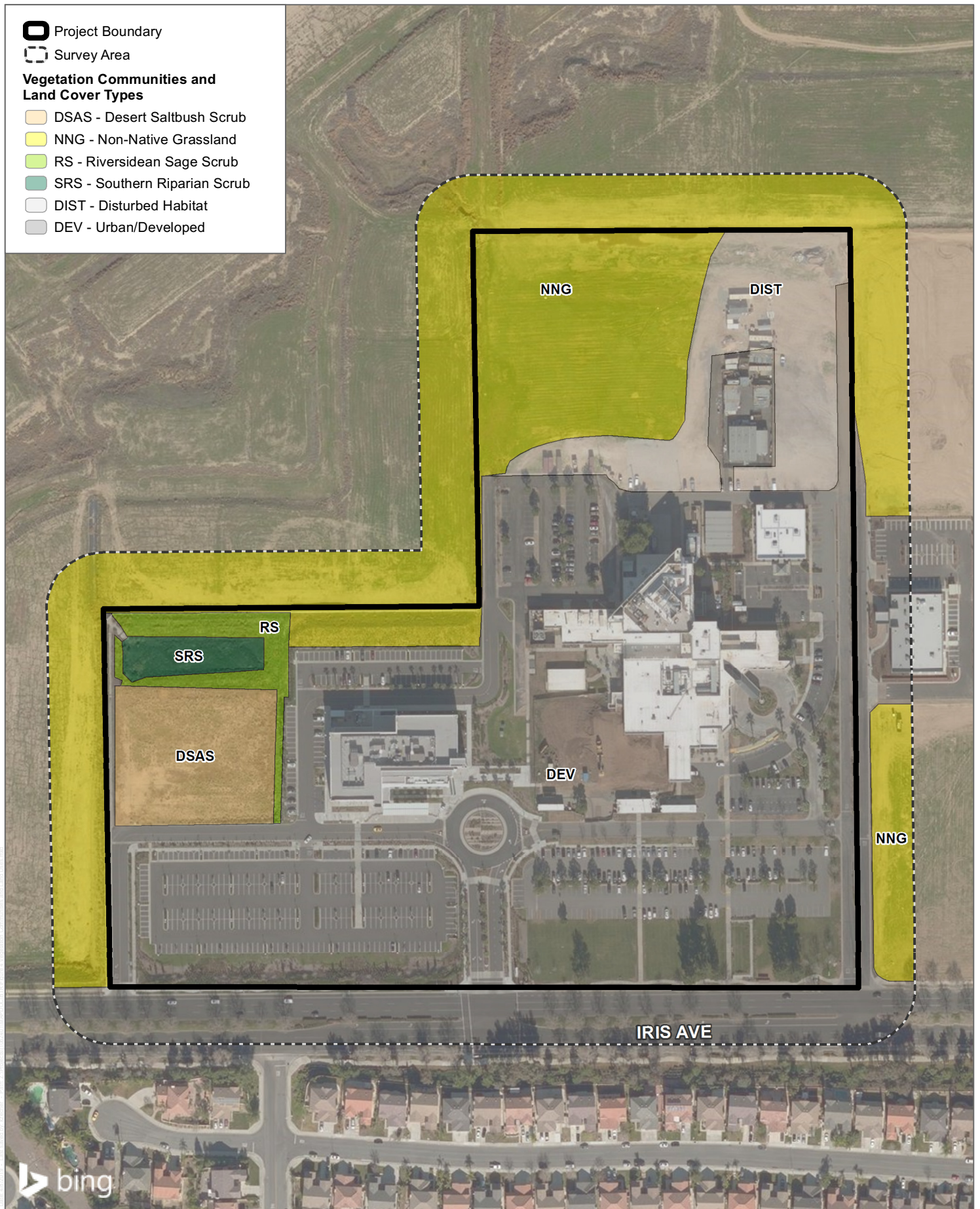




SOURCE: BING Maps; USDA NRCS

**FIGURE 2**  
**Soils**





SOURCE: BING Maps

**DUDEK**



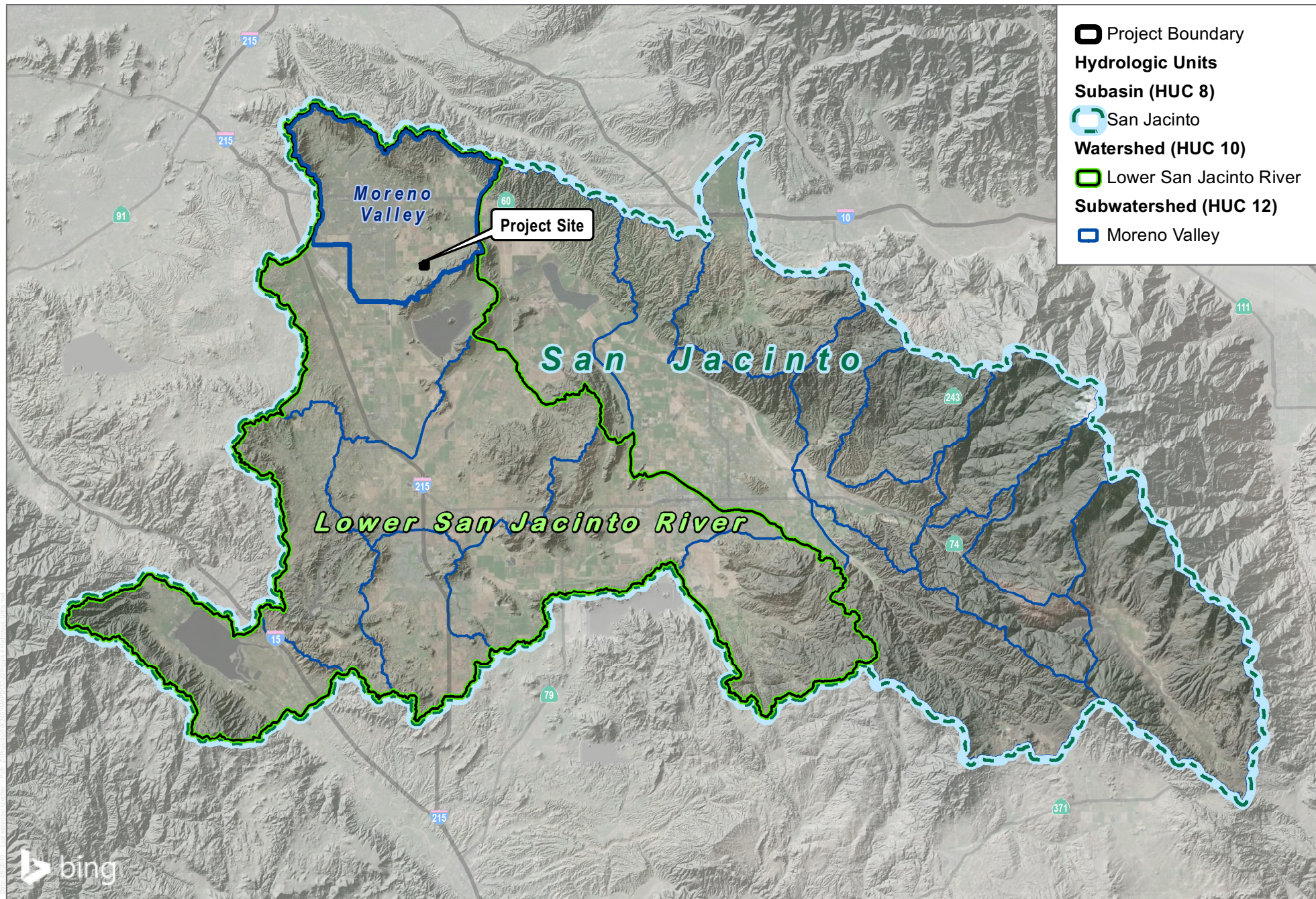
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**FIGURE 3**

**Vegetation Communities and Land Cover Types**

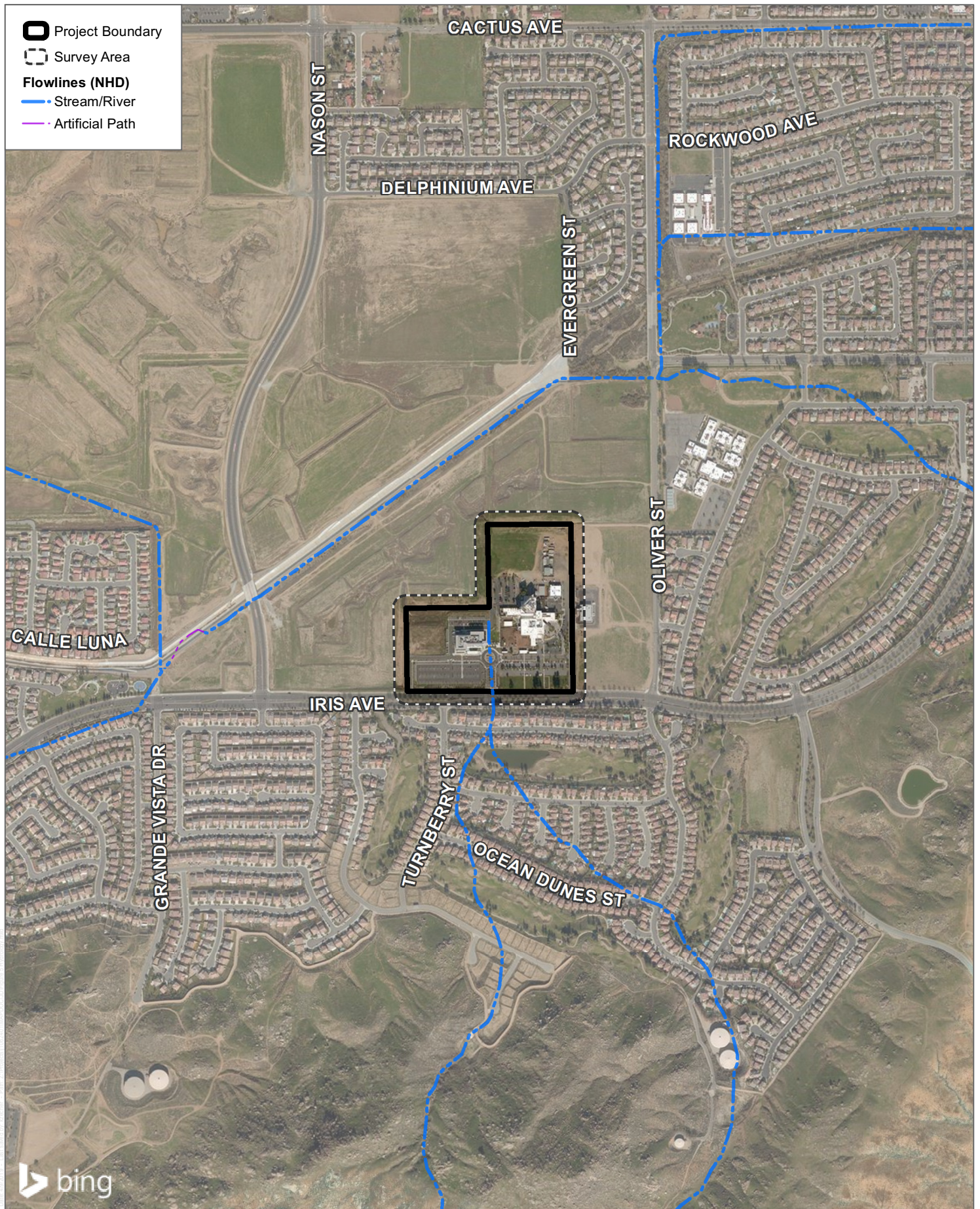
Jurisdictional Waters Delineation Report for the Kaiser Moreno Valley Medical Center Master Plan





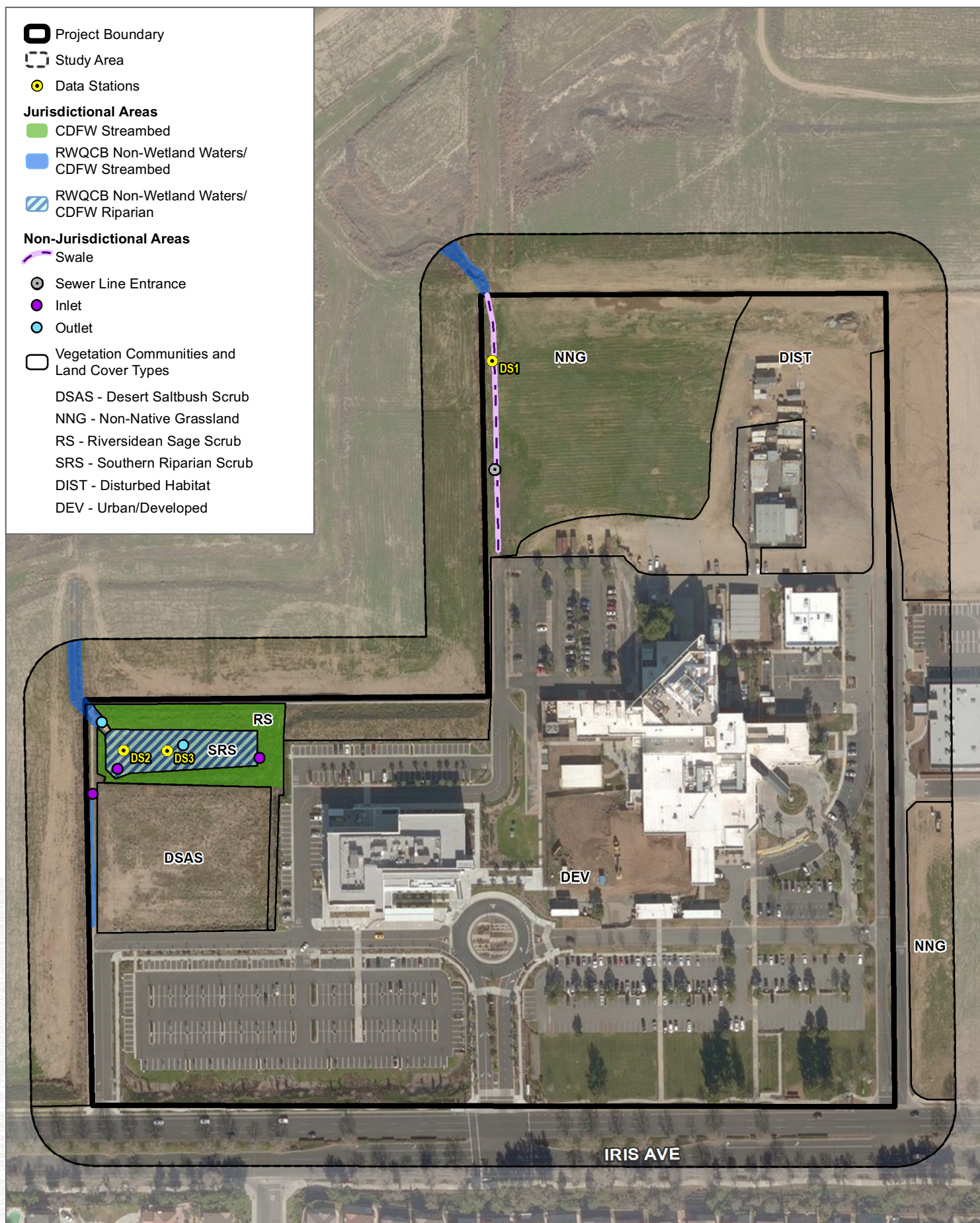
SOURCE: BING Maps, USGS NHD





SOURCE: BING Maps, USGS NHD



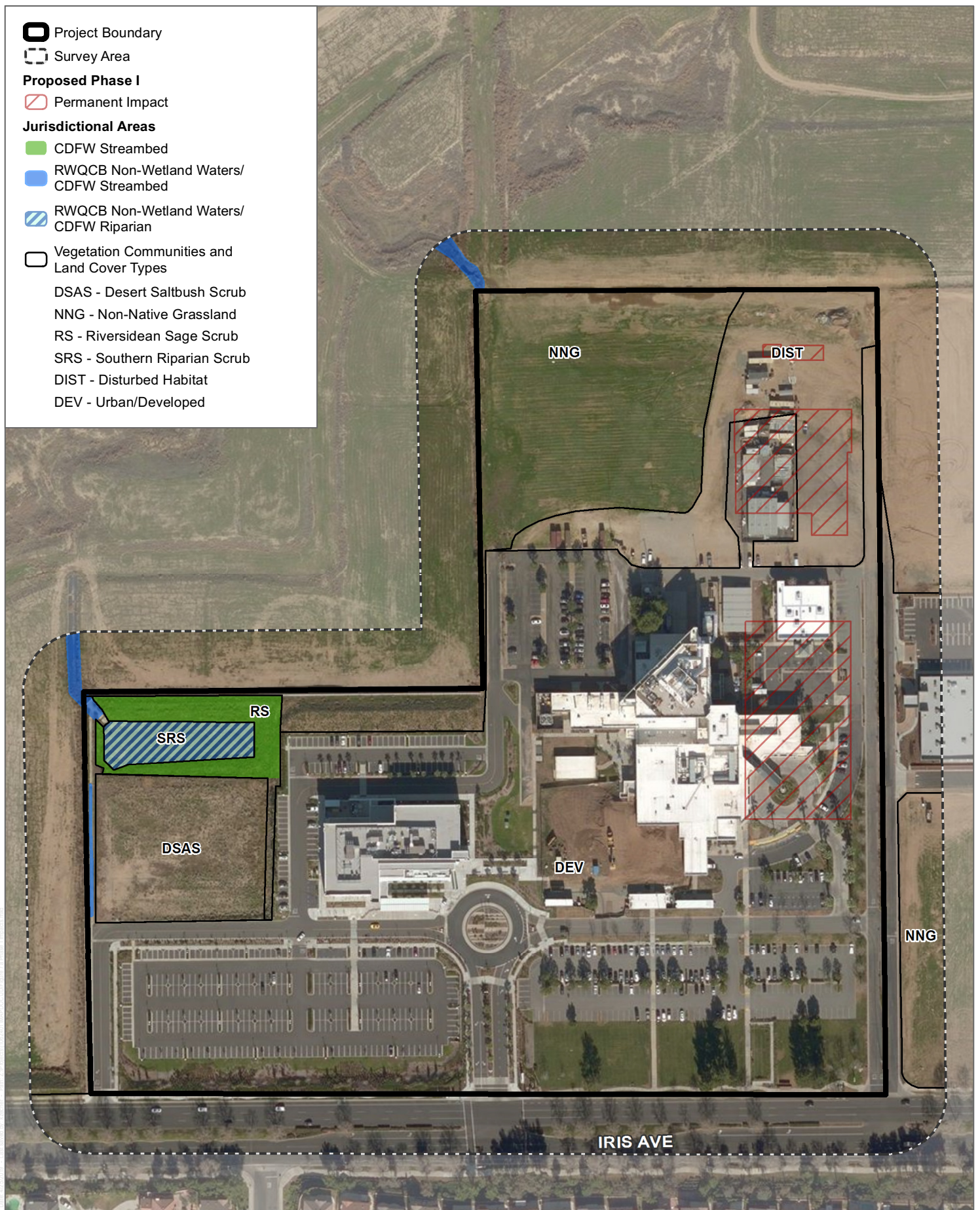


SOURCE: BING Maps

**FIGURE 6**

## Jurisdictional Delineation Results

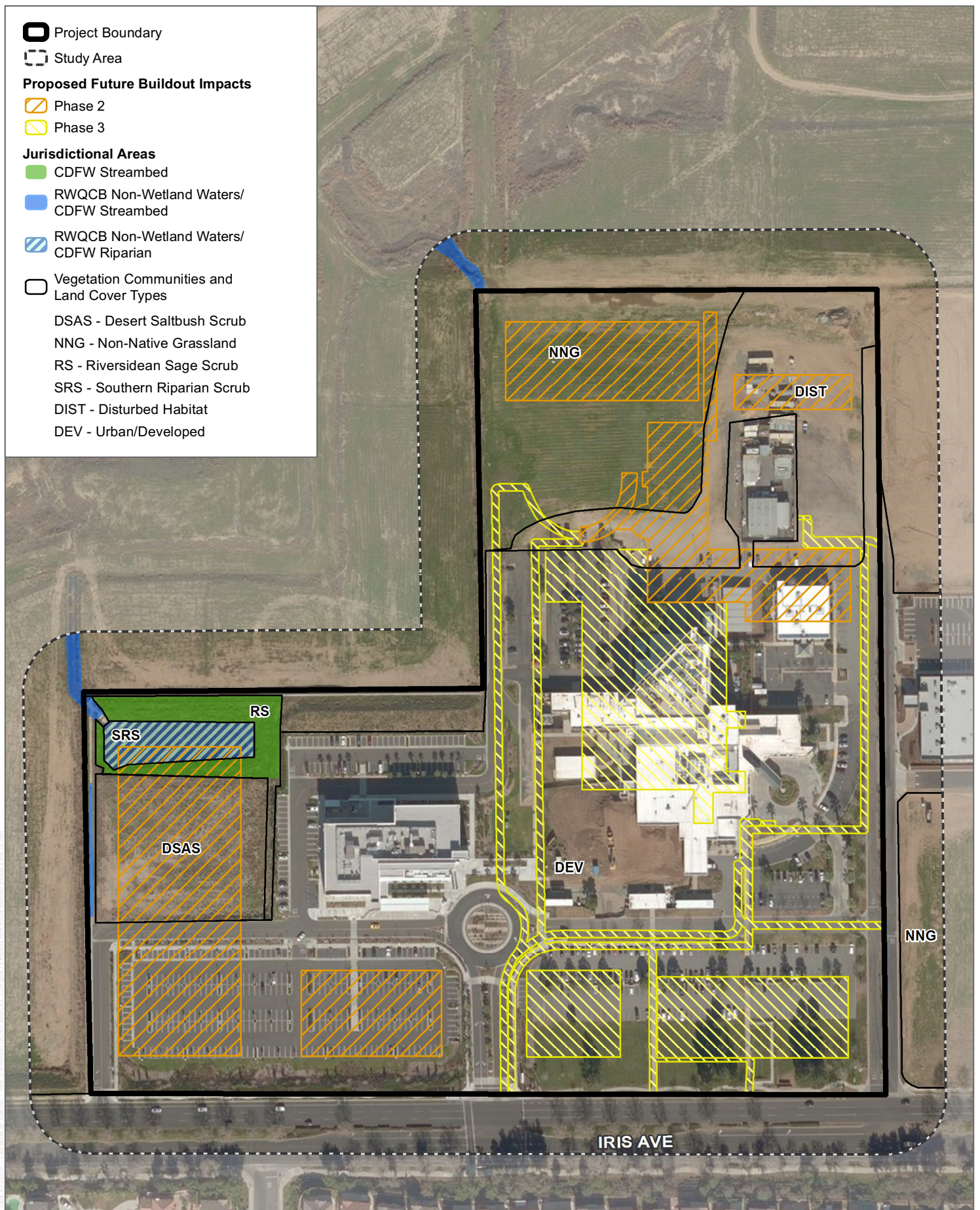




SOURCE: BING Maps







SOURCE: BING Maps

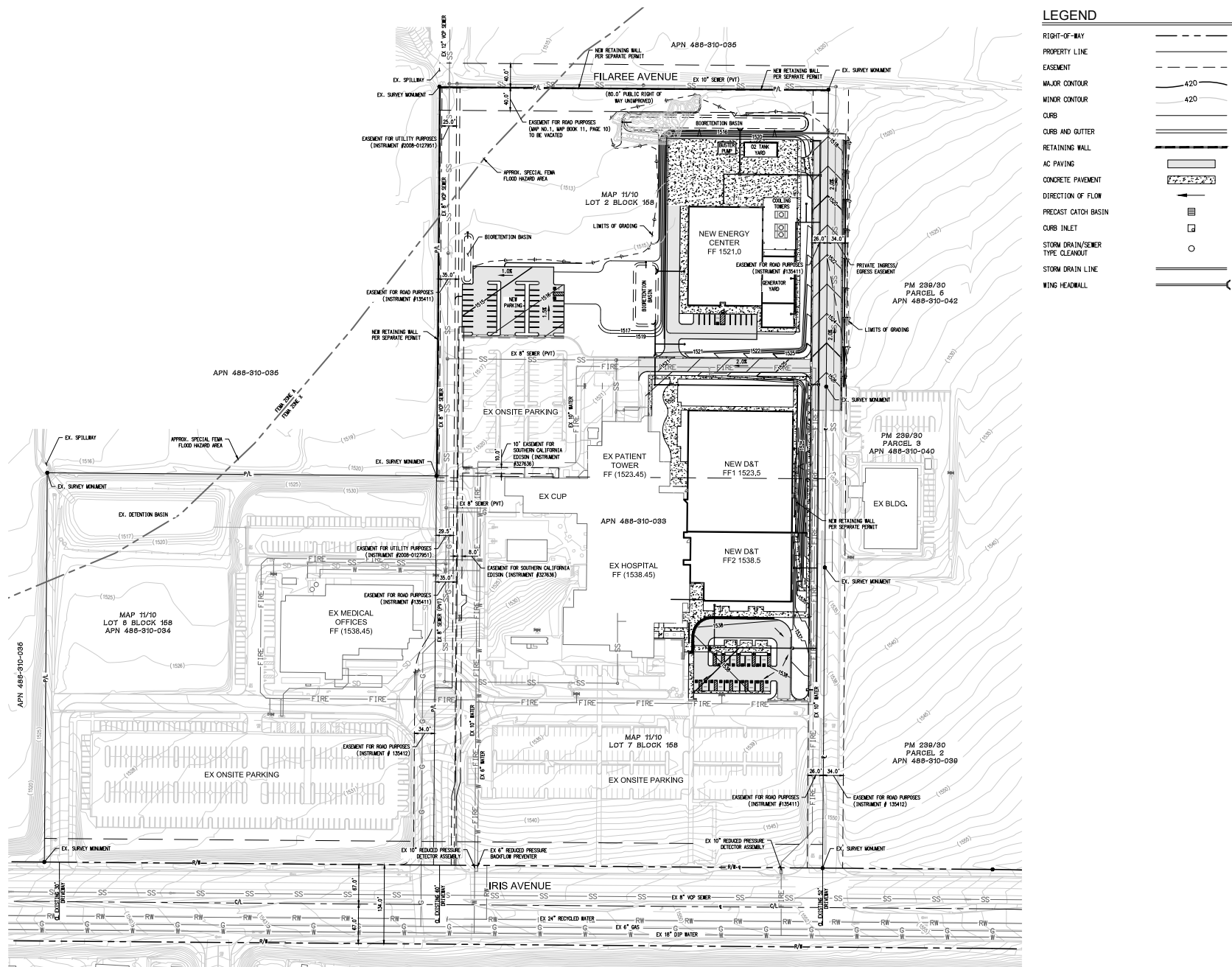


**FIGURE 7b**

**Impacts from Future Buildout (Phase II and III)**

Jurisdictional Waters Delineation Report for the Kaiser Moreno Valley Medical Center Master Plan





SOURCE: CO Architects, 2019

**FIGURE 7c**

Jurisdictional Waters Delineation Report for the Kaiser Moreno Valley Medical Center Master Plan



# Attachment B

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Jurisdictional Delineation Forms



# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Kaiser Permanente Moreno Valley Medical Center City/County: Moreno Valley/Riverside Sampling Date: 3/3/19  
 Applicant/Owner: Kaiser Permanente State: CA Sampling Point: DS 1  
 Investigator(s): Tommy Molioo, Anna Cassady Section, Township, Range: Section 22, Township 3N, Range 3W  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave (slight) Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.898946643 Long: -117.187095032 Datum:   
 Soil Map Unit Name: Greenfield Sandy Loam, 2 to 8 percent slopes, eroded NWI classification:

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 <input type="radio"/>	No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/>	No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>			
Remarks:					

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33.3 %</u> (A/B)
4.					
Total Cover: <u>    </u> %					
<u>Sapling/Shrub Stratum</u>				<b>Prevalence Index worksheet:</b>	
1. <i>Salix exigua</i>	<u>3</u>	<u>Yes</u>	<u>FACW</u>	Total % Cover of:	Multiply by:
2.				OBL species	x 1 = <u>0</u>
3.				FACW species	x 2 = <u>6</u>
4.				FAC species	x 3 = <u>0</u>
5.				FACU species	x 4 = <u>64</u>
Total Cover: <u>3</u> %				UPL species	x 5 = <u>135</u>
				Column Totals:	<u>46</u> (A) <u>205</u> (B)
				Prevalence Index = B/A = <u>4.46</u>	
<u>Herb Stratum</u>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <i>Hordeum murinum</i>	<u>15</u>	<u>Yes</u>	<u>FACU</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <i>Erodium cicutarium</i>	<u>5</u>	<u>No</u>	<u>Not Listed</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <i>Hirschfeldia incana</i>	<u>2</u>	<u>No</u>	<u>Not Listed</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. <i>Bromus madritensis</i>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. <i>Salsola tragus</i>	<u>1</u>	<u>No</u>	<u>FACU</u>		
6.					
7.					
8.					
Total Cover: <u>43</u> %					
<u>Woody Vine Stratum</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
1.				<b>Hydrophytic Vegetation Present?</b>	
2.				Yes <input type="radio"/> No <input checked="" type="radio"/>	
Total Cover: <u>    </u> %					
% Bare Ground in Herb Stratum <u>57</u> %		% Cover of Biotic Crust <u>    </u> %			
Remarks:					

## SOIL

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

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-2	Organic roots	100	N/A	0			N/A	
2-16	10 YR 3/2	100	N/A	0			loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**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:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☐ No ☒

Remarks: \_\_\_\_\_

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☐ 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 Visible 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 Plowed Soils (C6)  
☐ 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)  
☐ Thin Muck Surface (C7)  
☐ 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? Yes ☐ No ☒  
(includes capillary fringe)

Depth (inches): \_\_\_\_\_

**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: Kaiser Permanente Moreno Valley Medical Center City/County: Moreno Valley/Riverside Sampling Date: 3/3/19  
 Applicant/Owner: Kaiser Permanente State: CA Sampling Point: DS 2  
 Investigator(s): Tommy Molioo, Anna Cassady Section, Township, Range: Section 22, Township 3N, Range 3W  
 Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.897202024 Long: -117.189104251 Datum: WGS 1984  
 Soil Map Unit Name: Hanford Coarse Sandy Loam, 2 to 8 percent slopes NWI classification: N/A

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 <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
Remarks:				

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <i>Salix gooddingii</i>	5	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2.				Total Number of Dominant Species Across All Strata:	3 (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 % (A/B)
4.					
Total Cover:			5 %		
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. <i>Tamarix ramosissima</i>	10	Yes	Not Listed	Total % Cover of:	Multiply by:
2.				OBL species	x 1 = 0
3.				FACW species	x 2 = 10
4.				FAC species	x 3 = 45
5.				FACU species	x 4 = 8
Total Cover:			10 %	UPL species	x 5 = 100
				Column Totals:	42 (A) 163 (B)
Herb Stratum				Prevalence Index = B/A = 3.88	
1. <i>Melilotus indicus</i>	2	No	FACU	Hydrophytic Vegetation Indicators:	
2. <i>Erodium cicutarium</i>	5	No	Not Listed	<input checked="" type="checkbox"/> Dominance Test is >50%	
3. <i>Hirschfeldia incana</i>	5	No	Not Listed	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
4. <i>Elymus triticoides</i>	15	Yes	FAC	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5.				<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
7.				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
8.					
Total Cover:			27 %		
Woody Vine Stratum					
1.					
2.					
Total Cover:			%		
% Bare Ground in Herb Stratum			73 %	% Cover of Biotic Crust	
				0 %	
Remarks:					

## SOIL

Sampling Point: DS 2**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-0.5	Organic layer	100	N/A	0			N/A	
0.5-8	10 YR 3/2	100	N/A	0			loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**Type: shovel refusalDepth (inches): 8**Hydric Soil Present?** Yes ☐ No ☒

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input type="checkbox"/> Surface Water (A1)                            | <input type="checkbox"/> Salt Crust (B11)                              |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

**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)
- ☐ Thin Muck Surface (C7)
- ☐ 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? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

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

Remarks: Damp soil from previous rain

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Kaiser Permanente Moreno Valley Medical Center City/County: Moreno Valley/Riverside Sampling Date: 3/3/19  
 Applicant/Owner: Kaiser Permanente State: CA Sampling Point: DS 3  
 Investigator(s): Tommy Molioo, Anna Cassady Section, Township, Range: Section 22, Township 3N, Range 3W  
 Landform (hillslope, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR): C - Mediterranean California Lat: 33.897198708 Long: -117.188868396 Datum: WGS 1984  
 Soil Map Unit Name: Hanford Coarse Sandy Loam, 2 to 8 percent slopes NWI classification: N/A

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 <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
Wetland Hydrology Present?	Yes <input type="radio"/>	No <input checked="" type="radio"/>		
Remarks:				

## VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>66.7 %</u> (A/B)
4. _____	_____	_____	_____		
Total Cover:	<u>      </u> %				
Sapling/Shrub Stratum				Prevalence Index worksheet:	
1. <i>Baccharis salicifolia</i>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species	x 1 = <u>0</u>
3. _____	_____	_____	_____	FACW species	x 2 = <u>0</u>
4. _____	_____	_____	_____	FAC species	<u>15</u> x 3 = <u>45</u>
5. _____	_____	_____	_____	FACU species	<u>5</u> x 4 = <u>20</u>
Total Cover:	<u>5</u> %	UPL species <u>7</u> x 5 = <u>35</u>			
Herb Stratum				Column Totals:	<u>27</u> (A) <u>100</u> (B)
1. <i>Helianthus annuus</i>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.70</u>	
2. <i>Erodium cicutarium</i>	<u>2</u>	<u>No</u>	<u>Not Listed</u>	Hydrophytic Vegetation Indicators:	
3. <i>Hirschfeldia incana</i>	<u>2</u>	<u>No</u>	<u>Not Listed</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. <i>Elymus triticoides</i>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
5. <i>Heterotheca grandiflora</i>	<u>3</u>	<u>No</u>	<u>Not Listed</u>	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
7. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Total Cover:	<u>22</u> %				
Woody Vine Stratum					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
Total Cover:	<u>      </u> %				
% Bare Ground in Herb Stratum <u>78 %</u>	% Cover of Biotic Crust <u>0 %</u>				
Remarks:					



## SOIL

Sampling Point: DS 3**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-0.5	Organic layer	100	N/A	0			N/A	
0.5-6	10 YR 3/3	100	N/A	0			loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix.<sup>3</sup>Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

**Indicators for Problematic Hydric Soils:<sup>4</sup>**

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

<sup>4</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.**Restrictive Layer (if present):**Type: shovel refusalDepth (inches): 6**Hydric Soil Present?** Yes ☐ No ☒

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- |  |  |
|--|--|
| <input type="checkbox"/> Surface Water (A1)                            | <input type="checkbox"/> Salt Crust (B11)                              |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Biotic Crust (B12)                            |
| <input type="checkbox"/> Saturation (A3)                               | <input type="checkbox"/> Aquatic Invertebrates (B13)                   |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Presence of Reduced Iron (C4)                 |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Other (Explain in Remarks)                    |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     |  |

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)
- 
- ☐
- Thin Muck Surface (C7)
- 
- ☐
- 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? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)**Wetland Hydrology Present?** Yes ☐ No ☒

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

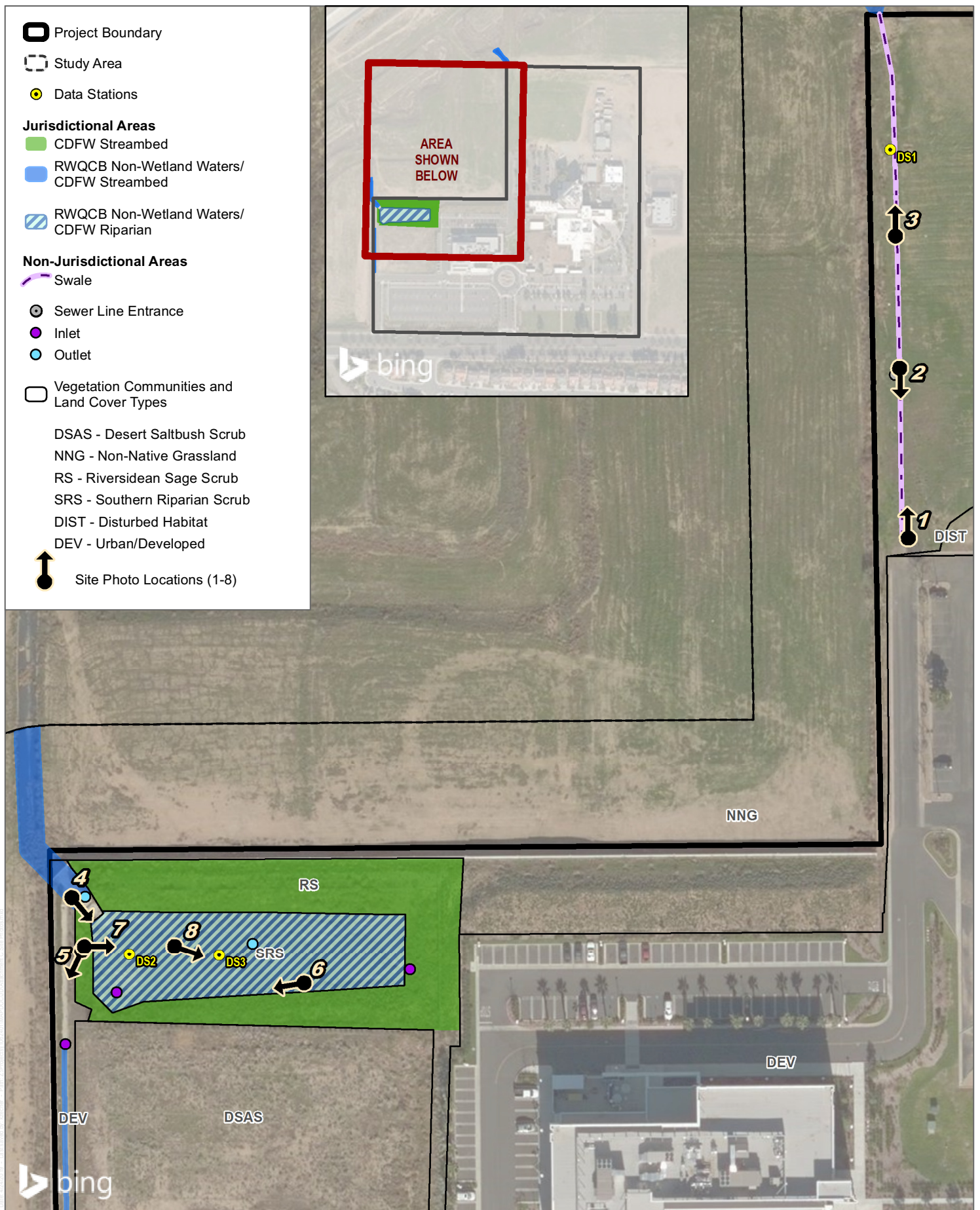
Remarks: Damp soil from previous rain



# Attachment C

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Site Photos



SOURCE: BING Maps

ATTACHMENT C

Site Photos





Photo 1: View of the swale from the edge of the Kaiser parking lot, facing north.



Photo 2: View of the swale, facing south.





Photo 3: View of Data Station 1, facing north towards the spillway leading outside of the study area.



Photo 4: View of the western edge of the basin and the concrete storm drain that leads into it, facing southwest.





Photo 5: View of the spillway leading from the basin out towards the basin north of the study area, facing north.



Photo 6: Example of southern riparian scrub within the basin bottom, facing west.





Photo 7: View of Data Station 2, facing east.



View of Data Station 3, facing east.