Biological Resources Technical Report

Yucaipa Valley Wine Country Specific Plan

NOVEMBER 2023

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Acronyms and Abbreviations

Acronym	Definition
amsl	above mean sea level
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CEQA Guidelines	State of California CEQA Guidelines
CESA	California Endangered Species Act
City	City of Yucaipa
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EIR	Environmental Impact Report
ESRI	Environmental Systems Research Institute
FESA	Federal Endangered Species Act
GIS	geographic information system
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
OHWM	ordinary high water mark
RWQCB	Regional Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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1 Introduction

This report documents the results of surveys conducted to identify potential biological resources constraints for the Yucaipa Valley Wine Country Specific Plan (Project; WCSP) located in the City of Yucaipa (City), San Bernardino County, California. Figure 1, Vicinity Map (all figures provided within Appendix A), shows the regional location of the Project and the site vicinity.

The purpose of this report is to (1) describe the conditions of biological resources within the Project site in terms of vegetation communities, plants, wildlife, wildlife habitats, and wetlands; (2) quantify potential direct and indirect impacts to biological resources that would result from the Project; (3) discuss those impacts in terms of biological significance in view of federal, state, and local laws and the City of Yucaipa General Plan and Municipal Code (policies); and (4) specify measures to avoid, minimize, and/or mitigate any significant impacts that would occur to biological resources as a result of Project implementation.

In addition, the proposed Project overlaps the City of Yucaipa General Plan Update and the Wilson Creek Estates Residential Subdivision Project and therefore this document includes conformance with these documents.

1.1 Project Description

1.1.1 Project Location

The approximately 1,108-acre Project site is located in the northeastern portion of the City, which is located in southwestern San Bernardino County (Figure 1). The Project site is located at the base of the San Bernardino National Forest, north of Oak Glen Road and east of Fremont Street. The Project site is intersected by Jefferson Street running north to south, by Ivy Avenue and Carter Street in the northern portion of the Project site, and Fir Avenue in the southern portion of the Project site, all three of which run east to west. The Project site consists of 75 Assessor's Parcel Numbers and rights-of-way, as listed in Table 1. Specifically, the Project site is located in Sections 19, 20, 29, and 30, Township 1 South, Range 1 West, as depicted on the U.S. Geological Survey Yucaipa and Forest Falls, California 7.5-minute topographic quadrangle maps. Regional access to the Project site is provided via Oak Glen Road, Carter Street, and Jefferson Street.

Table 1. Project Site Assessor's Parcel Numbers

Accessor's Parcel Number							
032023101	032025108	032025133	032103107	032103124	032103153	032104115	032110101
032023102	032025119	032025134	032103108	032103126	032104105	032108113	032110102
032023103	032025120	032025135	032103111	032103128	032104107	032108114	032110112
032023109	032025121	032025136	032103112	032103130	032104108	032108115	032110125
032023110	032025123	032025137	032103114	032103139	032104109	032108214	032110126
032024103	032025124	032025138	032103115	032103144	032104110	032109101	–
032024104	032025125	032025156	032103116	032103149	032104111	032109103	–
032024112	032025130	032025157	032103118	032103150	032104112	032109104	–
032024113	032025131	032025158	032103120	032103151	032104113	032109105	–
032025106	032025132	032103102	032103121	032103152	032104114	032109106	–

1.1.2 Project Description

The proposed Project would subdivide the Project site into home and estate lots and nonresidential areas for vineyards, trails, and open space.

As shown in Figure 2A, Land Use Plan I, and Figure 2B, Land Use Plan II, approximately half of the site is proposed for residential uses (547.4 acres) and half of the site is proposed for non-residential uses (546.2 acres). The proposed nonresidential land use designations include agricultural use (465.5 acres), avoided open space (73.6-acres), and public service use by Yucaipa Valley Water District (7.1 acres). The Project will be built in five phases, as shown in Figure 2C, Project Phases. For the purposes of this report, analysis is discussed by phase number in relation to the Wilson Creek Estates – Wine Country, which occupies most of Phase 1 of the proposed Project.

Residential Use

The Project would allow maximum of 1,091 residential units, which is the same total units permitted under the existing General Plan. The residential units are classified as either "Villas" or "Estates." The Villas would comprise 629 lots with a maximum buildout density of approximately 4.6 dwelling units per acre and a net loss size of 10,000 square feet. The maximum building footprint permitted is 50% of the lot area. The Villas would be within the interior of the Specific Plan area, connected by trails and open space areas separating the residences from vineyards. The Estates would consist of 462 half-acre lots with a maximum buildout density of 2 dwelling units per acre. The maximum building footprint permitted is 40% of the lot area. The maximum allowed building height for Villas and Estates is 35 feet, not exceeding two stories, consistent with existing land use designation.

Agricultural Use

The land designated for agriculture would be used for vineyards and wineries. It is anticipated that 346 acres would be used for vineyards that have no on-site wine production, and 120 acres would be for wineries that include ancillary production and commercial uses that support the vineyards. The Project anticipates a total of 26 wineries varying in sizes and on-site accessory buildings. For each category of winery, the accessory buildings and accessory uses would not occupy more than 25% of the gross lot area, with a minimum of 75% of the lot used for vineyards.

Public Service Use

The land designated for public service use consists of property owned by Yucaipa Valley Water District. Permitted land uses within this area include natural channels, levees, spreading grounds, detention basins, roads, trails, culverts, and diversion drainages; natural preserves and mitigation areas, including habitat restoration; and wildlife nature preserves, water bodies, general recreation, leisure, and ornamental parks open to the general public. The land also has a conditional use permit for public utilities and public services or use structures.

Avoided Open Space

In addition to the wineries and vineyards, the Project includes a 73.6-acre open space area along Wilson Creek that would provide recreational activities and passive open space. Preservation of this open space would require dedication of property to the City. Dedication would allow the City to maintain and preserve these areas. Permitted land uses within this area include publicly owned restroom and parking areas; natural channels, levees, spreading grounds, detention basins, roads, trails, culverts, and diversion drainages; and wildlife nature preserves, water bodies, general recreation, leisure, and ornamental parks open to the general public.

Circulation Plan

Oak Glen Road and Jefferson Street would continue to provide connectivity to the Project site. Development in the area would also continue to be supported by Ivy Avenue and Carter Street; new connections from all existing streets would create a complete roadway network supporting both neighborhoods and wineries. The goal is to maintain modest roadways with low traffic volumes and leisurely traffic speeds that allow travelers to enjoy the scenic, rural setting of the Project site and minimize chances of vehicle collisions with local wildlife.

Oak Glen Road is a two-lane city-designated scenic corridor that would serve as the primary access to the Project site. Oak Glen Road would accommodate two car lanes and a Class II bike lane. A 150-foot setback would be required along that roadway for any structure on an agriculture/winery property that has frontage to Oak Glen Road. Oak Glen Road is also a City-designated truck route that delivers goods and materials to and from Yucaipa.

Jefferson Street is an existing unpaved rural road. Roadway widening and improvement would be necessary for buildout of the Project site. Jefferson Street would be developed as a two-lane road with Class III bike access. A 100-foot setback would be required for any structure on an agriculture/winery property adjacent to Jefferson Street.

Carter Street is a paved one-lane rural roadway that provides east to west access between Bryant Street and the Bears Den Ranch. It would be developed as a two-lane roadway with Class III bike access. A 100-foot setback would be required for any structure on an agriculture/winery property adjacent to Carter Street.

Residential streets would provide direct access to future neighborhoods and individual properties. A typical street section consists of two drive lanes with a 55-foot right-of-way. At a minimum, the street would have a 5-foot sidewalk on one side. To maintain the rural character of the roadways, curbs and gutters are generally discouraged. The exact location of future residential streets would be determined during the tentative tract map phase of development.

Trails

The Project proposes 12-foot-wide multipurpose trails along Oak Glen Road, Jefferson Street, Carter Street, and Wilson Creek within the avoided open space. The multipurpose trails provide connectivity within the plan area and between the plan area and the adjacent residential neighborhoods. Neighborhoods with direct access to the proposed trails would provide at least one point of public access to the trails. Trails will correspond with existing pathways that intersect the Project site. The new trail connections would also provide connections to existing park facilities, including El Dorado Ranch Park, Yucaipa Regional Park, Yucaipa Community Park, and Wildwood Canyon State Park.

Landscaping

Landscaping is a critical component of developing an appealing community and can enhance curb appeal by introducing variations of color and texture to lawn areas, conserve water, provide shade to help cool down the ambient temperature, and reduce noise and improve the overall safety of roadways by providing tree-lined streets. Design considerations include the following:

- The use of drought tolerant plant material and water conservation elements such as on-site water retention
- Planted areas that include a mixture of colors from flowering and showy plants and shrubs, as well as similar trees used as accents
- Deciduous street trees intermixed with evergreen trees, such as pine and cedars consistent with those found in the Yucaipa foothills, complementing the fall colors of vineyards

- New landscaping that enhances the Deodar cedar (*Cedrus deodara*) trees, which are a defining feature of the area
- Detention basins within neighborhoods that integrate into the overall grading and are designed to appear as a natural drainage channel, with surrounding landscaping that ties into the neighborhood design

Lighting

The following lighting considerations are included in the design guidelines for the Project:

- Cutoff lighting fixtures shall be mounted parallel to the ground and located, aimed, and shielded to direct light only onto buildings or walkways and not toward adjacent roads or residences.
- Light fixtures shall be architecturally compatible with the building design.
- Building lighting should be used to help accentuate the building design at night, highlighting any key architectural details on the building façade.
- If Project elements, such as signs, walls, and trees, are lit, downlighting is encouraged. Lighting sources should be hidden unless the sources are an integral part of the design.
- Exterior lighting that has a color temperature of no more than 3000 Kelvin is encouraged to limit potential nighttime glare.
- Lighting should be used to enhance the safety of pedestrians and others using the Project trails.
- Outdoor security lighting shall not project above the roofline of the building on which is it mounted.
- Where applicable, time-control and other energy-saving devices should be used with exterior lighting.

Utilities and Infrastructure

The proposed Project will include potable water, sewer, and stormwater infrastructure, as well as other future public utilities.

Construction and Project Phasing

An approximate 20-year development schedule is anticipated for the 1,091 homes to proceed in five phases: (1) 313 dwelling units, (2) 37 dwelling units, (3) 316 dwelling units, (4) 197 dwelling units, and (5) 228 dwelling units. The Project would strive for a 50/50 split of vineyards and open space (nonresidential) to residential land per phase. Development is recommended to begin in areas closest to Oak Glen Road in year one, followed by sequential areas, as shown in Figure 2C.

Wilson Creek Estates Residential Subdivision Project In 2016 the City of Yucaipa City Council approved the Wilson Creek Estates Residential Subdivision Project, a Phased Tentative Tract Map (TTM 19974) to subdivide approximately 236 gross acres into 184 single-family lots each with a minimum lot size of 1 gross acre, with two additional “Not A Part” lots for an existing private residence (Casa Blanca Ranch) and water tank/pump station site owned and operated by the Yucaipa Valley Water District. The Final EIR was certified in 2016 (AECOM 2016) and therefore is considered a part of the environmental baseline of this document.

Since certification, a revised tentative tract map has been submitted to the City that is expected to be consistent with the proposed Project. The revised tentative tract map is depicted in Figure 2D and includes a manufactured lake, a water quality control basin, lots for future agricultural use, improvements to Jefferson Street, and trails through open space that line up with existing trails on the Project site. The revised tentative tract map partially overlaps Phase 1 of the proposed Project and will be referred to as “Wilson Creek Estates – Wine Country” or “the Wilson Creek Estates – Wine Country area” within this document.

2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 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; "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 on private property without any other federal agency involvement.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the Migratory Birds office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

2.1.3 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 CFR Parts 320 to 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which

were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

Based on a recent court case ordering vacation of the Navigable Waters Protection Rule, USACE and the U.S. Environmental Protection Agency have halted implementation of the rule and are interpreting waters of the United States consistent with the pre-2015 regulatory regime until further notice. Per 33 CFR 328.3(a), waters of the United States are defined as:

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. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (a)(1) through (4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.
8. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

The USACE/U.S. Environmental Protection Agency Rapanos Guidance states that USACE will regulate traditional navigable waters, adjacent wetlands, and relatively permanent waters tributary to traditional navigable waters, as well as adjacent wetlands. Non-relatively permanent waters (those exhibiting less than 3 months of continuous surface flows) and their adjacent wetlands would be regulated if there is a significant nexus from the site to traditional navigable waters.

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine RWQCBs. A request for certification is submitted to the regional board at the same time that an application is filed with USACE.

2.2 State

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050–2068) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA 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 a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, 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.

2.2.2 California Fish and Game Code

Fully Protected Species

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 CDFW to maintain viable populations of all native species. Toward that end, 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.

Sections 1600–1616

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. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which 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 ordinary high water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under 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. Applications to CDFW must include a complete certified California Environmental Quality Act (CEQA) document.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed 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. 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 California Fish and Game Code. To align with federal regulations, 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 CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

2.2.3 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.

The State of California CEQA Guidelines (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 California 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 Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 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."

2.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260[a]). The State Water Resources Control Board defines a waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the State Water Resources Control Board definition of wetlands includes the following:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

2.3 Local

2.3.1 City of Yucaipa Development Code

2.3.1.1 Division 9 Plant Protection and Management

Per the City's Municipal Development Code, Division 9, Plant Protection and Management, the City's abundant and diverse plant resources shall be promoted by the provision of regulations and guidelines for the management of these plant resources within the incorporated areas of the City on property or combinations of property under private or public ownership.

89.0115: Tree Removal Permit

A. A removal permit shall be required for the removal of any tree or plant that is subject to the provisions of this Division.

B. A land use application, a building permit, and all other development permits (e.g., grading, mobile home setdowns, etc.) shall consider and include a review of any proposed tree or plant removal. Any approved land use application and/or development permit shall be a permit for the removal of trees or plants, if such land use application or development permit specifically reviews and approves such removals. Such reviews shall consider and require compliance with the provisions of this Division.

C. The reviewing authority may require certification from an appropriate tree expert or plant expert that such tree removals are appropriate, supportive of a healthy environment, and in compliance with the provisions of this chapter.

D. Removals of trees or plants that are not requested in conjunction with a land use application or development permit may be accomplished only under a permit issued by either the Community Development Director, Planning Commission, or local Fire Authority subject to the provisions of this chapter.

E. The Building Official or the Community Development Director shall require a preconstruction inspection prior to approval of development permits.

F. The duration of a plant or tree removal permit, when issued in conjunction with a land use application and/or a development permit, shall be coterminous with the duration of the associated application or permit, unless otherwise specified. The Reviewing Authority shall specify the expiration date for all other tree and/or plant removal permits.

89.0120: Findings for Removal

The Reviewing Authority shall authorize the removal of a tree or plant subject to the provisions of this chapter only if the following findings are made.

a. The removal of the tree or plant is justified for one of the following reasons.
    1) The location of the tree or plant and/or its dripline interferes with an allowed structure, sewage disposal area, paved area, or other approved improvement or ground disturbing activity.
    2) The location of the tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property.
    3) The location of the tree or plant is hazardous to pedestrian or vehicular travel or safety.

4) The tree or plant or its presence interferes with or is causing extensive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements.
5) The condition or location of the plant or tree is adjacent to and in such close proximity to an existing or proposed structure that the plant or tree has or will sustain significant damage.

In the mountain area only, a Registered Professional Forester must certify in writing that the condition or location of the subject tree is contributing to an overstocked tree stand condition such that its removal will improve the overall health, safety, and vigor of the stand of trees containing

89.0125: Plot Plan Requirements

Prior to the issuance of a tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan shall be approved by the appropriate Review Authority for each site, indicating exactly which trees or plants are authorized to be removed. The required information can be added to any other required plot plan. Prior to issuance of development permits in areas with trees or plants that are subject to the provisions of this Division, a preconstruction inspection shall be conducted by the appropriate authority. Such preconstruction inspections may be combined with any other required inspection.

Construction Standards

During construction and prior to final inspection under a development permit, the following standards shall apply unless otherwise approved in writing by a Tree Expert.

a. Tree trunks and plants shall not be enclosed within roof lines or decking.
b. Utilities, construction signs, or other hardware shall not be attached so as to penetrate or abrase any live tree or plant.
c. Grade Alterations

There shall be no grade alterations which bury any portion of a tree or plant or significantly undercut the root system within the dripline.

89.0205: Disposition of Coniferous Trees

Every person, firm, or corporation, whether as principal, agent, or employee, which has control of, or right of entry, or of access to, any land in the area described in Section 89.0215, shall comply with the provisions of this chapter. Except as otherwise provided by this chapter, any coniferous tree or portion thereof, including stumps, shall be treated in accordance with one of the methods specified in this section and Section 89.0210 within 15 days after such a tree or portion of such a tree has been cut. In the case of any construction activity, the Building Official or the City Planner shall not approve any development permit inspections until all felled coniferous trees or portions thereof are treated in accordance with the provisions of this section. The Building Official or the City Planner shall require a permittee to obtain, where necessary, a certificate from the local Fire Authority, or appropriately certified Pest Control Adviser, or a Qualified Applicator, that compliance with any measures that are not readily observable by the inspector on the construction site has been made in an acceptable manner.

Felled coniferous trees shall be treated by at least one or a combination of the following measures.

a) Remove to a solid waste disposal site specifically designated by the City for such use.
b) Burn sufficiently to consume the bark, when allowed by local Fire Protection Agency and Air Pollution Control District.
c) Lop and scatter material less than four inches in diameter so that it is piled no higher than 24 inches above the ground, when allowed by the local Fire Protection Agency.
d) Remove the bark.
e) Chip or grind.
f) Split and scatter with bark toward the sun for a minimum of 45 consecutive days or until final inspection is completed, whichever is less.
g) Stack in the sun and cover with six mil clear plastic, which has a continuous seal from the outside for at least 180 days.
h) Spray with a commercial insecticide for such purposes as approved by the City Planner for such insects and purposes.
i) Treat under any other method approved by the enforcement officer in writing.

89.0210: Stump Treatment

Any fresh-cut stumps of any live coniferous trees shall be protected from infection by Annosus Root Rot (*Fomes annosus*) with borax powder (granular tech, 10 mole) as soon as possible after felling, covering the entire newly-exposed cut and/or broken surface completely with a thin uniform layer of white borax within two hours.

89.0410: Riparian Plant Conservation

The removal of any vegetation within 200 feet of the bank of a stream or in an area indicated as a protected riparian area on an overlay map or Specific Plan shall be subject to a tree or plant removal permit in accordance with the procedures detailed by Chapter 3 of this Division, and shall be subject to environmental review, except as otherwise provided or excepted by the provisions of this Division. For the purposes of this chapter, streams include those shown on U.S. Geological Survey Quadrangle topographic maps as perennial or intermittent, blue or brown lines (solid or dashed), and river wash areas. Pre-construction inspections shall include the verification of the presence of any riparian vegetation. Any necessary conditions of approval for removal of riparian vegetation may be imposed in addition to and in combination with any condition imposed pursuant to Chapter 3 of this Division.

89.0510 Oak Tree Conservation

Any person who owns, controls, has custody or possession of any real property within the City that is improved or has been approved for development, or which is part of or associated with the City approved development of another piece of property, such as any parcel to be maintained as permanent open space or for recreational purposes, shall maintain all oak tree(s) located thereon in a state of good health pursuant to the Oak Tree Conservation and Protection Guidelines adopted by City Council resolution. Failure to do so will constitute a violation of this article.

89.0515: Oak Tree Permit

(a) Permit required. No person shall cut, remove, encroach into the protected zone, or relocate any oak tree on any public or private property within the City unless a valid oak tree permit has been issued by the City pursuant to the provisions of this chapter and the Oak Tree Conservation and Protection Guidelines. The status of limbs or trees as deadwood or dead trees must be confirmed by an Oak Tree Conservation Consultant.

(b) Exemptions. A permit is not required to cut or remove a tree(s) under the following circumstances:

1) Trees that do not exceed two inches (2") in diameter when measured at a point four and half feet (4 1/2') above the tree's natural grade.

2) Trees damaged by thunderstorms, windstorms, floods, earthquakes, fires or other natural disasters and determined to be dangerous by the Planning Agency. The Department of Community Development shall be promptly notified of the nature of the emergency and action taken.

3) When removal is determined necessary by fire department.

4) Trees planted, grown and/or held for sale as part of a licensed nursery business.

5) Use of explosives. All tree fellers, tree surgeons, or anyone using explosives within the City limits in connection with the cutting down or removal of any oak tree shall first apply to the City Manager for a permit to do so and shall furnish such bond or insurance as the City Manager shall deem necessary for the protection of the property owner or any other person from any possible damage as a result of such work.

89.0520: Processing of Oak Tree Removal Permits

(a) Processing. The applicant shall furnish all necessary information as required by the Oak Tree Conservation and Protection Guidelines in a clear and accurate format to the Community Development Department and pay the appropriate filing fee prescribed by City Council resolution. The Community Development Director may approve, deny, or conditionally approve a request for removal of three or fewer oak trees on a single parcel. For requests involving three or fewer trees, the decision of the Director may be appealed to the Planning Commission and the Commission's decision may be appealed to the City Council pursuant to the provisions of this code. Any request for removal of four or more oak trees on a single parcel shall be reviewed by the Planning Commission which shall make recommendations to the Council which shall approve or deny the permit.

(b) Standards. An oak tree may be removed based upon one of the following findings by the decisionmaker:

1) The condition or location of the oak tree requires cutting to maintain or aid its health, balance or structure.

2) The condition of the tree(s) with respect to disease, danger of falling, proximity to existing structures, high pedestrian traffic areas such as parking lots, pedestrian walkways or interference with utility services cannot be controlled or remedied through reasonable preservation and/or preventative procedures and practices.

3) A permit may be approved when necessary to remove, relocate, cut or encroach into the protected zone of an oak tree to enable the reasonable and conforming use of the subject property which is otherwise prevented by the presence of the tree. Reasonable use of the property shall be determined in accordance with the Oak Tree Conservation and Protection Guidelines.

89.0525: Condition on Removal of Oak Trees

The conditions may be imposed on the permit at the discretion of the decisionmaker including, but not limited to, any of the following:

a) A condition requiring the replacement or placement of additional trees on the subject property to offset the impacts associated with the loss of a tree, limbs or encroachment into the protected zone of an oak tree;
b) The relocating of a tree on-site or off-site, or the planting of a new tree off-site within the City to offset the loss of a tree;
c) A condition requiring an objectively observable maintenance and care program be initiated to insure the continued health and care of oak tree(s) on the property;
d) Payment of a fee equal to the replacement cost of the tree or donation of a boxed tree to the City or other public agency to be used elsewhere in the community should a suitable replacement location of the tree not be possible on-site or off-site.

2.3.1.2 Division 5 Overlay Districts

85.030220 Development Standards.

When a land use is proposed or an existing land use is increased by more than 25% within a Biotic Resources Overlay District, the applicant shall have a report prepared identifying all biotic resources located on the site, as well as those on adjacent parcels, which could be impacted by the proposed development. The report shall outline mitigating measures designed to reduce or eliminate impacts to the identified resource(s), and shall be submitted along with the application for the proposed development. The report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist or other professional "life scientist."

The conditions of approval of any land use application shall incorporate the identified mitigating measures to protect and preserve the habitats of the identified plants and/or animals.

2.3.2 City of Yucaipa General Plan

2.3.2.1 Community Design and Land Use

Chapter 2 of the City of Yucaipa General Plan (General Plan) (Placeworks 2016a) specifies the permitted land uses within the community, along with how design concepts can improve the City. Goal CDL-2, Hillsides and Ridgelines, of the Plan calls for the "preservation of prominent ridgelines and hillsides to project viewsheds, recreational opportunities, sensitive biological resources, and ecological benefits while allowing development where appropriate." Per Goal CDL-2, the following policies apply to the Project.

CDL-2.3 Development Projects**.** Concentrate hillside development in areas with the least environmental impacts. Density, open space, and building design and site planning are to be correlated with steepness of the terrain; allow clustering to maximize open space.

CDL-2.4 Grading**.** Encourage natural grading techniques that blend with existing topography; grading should use rounded contours on slopes to minimize disturbance. Encourage the preservation of the physical shape of the hillside and views where feasible.

CDL-2.5 Slope Protection. Require revegetation with native and/or naturalized species where grading or other activities have disturbed the site. In general, planting species that are native to the region, drought resistant, and effective at erosion control.

Goal CDL-3, Community Design Features, of the General Plan calls for "attractive and well-maintained landscaping lighting, signage, and public art that instill pride, beautify Yucaipa, and convey a positive image of the City." Per Goal CDL-3, the following policies apply to the Project.

CDL-3.1 Public Landscaping. Ensure that all public landscaping in public right-of-ways (landscaping outside of parks) is attractive, adequately maintained, and utilizes California native, drought-tolerant, and/or other sustainable plant material.

2.3.2.2 Parks, Recreation, Trails and Open Space

Chapter 4 of the General Plan addresses the provision, use, and conservation of open space for parks, recreation and trails, as well as lands for biological resources. Goal PR-3, Multipurpose Trails, calls for a "comprehensive trail system that allows residents to travel, explore, and enjoy Yucaipa on foot, bicycle, or horseback."

Per Goal PR-3, the following policies apply to the Project.

PR-3.3 Environmental Protection. Locate, design, and regulate the use of multipurpose trails so that they do not have a significant negative impact on natural habitat, wildlife, landforms, and cultural resources.

PR-3.6 Regional Connectivity. Coordinate with adjacent cities to connect Yucaipa's trail network to the trails of neighboring cities to form a multi-jurisdictional system that extends to the forest, badlands, and other areas.

Goal PR-4, Natural Open Spaces, calls for the "conservation of Yucaipa's open spaces, hills, canyons, ridgelines, and channels for visual, recreational, wildlife, and educational benefits." Per Goal PR-4, the following policies apply to the Project.

PR-4.3 Hillside Preservation. Protect lands with steep topography, prominent natural features, ridgelines, and view sheds through adherence to Yucaipa's Hillside Preservation Ordinance.

PR-4.4 Oak Tree Preservation. Preserve the City's heritage oak trees through adherence to the Oak Tree Conservation regulations in the Yucaipa Municipal Code, proper tree care and maintenance, and other efforts.

PR-4.5 Creek Preservation and Restoration. Protect the integrity of natural drainage channels; secure grants and support to restore and preserve Yucaipa's creeks in a naturalized state for aesthetic, recreational, and wildlife value to the extent practical.

PR-4.6 Development Regulations. Require proposed private and public development to respect the integrity of the natural terrain of the city; ensure that potential impacts are fully mitigated, to the extent practical.

PR-4.7 Scenic Resources. Protect Yucaipa's scenic resources, including scenic corridors along roads and views of the hillsides, prominent ridgelines, canyons, and other significant natural features, to the extent practical.

PR-4.9 Dark Skies. Protect views of night skies in appropriate locations in Yucaipa through the regulation of project design, street lights, lighting and glare from buildings and land uses, and other features, to the extent practical.

Goal PR-5, Biological Resources, calls for the "preservation, conservation, and management of Yucaipa biological resources, including habitats, wildlife, and natural environments." Per Goal PR-5, the following policies apply to the Project.

PR-5.1 Resource Protection. Protect and conserve Yucaipa's biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.

PR-5.2 Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in Yucaipa in accordance with state and federal resource agency requirements.

PR-5.3 Wildlife Corridors. Participate in the planning of drainage channels, ridgelines, and other areas that provide potential wildlife linkages between open space areas in the community and the vicinity.

PR-5.4 Biotic Resources Overlay. Require proposed land uses and development projects to conduct appropriate biological resource studies and propose mitigations where needed to address potential resource impacts.

PR-5.5 Channels and Creeks. While completing necessary safety improvements, preserve the ecological integrity of watersheds and creek corridors that support riparian and wildlife resources by restoring native plants and other best practices to the extent practical.

PR-5.6 Interagency Coordination. Coordinate with the CDFW and USFWS in the review of biological resource assessments and surveys for land development applications in accordance with state and federal resource agency requirements.

3 Methods

Data regarding biological resources present within the 1,193.4-acre study area, which includes the Project site plus a 100-foot buffer, was obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail in this section. For purposes of this report, special-status resources are defined as follows:

- Special-status plant species include:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022a), or species with a CRPR of 1 or 2 in the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory) (CNPS 2022a)
- Special-status wildlife species include:
  - Species designated as either rare, threatened, or endangered by CDFW or USFWS and protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or the FESA (16 USC 1531 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Animals List (CDFW 2022b)
  - Species designated as California Fish and Game Code Section 4000 fur-bearing animals
- Special-status vegetation communities are those designated as sensitive by CDFW.

3.1 Literature Review

Prior to conducting a field assessment, a literature search and database review were conducted by Dudek biologists to evaluate the natural resources found or potentially occurring within the study area. The database review included the most recent versions of the CNDDB and special-status species lists (CDFW 2022a, 2022b, 2022c, 2022d), the CNPS Inventory (CNPS 2022a), and an Information for Planning and Conservation Report (USFWS 2022a). These databases were reviewed to identify sensitive biological resources present or potentially present for the U.S. Geological Survey 7.5-minute quadrangle on which the majority of study area is located (Yucaipa) and the eight surrounding quadrangles (Redlands, Forest Falls, Harrison Mountain, Keller Peak, Big Bear Lake, Sunnymead, El Casco, and Beaumont). Potential and/or historical drainages and aquatic features were investigated based on a review of U.S. Geological Survey topographic maps (1:24,000-scale), aerial photographs, the USFWS National Wetland Inventory database (USFWS 2022b), and the Natural Resource Conservation Service's Web Soil Survey (USDA 2022a).

The literature review also included review of the Yucaipa General Plan Update Final Environmental Impact Report (EIR) (Placeworks 2016b), Yucaipa General Plan Update Draft EIR (Placeworks 2015), the Wilson Creek Estates Final EIR (AECOM 2016), the Revised Biological Resources Assessment for Wilson Creek Estates (ECORP Consulting Inc. 2015), the Jurisdictional Delineation for the Casa Blanca Specific Plan (ECORP Consulting Inc. 2012), and the Biological Resources Assessment, Focused Rare Plant Survey, and Burrowing Owl Survey Results for the Casa Blanca Specific Plan (ECORP Consulting Inc. 2013).

3.2 Field Surveys

Dudek conducted the following biological surveys between April and September 2022: vegetation mapping, a general habitat assessment, a focused small mammal habitat assessment, an aquatic resources delineation, focused surveys for special-status plants, and protocol surveys for burrowing owl (*Athene cunicularia*) and coastal California gnatcatcher (*Polioptila californica californica*).

Table 2 lists the dates, focus, scope, conditions, and personnel for each survey.

Table 2. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
Vegetation Mapping/Habitat Assessment					
04/04/2022	AC, BS, KN, OK, SC	N/A	Entire Project Site	7:59 a.m.–4:30 p.m.	48°F–78°F; 0%–80% cloud cover; 1–4 mph wind
04/06/2022	DA, OK	N/A	Entire Project Site	7:30 a.m.–3:29 p.m.	64°F–88°F; 0% cloud cover; 1–5 mph wind
05/18/2022	ES, TP	N/A	Entire Project Site	8:00 a.m.–4:45 p.m.	72°F–79°F; 0% cloud cover; 1–3 mph wind
06/22/2022	MC, OK, SL	N/A	Entire Project Site	9:22 a.m.–1:25 p.m.	83°F–85°F; 20%–80% cloud cover; 1–5 mph wind
07/12/2022	OK	N/A	Entire Project Site	11:15 a.m.–4:09 p.m.	85°F–87°F; 0% cloud cover; 3–6 mph wind
07/13/2022	OK	N/A	Entire Project Site	8:00 a.m.–5:30 p.m.	80°F–90°F; 0%–10% cloud cover; 0–5 mph wind
08/18/2022	DA, SG	N/A	Entire Project Site	9:30 a.m.–1:07 p.m.	78°F–87°F; 40%–50% cloud cover; 0–3 mph wind
Small Mammal Habitat Assessment					
09/29/2022	PB	N/A	Entire Project Site	8:00 a.m.–5:00 p.m.	Not Collected
Burrowing Owl Protocol Surveys*					
04/11/2022	DJ, SN, TB	Pass 1 and Burrow Mapping	Phases 1–3 Only	6:00 a.m.–10:00 a.m.	46°F–61°F; 0%–100% cloud cover; 0–3 mph wind
04/11/2022	DJ, SN, TB	Pass 1 and Burrow Mapping	Phases 1–3 Only	5:00 p.m.–7:30 p.m.	57°F–63°F; 0% cloud cover; 1–9 mph wind
04/12/2022	DJ, KJ, SN, TB	Pass 1 and Burrow Mapping	Phases 1–3 Only	6:00 a.m.–10:00 a.m.	39°F–68°F; 0%–30% cloud cover; 0–7 mph wind
04/12/2022	DJ, KJ, SN, TB	Pass 1 and Burrow Mapping	Phases 1–3 Only	5:00 p.m.–7:30 p.m.	59°F–68°F; 0% cloud cover; 0–5 mph wind
04/13/2022	DJ, GH, KJ, SN, TB	Pass 1 and Burrow Mapping	Phases 1–3 Only	6:00 a.m.–10:00 a.m.	36°F–52°F; 0% cloud cover; 0–5 mph wind

Table 2. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
04/14/2022	SN	Pass 1 and Burrow Mapping	Phases 1–3 Only	6:00 a.m.–10:00 a.m.	41°F–55°F; 0% cloud cover; 0–6 mph wind
04/15/2022	SN	Pass 1 and Burrow Mapping	Phases 1–3 Only	6:00 a.m.–10:00 a.m.	40°F–54°F; 0% cloud cover; 0–6 mph wind
05/10/2022	KJ, SN	Pass 2	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–10:00 a.m.	39°F–61°F; 10%–60% cloud cover; 1–10 mph wind
05/10/2022	KJ, SN	Pass 2	Suitable Habitat within Phases 1–3 Only	5:39 p.m.–8:01 p.m.	59°F–68°F; 10%–60% cloud cover; 1–10 mph wind
05/11/2022	KJ, SN	Pass 2	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–10:00 a.m.	37°F–51°F; 10% cloud cover; 1–2 mph wind
05/12/2022	KJ, KP	Pass 2	Suitable Habitat within Phases 1–3 Only	5:30 a.m.–10:15 a.m.	50°F–73°F; 0% cloud cover; 0–1 mph wind
06/15/2022	KJ	Pass 3	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–10:00 a.m.	64°F–81°F; 0% cloud cover; 0–6 mph wind
06/16/2022	NT, KJ, AR	Pass 3	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–10:00 a.m.	66°F–82°F; 0% cloud cover; 0–6 mph wind
06/22/2022	KJ	Pass 3	Suitable Habitat within Phases 1–3 Only	5:30 a.m.–9:45a.m.	72°F–81°F; 30%–80% cloud cover; 0–9 mph wind
06/23/2022	KJ	Pass 3	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–10:00 a.m.	73°F–90°F; 0% cloud cover; 0–5 mph wind

Table 2. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
07/12/2022	KN, OK, SC	Pass 4	Suitable Habitat within Phases 1–3 Only	5:45 a.m.–9:00 a.m.	63°F–79°F; 0% cloud cover; 1–5 mph wind
07/13/2022	AR, AJ	Pass 4	Suitable Habitat within Phases 1–3 Only	5:30 a.m.–9:30 a.m.	67°F–81°F; 10% cloud cover; 1–2 mph wind
Coastal California Gnatcatcher Protocol Survey*					
05/16/2022	JP	Pass 1	Suitable Habitat within Phases 1–3 Only	7:00 a.m.–12:00 p.m.	60°F–80°F; 0% cloud cover; 0–6 mph wind
05/23/2022	JP	Pass 2	Suitable Habitat within Phases 1–3 Only	7:43 a.m.–12:00 p.m.	60°F–80°F; 0% cloud cover; 0–5 mph wind
05/31/2022	JP	Pass 3	Suitable Habitat within Phases 1–3 Only	6:51 a.m.–12:00 p.m.	55°F–73°F; 0%–20% cloud cover; 0–7 mph wind
06/07/2022	JP	Pass 4	Suitable Habitat within Phases 1–3 Only	6:00 a.m.–11:00 a.m.	60°F–83°F; 0% cloud cover; 0–5 mph wind
06/16/2022	JP	Pass 5	Suitable Habitat within Phases 1–3 Only	5:58 a.m.–10:33 a.m.	63°F–85°F; 0% cloud cover; 0–5 mph wind
06/23/2022	JP	Pass 6	Suitable Habitat within Phases 1–3 Only	6:15 a.m.–10:45 a.m.	66°F–88°F; 10% cloud cover; 0–4 mph wind
Special-Status Plant Focused Surveys*					
05/18/2022	DA, JH, KD	Pass 1	Phases 1–3 Only	7:30 a.m.–5:22 p.m.	57°F–88°F; 0%–100% cloud cover; 0–5 mph wind

Table 2. Survey Conditions

Date	Biologist	Survey Pass	Survey Area	Times	Weather Conditions
05/19/2022	DA, ES, LL, JH, KD	Pass 1	Phases 1–3 Only	8:11 a.m.–4:01 p.m.	62°F–85°F; 0%–10% cloud cover; 0–4 mph wind
05/20/2022	KD, SG	Pass 1	Phases 1–3 Only	7:42 a.m.–9:00 a.m.	52°F–63°F; 100% cloud cover; 1–3 mph wind
05/23/2022	KD, SG	Pass 1	Phases 1–3 Only	8:26 a.m.–2:01 p.m.	60°F–73°F; 0% cloud cover; 0–2 mph wind
09/21/2022	SG, ZP	Pass 2	Suitable Habitat within Phases 1–3 Only	7:26 a.m.–1:45 p.m.	60°F–72°F; 0% cloud cover; 3–5 mph wind
09/22/2022	KD, ZP	Pass 2	Suitable Habitat within Phases 1–3 Only	8:03 a.m.–1:45 p.m.	64°F–88°F; 0% cloud cover; 0–3 mph wind
Aquatic Resources Delineation					
06/28/2022	AC, DA, BS, ES	N/A	Entire Project Site	9:07 a.m.–4:14 p.m.	83°F–96°F; 0%–10% cloud cover; 0–3 mph wind
06/29/2022	AC, BS, ES	N/A	Entire Project Site	7:04 a.m.–1:53 p.m.	71°F–90°F; 0% cloud cover; 0–3 mph wind
08/18/2022	DA, SG	N/A	Entire Project Site	9:30 a.m.–1:07 p.m.	78°F–87°F; 40%–50% cloud cover; 0–3 mph wind
09/30/2022	ES, SG	N/A	Entire Project Site	10:13 a.m.–11:37 a.m.	76°F–79°F; 0% cloud cover; 1–3 mph wind

Notes: °F = degrees Fahrenheit; mph = miles per hour.
Personnel: AC=Anna Cassady; AJ=Angela Johnson; AR=Austin Robbins; BS=Britney Schultz; DJ=David Jirsa; DA=Dylan Ayers; ES=Eilleen Salas; GA=Galen Hagen; JH=Jeannette Halderman; JP=Jeffrey Priest; KD=Kathleen Dayton; KN=Kimberly Narel; KJ=Kristopher Jerpseth; KP=Kim Parsons LL=Lasthenia Lee; MC=Megan Correa; NT=Nevada Trager; OK=Olivia Koziel; PB=Phil Brylski; SN=Sandra Nash; SG=Sarah Greely; SC=Shana Carey; SL=Sierra Lippert; TB=Tamara Bryant; TP=Tracy Park; ZP=Zarina Pringle
* Focused surveys were only conducted within Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country area.

3.2.1 Vegetation Community and Land Cover Mapping

Vegetation communities and land uses within the study area were mapped in the field using Environmental Systems Research Institute (ESRI) Collector, a mobile data collection application, on a digital aerial-based background. Following completion of the fieldwork, all vegetation linework was finalized using ArcGIS and a geographic information system (GIS) coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the study area was determined.

Vegetation community classifications used in this report follow A Manual of California Vegetation, online edition (CNPS 2022b), and the California Natural Community List (CDFW 2022b), where feasible, with modifications made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land uses) using Oberbauer et al. (2008). Vegetation communities were classified based on site factors, descriptions, distribution,

and characteristic species present within an area. Each natural community was mapped to the association level, where feasible. These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages).

Minimum mapping units were established to standardize the scale and appropriate evaluation of stands, as recommended by CDFW (2020). Mapping standards call for a minimum mapping unit of not greater than 10 acres for upland natural communities not considered sensitive. Dudek biologists used a minimum mapping unit of 1 or 2 acres for communities not considered sensitive and 0.25 acres for sensitive vegetation communities and wetland or riparian vegetation communities. Visible disturbance factors were also noted during vegetation mapping.

3.2.2 Flora

Latin and common names for plant species with a CRPR follow the CNPS Rare Plant Inventory (CNPS 2022a). For plant species without a CRPR, Latin names follow the Jepson Online Interchange for California Floristics (Jepson Flora Project 2022) and common names follow the California Natural Community List (CDFW 2022d) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2022b).

3.2.3 Fauna

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. The site was visually scanned with and without binoculars to identify wildlife. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2018) for birds, and Wilson and Reeder (2005) for mammals.

3.2.4 Special-Status and Regulated Resources

3.2.4.1 Special-Status Plant Survey

Based on the results of the literature review discussed in Section 3.1, nine special-status plant species were determined to have a moderate potential to occur within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions on site: Yucaipa onion (*Allium marvinii*), Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), California satintail (*Imperata brevifolia*), Hall's monardella (*Monardella macrantha* ssp. *hallii*), salt spring checkerbloom (*Sidalcea neomexicana*), southern jewelflower (*Streptanthus campestris*), and San Bernardino aster (*Symphyotrichum defoliatum*). Therefore, focused surveys were conducted within Phases 1, 2, and 3, including the Wilson Creek Estates - Wine Country boundary, and consisted of two survey passes: May and September 2022. Focused surveys were not conducted within Phases 4 and 5 due to the anticipated construction schedule of these phases. Focused survey areas for each pass are depicted in Figure 3, Special-Status Plant Focused Survey Area.

Field survey methods and mapping of special-status plants conformed to CNPS Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). Surveys were conducted at the appropriate phenological stage of the plant (blooming and fruiting) to detect and identify the target species,

confirmed by reference checks at nearby known populations, further discussed in this section. The surveys were conducted by walking 20-meter transects within all suitable habitat to detect target species. All natural vegetation was surveyed for the first pass. The second pass focused on identification of San Bernardino aster, which is associated with ditches, streams, and springs (CNPS 2022a). Therefore, suitable habitat for that pass was defined as a 100-foot buffer surrounding all jurisdictional resources and non-jurisdictional swales. Target plant observations were mapped in the field using ESRI Collector equipped with a GPS receiver to record the extent of target plant populations. Points were recorded for other non-target special-status species if incidentally observed.

Plant species detected during the focused surveys were identified to subspecies or variety, if applicable and feasible, to determine sensitivity status. All plant species observed within the study area were noted, and plants that could not be identified in the field were collected and identified later using a microscope with taxonomic keys. Plants with a CRPR 3 or 4 were also mapped if incidentally observed.

Reference Population Checks

White-bracted spineflower was observed on March 31, 2022, near Keenbrook Road in San Bernardino County with only two plants in bloom; most were still vegetative. Parry's spineflower was observed in early flower on April 14, 2022. Yucaipa onion was observed in late bloom April 19, 2022, north of Banning, California. For the second pass, research grade observations of San Bernardino aster were recorded in the iNaturalist database in September 2022 (iNaturalist 2022).

3.2.4.2 Burrowing Owl Protocol-Level Survey

Dudek conducted protocol burrowing owl surveys within Phases 1, 2, and 3, including the Wilson Creek Estates - Wine Country boundary, to determine the presence or absence of burrowing owl within these portions of the study area. Protocol surveys were not conducted within Phases 4 and 5 due to the anticipated construction schedule of these phases. These surveys were conducted in accordance with Appendix D of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The protocol states that four survey passes shall be performed, with the first visits occurring between February 15 and April 15 and the remaining three visits, at least three weeks apart, between April 15 and July 15, with at least one visit after June 15.

Concurrent with the first pass of the burrowing owl surveys, Dudek biologists walked Phases 1, 2, and 3 to identify areas with suitable burrowing owl habitat (i.e., relatively open habitat with low gradients and burrow resources) and mapped all suitable burrows or burrow surrogates (i.e., ground-level cavities with openings of 4 inches in diameter or greater) using ESRI Collector. Following completion of the first survey pass, which included the burrow survey, polygons were drawn around large clusters of burrow resources and individual burrows that could not be easily clustered were buffered by 25 feet to create a burrowing owl survey area. The remaining three survey passes were conducted within this refined burrowing owl survey area and completing using a combination of pedestrian transects spaced approximately 20 meters apart and spot checks where suitable burrows and the surrounding areas were investigated to determine the status of suitable burrows in these areas. To ensure accurate documentation of observations and prevent inadvertent flushing of potential individuals, the burrows and surrounding area were initially scanned from a distance using binoculars. Any burrowing owl individuals and status of the burrow were documented. If needed, the biologists carefully approached the burrowing owl survey area while scanning the area for burrowing owl individuals and investigating suitably sized burrows for any signs of activity. The use of pedestrian transects or spot checks was determined in the field by the spatial distribution and density of suitable burrows or burrow features. Protocol survey areas for each pass are depicted in Figure 4, Special-Status Wildlife Protocol Survey Areas.

If observed, any direct observations (visual or audible) or active burrow sign (e.g., molted feathers, pellets, prey remains, white wash) of burrowing owls was recorded. The surveys were conducted when conditions were suitable for detecting owls (no rain, high winds [greater than 20 mph], dense fog, or temperatures over 90°F). If observed, any burrowing owl sightings, occupied burrows, and burrows with burrowing owl sign were mapped and recorded.

3.2.4.3 Coastal California Gnatcatcher Protocol-Level Survey

Dudek conducted protocol presence/absence coastal California gnatcatcher surveys within Phases 1, 2, and 3, including the Wilson Creek Estates - Wine Country boundary, to determine the presence or absence of coastal California gnatcatcher. Protocol surveys were not conducted within Phases 4 and 5 due to the anticipated construction schedule of these phases. These surveys were conducted following Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 2019).

The study area does not occur within a Natural Community Conservation Plan enrolled area or a Habitat Conservation Plan area; therefore, six survey passes were conducted at a minimum of 7-day intervals between visits during the breeding season (March 15 through June 30). In accordance with the protocol (USFWS 2019), no more than 80 acres of suitable habitat were surveyed by a single permitted biologist during each site visit. Survey routes completely covered all areas of suitable gnatcatcher habitat within the survey area and allowed for complete audible and visual coverage of all suitable gnatcatcher habitat on site. Digital mobile maps were used during the surveys to assist in navigating. Appropriate binoculars (e.g., 10 × 42 magnification) were used to aid in detecting and identifying bird species.

Surveys were conducted in weather conditions and time frames appropriate for the detection of gnatcatcher (i.e., avoiding periods of excessive heat, wind, rain, fog, etc., and between 6:00 a.m. and 12:00 p.m.). Weather conditions and survey dates are provided in Table 2. Biologists played a recording of gnatcatcher vocalizations at approximately 50- to 100-foot intervals to induce responses from potentially present coastal California gnatcatchers. Vocalization playback was terminated immediately upon detection of any coastal California gnatcatchers to minimize the potential for harassment. If observed, any coastal California gnatcatchers occurrences were mapped and recorded.

Concurrent with the first pass of the coastal California gnatcatcher surveys, USFWS-permitted biologist Jeff Priest (TE-840619-6.1) evaluated Phases 1, 2, and 3 to identify areas with suitable coastal California gnatcatcher habitat and mapped all suitable habitat using ESRI Collector. Following the finalization of the first survey, the coastal California gnatcatcher survey area was further refined to include all areas containing suitable habitat. The remaining five survey passes were conducted over this refined survey area. The protocol survey area for this species is depicted in Figure 4.

3.2.4.4 Small Mammal Habitat Assessment

The focused habitat assessment for Stephens' kangaroo rat (*Dipodomys stephensi*) and San Bernardino kangaroo rat (*Dipodomys merriami parvus*) was conducted by Phil Brylski, PhD, who holds Section 10(A) permits and Memoranda of Understanding with CDFW for Stephens' kangaroo rat and San Bernardino kangaroo rat surveys. The field-based habitat assessment included an examination of soils, vegetation, topographic features, and disturbance features to assess habitat suitability for Stephens' kangaroo rat and San Bernardino kangaroo rat on the site. Dr. Brylski conducted the assessment by driving throughout the study area and conducting pedestrian transects throughout potentially suitable habitat to search for kangaroo rat burrows and sign (scat, dust bowls, footprints, and tail-drag marks). For Stephens' kangaroo rat, the search was confined to potentially suitable grassland and sparse sage scrub stands. For San Bernardino kangaroo rat, the search was confined to sparse to moderate alluvial fan sage scrub and/or disturbed areas near to alluvial channels.

3.2.4.5 Aquatic Resources Delineation

Before conducting fieldwork for the aquatic resources delineation, Dudek reviewed aerial maps from the National Wetlands Inventory (USFWS 2022a), the National Hydrography database (USGS 2022), the Natural Resource Conservation Service (USDA 2022a, 2022b), and historical aerials and topographic maps (Google 2022; Historic Aerials Online 2022). Survey datasheets and forms are included in the Aquatic Resources Delineation Report, which is summarized in Section 5.3.3, Potential Aquatic Resources. The surveys were conducted on foot to visually cover the study area. Topographic contours were used to aid the delineation in areas that were difficult to access on foot due to challenging topography. Both current and historical imagery was used to supplement field investigation efforts, particularly on private lands or in areas where anthropogenic impacts have obscured aquatic indicators normally found in the field. Small portions of the study area were inaccessible and were delineated via topographical data and available aerial imagery. Remote sensing was not used during this delineation.

Dudek conducted a delineation of state and federal jurisdictional waters and wetlands within the study area in accordance with current policies. Federal wetlands were mapped based on the procedures in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters were mapped at the OHWM based on the procedures defined in A Field Guide to the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b). Waters of the state were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602.

To aid in the delineation and in conformance with the USACE 2008 Field Guide, 20 OHWM datasheets (T-1 through T-20) were recorded at potential non-wetland waters within the study area to determine the OHWM indicators within those features. The jurisdictional delineation did not contain any features that met the USACE wetland criteria, and due to the lack of hydrophytic vegetation and hydric soils, wetland determination data forms were not completed.

The limits of aquatic resources were collected in the field using a Trimble R1 GPS unit and ESRI Collector mobile application with sub-meter accuracy. In some areas with challenging topography, topographic contours were used to interpolate the linework. The geographic extents were digitized in a GIS based on the GPS data and data collected directly onto field maps into a Project-specific GIS using ArcGIS software.

3.2.5 Survey Limitations

Due to the El Dorado Fire in 2020, much of the previously occurring vegetation within the Project site is no longer present. Vegetation on the site exists in a post-fire recovery state; more information is provided in Section 5.1, Vegetation Communities and Land Covers. Shrub or tree vegetation was identified by evaluating the resprouts, if present. Vegetation mapping within the burned areas consisted of identifying the dominant resprout growth and extrapolating the resprouts to identify the associated community.

In addition, survey limitations during the field visits included limited access to the study area due to steep topography and difficult terrain that prevented 100% visual coverage of the hillslopes throughout the study area. Therefore, the vegetation mapping included some desktop extrapolation of vegetation communities in areas where the aerial mapping matched what was seen in the field. The vegetation mapping was conducted during the day and during months of the year when most annuals and perennials would have been evident or identifiable. However, due to the timing of the biological survey, some annuals and cryptic perennials may not have been detectable.

Limitations of the field surveys include a diurnal bias for most species and the absence of focused trapping for mammals and reptiles, since trapping is generally only performed for select listed species. Surveys were conducted mostly during the daytime to maximize visibility and detection of plants and most animals. As such, birds represent the largest component of vertebrate fauna recorded during the surveys, as they are usually most active during daytime hours. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night, particularly bat species. Many species of reptiles and amphibians are similarly nocturnal and/or cryptic in their habits and are difficult to observe using standard meandering transects. However, despite these limitations, the survey work conducted in the study area provides an adequate overall assessment of faunal resources for purposes of evaluating potential biological constraints.

The average rainfall in 2022 was below average, which has potential to limit the growth of flora. However, initial botanical reference searches were conducted prior to focused sensitive plant surveys and these search results are discussed further in Section 3.2.4.1, Special-Status Plant Survey, of this report. Conditions were monitored prior to collecting data to ensure target species would be identifiable if present. Surveys for sensitive plant species adequately covered flora that are known to bloom within the vicinity.

4 Environmental Setting

The purpose of this section is to describe the general existing conditions within and adjacent to the study area to document the baseline conditions for this report and subsequent analysis.

4.1 Land Use

The study area sits at the foothills of the San Bernardino National Forest and predominantly encompasses undeveloped open space that is intersected by incised drainages and numerous dirt roads. The northern and westerns portions of the study area contain several individual residences. The western portion of the study area also includes active agricultural operations. The majority of the study area burned in 2020 during the El Dorado Fire and vegetation is still recovering. The fire burned much of the native vegetation throughout the site. This has led to a dominance of non-native herbaceous species and allowed for other fire-following species to colonize the site. The portion of the study area west of Jefferson Street, south of Fir Avenue, and north of Wilson Creek has been previously graded as a part of a former subdivision.

The study area is located in the northeastern portion of the City. The northern, western, and southern portions of the study area abut residential and commercial development. To the east is El Dorado Ranch Park.

4.2 Climate

The study area is located in the inland valley region of western Riverside County. Maximum and minimum air temperatures near Yucaipa range from 41°F to 103°F (CIMIS 2022). The average annual precipitation for the last 5 years is 14.3 inches (CIMIS 2022). Periods of extended drought are common throughout the region.

4.3 Geology and Topography

The foothills of the San Bernardino National Forest lie to the north and east of the study area. West and south of the study area is comprised of the City.

While unpaved roads intersect the majority of the study area, the central western portion of the study area is subject to the highest disturbance as this is where the Project site abuts urban/developed areas and there is a concentration of unpaved roads and graded areas, which have led to areas of exposed bare soils. The study area's surface elevation ranges between approximately 2,930 and 3,600 feet above mean sea level (amsl) and gently slopes from the northern and eastern sides to the west. Drainages concentrated within the study area follow this pattern.

4.4 Soils

The study area consists of 12 soil complexes: Soboba-Hanford families association (2% to 15% slopes); Cieneba-Rock outcrop complex (30% to 50% slopes); Greenfield sandy loam (2% to 9% slopes); Greenfield cobbly sandy loam (5% to 15% slopes); Hanford coarse sandy loam (2% to 9% slopes); Ramona sandy loam (9% to 15% slopes); Saugus sandy loam (30% to 50% slopes); Soboba gravelly loamy sand (0% to 9% slopes); Soboba stony sandy loamy sand (2% to 9% slopes); Tujunga gravelly loamy sand (0% to 9% slopes); water; and psamments, fluvents and frequently flooded soils. These soil types are described in more detail below and are presented on Figure 5, Soils Map.

Cieneba Series consists of shallow, somewhat excessively drained soils that are formed from material weathered from granite and other rocks of similar texture and composition. These soils typically occur on coastal mountain ranges in central and Southern California and foothills of the Sierra Nevada at elevations of 500 to 4,000 feet amsl. Vegetation association with this series includes chaparral and chemise with widely spread foothill pine or oak trees and small areas of thin annual grasses and weeds.

Greenfield Series consists of deep, well-drained soils that are formed in alluvium from granitic and mixed rock sources. These soils are typically found fans and terraces at elevations of 100 to 3,500 feet amsl. Vegetation associated with this series includes annual grass, forbs, some shrubs, and scattered oak trees (USDA 2022a).

Hanford Series consists of very deep, well-drained soils that are formed in alluvium from granitic sources. These soils are typically found within floodplains, stream bottoms, and alluvial fans. This series is typically found at elevations of 890 to 2,860 feet amsl. Vegetation associated with this series include annual grasses and associated herbaceous plants (USDA 2022a).

Ramona Series consists of well-drained soils that are formed in alluvium derived from mostly granitic and related rock sources. These soils typically occur on terraces and fans at elevations of 250 to 3,500 feet. Cultivated vegetation associated with this series includes cultivated crops or pasture. Uncultivated areas have a cover of annual grasses, forbs, chamise, or chaparral.

Saugus Series consists of deep, well-drained soils formed from weakly consolidated sediments. These soils typically occur on terraces and foothills at elevations of 600 to 2,500 feet amsl. Vegetation associated with this series includes chamise and other shrubs plus minor amounts of perennial grasses. Naturalized grasses and forbs make up a small to large portion of the vegetation (USDA 2022a).

Soboba Series consists of excessively drained soils that formed in alluvium dominantly from very gravelly, cobbly, or stony granitic materials. Soboba soils are on talus slopes and alluvium fans at elevations of 30 to 4,200 feet amsl. Vegetation associated with this series includes annual grasses and forbs and chaparral shrubs. (USDA 2022a).

Tujunga Series consists of very deep, somewhat excessively drained soils formed in alluvium from granitic sources. These soils typically occur on alluvial fans and floodplains, including urban areas at elevations of 10 to 1,500 feet amsl. Vegetation associated with this series includes shrubs, annual grasses, and forbs (USDA 2022a).

Psamments, Fluvents and Frequently Flooded Soils Series consists of sandy soils formed in recent water-deposited sediments on flood plains, fans, and deltas along rivers and small stream courses at elevations of 10 to 1,500 feet amsl. These soils are frequently flooded (USDA 2022a).

Water features are comprised of areas that are either permanently or seasonally inundated with water.

4.5 Watersheds and Hydrology

The study area is located within the Yucaipa Creek subwatershed (Hydrologic Unit Code 180702030402), which lies within the San Timoteo Wash watershed (Hydrologic Unit Code 1807020304) and the Santa Ana subbasin (Figure 6, Hydrologic Resources Map). The Yucaipa Creek subwatershed is 45.6 square miles (29,266 acres) and contains Yucaipa Creek, Wilson Creek, and Oak Glen Creek as prominent features in the watershed. Wilson Creek and Oak Glen Creek flow into Yucaipa Creek. Yucaipa Creek flows west and north through several downstream features before converging with the Santa Ana River. The Santa Ana River flows south and west, terminating at the Pacific Ocean.

The study area is bisected by an upstream segment of Wilson Creek.

5 Results

This section describes the results of the literature review and field surveys within the study area.

5.1 Vegetation Communities and Land Covers

A total of 21 vegetation communities or land cover types were mapped within the study area. The spatial distribution of the vegetation communities and land covers are presented on Figures 7-1 through 7-13, Vegetation Communities and Land Cover Types. The acreages of the mapped vegetation alliances/associations and other land covers in the study area are presented in Table 3. The terms semi-natural stands vs. alliance are used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009). The alliances/associations and other land covers are grouped in Table 3 by the generalized habitat types included on the study area vegetation map (Figures 7-1 through 7-13). Vegetation communities considered sensitive biological resources by CDFW under CEQA (CDFW 2022d) are noted in Table 3. Photos of the Project site can be found in Appendix B.

CDFW rankings of 1, 2, or 3 are considered high priority for inventory or special status and impacts to these communities typically require mitigation.

Due to historical agricultural activities and the El Dorado Fire, grass- and herb-dominated vegetation communities dominated the study area, comprising 550.2 of 1,193.4 total acres, or 46% of the study area. Of the remaining vegetation (totaling 643.3 acres), 150.7 acres (23%) were burned communities in post-fire recovery. Finally, 8.2 acres within the study area are comprised of special-status vegetation communities under CEQA. These communities include Palmer's goldenbush scrub, white sage scrub, California sycamore woodlands, basket bush–river hawthorne–desert olive patches, and scale broom scrub.

Table 3. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Ranking[1]	Acreage[2]		
				Burned	Unburned	Total
Grass and Herb Dominated						
Post-fire herbaceous	*Erodium cicutarium*–*Hirschfeldia incana*–*Bromus* spp.–*Amsinckia* spp.	N/A	N/A	0.0	437.4	437.4
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	GNA/SNA	0.0	80.9	80.9
Non-Native Grassland	N/A	N/A	N/A	0.0	31.9	31.9
			Grass and Herb Dominated Subtotal	0.0	*550.2*	*550.2*

Table 3. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Ranking[1]	Acreage[2]		
				Burned	Unburned	Total
Chaparral						
Chamise chaparral	*Adenostoma fasciculatum* Alliance	*Adenostoma fasciculatum*	G5/S5	46.8	5.2	52.0
		Adenostoma fasciculatum–Eriogonum fasciculatum	G4/S4	0.0	2.3	2.3
		Adenostoma fasciculatum–(*Lotus scoparius–Eriodictyon* spp.)	G5/S5	0.0	1.1	1.1
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia–Adenostoma fasciculatum*	G4/S4	11.0	6.3	17.3
		Quercus berberidifolia	G4/S4	60.8	3.4	64.1
Deerweed – silver lupine – yerba santa scrub	*Lotus scoparius–Lupinus albifrons–Eriodictyon* spp. Alliance	*Eriodictyon californicum*–herbaceous	G5/S5	1.5	0.0	1.5
			Chaparral subtotal	*120.1*	*18.2*	*138.3*
Scrub						
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	G5/S5	17.8	44.2	61.9
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	G5/S5	0.0	112.1	112.1
Palmer's goldenbush scrub[3]	*Ericameria palmeri* Alliance	*Ericameria palmeri*	G3/S3 (provisional)	0.0	0.3	0.3
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum* (*elongatum, nudum*) Alliance	*Corethrogyne filaginifolia*	G4/S4	0.0	0.6	0.6

Table 3. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Ranking[1]	Acreage[2]		
				Burned	Unburned	Total
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp. *Alliance*	*Malacothamnus fasciculatus*	G4/S4	0.0	1.4	1.4
White sage scrub[3]	*Salvia apiana* Alliance	*Salvia apiana*	G3/S3	0.0	0.7	0.7
		Salvia apiana–Hesperoyucca whipplei	G4/S3	0.9	0.0	0.9
			Scrub subtotal	*18.7*	*159.3*	*178.0*
Riparian						
Mulefat thickets	*Baccharis salicifolia* Alliance	*Baccharis salicifolia–Sambucus nigra*	G4/S4	0.5	0.0	0.5
California sycamore woodlands[3]	*Platanus racemosa–Quercus agrifolia* Alliance	*Platanus racemosa–Baccharis salicifolia*	G3/S3	0.0	1.7	1.7
Basket bush - river hawthorn – desert olive patches[3]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens Alliance*	*Sambucus nigra*	G4/S3	0.0	0.7	0.7
Scale broom scrub[3]	*Lepidospartum squamatum* Alliance	*Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan	G3/S3	0.0	2.2	2.2
		Lepidospartum squamatum–Amsinckia menziesii	G3/S3	0.0	1.6	1.6
		Lepidospartum squamatum–ephemeral annuals	G2/S2	0.0	0.01	0.01
			Riparian subtotal	*0.5*	*6.2*	*6.7*
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia* Alliance	*Quercus agrifolia*	G5/S4	2.0	0.0	2.0

Table 3. Vegetation Communities and Land Cover Types within the Study Area

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Ranking[1]	Acreage[2]		
				Burned	Unburned	Total
Eucalyptus - tree of heaven - black locust groves	*Eucalyptus* spp.–*Ailanthus altissima*–*Robinia pseudoacacia* Eucalyptus–tree of heaven–black locust groves Alliance	*Ailanthus altissima*	GNA/SNA	0.0	1.0	1.0
		Eucalyptus *(globulus, camaldulensis)*	GNA/SNA	0.0	2.0	2.0
			Woodland subtotal	*2.0*	*3.1*	*5.1*
Unvegetated						
Unvegetated wash and river bottom	N/A	N/A	N/A	2.8	10.9	13.7
			Unvegetated subtotal	*2.8*	*10.9*	*13.7*
Disturbed and Developed						
Ornamental plantings	N/A	N/A	N/A	6.7	12.0	18.7
Urban/Developed	N/A	N/A	N/A	0.0	157.8	157.8
Disturbed Habitat	N/A	N/A	N/A	0.0	125.0	125.0
			Disturbed and developed subtotal	*6.7*	*294.8*	*301.5*
			Grand Total[2]	**150.7**	**1,042.6**	**1,193.4**

Notes:

[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2022):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
NA = not applicable
GNR = unranked, global rank not yet assessed
SNR = unranked, subnational rank not yet assessed

[2] Totals may not sum due to rounding.

[3] Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3). (CDFW 2022d)

5.1.1 Grass and Herb Dominated

5.1.1.1 Post-Fire Herbaceous

Although post-fire herbaceous is not recognized as a vegetation community in CFDW's California Natural Community List (CDFW 2022d), it is used in the project-specific vegetation map to more accurately describe site conditions since none of the recognized vegetation communities were a good fit for this particular assemblage of plants on site. Specifically, site conditions have been heavily influenced by the El Dorado Fire, leaving the site in a dynamic fire recovery state. The post-fire herbaceous vegetation community within the study area is composed of a somewhat even distribution of common stork's-bill (*Erodium cicutarium*), short-pod mustard (*Hirschfeldia incana*), bromes (*Bromus* spp.), and fiddlenecks (*Amsinckia* spp.). Other species observed within this vegetation community include slender oat (*Avena barbata*), phacelias *(Phacelia* spp.), and low cover of some native shrubs such as California buckwheat (*Eriogonum fasciculatum*) and deer weed (*Acmispon glaber*).

The only native dominant species is fiddleneck; the remaining dominant species are naturalized. The fiddleneck–phacelia fields alliance is ranked G5S5 and therefore is not considered sensitive. By extension, the post-fire herbaceous vegetation community mapped on site would not be considered sensitive.

Post-fire herbaceous non-native grasslands occur widely throughout the study area and make up the greatest proportion compared to any other vegetation community mapped within the study area.

5.1.1.2 Upland Mustards or Star Thistle Fields (42.013.00)

The upland mustards or star thistle fields alliance communities include black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), Italian plumeless thistle (*Carduus pycnocephalus*), Maltese star-thistle (*Centaurea melitensis*), yellow star-thistle (*Centaurea solstitialis*), artichoke thistle (*Cynara cardunculus*), carnation spurge (*Euphorbia terracina*), short-pod mustard, woad (*Isatis tinctoria*), radish (*Raphanus sativus*), or similar ruderal forbs that are dominant in the herbaceous layer. Emergent trees and shrubs may be present at low cover. The upland mustards or star thistle fields alliance has an open to continuous canopy less than 3 meters (9.8 feet) in height (CNPS 2022b).

The upland mustards or star thistle fields alliance is a semi-natural alliance, and as such it is included in the California Natural Community List but not ranked and is denoted as GNA/SNA (global/state rank not applicable) (CDFW 2022d); therefore, this community is not considered sensitive under CEQA.

The only association within the upland mustards or star thistle fields alliance is *Hirschfeldia incana*.

Associated species observed within this alliance in the field included short-pod mustard, pineappleweed (*Matricaria discoidea*), common stork's-bill, bristly fiddleneck (*Amsinckia tessellata*), and compact brome (*Bromus madritensis*). On site, the upland mustards or star thistle fields comprises two large patches in the northern portion of the study area and medium to small patches sparsely scattered throughout the eastern portion of the study area in between post-fire herbaceous vegetation communities.

5.1.1.3 Non-Native Grassland

California non-native grassland or California annual grassland is described in the first edition of A Manual of California Vegetation (Sawyer and Keeler-Wolf 1995) as being dominated by annual grasses and herbs in the ground layer including bromes (*Bromus* spp.), California poppy (*Eschscholzia californica*), filaree (*Erodium* spp.), lupine (*Lupinus* spp.), mustards (*Brassica* spp.), and oats (*Avena* spp.).

Vegetation community composition within the study area coincided with this vegetation community description, as no vegetation association or alliance in CNPS (2022) appropriately characterized this type of vegetation within the study area. The community in CNPS (2023) nearest to describing vegetation on the site is annual brome grasslands. This community is characterized by the dominance of several species of annual brome grasses, but grassland communities on the site are more diverse. Although annual brome grasses and wild oats are the dominant plant species in this community composition, native annual forbs also constitute significant cover.

Neither CDFW (2023) nor CNPS (2023) gives California annual grassland/annual brome grasslands a rarity ranking, as they are non-native plant communities that are widespread.

Associated species observed within this habitat type included bromes, fiddlenecks, and slender oat. Non-native grassland is concentrated in the western portions of the site west of Jefferson Street.

5.1.2 Chaparral

5.1.2.1 Chamise Chaparral (37.101.00)

The chamise chaparral alliance includes chamise (*Adenostoma fasciculatum*) as the dominant shrub with an intermittent to continuous canopy of less than 4 meters (13 feet) in height (CNPS 2022b). Species associated with the chamise chaparral alliance include redshanks (*Adenostoma* spp.), various manzanitas (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), bush monkeyflower (*Mimulus aurantiacus*), California buckwheat, chaparral yucca (*Hesperoyucca whipplei*), toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), various sage species (*Salvia* spp.), and poison oak (*Toxicodendron pubescens*). Emergent trees may be present at low cover (CNPS 2022b).

The chamise chaparral alliance is ranked by CDFW (2022d) as a G5S5 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2022d; NatureServe 2022); therefore, the community is not considered sensitive under CEQA.

The following associations within the chamise chaparral alliance were mapped on the Project site: *Adenostoma fasciculatum, Adenostoma fasciculatum–Eriogonum fasciculatum, Adenostoma fasciculatum*–(*Lotus scoparius–Eriodictyon* spp.).

Associated species observed in the field within the *Adenostoma fasciculatum* association include bush mallow (*Malacothamnus fasciculatus*), deer weed, sugarbush (*Rhus ovata*), and ripgut brome (*Bromus diandrus*). Associated species observed in the field within the *Adenostoma fasciculatum–Eriogonum fasciculatum* association include California buckwheat and mustard species. Associated species observed in the field within the *Adenostoma fasciculatum*–(*Lotus scoparius–Eriodictyon* spp.) association include hairy yerba santa (*Eriodictyon trichocalyx*), deer weed, and sugarbush.

The majority of the mapped *Adenostoma fasciculatum* alliance within the study area was burned during the El Dorado Fire. Therefore, this alliance is in post-fire recovery and primarily includes resprouting/immature individuals. On site, chamise chaparral is primarily distributed along drainages and comprises numerous small to large patches concentrated in the northern and northeastern portion of the study area, with a few smaller patches distributed through the rest of the study area.

5.1.2.2 Scrub Oak Chaparral (37.407.00)

The scrub oak chaparral alliance communities include scrub oak as the dominant or co-dominant shrub in the canopy. Scrub oak chaparral has a continuous shrub canopy less than 6 meters (19.7 feet) in height with a variable ground layer (CNPS 2022b). Species associated with the scrub oak chaparral alliance include redshanks, various manzanitas, ceanothus, alder-leaf mountain-mahogany (*Cercocarpus montanus*), coffee berry (*Frangula californica*), California ash (*Fraxinus dipetala*), toyon, and sugarbush (CNPS 2022b).

The scrub oak chaparral alliance is ranked by CDFW (2022d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The following associations within the scrub oak chaparral alliance were mapped within the study area: *Quercus berberidifolia–Adenostoma fasciculatum* and *Quercus berberidifolia.*

Associated species observed in the field within the *Quercus berberidifolia–Adenostoma fasciculatum* association include chamise, bush mallow, hairy yerba santa, sugarbush, and pink-bract manzanita (*Arctostaphylos pringlei*). Associated species observed in the field within the *Quercus berberidifolia* include blue elderberry (*Sambucus nigra* ssp. *caerulea*), various bromes, phacelias, fiddlenecks, and sugarbush. The majority of the mapped *Quercus berberidifolia* alliance within the study area was burned during El Dorado Fire. Therefore, this alliance is in post-fire recovery and primarily includes resprouting/immature individuals.

On site, scrub oak chaparral comprises large patches covering much of the northern portion of the study area with small to medium patches evenly scattered around the rest of the study area, primarily distributed along drainages.

5.1.2.3 Deer Weed–Silver Lupine–Yerba Santa Scrub (37.070.00)

The deer weed–silver lupine–yerba santa scrub alliance communities include tree poppy (*Dendromecon rigida*), yerba santa (*Eriodictyon californicum*), thickleaf yerba santa (*Eriodictyon crassifolium*), poodle-dog bush (*Eriodictyon parryi*), deer weed, and/or silver lupine (*Lupinus albifrons*) as the dominant shrub in the canopy. The deer weed–silver lupine–yerba santa scrub alliance has an open to intermittent shrub canopy that can be two tiered and is less than 3 meters (9.8 feet) in height with a sparse to intermittent herbaceous layer (CNPS 2022b).

The deer weed–silver lupine–yerba santa scrub alliance is ranked by CDFW (2022d) as a G5S5 alliance. This ranking indicates that globally and within California the alliance is widespread, abundant, and secure (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The only association within the deer weed–silver lupine–yerba santa scrub alliance is *Eriodictyon californicum*–herbaceous.

Associated species observed in the field within the *Eriodictyon californicum*–herbaceous association include broom baccharis (*Baccharis sarothroides*), fragrant sumac (*Rhus aromatica*), mustards (*Brassica* spp.), and bromes.

On site, deer weed–silver lupine–yerba santa scrub comprises a single medium sized patch in the center of the study area.

5.1.3 Scrub

5.1.3.1 California Buckwheat Scrub (32.040.00)

California buckwheat scrub alliance communities include California buckwheat as the dominant or co-dominant shrub in the canopy. California buckwheat scrub has a continuous or intermittent shrub canopy less than 2 meters (7 feet) in height with a variable ground layer that may be grassy (CNPS 2022b). Species associated with the California buckwheat scrub alliance include California sagebrush (*Artemisia californica*), bush mallow, California brittle bush (*Encelia californica*), coyote brush (*Baccharis pilularis*), deer weed, black sage (*Salvia mellifera*), and white sage (*Salvia apiana*) (CNPS 2022b).

The California buckwheat scrub alliance is ranked by CDFW (2022d) as a G5S5 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure (CDFW 2022d; NatureServe 2022) and within California the alliance is secure; therefore, this community is not considered sensitive under CEQA.

The only association within the California buckwheat scrub alliance is *Eriogonum fasciculatum*.

Associated species observed within this alliance in the field included common stork's-bill, short-pod mustard, red brome (*Bromus rubens*), and ripgut brome. Some of the areas mapped *as Eriogonum fasciculatum* alliance within the study area were burned during the El Dorado Fire in 2020. These areas are in post-fire recovery and primarily include resprouting/immature individuals. On site, California buckwheat scrub occurs in patches scattered throughout the study area with a concentration of small patches in the southwestern portion, where the study area borders residential development.

5.1.3.2 Deer Weed Scrub (52.240.00)

Deer weed scrub alliance communities include common deer weed (*Acmispon glaber* or *Lotus scoparius*) as dominant or co-dominant in the canopy. Deer weed scrub has a two-tiered open to intermittent shrub canopy less than 2 meters (7 feet) in height with a sparse ground layer (CNPS 2022b). Some species associated with the deer weed scrub alliance include chamise, California sagebrush, coyote brush, California aster (*Corethrogyne filaginifolia*), California buckwheat, California jointfir (*Ephedra californica*), interior goldenbush (*Ericameria linearifolia*), sawtooth goldenbush (*Hazardia squarrosa*), bush mallow, sugarbush, and white sage (CNPS 2022b).

The deer weed scrub alliance is ranked by CDFW (2022d) as a G5S5 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure (CDFW 2022d; NatureServe 2022) and within California the alliance is secure; therefore, this community is not considered sensitive under CEQA.

The only association within the deer weed scrub alliance is *Lotus scoparius,* and it was mapped on site accordingly.

Associated species observed within this alliance in the field included ripgut brome, red brome, bristly fiddleneck, and California buckwheat. Deer weed is a fire-following species and likely recruited into new areas following the El Dorado Fire. On site, deer weed scrub occurs in a large continuous patch in the northern portion of the study area and smaller patches scattered throughout the rest of the study area, with a concentration in the northeastern portion.

5.1.3.3 Palmer's Goldenbush Scrub (38.130.00)

Palmer's goldenbush scrub alliance communities include Palmer's goldenbush (*Ericameria palmeri*) as the dominant shrub in the canopy. Palmer's goldenbush has an open shrub canopy less than 1.5 meters (4.9 feet) in height with a continuous herbaceous layer (CNPS 2022b). Species associated with the Palmer's goldenbush alliance include California buckwheat, California matchweed (*Gutierrezia californica*), and sawtooth goldenbush (CNPS 2022b).

The Palmer's goldenbush alliance is ranked by CDFW (2022d) as a G3S3 (provisional) alliance. This ranking indicates that globally and within California the alliance is considered vulnerable to extirpation or extinction (CDFW 2022d; NatureServe 2022). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

The only association within the Palmer's goldenbush alliance is *Ericameria palmeri*.

Associated species observed within this alliance in the field included bristly fiddleneck, short-pod mustard, and hair horsebrush (*Tetradymia comosa*). On site, Palmer's goldenbush comprises two small patches in the northeastern portion of the study area.

5.1.3.4 Sand-Aster and Perennial Buckwheat Fields (32.240.01)

The sand-aster and perennial buckwheat fields alliance communities include California aster, longstem buckwheat (*Eriogonum elongatum*), or naked buckwheat (*Eriogonum nudum*) as the dominant or co-dominant herb in the canopy. The herbaceous layer cover is open to intermittent with a canopy less than 1 meter (3.3 feet) in height (CNPS 2022b). Species associated with the sand-aster and perennial buckwheat fields alliance include bromes, sandcarpet (*Cardionema ramosissimum*), farewell-to-spring (*Clarkia* spp.), stork's-bill (*Erodium* spp.), and California poppy (*Eschscholzia californica*) (CNPS 2022b).

The sand-aster and perennial buckwheat fields alliance is ranked by CDFW (2022d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The only association within the sand-aster and perennial buckwheat fields alliance is *Corethrogyne filaginifolia*.

Associated species observed within this alliance in the field included California buckwheat and deer weed. The community appears to be immature. On site, sand-aster and perennial buckwheat fields alliance comprises one small patch in the southwestern portion of the study area.

5.1.3.5 Bush Mallow Scrub (45.450.00)

Bush mallow scrub alliance communities in Southern California include bush mallow or Indian Valley bushmallow (*Malacothamnus aboriginum*) as dominant or co-dominant in the shrub canopy. Bush mallow scrub has a two-tiered open to intermittent shrub canopy less than 3 meters (10 feet) in height with a sparse ground layer (CNPS 2022b). Some species associated with the bush mallow scrub alliance include chamise, California sagebrush, ceanothus, California brittle bush, California buckwheat, chaparral yucca, toyon, deer weed, laurel sumac (*Malosma laurina*), sugarbush, and white sage. Emergent trees may be present at low cover, including Southern California black walnut (*Juglans californica*), California sycamore (*Platanus racemosa*), or coast live oak (*Quercus agrifolia*) (CNPS 2022b).

The bush mallow scrub alliance is ranked by CDFW (2022d) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The only association within the bush mallow scrub alliance is *Malacothamnus fasciculatus*.

Associated species observed within this alliance in the field included short-pod mustard in the understory. On site, bush mallow scrub occurs in one small match in the northeastern portion of the study area distributed along a drainage.

5.1.3.6 White Sage Scrub (32.030.00)

The white sage scrub alliance communities include white sage as the dominant or co-dominant shrub in the canopy. The white sage scrub alliance has an intermittent to continuous shrub canopy with most shrubs less than 2 meters (6.6 feet) in height and some shrubs less than 0.5 meters (1.6 feet) in height with a variable ground layer (CNPS 2022b). Species associated with the white sage scrub alliance include California sagebrush, *Ericameria* spp., California buckwheat, chaparral yucca, Menzies' goldenbush (*Isocoma menziesii*), bush mallow, laurel sumac, and *Rhus* spp. (CNPS 2022b).

The white sage scrub alliance is ranked by CDFW (2022d) as a G4S3 alliance. This ranking indicates that globally this community is apparently secure, but within California the alliance is considered vulnerable and at risk (CDFW 2022d; NatureServe 2022). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

The following associations within the white sage scrub alliance were mapped on site: *Salvia apiana and Salvia apiana–Hesperoyucca whipplei.*

Associated species observed in the field within the *Salvia apiana* association included yerba santa, deer weed, distant phacelia (*Phacelia distans*), and common fiddleneck (*Amsinckia intermedia*). Associated species observed in the field within the *Salvia apiana–Hesperoyucca whipplei* association include chaparral yucca, deer weed, red brome, and phacelias.

On site, white sage scrub alliance comprises three small patches distributed around a drainage near the southwestern border of the study area.

5.1.4 Riparian

5.1.4.1 Mulefat Thickets (63.510.03)

The mulefat thickets alliance features mulefat (*Baccharis salicifolia*) as the dominant or co-dominant shrub in the canopy. Mulefat thicket communities are characterized by a continuous two-tiered canopy that is less than 5 meters (16 feet) in height, with one tier under 5 meters and the secondary tier under 2 meters (6.5 feet) in height. Mulefat thickets commonly have a sparse herbaceous layer (CNPS 2022b). Species associated with this alliance include California sagebrush, coyote brush, laurel sumac, tree tobacco (*Nicotiana glauca*), arrow weed (*Pluchea sericea*), blackberry (*Rubus* spp.), sandbar willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), blue elderberry, and tamarisk (*Tamarix ramosissima*). Emergent trees present at low covers may include foothill pine (*Pinus sabiniana*), California sycamore, Fremont cottonwood (*Populus fremontii*), oak trees (*Quercus* spp.), and willows (*Salix* spp.) (CNPS 2022b).

The mulefat thickets alliance is ranked by CDFW (2022d) as a G4S4 alliance. This ranking indicates that globally and within California the alliance is apparently secure (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The only association within the mulefat thickets alliance is *Baccharis salicifolia–Sambucus nigra, which* was mapped on site accordingly. Associated species observed within this alliance in the field included blue elderberry as the dominant species with minimal mulefat present. The understory was comprised of bromes, common stork's-bill, *Amsinckia* spp., and phacelias. The mapped alliance is recovering from being burned in the El Dorado Fire. On site, mulefat thickets occur in a small patch in the center of the study area at the base of a historical swale.

5.1.4.2 California Sycamore Woodlands (61.313.01)

The California sycamore woodlands alliance communities include California sycamore and/or coast live oak as the dominant or co-dominant tree in the canopy in riparian habitats. The California sycamore woodland has an open to intermittent canopy less than 35 meters (114.8 feet) in height with an open to intermittent shrub layer and a sparse or grassy herbaceous layer (CNPS 2022b). Species associated with the California sycamore woodland alliance include white alder (*Alnus rhombifolia*), Southern California black walnut, Fremont cottonwood, valley oak (*Quercus lobata*), various willows, Peruvian peppertree (*Schinus molle*), and California bay laurel (*Umbellularia californica*) (CNPS 2022b).

The California sycamore woodland alliance is ranked by CDFW (2022d) as a G3S3 alliance. This ranking indicates that globally and within California the alliance is considered vulnerable to extirpation or extinction (CDFW 2022d; NatureServe 2022). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

The only association within the California sycamore woodland alliance is *Platanus racemosa–Baccharis salicifolia*. Associated species observed within this alliance in the field included blue elderberry, ripgut brome, and short-pod mustard. On site, the California sycamore woodland alliance comprises three small patches on the southern border of the study area distributed along a riparian corridor

5.1.4.3 Basket Bush–River Hawthorn–Desert Olive Patches (61.580.00)

Basket bush–river hawthorn–desert olive patches alliance communities include desert olive (*Forestiera pubescens*), skunkbush sumac (*Rhus trilobata*), and/or blue elderberry as the dominant or co-dominant shrub in the canopy. Basket bush–river hawthorn–desert olive patches alliance has an intermittent to continuous shrub canopy less than 5 meters (16.4 feet) in height with a sparse to intermittent herbaceous layer (CNPS 2022b). Species associated with the basket bush–river hawthorn–desert olive patches alliance include four-wing saltbush (*Atriplex canescens*), *Baccharis* spp., broom snakeweed (*Gutierrezia sarothrae*), common reed (*Phragmites australis*), desert almond (*Prunus fasciculata*), sandbar willow, and wild desert grape (*Vitis girdiana*). Emergent trees may be present at low cover, including Fremont cottonwood, *Quercus* spp., or red willow (*Salix laevigata*) (CNPS 2022b).

The basket bush–river hawthorn–desert olive patches alliance is ranked by CDFW (2022d) as a G4S3 alliance. This ranking indicates that globally this community is apparently secure, but within California the alliance is considered vulnerable and at risk (CDFW 2022d; NatureServe 2022). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

The only association within the basket bush–river hawthorn–desert olive patches is *Sambucus nigra*. Blue elderberry was the only species noted within this association. On site, the basket bush–river hawthorn–desert olive patches alliance comprises one small patch on the central western border of the study area.

5.1.4.4 Scale Broom Scrub (32.070.00)

The scale broom scrub alliance is dominated by scale broom (*Lepidospartum squamatum*) and often occurs in semi-alluvial environments. The alliance usually displays an open to continuous two-tiered shrub canopy less than 2 meters (6.5 feet) in height; the herbaceous layer is variable and may be grassy (CNPS 2022b). Species associated with this alliance include cheesebush (*Ambrosia salsola*), California sagebrush, mulefat, bladderpod (*Peritoma arborea*), California cholla (*Cylindropuntia californica*), California buckwheat, chaparral yucca, poison oak, and other arid scrub and wash species. Emergent trees or tall shrubs may be present at low cover and include mountain mahogany (*Cercocarpus ledifolius*), California juniper (*Juniperus californica*), California sycamore, Fremont cottonwood, or blue elderberry (CNPS 2022b).

The scale broom scrub alliance is ranked by CDFW (2022d) as a G3S3 alliance. This ranking indicates that globally and within California the alliance is considered vulnerable and at moderate risk (CDFW 2022d; NatureServe 2022). Therefore, this alliance is considered a sensitive natural community by CDFW and under CEQA.

The following associations within the scale broom scrub alliance were mapped on the site: *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan, *Lepidospartum squamatum–Amsinckia menziesii*, and *Lepidospartum squamatum*–ephemeral annuals. The *Lepidospartum squamatum*–ephemeral annuals association is ranked G2S2, despite the overall alliance ranking of G3S3. This ranking indicates that the association is imperiled and at high risk globally and within California (CDFW 2022d; NatureServe 2022). Therefore, this association is considered a sensitive natural community by CDFW and under CEQA.

Associated species observed in the field within the *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association include California cholla, California sycamore, bristly fiddleneck, and distant phacelia.

Associated species observed in the field within the *Lepidospartum squamatum–Amsinckia menziesii* association include California cholla, white sage, California sycamore, bristly fiddleneck, and distant phacelia. Associated species were not recorded for the *Lepidospartum squamatum*–ephemeral annuals association. On site, scale broom scrub occurs in long, narrow patches within and along Wilson Creek in the southwest portion of the study area.

5.1.5 Woodland

5.1.5.1 Coast Live Oak Woodland and Forest (71.060.00)

Coast live oak woodland and forest alliance communities include coast live oak as the dominant or co-dominant tree in the canopy. The coast live oak woodland and forest alliance has an open to continuous or savanna-like canopy less than 30 meters (98.4 feet) in height with a sparse to intermittent shrub layer and a sparse or grassy herbaceous layer (CNPS 2022b). Species associated with the coast live oak woodland and forest alliance include bigleaf maple (*Acer macrophyllum*), Pacific madrone (*Arbutus menziesii*), Southern California black walnut, and various oaks. (CNPS 2022b).

The coast live oak woodland alliance is ranked by CDFW (2022d) as a G5S4 alliance. This ranking indicates that globally the alliance is widespread, abundant, and secure and within California it is apparently secure (CDFW 2022d; NatureServe 2022); therefore, this community is not considered sensitive under CEQA.

The only association within the coast live oak woodland and forest alliance is *Quercus agrifolia*. Associated species observed within this alliance in the field included blue elderberry, chamise, bush mallow, and non-native grasses. The majority of the mapped *Quercus agrifolia* alliance within the study area was burned during the El Dorado Fire in 2020. Therefore, this alliance is in post-fire recovery. On site, the coast live oak woodland and forest alliance comprises a long narrow section distributed along a drainage in northern portion of the study area.

5.1.5.2 Eucalyptus–Tree of Heaven–Black Locust Groves (79.100.00)

Eucalyptus–tree of heaven–black locust groves alliance communities include black acacia (*Acacia melanoxylon*), *Acacia* spp., tree of heaven (*Ailanthus altissima*), *Eucalyptus* spp., or black locust (*Robinia pseudoacacia*) as the dominant tree in the canopy. Eucalyptus–tree of heaven–black locust groves have an open to continuous canopy less than 60 meters (196.9 feet) in height with a sparse to intermittent shrub and herbaceous layer (CNPS 2022b).

The eucalyptus–tree of heaven–black locust groves alliance is a semi-natural stand, and as such it is included in the California Natural Community List, but not ranked. It is denoted as GNA/SNA (global/state rank not applicable) (CDFW 2022d); therefore, this community is not considered sensitive under CEQA.

The following associations within the eucalyptus–tree of heaven–black locust groves alliance: *Ailanthus altissima* and *Eucalyptus (globulus, camaldulensis)*. Associated species observed within this alliance in the field include non-native grasses. On site, the majority of the eucalyptus–tree of heaven–black locust groves alliance is in long linear sections bordering structures in the western portion of the study area.

5.1.6 Unvegetated

5.1.6.1 Unvegetated Wash and River Bottom

Unvegetated wash and river bottom is not recognized by CDFW (2022d); however, unvegetated wash and river bottom may be jurisdictional by USACE pursuant to Section 404 of the Clean Water Act, RWQCB pursuant to Section 401 of the Clean Water Act or Porter Cologne Act, or CDFW pursuant to Section 1602 of the California Fish and Game Code.

Unvegetated wash and river bottom comprises ephemeral unvegetated channels that intersect the study area.

5.1.7 Disturbed and Developed

5.1.7.1 Ornamental Plantings

Parks and ornamental plantings refer to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential property/park. This habitat type typically supports myriad ornamental species, including, but not limited to, Bermudagrass (*Cynodon dactylon*), hottentot fig (*Carpobrotus edulis*), Peruvian peppertree, Brazilian peppertree (*Schinus terebinthifolius*), and red apple iceplant (*Aptenia cordifolia*).

Parks and ornamental plantings are not a listed vegetation community under the California Natural Community List (CDFW 2022d), but this category has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA.

Within the study area, ornamental plantings occur along a paved road and around structures near the southern border of the study area. Additionally, there are ornamental plantings bordering a dirt road that runs through the center of the study area.

5.1.7.2 Urban/Developed

Urban or developed land covers refer to areas that have been constructed on or otherwise physically altered to the point where vegetation is no longer present. Urban or developed areas are characterized by permanent or semi-permanent structures, hardscapes, and landscaped areas that require irrigation.

Developed land is not a listed vegetation community under the California Natural Community List (CDFW 2022d), but it has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA.

Within the study area, the urban/developed land cover consists of graded roads and residential structures in the northeast and western portions of the study area. Additionally, urban/developed land cover within the study area consists of and paved roads bordering parts of the western and southern portions of the study area and structures throughout the study area.

5.1.7.3 Disturbed Habitat

Disturbed habitat refers to areas where soils have been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats, and these areas provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance.

Disturbed habitat is not a listed vegetation community under the California Natural Community List (CDFW 2022d), but it has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA.

Within the study area, disturbed habitat occurs within unpaved roads and around structures concentrated on the western and southern portions of the study area that abut urban/developed land, as well as in the northeast corner around structures and unpaved roads.

5.2 Plants and Wildlife Observed

5.2.1 Plants

A total of 217 species of native or naturalized plants, 157 native (72%) and 60 non-native (28%), were recorded within the study area. A list of plant species observed by Dudek biologists is provided in Appendix C, Plant Compendium.

5.2.2 Wildlife

A total of 71 wildlife species, consisting of 67 native species (94%) and 4 non-native species (6%), were recorded within the study area or vicinity during surveys (Appendix D, Wildlife Compendium). Birds detected on or in the immediate vicinity of the study area included Bullock's oriole (*Icterus bullockii*), bushtit (*Psaltriparus minimus*), American kestrel (*Falco sparverius*), house finch (*Haemorhous mexicanus*), ash-throated flycatcher (*Myiarchus cinerascens*), Cooper's hawk (*Accipiter cooperii*), Anna's hummingbird (*Calypte anna*), California scrub-jay (*Aphelocoma californica*), belted kingfisher (*Megaceryle alcyon*), northern mockingbird (*Mimus polyglottos*), California quail (*Callipepla californica*), turkey vulture (*Cathartes aura*), blue-gray gnatcatcher (*Polioptila caerulea*), great horned owl (*Bubo virginianus*), band-tailed pigeon (*Patagioenas fasciata*), greater roadrunner (*Geococcyx californianus*), phainopepla (*Phainopepla nitens*), cliff swallow (*Petrochelidon pyrrhonota*), yellow-rumped warbler (*Setophaga coronate*), northern flicker (*Colaptes auratus*), house wren (*Troglodytes aedon*), lark sparrow (*Chondestes grammacus*), and wrentit (*Chamaea fasciata*). In addition, white-tailed kite (*Elanus leucurus*) was observed within the study area and bald eagle (*Haliaeetus leucocephalus*) was observed flying overhead.

Mammals detected included coyote (*Canis latrans*), desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), mule deer (*Odocoileus hemionus*), and northern raccoon (*Procyon lotor*).

Reptiles detected included western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), coastal tiger whiptail (*Aspidoscelis tigris stejnegeri*), coachwhip (*Coluber flagellum*), and western rattlesnake (*Crotalus oreganus*).

5.3 Special-Status and Regulated Resources

Appendix E and Appendix F provide tables of all special-status species (plants and wildlife, respectively) whose geographic ranges fall within the general study area vicinity. Special-status species' potential to occur within the study area were evaluated based on known species distribution, species-specific habitat preferences, and Dudek biologists' knowledge of regional biological resources. Species potentially occurring within the study area are identified as having moderate or high potential to occur based on habitat conditions on site, and species for which there is little or no suitable habitat are identified as not expected to occur or having low potential to occur.

5.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and species identified as rare by the 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).

Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur within the study area. Each special-status plant species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status plant species that occur in the region but are not expected or have low potential to occur in the study area due to a lack of suitable habitat,

the study area being located outside of the species' known geographic or elevation range, or not being observed during the focused 2022 special-status plant survey are also included in Appendix E; however, these species are not discussed further because no significant direct or indirect impacts to them are expected. In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the study area (USFWS 2022b).

Based on the results of the literature review and database searches, 70 special-status plant species were reported in the CNDDB and CNPS databases as occurring in the nine USGS 7.5-minute quadrangles containing and surrounding the study area.

Of these, the following species were determined to have a moderate to high potential to occur based on suitable soils and vegetation communities present within the study area and historical occurrences: Yucaipa onion, Jaeger's milk-vetch, Parry's spineflower, white-bracted spineflower, California satintail, Hall's monardella, salt spring checkerbloom, southern jewelflower, and San Bernardino aster. Therefore, focused surveys for these species were conducted in Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country area, in May and September 2022. No special-status plant species, including the target species, were observed during 2022 surveys. These target species are discussed in further detail in Table 4 below and their potential to occur has been updated based on the results of 2022 special-status plant focused surveys. There were no additional special-status plant species that were determined to have a moderate or high potential to occur within Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country area, based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations based on the CNDDB and CNPS Inventory (Appendix E).

Table 4 also lists those species with moderate potential to occur within Phases 4 and 5. There were no additional special-status plant species that were determined to have a moderate or high potential to occur within Phases 4 and 5 based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations based on the CNDDB and CNPS Inventory (Appendix E).

Table 4. Special-status Plant Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
Allium marvinii	Yucaipa onion	None/None/1B.2	Chaparral/perennial bulbiferous herb/Apr–May/2,490–3,490	**Low potential to occur**. While the study area is located within the species' known elevation range and suitable chaparral vegetation is present, this species was not detected during the May 2022 focused surveys. The study area is just north of the species' known geographic range (CCH 2022).	**Moderate potential to occur.** The study area is located within the species' known elevation range and suitable chaparral vegetation is present. The study area is just north of the species' known geographic range (CCH 2022).
Astragalus pachypus var. *jaegeri*	Jaeger's milk-vetch	None/None/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; rocky (sometimes), sandy (sometimes)/perennial shrub/Dec–June/1,195–3,195	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub to support this species.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; openings, rocky (sometimes), sandy (sometimes)/ annual herb/Apr–June/ 900–4,000	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral, coastal scrub, and grassland vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral, coastal scrub, and grassland vegetation to support this species.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/1B.2	Coastal scrub, Mojavean desert scrub, pinyon and juniper woodland; gravelly (sometimes),	**Low potential to occur.** While the study area is located within the species' known	**Moderate potential to occur.** The study area is located within the species'

Table 4. Special-status Plant Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
			sandy (sometimes)/annual herb/Apr–June/985–3,935	elevation range and contains suitable chaparral vegetation, this species was not detected during the May 2022 focused surveys.	known elevation range and contains suitable chaparral vegetation to support this species.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, coastal scrub, meadows and seeps, Mojavean desert scrub, riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation, this species was not detected during the May or September 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation to support this species.
Monardella macrantha ssp. *hallii*	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/2,395–7,200	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and grassland vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and grassland vegetation to support this species.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/perennial herb/ Mar–June/50–5,015	**Low potential to occur.** While the study area is located within the species' known elevation and geographic range and contains suitable chaparral and coastal scrub vegetation, this species was	**Moderate potential to occur.** The study area is located within the species' known elevation and geographic range and contains suitable chaparral and coastal scrub

Table 4. Special-status Plant Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
				not detected during the May 2022 focused surveys.	vegetation to support this species.
Streptanthus campestris	southern jewelflower	None/None/1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland; rocky/ perennial herb/(Apr)May–July/ 2,950–7,545	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral vegetation to support this species.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland; streambanks/ perennial rhizomatous herb/ July–Nov/5–6,690	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable coastal scrub and grassland vegetation, this species was not detected during the September 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable coastal scrub, grassland vegetation, and streambanks to support this species.

Notes: CRPR = California Rare Plant Rank
CRPR (California Rare Plant Rank):
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Threat Rank:
1: seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
2: moderately threatened in California (20%–80% of 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)

5.3.2 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW and those designated as Species of Special Concern by CDFW and as sensitive by USFWS.

Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the study area. Each special-status wildlife species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences and vegetation community/habitat association. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status wildlife species that are not expected or have low potential to occur in the study area are also included in Appendix F; however, these species are not discussed further as no significant direct or indirect impacts are expected.

Based on the results of the literature review and database searches, 62 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the study area. Of these, burrowing owl, coastal California gnatcatcher, San Bernardino kangaroo rat, and Stephens' kangaroo rat were determined to have a potential to occur based on suitable habitat present within the study area and historical occurrences. Therefore, focused protocol-level surveys were conducted for burrowing owl and coastal California gnatcatcher, and a focused habitat assessment was conducted for San Bernardino kangaroo rat and Stephens' kangaroo rat. These species are discussed in further detail below. In addition, there is no USFWS-designated critical habitat for listed wildlife species overlapping the study area (USFWS 2022b).

Three special-status wildlife species—white-tailed kite, bald eagle, and coastal tiger whiptail—were observed within the study area. An additional 15 special-status wildlife species were determined to have a moderate or high potential to occur within the study area based on habitat present and/or previous known locations in CNDDB records. The details of these species are presented below in Table 5. No other non-listed, special-status wildlife species were observed or determined to have at least a moderate potential to occur within the study area. No other listed, special-status species were observed or determined to have at least a low potential to occur within the study area.

Protocol-level surveys for burrowing owl were positive for burrowing owl sign, but no individuals were observed. Protocol-level surveys for coastal California gnatcatcher were negative. Finally, the focused habitat assessments for both San Bernardino kangaroo rat and Stephens' kangaroo rat were negative. These species, in addition to the 17 additional special status species with potential to occur within the study area, are detailed in the following discussion.

Table 5. Special-status Wildlife Species Observed or with Moderate or High Potential to Occur within the study area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
Amphibians					
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Moderate potential to occur.** The study area contains suitable ephemeral water features in chaparral, coastal scrub, and valley–foothill woodlands habitat. The nearest mapped CNDDB occurrence is 3 miles from the study area in temporary rain pools where adult, larvae, and egg masses were observed (CDFW 2022c).	**Moderate potential to occur.** The study area contains suitable ephemeral water features in chaparral, coastal scrub, and valley–foothill woodlands habitat. The nearest mapped CNDDB occurrence is 3 miles from the study area in temporary rain pools where adult, larvae, and egg masses were observed (CDFW 2022c).
Birds					
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**High potential occur.** The study area contains suitable grassland and scrub habitat. Field surveys conducted in spring 2022 were positive for burrowing owl sign (i.e., pellets) from a previous season, but no individuals were observed.	**High potential to occur.** The study area contains suitable grassland and scrub habitat. In addition, suitable burrows and burrowing owl sign (i.e., pellets) were mapped within Phases 1, 2, and 3 during the 2022 focused surveys.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Present.** The study area contains grasslands and disturbed areas suitable for foraging. Additionally, the study area contains some trees suitable for nesting; however, many were burned as a result of the El Dorado Fire and therefore do not contain sufficient canopy structure to support nesting.	**High potential to occur.** The study area contains grasslands and disturbed areas suitable for foraging. Additionally, the study area contains some trees suitable for nesting; however, many were burned as a result of the El Dorado Fire and therefore do not contain sufficient canopy structure to support nesting.
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	**Present**. While the study area lacks suitable forest habitats and surface water features necessary for nesting and foraging, a bald eagle was observed flying overhead during the 2022 field surveys. This individual may move through the study area, but is not expected to nest or winter.	**Not expected to nest or winter.** While the study area lacks suitable forest habitats and surface water features necessary for nesting and foraging, a bald eagle was observed flying overhead of Phases 1, 2, and 3 during the 2022 field surveys. Bald eagle may move through the study area, but is not expected to nest or winter.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. The nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road (CDFW 2022c).	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. The nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road (CDFW 2022c).
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	**Not expected to occur.** The study area lacks large stands of sage scrub habitat and is located at an elevation well above the range in which the majority of coastal California gnatcatchers nest. Additionally, coastal California gnatcatcher field surveys conducted in 2022 were negative.	**Low potential to occur.** The study area is located at the northern limit of this species' geographic range, lacks large stands of sage scrub habitat, and is located at an elevation well above the range in which the majority of coastal California gnatcatchers nest. In addition, field surveys conducted in 2022 for coastal California gnatcatcher within Phases 1, 2, and 3 were negative. However, fragmented stands of California buckwheat are present within this portion of the study area and could support this species.
Mammals					
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	**High potential to occur.** The study area contains suitable coastal scrub, oak woodland, and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles southwest in Banning (CDFW 2022c).	**High potential to occur.** The study area contains suitable coastal scrub, oak woodland and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles southwest in Banning (CDFW 2022c).

Table 5. Special-status Wildlife Species Observed or with Moderate or High Potential to Occur within the study area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are multiple CNDDB occurrences less than 5 miles west of the study area (CDFW 2022c).	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are multiple CNDDB occurrences less than 5 miles west of the study area (CDFW 2022c).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	**High potential to occur.** The study area contains suitable chaparral and coastal scrub habitat. The nearest CNDDB occurrence is approximately 2.5 miles west of the study area near Mill Creek Road (CDFW 2022c).	**High potential to occur.** The study area contains suitable chaparral and coastal scrub habitat. The nearest CNDDB occurrence is approximately 2.5 miles west of the study area near Mill Creek Road (CDFW 2022c).
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	**Moderate potential to occur.** The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 8 miles south of the study area (CDFW 2022c).	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 8 miles south of the study area (CDFW 2022c).
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	**Moderate potential to occur.** The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (USDA 2022a). The nearest CNDDB occurrence is approximately 5 miles away in Highland Springs (CDFW 2022c).	**Moderate potential to occur.** The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (USDA 2022a). The nearest CNDDB occurrence is approximately 5 miles away in Highland Springs (CDFW 2022c).
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, SCE	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	**Not expected to occur.** While the study area contains suitable coastal scrub habitat, it lacks river and stream terraces. Most local CNDDB occurrences are associated with the Santa Ana River floodplain (CDFW 2022c). A focused habitat assessment for the San Bernardino kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment found that the study area primarily consists of chamise and chaparral at higher elevations and grasslands and disturbed habitats at lower elevations. Wilson Creek runs through the southern part of the study area, but lacks habitat suitable for this species. Focused surveys for San Bernardino kangaroo rat along Wilson Creek immediately west of the study area did not record any in 2012 (Cadre Environmental 2012; Tom Dodson & Associates 2012); 2016 (Jericho Systems 2016), or 2017 (Jericho Systems 2017).	**Not expected to occur.** While the study area contains suitable coastal scrub habitat, it lacks river and stream terraces. Most local CNDDB occurrences are associated with the Santa Ana River floodplain (CDFW 2022c). A focused habitat assessment for the San Bernardino kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment found that the study area primarily consists of chamise and chaparral at higher elevations and grasslands and disturbed habitats at lower elevations. Wilson Creek runs through the southern part of the study area, but lacks habitat suitable for this species.
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or disturbed areas	**Not expected to occur.** The study area contains suitable perennial and annual grassland and coastal scrub general habitat. The study area is north of all known records, with the nearest mapped CNDDB occurrence being approximately 8 miles south of the study area in Nicklin (CDFW 2022c). A focused habitat assessment for the Stephens' kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment concluded that there is no suitable habitat for this species.	**Not expected to occur.** The study area contains suitable perennial and annual grassland and coastal scrub general habitat. The study area is north of all known records, with the nearest mapped CNDDB occurrence being approximately 8 miles south of the study area in Nicklin (CDFW 2022c). A focused habitat assessment for the Stephens' kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment concluded that there is no suitable habitat for this species.

Table 5. Special-status Wildlife Species Observed or with Moderate or High Potential to Occur within the study area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**High potential to occur.** The study area contains suitable dry, open, treeless areas and grassland and coastal scrub habitat. Additionally, the two most prominent soils series mapped in the area (Greenfield and Saugus) are described as friable (USDA 2022a). Finally, the study area contains burrows that have potential to support American badger. The nearest CNDDB occurrence is approximately 2 miles northeast near Mill Creek Road (CDFW 2022c).	**High potential to occur.** The study area contains suitable dry, open, treeless areas and grassland and coastal scrub habitat. Additionally, the two most prominent soils series mapped in the area (Greenfield and Saugus) are described as friable (USDA 2022a). Finally, the study area contains burrows that have potential to support American badger. The nearest CNDDB occurrence is approximately 2 miles northeast near Mill Creek Road (CDFW 2022c).
Reptiles					
Anniella stebbinsi	Southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	**Moderate potential to occur**. The study area contains suitable dry washes and valley–foothill, chaparral, and scrub habitat. Additionally, the most prominent soils series mapped in the area are described as sandy loam soils. However, the study area is generally dominated by annual grass and forbs, so the vegetation may be too dense for this species to occur. The nearest CNDDB occurrence is approximately 0.5 miles southwest in Yucaipa (CDFW 2022c).	**Moderate potential to occur**. The study area contains suitable dry washes and valley–foothill, chaparral, and scrub habitat. Additionally, the most prominent soils series mapped in the area are described as sandy loam soils. However, the study area is generally dominated by annual grass and forbs, so the vegetation may be too dense for this species to occur. The nearest CNDDB occurrence is approximately 0.5 miles southwest in Yucaipa (CDFW 2022c).
Arizona elegans occidentalis	California glossy snake	None/SSC	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	**Moderate potential to occur**. The study area contains suitable grassland and chaparral habitat with some open areas. Additionally, the most prominent soils series mapped in the area are described as generally loose, sandy loam soils (USDA 2022a). The nearest CNDDB occurrence is approximately 6 miles northwest along Greenspot Road (CDFW 2022c).	**Moderate potential to occur**. The study area contains suitable grassland and chaparral habitat with some open areas. Additionally, the most prominent soils series mapped in the area are described as generally loose, sandy loam soils (USDA 2022a). The nearest CNDDB occurrence is approximately 6 miles northwest along Greenspot Road (CDFW 2022c).
Aspidoscelis tigris stejnegeri	coastal tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	**Present.** The study area contains suitable chaparral and woodland habitat. This species was detected during 2022 surveys.	**High potential to occur.** The study area contains suitable chaparral and woodland habitat. This species was not detected within Phases 4 and 5 during 2022 surveys, but was detected immediately south within the remainder of the study area.
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	**Moderate potential to occur.** The study area contains suitable coastal scrub, chaparral, and oak woodland habitat. The nearest CNDDB occurrence is approximately 8 miles northwest near Greenspot Road. All local CNDDB occurrences record dead adult individuals found on roads (CDFW 2022c).	**Moderate potential to occur.** The study area contains suitable coastal scrub, chaparral, and oak woodland habitat. The nearest CNDDB occurrence is approximately 8 miles northwest near Greenspot Road. All local CNDDB occurrences record dead adult individuals found on roads (CDFW 2022c).
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence is approximately 0.5 miles west of the study area where one adult was observed (CDFW 2022c).	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence is approximately 0.5 miles west of the study area where one adult was observed (CDFW 2022c).
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	**High potential to occur.** The study area contains suitable shrubby coastal scrub and chaparral vegetation. The nearest CNDDB occurrence is approximately 2 miles northwest of the study area near Mill Creek Road (CDFW 2022c).	**High potential to occur**. The study area contains suitable shrubby coastal scrub and chaparral vegetation. The nearest CNDDB occurrence is approximately 2 miles northwest of the study area near Mill Creek Road (CDFW 2022c).

Table 5. Special-status Wildlife Species Observed or with Moderate or High Potential to Occur within the study area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Estates – Wine Country Area Potential to Occur	Phases 4 and 5 Potential to Occur
Invertebrates					
Bombus crotchii	Crotch bumble bee	None/SCT	Open grassland and scrub communities supporting suitable floral resources.	**High potential to occur**. The study area contains grassland and scrub communities with *Phacelia, Clarkia, Eriogonum, Eschscholzia* and *Antirrhinum* species, which have been identified as preferred food plant genera. The eastern portion of the study area overlaps with CNDDB record of this species in Calimesa; however, the exact location of the record is unknown (CDFW 2022c).	**High potential to occur**. The study area contains grassland and scrub communities with *Phacelia, Clarkia, Eriogonum, Eschscholzia* and *Antirrhinum* species, which have been identified as preferred food plant genera. The eastern portion of the study area overlaps with CNDDB record of this species in Calimesa; however, the exact location of the record is unknown (CDFW 2022c).

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

The following discussion details the 14 special-status wildlife species determined to have a moderate or high potential to occur within the study area. This discussion also includes the three special-status species observed within the study area, as well as the results of the protocol-level surveys for burrowing owl and California gnatcatcher and the focused habitat assessments for San Bernardino kangaroo rat and Stephens' kangaroo rat.

5.3.2.1 Amphibians

Western Spadefoot

The western spadefoot (*Spea hammondii*) is a California Species of Special Concern. This species is endemic to California and northern Baja California (Jennings and Hayes 1994; Stebbins 2003). Although the species primarily occurs in lowlands, it also occurs in foothill and mountain habitats, occurring at elevations ranging from sea level to 4,000 feet amsl, but primarily occurs at elevations below 3,000 feet amsl (Stebbins 2003).

The western spadefoot requires two separate habitat components to complete their life cycle; they require upland areas for foraging and overwintering and adjacent wetland areas for breeding and reproduction (USFWS 2012). Spadefoot toads aestivate in upland habitats near potential breeding sites in burrows approximately 1 meter in depth (Stebbins 1972) and adults emerge from underground burrows during relatively warm rainfall events to breed. The species is almost completely nocturnal (Holland and Goodman 1998) with most aboveground activity occurring on rainy nights (Zeiner et al. 1988). Western spadefoot tadpoles consume planktonic organisms and algae but are also carnivorous and will forage on dead vertebrates and invertebrates (Bragg 1964).

Western spadefoot has a moderate potential to occur within the study area due to the presence of suitable habitat in the form of ephemeral water features in chaparral, coastal scrub, and valley-foothill woodland habitat.

5.3.2.2 Birds

Burrowing Owl

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

The presence of burrows is the most essential component of burrowing owl habitat as they are required for nesting, roosting, cover, and catching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels. Burrowing owls may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse), useable burrows are available, and foraging habitat occurs in close proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

Protocol surveys for burrowing owl were conducted by Dudek in 2022. Biologists mapped burrows throughout the focused survey area. The majority of burrows mapped were located in and around drainages/washes, except in the very southwest corner of the focused survey area, where several burrows and burrow clusters were mapped within an agricultural field (Figure 8, Biological Resources). Mapped burrows ranged in size from 4 to 10 inches in diameter, and all were natural earthen burrows except two mapped pipes that were wide enough to be considered

as suitable burrowing owl burrow surrogates. Burrowing owl sign was observed at one burrow in the northwestern corner of the focused survey area and consisted of pellets found outside of the burrow entrance. The pellets appeared to be from a previous season and did not seem to be from 2022. No other active burrowing owl sign (i.e., feathers, whitewash, or pellets) was observed within the focused survey area.

White-Tailed Kite

The white-tailed kite is a California fully protected species. This nonmigratory resident species is found throughout much of California. White-tailed kites are frequently associated with agricultural areas, as well as low elevation grasslands, open woodlands, marshes and savannah habitats, where they hover high above the ground while hunting for prey. Small mammals comprise the majority of the white-tailed kite's diet; however, the species is also known to eat other birds, lizards, and even insects. White-tailed kites typically nest in riparian areas that are adjacent to open space areas. Nests are typically found within the upper third of trees ranging in height from 10 to 160 feet tall. Kite pairs stay together during a single breeding season and may or may not pair up again in future breeding seasons (Cornell Lab of Ornithology 2019).

White-tailed kite population numbers appear to primarily be impacted by fluctuations in the population sizes of the species' prey base; however, conversion of natural and agricultural lands to urban or commercial property, increased competition for nest-sites with other raptors and corvids, drought conditions throughout Southern California, and increased disturbances near nest sites could also be impacting population sizes of white-tailed kites (Dunk 1995).

White-tailed kite was observed within the study area during the 2022 survey efforts (Figure 8). The study area contains suitable foraging habitat for white-tailed kites in the form of open grasslands and disturbed areas, as well as some suitable nesting habitat in the form of large trees.

Bald Eagle

The bald eagle is a California Fully Protected Species and is state listed as endangered. Bald eagles are large raptors found throughout much of the United States and into Canada. This species is typically found near large bodies of water. This species prefers to feed on fish but is also known to prey on waterfowl and other birds, as well as a variety of mammals, reptiles and amphibians, and carrion and garbage (Buehler 2000). Bald eagles nest in large trees found in forested areas, as well as on cliff faces. They prefer to nest within 1.25 miles of a large body of water that provides ample prey and well situated perch sites providing views of the surrounding area (USFWS 1986). Additionally, bald eagles prefer nest sites that are located away from human activity/disturbances (Buehler 2000).

The study area lacks suitable forest habitats and surface water features needed by bald eagles for nesting and wintering; however, a bald eagle was observed flying overhead during the 2022 field surveys. This individual is likely the known bald eagle that nests in Big Bear.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is a USFWS Bird of Conservation Concern and a California Species of Special Concern. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, although shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or human-made structures (such as the tops of chain-link fences or barbed wire) that provide a location to impale prey upon for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along woodland edges, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Loggerhead shrike has moderate potential to occur within the study area due to the presence of open habitat with scattered shrubs and trees that provide suitable habitat for nesting and foraging.

Coastal California Gnatcatcher

Coastal California gnatcatcher is federally listed as threatened and a California Species of Special Concern. This species is a year-round resident of coastal areas in Southern California and south into Baja California where arid scrub habitat is found. Coastal California gnatcatchers typically occur below 2,500 feet amsl (65 FR 63680) and most frequently within the California sagebrush-dominated communities on mesas, gently sloping areas, and along the lower slopes of the Coast Ranges (Atwood 1990).

California gnatcatchers glean spiders and insects (including wasps, bees, and ants) from foliage of shrubs, primarily California buckwheat and coastal sagebrush (Burger et al. 1999; Atwood 1993). Nests are typically located in small shrubs or cactus 1 to 3 feet above the ground. Breeding season territories average 5.7 acres (Atwood et al. 1998).

Coastal California gnatcatcher is not expected to occur within the study area due to the lack of large stands of sage scrub habitat within elevation ranges typically occupied by the species. In addition, protocol surveys conducted within Phases 1, 2, and 3 in 2022 for coastal California gnatcatchers were negative.

The study area was burned in the El Dorado Fire in 2020, and much of the potential habitat for coastal California gnatcatcher was burned. As such, the surveys were conducted within the remaining, intact potential habitat within the study area, which consists of 32 acres of California buckwheat scrub characterized by stands of California buckwheat intermixed with native shrubs and non-native herbaceous species.

5.3.2.3 Mammals

Dulzura Pocket Mouse

Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a California Species of Special Concern. This species occupies a rather wide variety of habitats including coastal sage scrub, chamise chaparral, oak woodlands, and open habitats. It occurs in greatest abundance where grassland and chaparral habitats occur near one other, such as is found within the study area. This species is solitary and nocturnal, spending daylight hours within their burrows, which they plug with earth to keep the temperatures low and humidity levels high (Johnson 2001).

Dulzura pocket mice typically produce a single litter of four young, on average, between April and July. The species' diet focuses primarily on seeds from annual grasses and forbs; however, insects and leafy vegetation are known to be consumed seasonally (Johnson 2001).

Dulzura pocket mouse has a high potential to occur within the study area due to the presence of coastal scrub, oak woodland, and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance-adapted species.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a California Species of Special Concern. This species occurrences are restricted to the central and northern Baja California Peninsula and southwestern California between sea level and 6,000 feet amsl (Brylski n.d.; Rios and Álvarez-Castañeda 2010). Northwestern San Diego pocket mice prefer sandy herbaceous areas within coastal sage scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, and annual grassland (Patton and Álvarez-Castañeda 1999).

This nocturnal species forages on seeds or forbs, grasses, and shrubs, but prefers grass seeds, which it stores within cheek pouches to transport back to the burrow. Northwestern San Diego pocket mice have also been known to feed on insects (Brylski n.d.).

Northwestern San Diego pocket mouse has a high potential to occur within the study area due to the presence of suitable coastal scrub, chaparral, and annual grassland habitat.

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat is federally listed as endangered, is a California Species of Special Concern, and is a state candidate for listing as endangered. This species occurs in southwestern North America and is typically found in Riversidean alluvial fan sage scrub, alluvial fans and flood plains, and along washes with nearby sage scrub (McKernan 1997 as cited in 63 FR 3835–3843). Soil texture is an important factor in habitat selection for San Bernardino kangaroo rats. Specifically, sandy loam substrates that allow for the digging of simple, shallow burrows are preferred (McKernan 1997 as cited in 63 FR 3835–3843).

Kangaroo rats are primarily granivores; however, they will also consume plants and insects when available (Bradley and Mauer 1971; Reichman and Price 1993). The species is primarily nocturnal, emerging from their burrows around dusk and returning to their burrows before dawn (Behrends et al. 1986).

San Bernardino kangaroo rat is not expected to occur within the study area. A focused habitat assessment (Bryslki 2022) for the San Bernardino kangaroo rat was conducted within the study area by permitted biologist, Phil Brylski. According to the habitat assessment, the Project site is located outside of the known geographic range of San Bernardino kangaroo rat and is not within designated critical habitat for the species. The nearest documented occurrence is a single individual captured from Mill Creek, Mentone, in 2011 approximately 2.75 miles northwest of the study area (CDFW 2022c) and geographically separated from the study area by steep topography or development. In addition, the scrub vegetation within the study area is largely chaparral, which is generally unsuitable for San Bernardino kangaroo rat. The study area does not contain a well-developed alluvial fan sage scrub (i.e., scale broom scrub) community. Scale broom scrub habitat is generally suitable for San Bernardino kangaroo rat and does occur along the lower reaches of Wilson Creek within the study area. However, this region is small in area (3.8 acres) and of low quality for San Bernardino kangaroo rat. San Bernardino kangaroo rat can occur in disturbed and other lower-quality habitats such as the post-fire herbaceous habitat when they are in proximity to higher-quality habitats, but these are absent from the study area.

Downstream of the study area, Wilson Creek contains alluvial fan sage scrub habitat that appear to be suitable for San Bernardino kangaroo rat. However, four protocol surveys of these habitats in the period from 2012 to 2017 yielded no San Bernardino kangaroo rat in alluvial fan sage scrub and associated water percolation basins (Cadre Environmental 2012, Tom Dodson Assoc. 2012, Jericho Systems 2016, and Jericho Systems 2017).

In conclusion, a review of surrounding literature and a site visit by a permitting biologist indicated that there is not suitable habitat for San Bernardino kangaroo rat within the study area.

Stephen's Kangaroo Rat

Stephens' kangaroo rat is federally listed as endangered and state listed as threatened. This species only occurs in Riverside County and San Diego County within open grasslands or sparse shrublands (Bleich 1977; O'Farrell 1990; USFWS 1997). Similar to the San Bernardino kangaroo rat, soil type is an important factor for Stephens' kangaroo rats when selecting habitat. This species prefers habitat that contains sandy and sandy loam soils with low clay to gravel content. These soil types are needed for burrowing and sand bathing (Randall 1993).

Stephens' kangaroo rats, like other kangaroo rats, primarily forage on seeds, but will also consume herbaceous forbs when available (Dudek 2003). This nocturnal species emerge from burrows around dusk to forage and participate in other activities. Peak breeding season occurs during the winter and spring months for Stephens' kangaroo rats.

Stephens' kangaroo rat is not expected to occur within the study area. A focused habitat assessment (Brylski 2022) for the Stephens' kangaroo rat was conducted within the study area by permitted biologist, Phil Brylski. According to the habitat assessment, the Project site is located outside of the known geographic range of Stephens' kangaroo rat. The nearest documented occurrence is approximately 7.4 miles south of the study area in the Beaumont Valley (CDFW 2022c). Stephens' kangaroo rat has not been recorded within the Yucaipa area and there are no recent records north of Interstate 10 (CDFW 2022c). The distribution of Stephens' kangaroo rat has been well-studied, and it would be unlikely, but not impossible, for Stephens' kangaroo rat to be discovered in the study area.

The study area contains a few areas in the southwestern corner with sparse grassland dominated by red brome, red stem filaree, and vinegarweed (*Trichostema lanceolatum*). This habitat, as well as the burned buckwheat scrub and buckwheat scrub habitats in the southwestern corner of the study area, are potentially suitable for Stephens' kangaroo rat. However, the site assessment revealed no kangaroo rat burrows observed in these grasslands or in the buckwheat scrub. Much of the other grasslands in the lower elevations of the study area are either too dense or heavily grazed, and no kangaroo rat burrows were observed in these areas either. Common plants in the scrub habitats elsewhere on the site include chamise, manzanita, ceanothus, redshank, mountain mahogany, and scrub oak, which prior to the El Dorado Fire, appeared to comprise a dense chaparral community that would have been unsuitable for Stephens' kangaroo rat.

In conclusion, a site visit by a permitting biologist indicated that there is not suitable habitat for Stephens' kangaroo rat within the study area.

San Diego Desert Woodrat

The San Diego desert woodrat (*Neotoma lepida intermedia*) is a California Species of Special Concern. This species is widespread throughout central and Southern California and the Great Basin, Mojave, and Colorado deserts (Hall 1981). Desert woodrats are found in a variety of shrub and desert habitats and are primarily associated with

rock outcroppings, boulders, cacti, or areas of dense undergrowth (Bleich 1973; Bleich and Schwartz 1975; Brown et al. 1972; Cameron and Rainey 1972; Thompson 1982). Desert woodrats use various materials, such as twigs and other debris (sticks, rocks, dung), to build elaborate dens or "middens," which are used for nesting and food storage. Middens may be used by several generations of woodrats (Cameron and Rainey 1972).

Desert woodrats are primarily herbivorous, and their diet may include leaves, seeds, berries, parts of flowers, and yucca shoots (Cameron and Rainey 1972). Home ranges of desert woodrats are relatively small and den sites are typically located along the periphery of the home range (Bleich and Schwartz 1975). The breeding season of desert woodrats probably is related to local climate conditions and available resources to support reproduction that may vary from year to year. The peak breeding season in north-coastal San Diego County, for example, appears to be from November to April, but breeding can occur year-round (Bleich 1973).

San Diego desert woodrat has a high potential to occur within the study area, as the study area contains suitable chaparral and coastal sage scrub habitat to support the species.

Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) is a California Species of Special Concern. This species occurs throughout desert habitats in the southwestern United States, including Southern California, where it inhabits temperate shrubland and desert habitats with friable soils for digging (Encyclopaedia Britannica 2021). Their diet primarily consists of arthropods (e.g., crustaceans, insects, centipedes, millipedes, and arachnids), but may also include other insects and small rodents (Baily and Sperry 1929; Horner et al. 1964; McCarty 1975). The southern grasshopper mouse is primarily nocturnal and appears to be active on the surface all year round (Baily and Sperry 1929; Frank and Heske 1992; McCarty 1975).

The timing of breeding probably varies geographically and in relation to environmental conditions, but the peak breeding season is May through July (McCarty 1975). Year-to-year survival appears to be low for the southern grasshopper mouse and juvenile mortality and/or dispersal appears to be very high. Because of its high population turnover, relatively early age of sexual maturity, and senescence after the first year, the southern grasshopper mouse probably is subject to "boom and bust" population cycles and is perhaps at high risk of local extirpation under poor conditions.

The southern grasshopper mouse has a moderate potential to occur within the study area due the presence of suitable grassland and coastal scrub habitats.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a California Species of Special Concern. This species' historic range has been estimated to be from Burbank and San Fernando in Los Angeles County east to the City of San Bernardino in San Bernardino County (Hall 1981). Los Angeles pocket mouse prefers lower elevation grasslands, as well as alluvial sage scrub and coastal sage scrub habitats (cited in Brylski et al. 1993). Los Angeles pocket mouse prefers fine, sandy soils, which likely are preferred for burrowing (Jameson and Peeters 1988).

Similar to other pocket mice, the Los Angeles pocket mouse hibernates in the winter, generally from October to February, periodically emerging from hibernation to feed on seed caches stored in their burrows. Emergence from hibernation is correlated with availability of forb and grass seeds. The Los Angeles pocket mouse is a granivore; however, little is known of the foraging behavior of this species (Dudek 2003).

Los Angeles pocket mouse has a moderate potential to occur within the study area, as the study area contains suitable grassland and coastal scrub habitat for this species. In addition, the study area is primarily comprised of sandy soils, which are a preferred microhabitat characteristic of the species.

American Badger

American badger (*Taxidea taxus*) is a California Species of Special Concern. American badgers prefer open scrub or grassy areas and occur throughout California (NPS 2015; Reid 2006; USGS 2020). The American badger is a very proficient digger and uses its short, stocky front legs along with its long front claws to construct burrows. The entrance to these burrows is typically the shape of a low broad ellipse, approximately 8–12 inches in diameter with a large dirt mound in the front of the burrow entrance. American badgers feed primarily on rodents, but are known to consume invertebrates, birds, snakes, and carrion (Reid 2006).

The American badger has a high potential to occur within the study area due to the presence of suitable dry, open, treeless areas and grassland and coastal scrub habitat, along with friable soils.

5.3.2.4 Reptiles

Southern California Legless Lizard

The Southern California legless lizard (*Anniella stebbinsi*) is a California Species of Special Concern. This subspecies occurs south of the Transverse Range extending to northwestern Baja California (CDFW 2022c). Southern California legless lizards occur in sandy or loose loamy soils under sparse vegetation in a variety of habitats but prefer moist soils (CDFW 2022c).

The full species, California legless lizard, usually forages at the base of shrubs for insect larvae, small adult insects, and spiders (Stebbins 1954). Microhabitat may include surface objects such as flat boards, rocks, or leaf litter; they commonly burrow near the soil surface in loose soil (CWHR 2022). Legless lizards can be active on cool days, and the southern subspecies is probably active year-round with brief periods of inactivity in the winter (CWHR 2022). Individuals have demonstrated high site fidelity over the short term (Jennings and Hayes 1994). Live young are born in the fall, and litter sizes range from one to four (Stebbins 1954).

Southern California legless lizard has a moderate potential to occur within the study area. Suitable habitat, including dry washes and valley-foothill grasslands, chaparral, and scrub with mapped sandy loam soils, is present. However, the dominant annual grasses and forbs may be too dense for this species to occur.

California Glossy Snake

The California glossy snake (*Arizona elegans occidentalis*) is a California Species of Special Concern. California glossy snakes are common throughout Southern California, especially in desert regions, but they also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass (CWHR 2022). This species is found from below sea level to around 7,218 feet amsl (Stebbins 2003).

California glossy snakes are primarily nocturnal, spending their days and the winter in mammal burrows, rock outcrops, and under surface objects such as flat rocks and vegetation. Eggs are laid a few centimeters below the soil surface. This species feeds on a variety of desert lizards (Cunningham 1959; Ferguson et al. 1982; Vitt and Ohmart 1977).

California glossy snake has a moderate potential to occur within the study area due to the presence of valley-foothill grasslands and chaparral and scrub vegetation communities.

Coastal Tiger Whiptail

Coastal tiger whiptail is a California Species of Special Concern. It is also referred to as the San Diegan tiger whiptail. Less is known about this subspecies than the full species western whiptail (*Aspidoscelis tigris*), so much of this discussion is based on the life history of the western whiptail, with expected similarities between the full species and subspecies. The coastal whiptail is found in Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges; north into Ventura County; and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003). Coastal tiger whiptail can be found in deserts and semi-arid areas with sparse vegetation and open areas (CDFW 2022c). It can also be found in woodland and riparian areas where the ground is firm soil, sandy, or rocky (CDFW 2022c).

The western whiptail is a diurnal, actively foraging lizard (Anderson 1993). Its prey includes termites, scorpions, solfugids, cockroaches, antlion larvae, and various insect eggs, larvae, and pupae (Anderson 1993). Western whiptails lay their eggs in the soil or underground (NatureServe 2022). Mean clutch size of the western whiptail varies from 2.1 to 4.0. (Garland 1993).

Coastal tiger whiptail was detected within the study area during 2022 surveys (Figure 8).

Red Diamondback Rattlesnake

Red diamondback rattlesnake (*Crotalus ruber*) is a California Species of Special Concern. This species is distributed from San Diego County to the eastern slopes of the mountains and north through western Riverside County into southernmost San Bernardino County (CWHR 2022). Red diamondback rattlesnake can be found in chaparral, woodland, grassland, and desert areas, particularly in rocky areas and dense vegetation. This species needs rodent burrows, cracks in rocks, or surface cover objects (CDFW 2022c).

Red diamondback rattlesnake is active during the day early in the year but increasingly shifts activity to later in the evening as daytime temperatures increase. Eventually it is fully nocturnal (Stebbins 1954; Klauber 1972). This species feeds on rodents, rabbits, lizards, birds, and other snakes (Stebbins 1954; Klauber 1972). Young are live-born (Stebbins 1954; Klauber 1972). Clutch sizes average 8 young and range from 5 to 13 (Stebbins 1954; Klauber 1972).

Red diamondback rattlesnake has moderate potential to occur, as the study area contains suitable habitat including coastal shrub, chaparral, and oak woodland.

Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is a California Species of Special Concern. This species has a large range that covers much of central and Southern California, extending from Shasta County in the north, south to San Diego County. Blainville's Horned Lizards occur in valley-foothill hardwood forests, conifer and riparian habitats, juniper-cypress, and juniper and annual grassland habitats (CWHR 2022).

This species is diurnal and feeds primarily on ants and small beetles when abundant (Pianka and Parker 1975; Stebbins 1954). The reproductive season for the Blainville's Horned Lizard extends from May to June in Southern California (Pianka and Parker 1975). Females may lay clutch sizes ranging from 6 to 16 eggs (Tollestrup 1981).

These lizards are preyed upon by leopard lizards (*Gambelia* spp.), sidewinders (*Crotalus cerastes*), striped whipsnakes (*Masticophis taeniatus*), and other snakes, loggerhead shrikes, and hawks (CWHR 2022).

Blainville's horned lizard has a high potential to occur within the study area due to the presence of valley-foothill grasslands.

Coast Patch-Nosed Snake

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a California Species of Special Concern. This species occurs in Southern California and ranges from the Santa Ynez Mountains near Santa Barbara to the foothills of Santa Ana Mountains and continues within 50 miles of the coast south to the Mexican border (CDFW 2022c). Coast patch-nosed snakes occur in brushy or shrubby vegetation and require small mammal burrows for refuge and overwintering sites (CDFW 2022c; Zeiner et al. 1988).

The coast patch-nosed snake is diurnal and can be found throughout the day during the milder months of spring (Stebbins 2003). This subspecies is a broad generalist in its diet and an opportunistic feeder, which includes small mammals (*Dipodomys* spp.), lizards (*Aspidoscelis* spp., *Coleonyx* spp.), and the eggs of lizards and snakes (Stebbins 2003). Clutches range from four to seven eggs (Wright and Wright 1957). Goldberg (1995) found evidence suggesting that not all females breed each year.

Coast patch-nosed snake has a high potential to occur within the study area as it contains suitable coastal scrub, chaparral, and annual grassland habitat. Also, suitable sandy loams soils are mapped in the area and the nearest CNDDB occurrence is approximately 0.5 miles west of the study area.

5.3.2.5 Invertebrates

Crotch Bumble Bee

Crotch bumble bee (*Bombus crotchii*) is a is a state candidate for listing as threatened. This species ranges throughout much of central and Southern California, along the central and Southern California coasts, through the Central Valley, and in the surrounding foothills. However, it now appears to be absent from much of its former range, and its population appears to have declined drastically, especially in its former stronghold in the Central Valley (Xerces Society et. al. 2018; CDFW 2019).

Crotch bumble bee occurs in open grassland and scrub communities supporting suitable floral resources. Data from a variety of resources most commonly associated the species with plants from the following families, in descending order based on number of observations: Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Richardson et. al. 2014 as cited in Xerces Society et. al. 2018). Williams et. al. (2014) cited the genera *Asclepias, Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia* as example food plants. The species nests primarily underground and may be reliant on small mammal burrows. Little is known about winter hibernacula, but the species is presumed to rely on microhabitats for overwintering similar to those of other bumble bees, including loose disturbed soil, leaf litter, and other debris (Xerces Society et. al. 2018; CDFW 2019).

Crotch bumble bee has a high potential to occur within the study area as it contains grassland and scrub communities with *Phacelia*, *Clarkia*, *Eriogonum*, *Eschscholzia* and *Antirrhinum* species, which have been identified as preferred food plant genera.

5.3.3 Potential Aquatic Resources

The jurisdictional aquatic resources delineation identified numerous ephemeral drainages within the study area (Appendix G). The results of the jurisdictional delineation concluded there are approximately 5.6 acres of non-wetland waters potentially regulated by USACE (Figures 9-1 through 9-13, Jurisdictional Aquatic Resources). Additionally, 5.8 acres of non-wetland waters (below ordinary high water mark) fall under RWQCB jurisdiction, and 19.2 acres of CDFW streambed (below and above ordinary high water mark, to top of bank) and associated riparian habitat occur in the study area. A further breakdown of jurisdictional aquatic features is provided in Table 6.

Table 6. Aquatic Resource Summary for the Study Area

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/ CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
NWW-1	Scale broom scrub	0.0	0.0	1.6	0.0
	Unvegetated wash and river bottom	3.1	0.0	3.2	0.0
NWW-2	Unvegetated wash and river bottom	0.1	0.0	0.3	0.0
NWW-3	Unvegetated wash and river bottom	0.0	0.2	0.0	0.0
NWW-4	Unvegetated wash and river bottom	1.4	0.0	1.0	0.0
NWW-5	Unvegetated wash and river bottom	1.0	0.0	2.1	0.0
RIP-1	Scale broom scrub	0.0	0.0	0.0	2.1
RIP-2	Mulefat thickets	0.0	0.0	0.0	0.5
RIP-3	California sycamore woodlands	0.0	0.0	0.0	1.7
RIP-4	Basket bush - river hawthorn - desert olive patches	0.0	0.0	0.0	0.7
	Grand Total[1]	**5.6**	**0.2**	**8.3**	**5.0**

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

[1] Totals may not sum due to rounding.

5.4 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 ensuring 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 also 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.

Wildlife corridors and linkages can be classified as either regional or local. Regional corridor and linkages are those that link two or more large areas of natural open space, while local corridors and linkages allow resident wildlife to access necessary resources (e.g., food, shelter, water) in smaller areas that might be isolated due to urban development (i.e., roads, housing tracts, etc.) or some other form of fragmentation.

Regional Wildlife Movement

The study area is located in the very southwestern portion of San Bernadino County, in the northeastern corner of the City of Yucaipa, which lies at the foothills between the San Bernardino Mountains to the north, the Crafton Hills Conservation Area to the west, the San Jacinto Mountains to south, and the San Gorgonio Wilderness Area to the east (Figure 10, Wildlife Corridors and Linkages).

There are several parks and open spaces within the City that provide regional wildlife movement opportunities between the San Bernardino Mountains (to the north) and San Jacinto Mountains (to the south). These include El Dorado Ranch Park and Wildwood Canyon State Park, which are located to the east and south of the study area. Both parks provide connectivity to the westernmost area of land identified by the South Coast Missing Linkages Project as part of the San Bernardino-San Jacinto Linkage, connecting the San Bernardino Mountains and the San Gorgonio Wilderness Area to the San Jacinto Mountains. In addition, Yucaipa Regional Park, located west of the study area, provides connectivity to the Crafton Hills Conservation Area, which provides further connectivity to the San Bernardino Mountains via Mill Creek.

Analysis of Regional Wildlife Movement Landscape Features

California Essential Habitat Connectivity Project

This project was initiated by CDFW and the California Department of Transportation and identifies a network of Natural Landscape Blocks (i.e., relatively intact, large areas of land) and Essential Connectivity Areas (i.e., an area of land that serves to connect at least two Natural Landscape Blocks). These areas represent modeled linkages and landscape blocks that need to be maintained to support natural communities and to provide guidance in the development of infrastructure and land use.

San Bernardino National Forest/San Bernardino Mountains

The San Bernardino National Forest to the north of the study area is mapped as a Natural Landscape Block and an Essential Connectivity Area. The San Bernardino National Forest encompasses the San Bernardino Mountains and foothills and provides live-in and move-through habitat for a variety of special-status species including San Bernardino kangaroo rat, bighorn sheep (*Ovis canadensis*), mountain lion (*Puma concolor*), and the metalmark butterflies (*Riodinidae*) Habitats within this landscape range from coastal sage scrub and alluvial fan to mixed conifer, oak woodlands, pinyon-juniper, and desert scrub. The northern portion of the study area overlaps this landscape block (Spencer et al. 2010; Spencer et al., 2017).

San Jacinto Mountains

The San Jacinto Mountains and associated Badlands are identified as a Natural Landscape Block. San Jacinto Mountain is the tallest and northernmost peak of the Peninsular Ranges. This area contains coastal and desert habitats side by side creating an ecotone and providing a high diversity of habitats and species within a relatively small area of land. Many species ranging from large mammals such as mountain lion and mule deer to Blainville's horned lizard and the endangered Quino checkerspot butterfly (*Euphydryas editha quino*) rely on the diversity of habitats that exist within the Natural Landscape Block. The study area does not overlap this landscape block (Spencer et al. 2017).

Mill Creek

Mill Creek is mapped as an Essential Connectivity Area, providing a linkage from the Crafton Hills Preserve north into to San Bernardino National Forest. Mill Creek supports riparian and alluvial fan habitat. Special-status species known to occur here include southwestern willow flycatcher (*Empidonax traillii extimus*) and San Bernardino kangaroo rat. The study area does not overlap this landscape block (Spencer et al. 2010; Spencer et al., 2017).

South Coast Missing Linkages Project

The South Coast Missing Linkages Project mapped several areas of land designated as the San Bernardino-San Jacinto Linkage. This linkage comprises five swaths of land that occur partially in San Bernardino County and continue south into Riverside County that would provide a connection between the San Bernardino and San Jacinto Mountains. The westernmost linkage area identified in this project is located just east of Yucaipa and encompasses Wildwood Canyon, Cherry Canyon, Wallace Creek, and Little San Gorgonio Creek (Dudek 2019). The study area does not overlap any mapped missing linkages (Beier et al. 2008).

Mountain Lion Habitat Suitability – Summer

This dataset models habitat suitability for mountain lion based on a summer resource selection function as described in Dellinger et al. (2020). According to this dataset, the central and northernmost portions of the study area are mapped as being moderately suitable for mountain lion (Leahy 2021).

Mountain Lion Predicted Habitat

This dataset represents areas of suitable habitat for mountain lion based on California Wildlife Habitat Relationships (CWHR 2022) and statewide vegetation maps. Habitats are assessed for breeding, foraging, and cover and assigned a suitability ranking of Low (less than 0.34), Medium (0.34–0.66) or High (greater than 0.66). According to this dataset, the central and northern portions of the study area provide Medium to High mountain lion suitability (FRAP Vegetation Mapping Coordinator 2016).

Wildlife Movement Analysis Within the Study Area

The study area is primarily comprised of undeveloped, open land that currently provides for unconstrained local (i.e., within the study area) wildlife movement. It is not mapped as an Essential Connectivity Area; however, the northernmost portion of the study area minimally overlaps with the San Bernardino National Forest Natural Landscape Block. This portion of the study includes steep slopes and drainages that include mature oak trees (Spencer et al. 2010; Spencer et al. 2017).

The study area is bisected by Wilson Creek, which may provide opportunities for local wildlife movement between the San Bernardino Mountains and the Crafton Hills Conservation Area via Yucaipa Regional Park; however, this drainage becomes constrained west of the study area, as it leads to a series of basins and a concrete-lined channel within the more densely organized portions of the City. The channelization of Wilson Creek and urbanization of the City forms a barrier for wildlife moving west from the study area. Oak Glen Creek is located south of Oak Glen Road, which forms the southern boundary of the Project site. Oak Glen Creek continues southwest, under Interstate 10 into open lands that continue south and east to the Badlands/San Jacinto Mountains. Oak Glen Creek, similar to Wilson Creek, is constrained by development through the City. Both of these drainages were identified in the Final EIR for the Yucaipa General Plan Update (Placeworks 2016) as "potential local wildlife linkages" and thus may provide some restricted connectivity to the Crafton Hills Conservation Area and to the San Jacinto Mountains and Badlands.

The study area also provides opportunity for unrestricted movement north to south between the San Bernardino National Forest to the north to Oak Glen Creek and Wildwood Canyon State Park to the south; however, Oak Glen Roads acts as a substantial barrier to wildlife moving off the Project site to Oak Glen Creek.

Several of the focal species for the San Bernardino-San Jacinto Linkage of the South Coast Missing Linkage Project were observed within the study area during the 2022 survey efforts, including tarantula hawk (*Pepsini*), wrentit, mule deer, and metalmark butterfly (Beier et al. 2008). While no mountain lion sign nor individuals were observed within the study area, the mountain lion datasets discussed previously indicate the study area may provide moderately suitable habitat and movement opportunities for mountain lion (FRAP Vegetation Mapping Coordinator 2016; Leahy 2021). In addition, mule deer, a common food source for mountain lion, was detected within the study area. The mountain lion data sets are based on the vegetation/land cover data mapped prior to the El Dorado Fire. Given a large portion of the study area burned in this fire, it is likely that the study area now provides less suitable habitat due to the fact that the mountain lion habitat suitability models were partially based on availability of foraging/prey species and cover, both of which have been reduced as a result of the fire. Nonetheless, Wilson Creek is mapped as a "high predicted habitat area" for mountain lion; therefore, it may provide some rather constrained movement opportunities through the study area between Crafton Hills, the San Bernardino National Forest, and the San Jacinto Mountains (FRAP Vegetation Mapping Coordinator 2016).

Summary

In summary, the study area currently provides for local wildlife movement through the open lands and drainages (i.e., Wilson Creek) within the Project site. The northern portion of the study area overlaps with a Natural Landscape Block. Wilson Creek may provide opportunities for local and regional wildlife movements, including through the study area, although these drainages are constrained outside of the study area. While the study area is adjacent to Oak Glen Creek and overlaps with the San Bernardino National Forest Natural Landscape Block, the majority of study area was not identified as being significant for regional wildlife connectivity.

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6 Project Impacts

This section addresses direct and indirect impacts to biological resources that would result from implementation of the Project, provides the significance determinations for proposed or potential impacts, and proposes mitigation. Cumulative impacts are addressed in the Project's environmental impact report.

6.1 Explanation of Findings of Significance

Impacts to special-status vegetation communities, plant and wildlife species, and jurisdictional waters, including wetlands, must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible, because the significance of an activity may vary with the setting. Appendix G of the CEQA Guidelines, however, does provide "examples of consequences which may be deemed to be a significant effect on the environment" (14 CCR 15064[e]). These effects include substantial effects on rare or endangered species of animal or plant or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have a significant effect on the environment. Under that section, a proposed project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of a major period of California history or prehistory.

The following are the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G Environmental Checklist, which states that a project would potentially have a significant effect if it does any of the following:

Impact BIO-1	Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
Impact BIO-2	Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
Impact BIO-3	Has a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
Impact BIO-4	Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
Impact BIO-5	Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
Impact BIO-6	Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The evaluation of whether an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a special-status plant or wildlife species. Impacts may be important locally because they result in an adverse alteration of existing site conditions, but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether that impact can be mitigated to a level below significance.

6.2 Definition of Impacts

For the purposes of the impacts analysis, impacts were evaluated within three separate areas: the Wilson Creek Estates – Wine Country area; Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area; and Phases 4 and 5. The following assumptions were used for each scenario:

Wilson Creek Estates – Wine Country Area

Direct impacts refer to complete loss of a biological resource. For purposes of this report, it refers to areas where vegetation clearing, grubbing, or grading replaces biological resources. Direct impacts were quantified by overlaying the proposed impact limits on the biological resources map of the study area. Direct impacts would occur from construction of residential buildings, wineries, a manufactured lake, associated roadways and parking lots, a water quality control basin, fuel modification zones, and landscape areas.

Indirect impacts are reasonably foreseeable effects caused by a project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this report, indirect impacts may affect areas outside the area of disturbance. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Direct impacts refer to complete loss of a biological resource. For purposes of this report, it refers to areas where future development may result in vegetation clearing, grubbing, or grading that replaces biological resources. Direct impacts are qualitatively described based on known project information and biological resources mapped within the study area.

Indirect impacts are reasonably foreseeable effects caused by a project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this report, indirect impacts may affect areas outside the area of disturbance. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.

Phases 4 and 5

Direct impacts refer to complete loss of a biological resource. For purposes of this report, it refers to areas where future development may result in vegetation clearing, grubbing, or grading that replaces biological resources. Direct impacts are qualitatively described based on known project information and biological resources mapped within the study area.

Indirect impacts are reasonably foreseeable effects caused by a project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this report, indirect impacts may affect areas outside the area of disturbance. Indirect impacts may be short-term and construction-related, or long-term and associated with development in proximity to biological resources.

6.3 Impacts Analysis

Table 7 and Figure 11, Definition of Project Impacts, list and show the areas where impacts are anticipated to occur based on the three ways that impacts were evaluated. Appendix H includes additional tables that break out impacts based on individual Project components or land uses. Figures 12-1 through 12-13, Impacts to Biological Resources, depict Project impacts to vegetation communities and land cover types.

The Project mitigation measures will contain measures as listed in the Yucaipa General Plan Update Final EIR (Placeworks 2016b). These measures have been given unique identifiers in Section 7.1 of this document. All measures from the Final EIR retained their original numbering (4-1, 4-2, etc.); however, MM (Mitigation Measure) and GP (General Plan) were added to the identifier for consistency with the remainder of the measures. Similarly, the Wilson Creek Estates Final EIR measures are listed in Section 7.2 and include a MM and a WCE (Wilson Creek Estates) designator in front of the original identifier. Finally, all additional mitigation measures for the Project are included in Section 7.3 with a MM and WCSP (Wine Country Specific Plan) designator.

Table 7. Direct Impacts to Vegetation Communities and Land Covers within the Project Site

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[1]			
			Wilson Creek Estates – Wine Country Area	Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area	Phases 4 and 5	Grand Total
Grass and Herb Dominated						
Post-fire herbaceous	*Erodium cicutarium–Hirschfeldia incana–Bromus* spp.*–Amsinckia* spp.	N/A	165.2	197.6	39.7	402.5
Upland mustards or star-thistle fields	Hirschfeldia incana Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	2.3	23.7	53.3	79.3
Non-Native Grassland	N/A	N/A	0.0	0.2	31.7	31.9
	Grass and Herb Dominated Subtotal		*167.5*	*221.5*	*124.7*	*513.7*
Chaparral						
Chamise chaparral		*Adenostoma fasciculatum*	0.0	42.9	5.8	48.7

Table 7. Direct Impacts to Vegetation Communities and Land Covers within the Project Site

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[1]			
			Wilson Creek Estates – Wine Country Area	Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area	Phases 4 and 5	Grand Total
	Adenostoma fasciculatum Alliance	*Adenostoma fasciculatum–Eriogonum fasciculatum*	0.0	2.2	0.0	2.2
		Adenostoma fasciculatum–(Lotus scoparius–Eriodictyon spp.)	0.0	1.1	0.0	1.1
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia–Adenostoma fasciculatum*	1.2	8.6	4.0	13.8
		Quercus berberidifolia	4.0	44.6	9.6	58.2
Deerweed – silver lupine – yerba santa scrub	*Lotus scoparius–Lupinus albifrons–Eriodictyon* spp. Alliance	*Eriodictyon californicum–herbaceous*	0.0	0.0	0.0	0.0
		Chaparral subtotal	*5.1*	*99.4*	*19.5*	*124.0*
Scrub						
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	3.0	26.6	26.2	55.8
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	2.2	41.4	65.2	108.7
Palmer's goldenbush scrub[2]	*Ericameria palmeri* Alliance	*Ericameria palmeri*	0.0	0.0	0.3	0.3
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia - Eriogonum (elongatum, nudum)* Alliance	*Corethrogyne filaginifolia*	0.0	0.6	0.0	0.6

Table 7. Direct Impacts to Vegetation Communities and Land Covers within the Project Site

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[1]			
			Wilson Creek Estates – Wine Country Area	Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area	Phases 4 and 5	Grand Total
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp. Alliance	*Malacothamnus fasciculatus*	0.0	1.4	0.0	1.4
White sage scrub[2]	*Salvia apiana* Alliance	*Salvia apiana*	<0.01	0.0	0.0	<0.01
		Salvia apiana–Hesperoyucca whipplei	0.0	0.0	0.0	0.0
		Scrub subtotal	*5.2*	*70.0*	*91.7*	*166.8*
Riparian						
Mulefat thickets	*Baccharis salicifolia* Alliance	*Baccharis salicifolia–Sambucus nigra*	0.4	0.0	0.0	0.4
California sycamore woodlands[2]	*Platanus racemosa–Quercus agrifolia* Alliance	*Platanus racemosa–Baccharis salicifolia*	0.2	0.0	0.0	0.2
Basket bush - river hawthorn – desert olive patches[2]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens Alliance*	*Sambucus nigra*	0.0	0.0	0.7	0.7
Scale broom scrub[2]	*Lepidospartum squamatum* Alliance	*Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan	0.0	1.2	0.0	1.2
		Lepidospartum squamatum–Amsinckia menziesii	<0.01	0.0	0.0	<0.01
		Lepidospartum squamatum– ephemeral annuals	0.0	0.01	0.0	0.01
		Riparian subtotal	*0.6*	*1.2*	*0.7*	*2.5*

Table 7. Direct Impacts to Vegetation Communities and Land Covers within the Project Site

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[1]			
			Wilson Creek Estates – Wine Country Area	Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area	Phases 4 and 5	Grand Total
Woodland						
Coast live oak woodland and forest	*Quercus agrifolia* Alliance	*Quercus agrifolia*	0.0	0.0	1.8	1.8
Eucalyptus - tree of heaven - black locust groves	*Eucalyptus* spp.–*Ailanthus altissima*–*Robinia pseudoacacia* Eucalyptus–tree of heaven–black locust groves Alliance	*Ailanthus altissima*	0.0	<0.01	0.8	0.8
		Eucalyptus (globulus, camaldulensis)	0.0	0.1	1.9	2.0
		Woodland subtotal	*0.0*	*0.1*	*4.6*	*4.7*
Unvegetated						
Unvegetated wash and river bottom	N/A	N/A	0.5	5.4	4.0	9.9
		Unvegetated subtotal	*0.5*	*5.4*	*4.0*	*9.9*
Disturbed and Developed						
Ornamental plantings	N/A	N/A	7.3	7.6	0.0	15.0
Urban/Developed	N/A	N/A	0.8	4.8	103.6	109.2
Disturbed Habitat	N/A	N/A	1.5	33.2	84.5	119.2
		Disturbed and Developed subtotal	*9.7*	*45.6*	*188.1*	*243.4*
		Grand Total1	**188.5**	**443.1**	**433.3**	**1,065.0**

Notes:
1 Totals may not sum due to rounding.
2 Communities listed by CDFW as high priority for inventory (i.e., State Rank 1, 2, or 3). (CDFW 2020).

6.3.1 Impact BIO-1: Special-Status Species

6.3.1.1 Impacts to Special-Status Plants

Nine special-status plant species were determined to have a moderate potential to occur within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions on the Project site: Yucaipa onion (CRPR 1B.2), Jaeger's milk-vetch (CRPR 1B.1), Parry's spineflower (CRPR 1B.1), white-bracted

spineflower (CRPR 1B.2), California satintail (CRPR 2B.1), Hall's monardella (CRPR 1B.3), salt spring checkerbloom (CRPR 2B.2), southern jewelflower (CRPR 1B.3), and San Bernardino aster (CRPR 1 B.2).

These species were targeted during 2022 focused surveys for special-status plants within Phases 1, 2, and 3 of the Project site, which also includes the Wilson Creek Estates – Wine Country area. Focused surveys for special-status plants were negative. Focused surveys were not conducted in Phases 4 and 5 of the Project site.

The study area does not occur within federally designated critical habitat for special-status plant species, and there would be no impacts to critical habitat.

Direct Impacts

Wilson Creek Estates – Wine Country Area

The Wilson Creek Estates Final EIR identified slender-horned spineflower (*Dodecahema leptoceras*), white-bracted spineflower, Parry's spineflower, and Plummer's mariposa lily (*Calochortus plummerae*) as having moderate or high potential to occur within the specific plan boundary and included **Mitigation Measure (MM) WCE-BIO-2** (Rare Plant Surveys), which stated that additional surveys for special-status plants shall be completed during the appropriate blooming period prior to construction activities (AECOM 2016). Due to changed site conditions since certification of the Wilson Creek Estates Final EIR, an updated habitat assessment was conducted over this portion of the study area and focused surveys were conducted for species with suitable habitat present, as discussed in Section 5.3.1.

Focused surveys for special-status plants conducted in 2022 as a part of the proposed Project were negative for special-status plants. As such, no special-status plants are expected to occur within the Wilson Creek Estates – Wine Country area. Plummer's mariposa lily was not included as a target species for the 2022 focused surveys because it is a CRPR 4.2 species. Species with CRPR 4 are not considered rare, but only limited in distribution or infrequent throughout a broader range in California (e.g., "watch list" species) (CNPS 2022a). Thus, given that CEQA requires findings of significance for projects that "threaten to . . . reduce the number or restrict the range of a rare or endangered plant," Plummer's mariposa lily will not be analyzed further. In addition, the blooming period for Plummer's mariposa lily is May to July, meaning that this species would have been identifiable and recorded during the May pass of the focused surveys if it was present within the Project site. Therefore, direct impacts to special-status plant species would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Focused surveys for special-status plants conducted in 2022 as a part of the proposed Project were negative for special-status plants. As such, no special-status plants are expected to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. Therefore, direct impacts to special-status plant species would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Phases 4 and 5

Focused surveys for special-status plants conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Future development of Phases 4 and 5 has the potential to result in impacts to special-status plants through unintentional clearing, trampling, or grading outside of the proposed construction zone. Any potential impact to a federal- or state-listed plant species would be significant. Potential impacts to non-listed special-status plants from future development in Phases 4 and 5 are potentially significant depending on the

location and size of the impact. Project implementation of **MM-WCSP-BIO-1** (Focused Special-Status Plant Survey and Avoidance) would reduce potential direct impacts to a less-than-significant level through focused special-status plant surveys, avoidance and minimization measures, a salvage and relocation plan, and/or compensatory mitigation to comply with CEQA. Therefore, direct impacts to special-status plant species would be **less than significant with mitigation incorporated**.

Indirect Impacts

Wilson Creek Estates – Wine Country Area

Focused surveys for special-status plants conducted in 2022 within the Wilson Creek Estates – Wine Country area were negative for special-status plants. As such, no special-status plants are expected to occur within the Wilson Creek Estates – Wine Country area. Therefore, indirect impacts to special-status plant species would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Focused surveys for special-status plants conducted in 2022 as a part of the proposed Project were negative for special-status plants. As such, no special-status plants are expected to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. Therefore, indirect impacts to special-status plant species would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Phases 4 and 5

Focused surveys for special-status plants conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Future development of Phases 4 and 5 has the potential to result in indirect impacts to special-status plants.

Construction-Related Impacts

Special-status plant species and suitable habitat for special-status plant species may be indirectly impacted during future construction of Phases 4 and 5. Potential short-term or temporary indirect impacts to special-status plant species resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the release of chemical pollutants. These potential construction-related indirect impacts to special-status plant species would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, implementation of standard dust control measures, development of a Stormwater Pollution Prevention Plan (SWPPP), and requiring all vehicles and equipment be serviced in designated staging areas.

With implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources), the effect of construction-related indirect impacts to special-status plant species would be minimized to **less than significant with mitigation incorporated**.

Long-Term Impacts

Potential long-term indirect impacts that could result from development near special-status plant species or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for special-status plants; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to special-status plant species would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status plants.

With implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources), the effect of long-term indirect impacts to special-status plant species would be minimized to **less than significant with mitigation incorporated**.

6.3.1.2 Impacts to Special-Status Wildlife

A total of 19 special-status wildlife species were determined to have a moderate or high potential to occur for non-listed species or a low potential to occur for listed species within the study area based on known species distribution, species-specific habitat preferences, and habitat conditions on the study area: western spadefoot, burrowing owl, white-tailed kite, bald eagle, loggerhead shrike, coastal California gnatcatcher, Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, American badger, Southern California legless lizard, California glossy snake, coastal tiger whiptail, red diamondback rattlesnake, Blainville's horned lizard, coast patch-nosed snake, and Crotch bumble bee.

Coastal California gnatcatcher and burrowing owl were targeted during 2022 protocol surveys within Phases 1, 2, and 3 of the Project site, which also includes the Wilson Creek Estates – Wine Country area. Protocol surveys for coastal California gnatcatcher were negative. Protocol surveys for burrowing owl were positive for burrowing owl sign, but negative for burrowing owl individuals. Protocol surveys were not conducted in Phases 4 and 5 of the Project site.

The study area does not occur within federally designated critical habitat for special-status wildlife species, and there would be no impacts to critical habitat.

Direct Impacts

Wilson Creek Estates – Wine Country Area

Amphibians

Western Spadefoot

Western spadefoot was not detected within the Wilson Creek Estates – Wine Country area by AECOM (2016) or during 2022 surveys. This portion of the Project site has largely been disturbed by historical agricultural activities and includes dense, non-native grasses and forbs along mesas to the south. Wilson Creek, an intermittent water body, flows through the Wilson Creek Estates – Wine Country area. Wilson Creek and its associated floodplain provides potential habitat for western spadefoot, if present. Wilson Creek Estates – Wine Country area is avoiding Wilson Creek and open space on either side of Wilson Creek, creating a corridor that ranges from approximately 300 feet to 970 feet in width. According to recent literature (Baumberger et al. 2019), western spadefoot were documented in Orange County traveling a maximum of 226 feet (69 meters), on average, from their freshwater source. While Wilson Creek meanders through the open space and therefore has a varying buffer on either side of the waterway, sufficient upland adjacent to the waterway could support western spadefoot, if present. However, there is still potential that western spadefoot could be present within the uplands outside of the Wilson Creek floodplain and outside of the proposed open space. Because adults of these species are belowground during a large part of their the year, they are susceptible to injury and mortality during construction activities. Any potential impact to western spadefoot could be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would reduce potential direct impacts to a less-than-significant level through pond checks the winter prior to construction and, if ponding is present, focused surveys for western spadefoot and relocation of western spadefoot, if present, to suitable habitat outside of the construction footprint. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated western spadefoot, if present. Therefore, direct impacts to western spadefoot would be **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite was observed within the Wilson Creek Estates – Wine Country area (AECOM 2016). In addition, white-tailed kite and bald eagle were both observed flying through or overhead of the study area during 2022 biological surveys. Bald eagle is not expected to nest or winter within the Wilson Creek Estates – Wine Country area. This portion of the Project site does not contain suitable forested habitat that can support bald eagle nesting or an adjacent water body that can support bald eagle foraging. White-tailed kite has a low potential to nest within the Wilson Creek Estates – Wine Country area. This portion of the Project site does not contain woodland vegetation communities. There are minimal trees that can support the nesting of these species, as many have been damaged by the El Dorado Fire and do not contain sufficient canopy structure to support nesting. However, a stand of common olive (*Olea europaea*) trees lines the southern border of the Wilson Creek Estates – Wine Country area and were undamaged by the fire and would provide marginal nesting habitat for white-tailed kite. Direct impacts to white-tailed kite from construction are generally unlikely due to its high mobility and access to adjacent habitat; however, potential impacts may occur to nesting white-tailed kite during vegetation removal. Development of Wilson Creek

Estates– Wine Country area has the potential to result in impacts to nesting white-tailed kite. Because white-tailed kite is a state Fully Protected species, any actions or activities that would result in injury and/or mortality to individuals of this species, including the loss of eggs or young within an active nest, would be a violation of Section 3511 of the California Fish and Game Code and a significant impact under CEQA absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would minimize potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to fully protected raptors would be **less than significant with mitigation incorporated**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project were negative within the Wilson Creek Estates – Wine Country area. As such, coastal California gnatcatcher is not expected to occur within the Wilson Creek Estates – Wine Country area. Therefore, direct impacts to coastal California gnatcatcher would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Burrowing Owl

Protocol surveys for burrowing owl conducted in 2022 as a part of the proposed Project were negative within the Wilson Creek Estates – Wine Country area but positive for burrowing owl pellets to the north within the Phase 3 area. In general, the herbaceous vegetation communities within the Project site included high cover of non-native grasses and forbs and did not support openings, clearings, or areas where burrowing owl could have direct line-of-sight. Similarly, shrub and chaparral communities within the Project site are recovering from the El Dorado Fire and supported a high cover of non-native grasses and forbs in the understory with limited areas of bare ground or short vegetation. As such, potential for burrowing owl at the time of the protocol surveys was low. However, because historical sign was detected nearby and potentially suitable burrows were mapped within the study area, burrowing owl could occupy up to 179.7 acres of potential habitat of this portion of the study area prior to future construction of Wilson Creek Estates – Wine Country area. Development has the potential to result in direct impacts to burrowing owl through unintentional clearing, trampling, or grading outside of the construction zone. Any potential impact to burrowing owl would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated burrowing owl, if present. Therefore, direct impacts to burrowing owl would be **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike was not detected within the Wilson Creek Estates – Wine Country area by AECOM (2016) or during 2022 surveys. However, this portion of the Project site contains suitable nesting habitat for the species and development of Wilson Creek Estates – Wine Country area would result in the loss of 10.9 acres of potential habitat for loggerhead shrike. Wilson Creek Estates – Wine Country area includes 40.9 acres of open space around Wilson Creek that can be used by loggerhead shrike and will offset any loss of potential loggerhead shrike habitat. In addition, phasing of the Project will allow for loggerhead shrike to disperse to vacant lands outside of the Wilson

Creek Estates – Wine Country area. Adults of this species are very mobile and not susceptible to direct impacts from construction-related activities. However, the proposed Project could have a direct impact on bird nests, eggs, and young during vegetation removal. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to loggerhead shrike would be **less than significant with mitigation incorporated**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

No special-status, fossorial small mammals were incidentally detected within the Wilson Creek Estates – Wine Country area by AECOM (2016) or during 2022 surveys. However, this portion of the Project site contains suitable habitat for these species and development of Wilson Creek Estates – Wine Country area would result in the loss of 178.8 acres of potential habitat for fossorial small mammals, including Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, and Los Angeles pocket mouse. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat from the Wilson Creek Estates – Wine Country area has potential to the affect the local population dynamics of these species, if present. Adults of these species typically reside belowground during the daytime and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated small mammals, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to fossorial small mammals would be **less than significant with mitigation incorporated**.

American Badger

American badger was not incidentally detected within Wilson Creek Estates – Wine Country area by AECOM (2016) or during 2022 surveys. However, this portion of the Project site contains suitable habitat, including potential burrows, for the species, and development of Wilson Creek Estates – Wine Country area could result in the loss of up to 177.7 acres of potential habitat for American badger. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat from the Wilson Creek Estates – Wine Country area has potential to the affect the local population dynamics of this species, if present. In addition, adults of this species typically reside belowground and therefore are susceptible to injury and mortality during construction activities. The potential impacts to dens and loss or injury to individual American badgers are considered significant absent mitigation.

Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Survey and Avoidance) would reduce potential direct impacts to a less-than-significant level through pre-construction surveys for winter and natal badger dens and, if present, implementation of avoidance measures to minimize impacts to badgers. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot

corridor of open space along Wilson Creek that could support relocated American badger, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to American badger would be **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Coastal tiger whiptail was incidentally detected within the Wilson Creek Estates – Wine Country area by AECOM (2016) and it was observed immediately west of the Wilson Creek Estates – Wine Country area during 2022 surveys. No other special-status lizard or snake was incidentally detected; however, this portion of the Project site contains suitable habitat and development of Wilson Creek Estates – Wine Country area could result in the loss of up to 178.8 acres of potential habitat for special-status lizards and snakes. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat from the Wilson Creek Estates – Wine Country area has potential to affect the local population dynamics of these species, if present. In addition, these species generally have low mobility to escape and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. In addition, for any non-listed special-status wildlife species occurring in construction areas, buffers will be established or, if establishing buffers is not feasible, attempts will be made to move the individuals to safety through capture and relocation or through encouraging them to leave the site. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated special-status lizards and snakes, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to special-status lizards and snakes would be **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has a high potential to occur within the study area. Direct impacts to individuals of this uncommon species could occur with project implementation. Wilson Creek Estates could result in the loss of up to 178.8 acres of potential habitat supporting potential floral resources for the species, which could be used for nesting by Crotch bumble bee if present on site. Although the Project site supports suitable floral resources within these communities, the actual area occupied by specific resources with potential to support nesting for the species is likely a much lower acreage. In addition, microhabitats, such as small mammal burrows where the species may nest, and debris and other loose matter suitable for hibernation, likely occur on site in more limited areas.

Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for Crotch bumble bee and avoidance of nesting resources, if present, until the nesting period has concluded. In addition, project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support Crotch bumble bee, if present, as well as offset impacts to potentially suitable nesting habitat. Therefore, direct impacts to Crotch bumble bee would be **less than significant with mitigation incorporated**.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Amphibians

Western Spadefoot

Western spadefoot was not incidentally detected during 2022 surveys. This portion of the Project has largely been disturbed by the El Dorado Fire and includes dense, non-native grasses and forbs and recovering shrub and chaparral communities interspersed with ephemeral streams. Wilson Creek, an intermittent water body, flows through Phases 2 and 3 of the Project site. Ephemeral ponding was also observed within the western portion of Phase 2. Any ephemeral ponding, as well as Wilson Creek and its associated floodplain, provides potential habitat for western spadefoot, if present. Future development of the proposed Project avoids Wilson Creek and open space on either side of Wilson Creek. The portion of Wilson Creek within Phase 2, at the western end of the Project site, is proposed as open space, creating a corridor that ranges from approximately 36 feet to 400 feet in width. Note that the area that is 36 feet in width is the far western portion of the Project site that becomes narrow, but all of the Project in this area is proposed as open space. According to recent literature (Baumberger et al. 2019), western spadefoots were documented in Orange County traveling a maximum of 226 feet (69 meters), on average, from their freshwater source. While Wilson Creek meanders through the open space and therefore has a varying buffer on either side of the waterway, sufficient upland adjacent to the waterway could support western spadefoot, if present. However, there is still potential that western spadefoot could be present within the uplands outside of the Wilson Creek floodplain and outside of the proposed open space. Because adults of these species are belowground during a large part of the year, they are susceptible to injury and mortality during construction activities. Any potential impact to western spadefoot would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would reduce potential direct impacts to a less-than-significant level through pond checks the winter prior to construction and, if ponding is present, focused surveys for western spadefoot and relocation of western spadefoot, if present, to suitable habitat outside of the construction footprint. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated western spadefoot, if present. Therefore, direct impacts to western spadefoot would be **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite and bald eagle were both observed flying through or overhead of the study area during 2022 biological surveys. Bald eagle is not expected to nest within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area because this portion of the Project site does not contain suitable forested habitat that can support bald eagle nesting or an adjacent water body that can support bald eagle foraging. White-tailed kite has a low potential to nest within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. This portion of the Project site contains minimal (0.1 acres) woodland vegetation communities with some trees that can support the nesting of these species, but many trees have been damaged by the El Dorado Fire and do not contain sufficient canopy structure to support nesting. Future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area has the potential to result in impacts to nesting white-tailed kite. Because white-tailed kite is a state Fully Protected species, any actions or activities that would result in injury and/or mortality to individuals of this species, including the loss of eggs or young within an active nest, would be a violation of Section 3511 of the California Fish and Game Code and a significant impact under CEQA absent mitigation.

Project implementation of **MM-WCSP-BIO-5** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to fully protected species would be **less than significant with mitigation incorporated**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project were negative. As such, coastal California gnatcatcher is not expected to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. Therefore, direct impacts to coastal California gnatcatcher would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Burrowing Owl

Burrowing owl pellets were observed within the study area during 2022 protocol burrowing owl surveys; however, the sign was not fresh and indicated that burrowing owl may have been present during a previous season. No active burrowing owl individuals, burrows, or sign were detected. In general, the herbaceous vegetation communities within the Project site included high cover of non-native grasses and forbs and did not support openings, clearings, or areas where burrowing owl could have direct line-of-sight. Similarly, shrub and chaparral communities within the Project are recovering from the El Dorado Fire and supported a high cover of non-native grasses and forbs in the understory with limited areas of bare ground or short vegetation. As such, potential for burrowing owl at the time of the protocol surveys was low. However, because historical sign was detected and potentially suitable burrows were mapped within the study area, burrowing owl could occupy up to 429.4 acres of potential habitat within this portion of the study area prior to future construction of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. Future development has the potential to result in impacts to burrowing owl through unintentional clearing, trampling, or grading outside of the construction zone. Any potential impact to burrowing owl would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated burrowing owl, if present. Therefore, direct impacts to burrowing owl would be **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike was not incidentally detected within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area during 2022 biological surveys. However, this portion of the Project site contains suitable nesting habitat for the species and future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area would result in the loss of up to 170.5 acres of suitable habitat for loggerhead shrike. Adults of this species are very mobile and not susceptible to direct impacts from construction-related activities. However, future development of the proposed Project could have a direct impact on bird nests, eggs, and young, should nesting occur within the impact footprint. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to loggerhead shrike would be **less than significant with mitigation incorporated**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

No special-status, fossorial small mammals were incidentally detected within Phases 1, 2, or 3 outside of the Wilson Creek Estates – Wine Country area during 2022 biological surveys. However, this portion of the Project site contains suitable habitat for these species and future development of Phases 1, 2, or 3 outside of the Wilson Creek Estates – Wine Country area could result in the loss of up to 397.5 acres of potential habitat for fossorial small mammals, including Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, and Los Angeles pocket mouse. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat in Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area has potential to the affect the local population dynamics of these species, if present. Adults of these species typically reside belowground during the daytime and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated small mammals, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to fossorial small mammals would be **less than significant with mitigation incorporated**.

American Badger

American badger was not incidentally detected within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area during 2022 biological surveys. However, this portion of the Project site contains suitable habitat, including potential burrows, for the species, and future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area could result in the loss of up to 390.8 acres of suitable habitat for American badger. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area has potential to the affect the local population dynamics of this species, if present. In addition, adults of this species typically reside belowground and therefore are susceptible to injury and mortality during construction activities. The potential impacts to dens and loss or injury to individual badgers are considered significant absent mitigation.

Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Survey and Avoidance) would reduce potential direct impacts to a less-than-significant level through pre-construction surveys for winter and natal badger dens, and, if present, implementation of avoidance measures to minimize impacts to badgers. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated American badger, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to American badger would be **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Coastal tiger whiptail was incidentally detected four times during 2022 biological surveys. No other special-status lizard or snake was incidentally detected; however, this portion of the Project site contains suitable habitat and future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area could result in the loss of up to 397.5 acres of potential habitat for special-status lizards and snakes. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area has potential to the affect the local population dynamics of these species, if present. In addition, these species generally have low mobility to escape construction activities and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. In addition, for any non-listed special-status wildlife species occurring in construction areas, buffers will be established or, if establishing buffers is not feasible, attempts will be made to move the individuals to safety through capture and relocation or through encouraging them to leave the site. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated special-status lizards and snakes, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to special-status lizards and snakes would be **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has a high potential to occur within the study area. Direct impacts to individuals of this uncommon species could occur with project implementation. Future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area could result in the loss of up to 397.5 acres of potential habitat supporting potential floral resources for the species, which could be used for nesting by Crotch bumble bee if present on site. Although the Project site supports suitable floral resources within these communities, the actual area occupied by specific resources with potential to support nesting for the species is likely a much lower acreage. In addition, microhabitats, such as small mammal burrows where the species may nest, and debris and other loose matter suitable for hibernation, likely occur on site in more limited areas.

Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for Crotch bumble bee and avoidance of nesting resources, if present, until the nesting period has concluded. In addition, project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support Crotch bumble bee, if present, as well as offset impacts to potentially suitable nesting habitat. Therefore, direct impacts to Crotch bumble bee would be **less than significant with mitigation incorporated**.

Phases 4 and 5

Amphibians

Western Spadefoot

Western spadefoot was not incidentally detected during 2022 surveys. This portion of the Project site has largely been disturbed by the El Dorado Fire and includes dense, non-native grasses and forbs and recovering shrub and chaparral communities interspersed with ephemeral streams. The ephemeral streams and associated uplands provide potential habitat for western spadefoot, if present. Because adults of these species are belowground during a large part of the year, they are susceptible to injury and mortality during construction activities. Any potential impact to western spadefoot would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would reduce potential direct impacts to a less-than-significant level through pond checks the winter prior to construction and, if ponding is present, focused surveys for western spadefoot and relocation of western spadefoot, if present, to suitable habitat outside of the construction footprint. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated western spadefoot, if present. Therefore, direct impacts to western spadefoot would be **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite and bald eagle were both observed flying through or overhead of the study area during 2022 biological surveys. Bald eagle is not expected to nest within Phases 4 and 5 because this portion of the Project site does not contain suitable forested habitat that can support bald eagle nesting or an adjacent water body that can support bald eagle foraging. White-tailed kite has a low potential to nest within Phases 4 and 5. This portion of the Project site contains 4.6 acres of woodland vegetation communities with some trees that can support the nesting of this species, but many trees have been damaged by the El Dorado Fire and do not contain sufficient canopy structure to support nesting. Future development of Phases 4 and 5 has the potential to result in impacts to nesting white-tailed kite. Because white-tailed kite is a state Fully Protected species, any actions or activities that would result in injury and/or mortality to individuals of this species, including the loss of eggs or young within an active nest, would be a violation of Section 3511 of the California Fish and Game Code and a significant impact under CEQA absent mitigation.

Project implementation of **MM-WCSP-BIO-5** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to fully protected species would be **less than significant with mitigation incorporated**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Phases 4 and 5 contain 26.2 acres of potential habitat (California buckwheat scrub) for coastal California gnatcatcher. Future development of Phases 4 and 5 has the potential to result in impacts to coastal California gnatcatcher through unintentional clearing, trampling, or grading outside of the construction zone. Any potential impact to a coastal California gnatcatcher would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-11** (Coastal California Gnatcatcher Protocol Survey) would reduce potential direct impacts to a less-than-significant level through a habitat assessment and focused surveys, avoidance and minimization measures, and/or compensatory mitigation. Therefore, direct impacts to coastal California gnatcatcher would be **less than significant with mitigation incorporated**.

Burrowing Owl

Protocol surveys for burrowing owl conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Phases 4 and 5 contain 324.4 acres of potential habitat for burrowing owl. Future development of Phases 4 and 5 has the potential to result in impacts to burrowing owl through unintentional clearing, trampling, or grading outside of the construction zone. Any potential impact to a burrowing owl would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-12** (Burrowing Owl Protocol Surveys) would reduce potential direct impacts to a less-than-significant level through a habitat assessment and focused surveys, avoidance and minimization measures, and/or compensatory mitigation. In addition, implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated burrowing owl, if present. Therefore, direct impacts to burrowing owl would be **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike was not incidentally detected within Phases 4 and 5 during 2022 surveys. However, this portion of the Project site contains suitable nesting habitat for the species and future development of Phases 4 and 5 could result in the loss of up to 111.9 acres of suitable habitat for loggerhead shrike. Adults of this species are very mobile and not susceptible to direct impacts from construction-related activities. However, future development of the proposed Project could have a direct impact on bird nests, eggs, and young should nesting occur within the impact footprint. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential direct impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. Therefore, direct impacts to loggerhead shrike would be **less than significant with mitigation incorporated**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

No special-status, fossorial small mammals were incidentally detected within Phases 4 or 5 during 2022 biological surveys. However, this portion of the Project site contains suitable habitat for these species and future development of Phases 4 and 5 could result in the loss of up to 245.2 acres of potential habitat for fossorial small mammals, including Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, and Los Angeles pocket mouse. When cumulatively evaluated with all of the proposed Project,

the potential loss of this habitat within Phases 4 and 5 has potential to the affect the local population dynamics of these species, if present. Adults of these species typically reside belowground during the daytime and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be captured. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated small mammals, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to fossorial small mammals would be **less than significant with mitigation incorporated**.

American Badger

American badger was not incidentally detected within Phases 4 and 5 during 2022 biological surveys. However, this portion of the Project site contains suitable habitat for the species and future development of Phases 4 and 5 could result in the loss of up to 235.9 acres of suitable habitat for American badger. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat within Phases 4 and 5 has potential to affect the local population dynamics of this species, if present. In addition, adults of this species typically reside belowground and therefore are susceptible to injury and mortality during construction activities. The potential impacts to dens and loss or injury to individual badgers are considered significant absent mitigation.

Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Survey and Avoidance) would reduce potential direct impacts to a less-than-significant level through pre-construction surveys for winter and natal badger dens, and, if present, implementation of avoidance measures to minimize impacts to badgers. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated American badger, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to American badger would be **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Coastal tiger whiptail was not incidentally detected during 2022 biological surveys; however, it was observed immediately south of Phases 4 and 5 within other phases of the Project site. No other special-status lizard or snake was incidentally detected; however, this portion of the Project site contains suitable habitat and future development of Phases 4 and 5 could result in the loss of up to 245.2 acres of potential habitat for special-status lizards and snakes. When cumulatively evaluated with all of the proposed Project, the potential loss of this habitat within Phases 4 and 5 has potential to the affect the local population dynamics of these species, if present. In addition, these species generally have low mobility to escape construction activities and therefore are susceptible to injury and mortality during construction activities. This impact would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for special-status wildlife species using appropriate methods, avoidance of these species where possible, and relocation of individuals that may be

captured. In addition, for any non-listed special-status wildlife species occurring in construction areas, buffers will be established or, if establishing buffers is not feasible, attempts will be made to move the individuals to safety through capture and relocation or through encouraging them to leave the site. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support relocated special-status lizards and snakes, if present, as well as offset impacts to potentially suitable habitat. Therefore, direct impacts to special-status lizards and snakes would be **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has a high potential to occur within the study area. Direct impacts to individuals of this uncommon species could occur with project implementation. Future development of Phases 4 and 5 could result in the loss of up to 245.2 acres of potential habitat supporting potential floral resources for the species, which could be used for nesting by Crotch bumble bee if present on site. Although the Project site supports suitable floral resources within these communities, the actual area occupied by specific resources with potential to support nesting for the species is likely a much lower acreage. In addition, microhabitats, such as small mammal burrows where the species may nest, and debris and other loose matter suitable for hibernation, likely occur on site in more limited areas.

Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would reduce potential direct impacts to a less-than-significant level by requiring a pre-construction survey for Crotch bumble bee and avoidance of nesting resources, if present, until the nesting period has concluded. In addition, project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would ensure that there is a minimum 1,000-foot corridor of open space along Wilson Creek that could support Crotch bumble bee, if present, as well as offset impacts to potentially suitable nesting habitat. Therefore, direct impacts to Crotch bumble bee would be **less than significant with mitigation incorporated**.

Indirect Impacts

Wilson Creek Estates – Wine Country Area

Amphibians

Western Spadefoot

Western spadefoot has potential to occur within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to western spadefoot resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and adverse effects from noise and vibration. Western spadefoot is typically belowground, so impacts from generation of fugitive dust, increased human presence, and lighting during night-time construction would be less than significant. These potential construction-related indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, and requiring all vehicles and equipment be serviced in designated staging areas. In addition, Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would result in identification and relocation of any western spadefoot within areas potentially impacted by the Project, which would minimize indirect impacts from noise and vibration.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would minimize the effect of construction-related indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near western spadefoot or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for western spadefoot; increased invasive plant species that may degrade habitat; and trampling of habitat and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for western spadefoot.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of long-term indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite has potential to nest within the Wilson Creek Estates – Wine Country area and because white-tailed kite is a state Fully Protected species, any actions or activities that would result in injury and/or mortality to individuals of this species, including the loss of eggs or young within an active nest, would be a violation of Section 3511 of the California Fish and Game Code and a significant impact under CEQA absent mitigation.

***Construction-Related*:** Potential short-term or temporary indirect impacts to nesting white-tailed kite resulting from construction activities include adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to white-tailed kite would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting white-tailed kite are identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are avoided.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would minimize the effect of construction-related indirect impacts to nesting white-tailed kite to **less than significant with mitigation incorporated**.

Long-Term: White-tailed kite are relatively mobile and are expected to avoid the developed portions of the Project and instead occur within the proposed open space. For this reason, this species is not particularly susceptible to vehicle or building collisions. Therefore, long-term indirect impacts to white-tailed kite would be **less than significant**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project were negative within the Wilson Creek Estates – Wine Country area. As such, coastal California gnatcatcher is not expected to occur within the Wilson Creek Estates – Wine Country area. Therefore, indirect impacts to coastal California gnatcatcher would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Burrowing Owl

Burrowing owl protocol surveys were negative within the Wilson Creek Estates – Wine Country area; however, sign for this species was detected to the north. Therefore, this species could occur prior to development of the Project. Development of Wilson Creek Estates – Wine Country has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to burrowing owl resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. If burrowing owl is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to burrowing owl through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near burrowing owl or their habitat include chemical releases such as oils and grease from vehicles that could degrade habitat, increased human presence that could lead to unauthorized access to potential habitat for burrowing owl, and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for burrowing owl.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of long-term indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike has potential to nest within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to loggerhead shrike resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting loggerhead shrike is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to loggerhead shrike through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection), and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to loggerhead shrike to **less than significant with mitigation incorporated**.

Long-Term: Loggerhead shrikes are relatively mobile and are not especially susceptible to impacts from vehicle or building collisions. Therefore, long-term indirect impacts to loggerhead shrikes would be **less than significant**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

Special-status fossorial small mammals have potential to occur within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to fossorial small mammals resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any fossorial small mammals within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near fossorial small mammal species or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for fossorial small mammals; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for fossorial small mammals, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

American Badger

American badger has potential to occur within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to American badger resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would result in identification and relocation of any American badger within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would minimize the effect of construction-related indirect impacts to American badger to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near American badger or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for American badger; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for American badger, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to American badger to **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Special-status lizards and snakes have potential to occur within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to lizards and snakes resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any special-status lizards or snakes within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near lizards and snakes or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for lizards and snakes; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status lizards and snakes, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has potential to occur within the Wilson Creek Estates – Wine Country area and development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to nest resources for Crotch bumble bee resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; and adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to Crotch bumble bee would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would result in identification and avoidance of occupied nest resources for Crotch bumble bee within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would minimize the effect of construction-related indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near Crotch bumble bee nest resources include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for Crotch bumble bee; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for nesting Crotch bumble bee, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**. Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Amphibians

Western Spadefoot

Western spadefoot has potential to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to western spadefoot resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; adverse effects from noise and vibration. Western spadefoot is typically belowground, so impacts from generation of fugitive dust, increased human presence, and lighting during night-time construction

would be less than significant. These potential construction-related indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, and requiring all vehicles and equipment be serviced in designated staging areas. In addition, Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would result in identification and relocation of any western spadefoot within areas potentially impacted by the Project, which would minimize indirect impacts from noise and vibration.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would minimize the effect of construction-related indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near western spadefoot or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for western spadefoot; increased invasive plant species that may degrade habitat; and trampling of habitat and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for western spadefoot. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite has potential to nest within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to nesting white-tailed kite resulting from construction activities include adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to white-tailed kite would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting

season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting white-tailed kite are identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would minimize the effect of construction-related indirect impacts to nesting white-tailed kite to **less than significant with mitigation incorporated**.

Long-Term: White-tailed kite are relatively mobile and are expected to avoid the developed portions of the Project and instead occur within the proposed open space. For this reason, this species is not particularly susceptible to vehicle or building collisions. Therefore, long-term indirect impacts to white-tailed kite would be **less than significant**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project were negative within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area. As such, coastal California gnatcatcher is not expected to occur. Therefore, indirect impacts to coastal California gnatcatcher would be **less than significant** and no avoidance or compensatory mitigation measures are required.

Burrowing Owl

Burrowing owl pellets were observed within the study area during 2022 protocol burrowing owl surveys; however, the sign was not fresh and indicated that burrowing owl may have been present during a previous season. Therefore, this species could occur prior to development of the Project. Future development of Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to burrowing owl resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. If burrowing owl is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to burrowing owl through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near burrowing owl or their habitat include chemical releases such as oils and grease from vehicles that could degrade habitat, increased human presence that could lead to unauthorized access to potential habitat for burrowing owl, and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for burrowing owl. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike has potential to nest within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to loggerhead shrike resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to loggerhead shrike would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting loggerhead shrike is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to loggerhead shrike through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to loggerhead shrike to **less than significant with mitigation incorporated**.

Long-Term: Loggerhead shrikes are relatively mobile and are not especially susceptible to impacts from vehicle or building collisions. Therefore, long-term indirect impacts to loggerhead shrikes would be **less than significant**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

Special-status fossorial small mammals have potential to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to fossorial small mammals resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any fossorial small mammals within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near fossorial small mammal species or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for fossorial small mammals; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for fossorial small mammals, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

American Badger

American badger has potential to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to American badger resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would result in identification and relocation of any American badger within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would minimize the effect of construction-related indirect impacts to American badger to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near American badger or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for American badger; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for American badger, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to American badger to **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Special-status lizards and snakes have potential to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to lizards and snakes resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any special-status lizards or snakes within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near lizards and snakes or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for lizards and snakes; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status lizards and snakes, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has potential to occur within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to nest resources for Crotch bumble bee resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; and adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to Crotch bumble bee would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would result in identification and avoidance of occupied nest resources for Crotch bumble bee within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would minimize the effect of construction-related indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near Crotch bumble bee nest resources include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for Crotch bumble bee; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for nesting Crotch bumble bee, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**.

Phases 4 and 5

Amphibians

Western Spadefoot

Western spadefoot has potential to occur within Phases 4 and 5 and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to western spadefoot resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and adverse effects from noise and vibration. Western spadefoot is typically belowground, so impacts from generation of fugitive dust, increased human presence, and from lighting during night-time construction would be less than significant. These potential construction-related indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, and requiring all vehicles and equipment be serviced in designated staging areas. In addition, Project implementation of **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would result in identification and relocation of any western spadefoot within areas potentially impacted by the Project, which would minimize indirect impacts from noise and vibration.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-4** (Pre-Construction Pond Check) would minimize the effect of construction-related indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near western spadefoot or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for western spadefoot; increased invasive plant species that may degrade habitat; and trampling of habitat and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to western spadefoot would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for western spadefoot. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to western spadefoot to **less than significant with mitigation incorporated**.

Birds

Fully Protected Raptors (White-Tailed Kite and Bald Eagle)

White-tailed kite has potential to nest within Phases 4 and 5 and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to nesting white-tailed kite resulting from construction activities include adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to white-tailed kite would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting white-tailed kite are identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence is minimized.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would minimize the effect of construction-related indirect impacts to nesting white-tailed kite to **less than significant with mitigation incorporated**.

Long-Term: White-tailed kite are relatively mobile and are expected to avoid the developed portions of the Project and instead occur within the proposed open space. For this reason, this species is not particularly susceptible to vehicle or building collisions. Therefore, long-term indirect impacts to white-tailed kite would be **less than significant**.

Coastal California Gnatcatcher

Protocol surveys for coastal California gnatcatcher conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to coastal California gnatcatcher resulting from construction activities include adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to coastal California gnatcatcher would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-11** (Coastal California Gnatcatcher Protocol Survey) and **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through identification of coastal California gnatcatcher, if present, and avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If coastal California gnatcatcher is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized.

Implementation of **MM-WCSP-BIO-11** (Coastal California Gnatcatcher Protocol Survey) and **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would minimize the effect of construction-related indirect impacts to coastal California gnatcatcher to **less than significant with mitigation incorporated**.

Long-Term: Coastal California gnatcatcher have lower mobility than other birds, but are expected to avoid the developed portions of the Project and instead occur within the proposed open space. For this reason, this species is not particularly susceptible to vehicle or building collisions. Therefore, long-term indirect impacts to coastal California gnatcatcher would be **less than significant**.

Burrowing Owl

Protocol surveys for burrowing owl conducted in 2022 as a part of the proposed Project did not include Phases 4 and 5. Future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to burrowing owl resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-12** (Burrowing Owl Protocol Surveys) would reduce potential indirect impacts to a less-than-significant level through identification and avoidance of burrowing owl within Phases 4 and 5. Furthermore, Project implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the breeding season, performance of a pre-construction burrowing owl survey if vegetation is removed during the breeding season, and preparation of a Burrowing Owl Protection Plan if burrowing owl is detected during the pre-construction survey. If burrowing owl is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to burrowing owl through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-7** (Pre-Construction Burrowing Owl Surveys and Avoidance) and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near burrowing owl or their habitat include chemical releases such as oils and grease from vehicles that could degrade habitat, increased human presence that could lead to unauthorized access to potential habitat for burrowing owl, and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owl would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-

IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with potential habitat for burrowing owl. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to burrowing owl to **less than significant with mitigation incorporated**.

Loggerhead Shrike

Loggerhead shrike has potential to nest within Phases 4 and 5, and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to loggerhead shrike resulting from construction activities include the release of chemical pollutants; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to loggerhead shrike would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) would reduce potential indirect impacts to a less-than-significant level through avoidance of vegetation removal during the nesting season and performance of a nesting bird survey if vegetation is removed during the nesting season. If nesting loggerhead shrike is identified, an adequate buffer will be implemented to ensure that effects from noise, vibration, and human presence are minimized. In addition, implementation of **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) will minimize indirect impacts to loggerhead shrike through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night.

Implementation of **MM-WCSP-BIO-6** (Pre-Construction Nesting Bird Survey and Protection) and **MM-WCSP-BIO-2** (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to loggerhead shrike to **less than significant with mitigation incorporated**.

Long-Term: Loggerhead shrikes are relatively mobile and are not especially susceptible to impacts from vehicle or building collisions. Therefore, long-term indirect impacts to loggerhead shrikes would be **less than significant**.

Mammals

Fossorial Small Mammals (Dulzura Pocket Mouse, Northwestern San Diego Pocket Mouse, San Diego Desert Woodrat, Southern Grasshopper Mouse, Los Angeles Pocket Mouse)

Special-status fossorial small mammals have potential to occur within Phases 4 and 5, and future development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to fossorial small mammals resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any fossorial small mammals within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near fossorial small mammal species or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for fossorial small mammals; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to fossorial small mammals would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for fossorial small mammals, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to fossorial small mammals to **less than significant with mitigation incorporated**.

American Badger

American badger has potential to occur within Phases 4 and 5, and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to American badger resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status

resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would result in identification and relocation of any American badger within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-9** (Pre-Construction American Badger Surveys and Avoidance) would minimize the effect of construction-related indirect impacts to American badger to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near American badger or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for American badger; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to American badger would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for American badger, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to American badger to **less than significant with mitigation incorporated**.

Reptiles

Lizard and Snakes (Southern California Legless Lizard, California Glossy Snake, Coastal Tiger Whiptail, Red Diamondback Rattlesnake, Blainville's Horned Lizard, Coast Patch-Nosed Snake)

Special-status lizards and snakes have potential to occur within Phases 4 and 5, and future development has the potential to result in indirect impacts to these species.

Construction-Related: Potential short-term or temporary indirect impacts to lizards and snakes resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; adverse effects from noise, vibration, and increased human presence; and night-time lighting. These potential construction-related indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status

resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP, implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would result in identification and relocation of any special-status lizards or snakes within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-8** (Pre-Construction Clearance Survey) would minimize the effect of construction-related indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near lizards and snakes or their suitable habitat include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for lizards and snakes; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for special-status lizards and snakes, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to special-status lizards and snakes to **less than significant with mitigation incorporated**.

Invertebrates

Crotch Bumble Bee

Crotch bumble bee has potential to occur within Phases 4 and 5 and future development has the potential to result in indirect impacts to this species.

Construction-Related: Potential short-term or temporary indirect impacts to nest resources for Crotch bumble bee resulting from construction activities include the release of chemical pollutants; generation of fugitive dust; and adverse effects from noise, vibration, and increased human presence. These potential construction-related indirect impacts to Crotch bumble bee would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, development of a SWPPP,

implementation of standard dust control measures, requiring all vehicles and equipment be serviced in designated staging areas, and ensuring that construction will not be conducted at night. In addition, Project implementation of **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would result in identification and avoidance of occupied nest resources for Crotch bumble bee within areas potentially impacted by the Project, which would minimize indirect impacts from noise, vibration, and increased human presence.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-10** (Pre-Construction Survey for Crotch Bumble Bee) would minimize the effect of construction-related indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**.

Long-Term: Potential long-term indirect impacts that could result from development near Crotch bumble bee nest resources include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence that could lead to unauthorized access to potential habitat for Crotch bumble bee; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to lizards and snakes would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to areas with potential habitat for nesting Crotch bumble bee, and stipulations that night-lighting will not be directed towards open space areas. In addition, **MM-WCSP-BIO-5** (Open Space Conservation) will further buffer effects of urbanization through establishment of a minimum 1,000-foot corridor of open space along Wilson Creek.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) and **MM-WCSP-BIO-5** (Open Space Conservation) would minimize the effect of long-term indirect impacts to Crotch bumble bee to **less than significant with mitigation incorporated**.

6.3.2 Impact BIO-2: Sensitive Vegetation Communities

6.3.2.1 Direct Impacts

As described in Section 5.1, a total of 21 vegetation communities or land cover types were mapped within the study area. Of these, five communities are considered special-status vegetation communities by CDFW (CDFW 2022d) and sensitive under CEQA: Palmer's goldenbush scrub, white sage scrub, California sycamore woodlands, basket bush–river hawthorne–desert olive patches, and scale broom scrub. A total of 2.3 acres of sensitive vegetation communities, including 0.2 acres within the Wilson Creek Estates – Wine Country area; up to 1.2 acres within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area; and up to 1.0 acre within Phases 4 and 5, would be impacted by the Project, as listed in Table 8. Impacts to these five vegetation communities would be significant absent mitigation. In addition, the proposed Project would result in impacts to riparian and streambed vegetation communities. An impacts analysis for riparian and streambed resources will be included under Section 6.3.3 of this document—Section 6.3.2 will only discuss sensitive vegetation communities under CDFW.

Table 8. Direct Impacts to Special-Status Vegetation Communities within the Project Site

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[1]			
			Wilson Creek Estates – Wine Country Area	Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area	Phases 4 and 5	Grand Total
Scrub						
Palmer's goldenbush scrub[2]	*Ericameria palmeri* Alliance	*Ericameria palmeri*	0.0	0.0	0.3	0.3
White sage scrub[2]	*Salvia apiana* Alliance	*Salvia apiana*	<0.01	0.0	0.0	<0.01
		Salvia apiana–Hesperoyucca whipplei	0.0	0.0	0.0	0.0
		Scrub subtotal	*<0.01*	*0.0*	*0.3*	*0.3*
Riparian						
California sycamore woodlands[2]	*Platanus racemosa–Quercus agrifolia* Alliance	*Platanus racemosa–Baccharis saliciolia*	0.2	0.0	0.0	0.2
Basket bush–river hawthorn–desert olive patches[2]	*Rhus trilobata-Crataegus rivularis–Forestiera pubescens Alliance*	*Sambucus nigra*	0.0	0.0	0.7	0.7
Scale broom scrub[2]	*Lepidospartum squamatum* Alliance	Eriogonum fasciculatum–Lepidospartum squamatum alluvial fan	0.0	1.2	0.0	1.2
		Lepidospartum squamatum–Amsinckia menziesii	<0.01	0.0	0.0	<0.01
		Lepidospartum squamatum–ephemeral annuals	0.0	0.01	0.0	0.01
		Riparian subtotal	*0.2*	*1.2*	*0.7*	*2.1*
		Grand Total[1]	**0.2**	**1.2**	**1.0**	**2.3**

Notes:

1 Totals may not sum due to rounding.

2 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3). (CDFW 2020)

Wilson Creek Estates – Wine Country Area

Updated vegetation mapping conducted in 2022 within the Wilson Creek Estates – Wine Country area identified 0.2 acres of impacts to California sycamore woodlands and negligible (less than 0.01 acres) impacts to scale broom scrub and white sage scrub. Impacts to 0.2 acres of California sycamore woodland would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-13** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level through the requirement to provide compensatory mitigation and obtain permits from each of the regulatory agencies prior to ground-disturbing activities. Therefore, direct impacts to special-status vegetation communities would be **less than significant with mitigation incorporated**.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Vegetation mapping conducted in 2022 within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area identified 1.2 acres of scale broom scrub that could be impacted by future development. Impacts to scale broom scrub would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-13** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level through full avoidance of scale broom scrub. If full avoidance by future development is not feasible, then compensatory mitigation will be provided and permits will be required from each of the regulatory agencies prior to ground-disturbing activities. Therefore, direct impacts to special-status vegetation communities would be **less than significant with mitigation incorporated**.

Phases 4 and 5

Vegetation mapping conducted in 2022 within Phases 4 and 5 identified 0.3 acres of Palmer's goldenbush scrub and 0.7 acres of basket bush–river hawthorn–desert olive patches that could be impacted by future development. This community comprises two individual patches that are disconnected from other Palmer's goldenbush scrub in the region. Impacts to this community is not expected to result in adverse effects to the community regionally. As such, future potential impacts to Palmer's goldenbush scrub would be **less than significant**.

6.3.2.2 Indirect Impacts

Development of Wilson Creek Estates – Wine Country area and future development of the remainder of the Project has the potential to result in indirect impacts to special-status vegetation communities.

Construction-Related

Special-status vegetation communities may be indirectly impacted during future construction of the proposed Project. Potential short-term or temporary indirect impacts to special-status vegetation communities resulting from construction activities include inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and the adverse effect of invasive plant species. These potential construction-related, indirect impacts to special-status plant species would be potentially significant absent mitigation.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to special-status vegetation species to **less than significant with mitigation incorporated**.

Long-Term

Potential long-term, indirect impacts that could result from development near special-status vegetation communities include chemical releases such as oils and grease from vehicles that could degrade habitat; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. These potential long-term indirect impacts to special-status plant species would be potentially significant absent mitigation.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of long-term indirect impacts to special-status vegetation communities to **less than significant with mitigation incorporated**.

6.3.3 Impact BIO-3: State or Federally Protected Wetlands

The study area does not contain state or federal wetland waters. The study area supports 5.6 acres of non-wetland waters potentially regulated by USACE (Figures 13-1 through 13-13, Impacts to Potential Jurisdictional Aquatic Resources). Additionally, 5.8 acres of non-wetland waters (below OHWM) fall under RWQCB jurisdiction, and 19.2 acres of CDFW streambed (below and above OHWM, to top of bank) and associated riparian habitat occur in the study area.

6.3.3.1 Direct Impacts

Wilson Creek Estates – Wine Country Area

An updated aquatic resources delineation conducted in 2022 within the Wilson Creek Estates – Wine Country area identified impacts to aquatic resources, as listed in Table 9; however, the ultimate decisions on the amount and location of jurisdictional resources is made by the resource agencies (i.e., USACE, CDFW, and RWQCB). Impacts to aquatic resources from development of Wilson Creek Estates – Wine Country area would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-13** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level through the requirement to provide compensatory mitigation and obtain permits from each of the regulatory agencies prior to ground-disturbing activities. Therefore, direct impacts to aquatic resources would be **less than significant with mitigation incorporated**.

Table 9. Impacts to Aquatic Resource Within the Wilson Creek Estates Wine Country Area

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/ CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
NWW-1	Scale broom scrub	0.0	0.0	0.0	0.0
	Unvegetated wash and river bottom	0.01	0.0	0.03	0.0

Table 9. Impacts to Aquatic Resource Within the Wilson Creek Estates Wine Country Area

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/ CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
NWW-2	Unvegetated wash and river bottom	0.09	0.0	0.32	0.0
RIP-1	Scale broom scrub	0.0	0.0	0.0	<0.01
RIP-2	Mulefat thickets	0.0	0.0	0.0	0.43
RIP-3	California sycamore woodlands	0.0	0.0	0.0	0.18
	Grand Total[1]	**0.11**	**0.0**	**0.35**	**0.62**

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.

[1] Totals may not sum due to rounding.

Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country area

An aquatic resources delineation conducted in 2022 within Phases 1, 2, and 3 outside of the Wilson Creek Estates – Wine Country area identified impacts to aquatic resources, as listed in Table 10; however, the ultimate decisions on the amount and location of jurisdictional resources is made by the resource agencies (i.e., USACE, CDFW, and RWQCB). Impacts to aquatic resources from future development would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-13** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level through full avoidance of aquatic resources. If full avoidance by future development is not feasible, then compensatory mitigation will be provided and permits will be required from each of the regulatory agencies prior to ground-disturbing activities. Therefore, direct impacts to aquatic resources would be **less than significant with mitigation incorporated**.

Table 10. Impacts to Aquatic Resource Within Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/ RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/ CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
NWW-1	Scale broom scrub	0.0	0.0	0.38	0.0
	Unvegetated wash and river bottom	1.66	0.0	1.94	0.0
NWW-3	Unvegetated wash and river bottom	0.0	0.23	0.0	0.0
NWW-4	Unvegetated wash and river bottom	1.02	0.0	0.44	0.0

Table 10. Impacts to Aquatic Resource Within Phases 1, 2, and 3 Outside of the Wilson Creek Estates – Wine Country Area

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/ RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/ CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
RIP-1	Scale broom scrub	0.0	0.0	0.0	0.79
	Grand Total[1]	**2.68**	**0.23**	**2.76**	**0.79**

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.
1 Totals may not sum due to rounding.

Phases 4 and 5

An aquatic resources delineation conducted in 2022 within Phases 4 and 5 of the Project identified impacts to aquatic resources, as listed in Table 11; however, the ultimate decisions on the amount and location of jurisdictional resources is made by the resource agencies (i.e., USACE, CDFW, and RWQCB). Impacts to aquatic resources from future development would be significant absent mitigation.

Project implementation of **MM-WCSP-BIO-13** (Aquatic Resource Avoidance, Permitting, and Protection) would reduce potential direct impacts to a less-than-significant level through full avoidance of aquatic resources. If full avoidance by future development is not feasible, then compensatory mitigation will be provided and permits will be required from each of the regulatory agencies prior to ground-disturbing activities. Therefore, direct impacts to aquatic resources would be **less than significant with mitigation incorporated**.

Table 11. Impacts to Aquatic Resource Within Phases 4 and 5

Feature Name	Vegetation Community or Land Cover Type	Non-Wetland Waters of the United States (USACE/ RWQCB/ CDFW) Acreage	Non-Wetland Waters of the State (RWQCB/CDFW)	Jurisdictional Streambed (CDFW Only)	Jurisdictional Riparian (CDFW Only)
NWW-4	Unvegetated wash and river bottom	0.39	0.0	0.61	0.0
NWW-5	Unvegetated wash and river bottom	0.94	0.0	2.11	0.0
RIP-4	Basket bush - river hawthorn - desert olive patches	0.0	0.0	0.0	0.70
	Grand Total[1]	**1.33**	**0.0**	**2.72**	**0.70**

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.
1 Totals may not sum due to rounding.

6.3.3.2 Indirect Impacts

Development of Wilson Creek Estates – Wine Country area and future development of the remainder of the Project has the potential to result in indirect impacts to aquatic resources.

Construction-Related

Jurisdictional waters of the United States/state may be indirectly impacted during construction. Potential short-term or temporary indirect impacts to jurisdictional waters resulting from construction activities include the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; the release of chemical pollutants; and unintentional clearing, trampling, or grading outside of the proposed construction zone. Construction-related indirect impacts to jurisdictional waters would be potentially significant.

MM-WCSP-BIO-2 (Construction Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize construction-related indirect impacts through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, implementation of standard dust control measures, development of a SWPPP, and requiring all vehicles and equipment be serviced in designated staging areas. Therefore, construction-related indirect impacts to aquatic resources would be **less than significant with mitigation incorporated**.

Long-Term

Potential long-term indirect impacts that could result from development near waters of the United States/state communities include pollutants that could degrade water quality and habitat; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. Long-term indirect impacts to jurisdictional waters would be potentially significant.

MM-WCSP-BIO-3 (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize long-term indirect impacts by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, and incorporation of barriers to prevent unauthorized public access to areas with state and federally protected waterways. Therefore, long-term indirect impacts to aquatic resources would be **less than significant with mitigation incorporated**.

6.3.4 Impact BIO-4: Wildlife Corridors and Habitat Linkages

This threshold is not separated by Project phase because to analyze this question these Project components need to be evaluated together.

6.3.4.1 Direct Impacts

The Project site does not contain nursery sites, such as bat colony roosting sites or colonial bird nesting areas. The study area is not located within an area identified as a wildlife corridor or linkage; however, the Final EIR for the Yucaipa General Plan Update identified Wilson Creek as a potential local wildlife linkage (Placeworks 2016). **MM-GP-4-6** (Habitat Connectivity) states that a habitat connectivity/corridor evaluation should be conducted over projects that affect local wildlife corridors, particularly areas between Yucaipa Regional Park, Crafton Hills Open

Space, Wildwood Canyon State Park, and El Dorado Ranch Park. The study area is located in open space between these parks and open space areas identified in **MM-GP-4-6**.

Development of Wilson Creek Estates – Wine Country area and future development of the Project may interfere with the movement of native wildlife that uses Wilson Creek as a local linkage. Wilson Creek bisects the Project site and is not expected to be directly impacted by Wilson Creek Estates – Wine Country area or future development for the Project; however, development is expected to encroach into its associated uplands, which may constrain wildlife use of the area.

Wilson Creek Estates – Wine Country area proposes open space on either side of Wilson Creek, creating a corridor that ranges from approximately 300 feet to 970 feet in width. Wilson Creek Estates – Wine Country area also includes development of a manufactured lake and a water quality control basin south of Wilson Creek. The creation of these features has potential to constrain Wilson Creek at the western side of the Project; however, the proposed land uses are expected to continue to facilitate some wildlife movement through this segment of Wilson Creek. Wilson Creek Estates – Wine Country area contains a planned roadway improvement to Jefferson Street that will intersect Wilson Creek at the western end of the Project. Development of this roadway has potential to impact local wildlife movement along Wilson Creek. Impacts to movement along Wilson Creek would be potentially significant absent mitigation. Project implementation of **MM-WCSP-BIO-14** (Culvert Undercrossing) will minimize potential impacts to this corridor through creation of an undercrossing that will facilitate wildlife movement beneath the roadway.

Future development of the rest of the Project identifies open space for the remainder of the Wilson Creek alignment. According to the Land Use Plan (Figure 2A), Wilson Creek will be buffered by open space that will create a corridor ranging from approximately 430 to 660 feet wide. The Yucaipa Valley Water District owns 2.4 acres of land at the upstream end of Wilson Creek. Permitted land uses within this area include natural channels, levees, spreading grounds, detention basins, roads, trails, culverts, and diversion drainages; natural preserves and mitigation areas, including habitat restoration; and wildlife nature preserves, water bodies, general recreation, leisure, and ornamental parks open to the general public. The land also has a conditional use permit for public utilities and public services or use structures. Future plans for this land are currently unknown; however, future projects will undergo their own CEQA review and must demonstrate that they will not significantly impact wildlife corridors and linkages. Given that future development plans for open space outside of Wilson Creek Estates – Wine Country area are currently conceptual, specific impacts to wildlife corridors and habitat linkages are not known and therefore potentially significant. Project implementation of **MM-WCSP-BIO-5** (Open Space Conservation) would minimize impacts to wildlife corridors and habitat linkages through a commitment for future development to contribute to a minimum 1,000-foot corridor along Wilson Creek.

The proposed Project also has potential to facilitate local wildlife movement north to south through the Project site and future development may constrain this movement. The configuration of the Land Use Plan (Figure 2A) proposes future agricultural uses to form a north to south strip along the western portion of the Project site. Land use in this area is designated for vineyards and wineries and is expected to consist of both permanent structures (25% of acreage per lot) that would constrict wildlife movement and also vineyards (75% of acreage per lot) that will continue to allow for most wildlife to pass through from north to south. In addition, proposed residential development will be clustered throughout the Project site and occur at a low density (2 dwelling units per acre or 4.6 dwelling units per acre). Ornamental plantings, night lightings, and impermeable fences placed around agricultural and residential uses have the potential to impact wildlife movement north to south. Implementation of **MM-WCSP-BIO-15** (Wildlife Movement) would further codify the recommendations in **MM-GP-4-6** (Habitat Connectivity) and includes measures that will encourage wildlife-passable fence designs, shielded night lighting, and minimal landscaping.

Implementation of **MM-WCSP-BIO-5** (Open Space Conservation), **MM-WCSP-BIO-14** (Culvert Undercrossing), and **MM-WCSP-BIO-15** (Wildlife Movement) would minimize the effect of direct impacts to wildlife corridors and habitat linkages to **less than significant with mitigation incorporated**.

6.3.4.2 Indirect Impacts

Development of Wilson Creek Estates – Wine Country area and future development of the remainder of the Project has the potential to result in indirect impacts to wildlife movement.

Construction-Related

Potential short-term or temporary indirect impacts to wildlife movement resulting from construction activities include the adverse effects from noise, vibration, and increased human presence, as well as night-time lighting. These potential construction-related indirect impacts to wildlife movement would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level through biological monitoring, requirement of a Worker Environmental Awareness Training that will cover the special-status resources and mitigation requirements for the Project, delineation of Project boundaries, and ensuring that construction will not be conducted at night. In addition, the Project will be constructed in five phases over 20 years and therefore construction would not be expected to significantly disrupt wildlife movement due to ambient noise conditions and the ability for wildlife to continue to move around the construction area.

Implementation of **MM-WCSP-BIO-2** (Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of construction-related indirect impacts to wildlife corridors and habitat linkages to **less than significant with mitigation incorporated**.

Long-Term

Potential long-term indirect impacts to wildlife movement include chemical releases such as oils and grease from vehicles that could degrade habitat; increased human presence; increased invasive plant species that may degrade habitat; trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion; and night-time lighting. These potential long-term indirect impacts to would be potentially significant absent mitigation.

Project implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would reduce potential indirect impacts to a less-than-significant level by requiring measures to ensure runoff is not altered from existing conditions and toxicants are not discharged, restoration of temporary impacts, preparation of landscaping plans that will emphasize native species and not include species from the Cal-IPC California Invasive Plant Inventory, incorporation of barriers to prevent unauthorized public access to avoided open space, and stipulations that night-lighting will not be directed towards open space areas.

Implementation of **MM-WCSP-BIO-3** (Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources) would minimize the effect of long-term indirect impacts to wildlife movement to **less than significant with mitigation incorporated**.

6.3.5 Impact BIO-5: Local Policies and Ordinances

City of Yucaipa Development Code

The City of Yucaipa's Municipal Development Code, Division 9, Plant Protection and Management, includes ordinances related to the removal of trees, including oak trees, as well as the removal of plants within 200 feet of a streambank. The Project site contains trees, including oak trees, and streambanks within its boundary. Implementation of **MM-WCSP-BIO-16** (Tree Removal Permit) will ensure that a plot plan is provided to the City and all tree removal is preceded by receipt of a tree removal permit from the City.

With implementation of **MM-WCSP-BIO-16** (Tree Removal Permit), the proposed Project will not be in conflict with the City of Yucaipa Development Code and impacts would be **less than significant with mitigation incorporated**.

City of Yucaipa General Plan

The City's General Plan includes Goals PR-3, PR-4, and PR-5 related to biological resources. The proposed Project must comply with the General Plan and impacts would be **less than significant**.

6.3.6 Impact BIO-6: Habitat Conservation Plans

The Project does not overlap any habitat conservation plans. Therefore, there would be **no impact** to habitat conservation plans.

7 Project Mitigation

7.1 General Plan EIR Mitigation Measures

The following mitigation measures reflect the final Mitigation Measures included in the Yucaipa General Plan Update Final as certified and included in the Mitigation Monitoring and Reporting Program (MMRP) for the General Plan Update (Placeworks 2016b). The notations below each mitigation measure describe how the measure has been implemented by means of this Biological Resources Technical Report or has been integrated into the mitigation measures for the Project as detailed in Section 7.3 below.

MM-GP-4-1: (Biological Resource Surveys) The City of Yucaipa shall require applicants for future development projects that disturb undeveloped land to conduct a biological resources survey to determine if sensitive biological resources would be impacted. The biological resources survey shall be prepared by a qualified biologist. The biological resources survey shall include, but not be limited to:

- An analysis of available literature and biological databases, such as CNDDB, to determine sensitive biological resources that have been reported historically from the proposed development project vicinity
- A review of current land use and land ownership within the proposed development project vicinity
- An assessment and mapping of vegetation communities present within the proposed development project vicinity, including adjoining habitat areas susceptible to direct and indirect impacts offsite, by following the then current standards
- An evaluation of potential local and regional wildlife movement corridors
- A general assessment of potential jurisdictional areas, including wetlands and riparian habitats

If the proposed development project site supports vegetation communities that may provide habitat for plant or wildlife species, a focused habitat assessment shall be conducted by a qualified biologist to determine the potential for special status plant and/or animal species to occur within or adjacent to the proposed development project area.

If one or more special status species has the potential to occur within the proposed development project area, focused species surveys shall be conducted to determine the presence/absence of these species to adequately evaluate potential direct and/or indirect impacts to these species. Focused species surveys shall be conducted by a qualified biologist, during the season(s) and time(s) at which the species in question is most likely to be present and identifiable (e.g., during blooming and/or fruiting for plants, at dawn and dusk for crepuscular species, during times of year when migratory species are expected to be present in the region, etc.). The focused surveys shall follow the protocols recommended by the California Department of Fish and Wildlife (CDFW) and/or the United States Fish and Wildlife Service (USFWS). In cases where there are no specific recommended survey methodology, survey protocols based on the best available scientific knowledge shall be established.

If construction activities are not initiated within one year of focused surveys being completed, additional pre-construction special status species surveys may be required to assure impacts are avoided or minimized to the extent feasible. If pre-construction activities are required, a qualified

biologist would perform these surveys as required for each special status species that is known to occur or has a potential to occur within or adjacent to the proposed development project area.

The results of the biological survey shall be presented in a biological survey letter report for proposed development projects with no significant impacts, or in a biological technical report for proposed development projects with significant impacts that require mitigation to reduce the impacts to below a level of significance.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

The results of this BTR serve as documentation of the completion of the conditions outlined in MM-GP-4-1. A biological resources survey, including preparation of a vegetation map and a habitat assessment for special-status species, was conducted throughout the Project site. Focused surveys were conducted within Phases 1, 2, and 3 for coastal California gnatcatcher, burrowing owl, and special-status plants. Focused surveys were not conducted for Phases 4 and 5. Measures stipulating that these surveys occur prior to Phases 4 and 5 construction activities have been incorporated into this BTR as MM-WCSP-BIO-1, MM-WCSP-BIO-11, and MM-WCSP-BIO-12. MM-GP-4-2 (Flagging): If sensitive biological resources are identified within or adjacent to the proposed development project area, the construction limits shall be clearly flagged to assure impacts to sensitive biological resources are avoided or minimized to the extent feasible. Prior to implementing construction activities, a qualified biologist shall verify that the flagging clearly delineates the construction limits and sensitive resources to be avoided.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-2. MM-GP-4-3 (Worker Education): If sensitive biological resources are known to occur within or adjacent to the proposed development project area, the City of Yucaipa shall require applicants to contract with a qualified biologist to develop and implement a project-specific contractor training program to educate project contractors on the sensitive biological resources within and adjacent to the proposed development project area and on measures being implemented to avoid and/or minimize impacts to these species.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-2.

MM-GP-4-4 (Monitoring): If sensitive biological resources are present within or adjacent to the proposed development project area and impacts may occur from implementation of construction activities, a qualified biological monitor may be required during a portion or all of the construction activities to ensure that impacts to the sensitive biological resources are avoided or minimized to the extent feasible. The specific biological monitoring requirements shall be evaluated on a project-by-project basis. The qualified biological monitor shall be approved by the City on a project-by-project basis based on applicable experience with the sensitive biological resources that may be impacted by the proposed development.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-2.

MM-GP-4-5 (Jurisdictional Delineation). The City of Yucaipa shall require applicants of development project that have the potential to affect jurisdictional resources to contract with a qualified biologist to conduct a jurisdictional delineation following the methods outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008) to map the extent of wetlands and non-wetland waters, determine jurisdiction, and assess potential impacts. The results of the delineation shall be presented in a wetland delineation letter report and shall be incorporated into the CEQA document(s) required for approval and permitting of the proposed development project.

Applicants of development projects that have the potential to impact jurisdictional features, as identified in the wetland delineation letter report, shall obtain permits and authorizations from the Army Corps of Engineers, California Department of Fish and Wildlife, and/or Santa Ana Regional Water Quality Control Board. The regulatory agency authorization(s) would include impact avoidance and minimization measures as well as mitigation measures for unavoidable impacts. Specific avoidance, minimization, and mitigation measures for impacts to jurisdictional resources shall be determined through discussions with the regulatory agencies during the proposed development project permitting process and may include monetary contributions to a mitigation bank or habitat creation, restoration, or enhancement.

Project Compliance and/or associated Project Mitigation Measures (Section 7.3):

The results of this BTR serve as documentation of the completion of the conditions outlined in MM-GP-4-5. A jurisdictional delineation, also known as an aquatic resources delineation, was conducted throughout the Project site, the results for which are included in this BTR. Conditions stipulated in this measure for regulatory permitting and avoidance and minimization measures have also been incorporated into this BTR as MM-WCSP-BIO-2, MM-WCSP-BIO-3, and MM-WCSP-BIO-13.

MM-GP-4-6 (Habitat Connectivity): The City of Yucaipa shall require a habitat connectivity/wildlife corridor evaluation for future development projects that may impact existing connectivity areas and wildlife linkages identified in Figure 5.4-3, Wildlife Corridors, of the Draft EIR. The results of the evaluation shall be incorporated into the project's biological report required under Mitigation Measure 4-1. The habitat connectivity evaluation shall assess the potential for the project to adversely affect the San Bernardino Mountains to San Jacinto Mountains Connection, identified by the California Essential Habitat Connectivity Project, and local and regional wildlife corridors in Yucaipa, including areas within and between the Yucaipa Regional Park, Crafton Hills Open Space, Wildwood Canyon State Park, and El Dorado Ranch Park. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the City shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:

- Adhere to low density zoning standards to the greatest extent practicable

- Encourage clustering of development
- Avoid known sensitive biological resources
- Provide shielded lighting adjacent to sensitive habitat areas
- Encourage development plans that maximize wildlife movement
- Provide buffers between development and wetland/riparian areas
- Protect wetland/riparian areas through regulatory agency permitting process
- Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries
- Encourage preservation of native habitat on the undeveloped remainder of developed parcels
- Minimize road/driveway development to help prevent loss of habitat due to roadkill and habitat loss
- Use native, drought-resistant plant species in landscape design
- Encourage participation in local/regional recreational trail design effort

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

The results of this BTR serve as documentation of the completion of the conditions outlined in MM-GP-4-6. An evaluation of habitat connectivity and wildlife movement was conducted throughout the Project site. In order to avoid potential impacts to wildlife movement, the conditions stipulated in this measure have also been incorporated into this BTR as MM-WCSP-BIO-5, MM-WCSP-BIO-14, and MM-WCSP-BIO-15.

MM-GP-4-7 (Wildlife Hazards): During construction activities, workers shall reduce potential wildlife hazards by implementing the following preventative measures to ensure wildlife does not become trapped, entangled, injured, or poisoned by certain construction structures, equipment, and/or substances:

1. Structures in which wildlife may become trapped (e.g., open pipes, pits, trenches, etc.) shall be tightly covered at the end of each work day. If covering the structure is not possible, an escape ramp shall be provided to allow any wildlife that falls in to safely escape.
2. Debris piles, construction materials, equipment, and other items that may be used as wildlife refuge shall be inspected for wildlife at the start of each work day and prior to disturbance. If wildlife is discovered, it shall either be moved out of harm's way by a qualified biologist, or allowed to move off of the project site on its own.
3. Nets and mesh shall be made of loose weave material that is not fused at the intersections of the weave, as nets with welded weaves present an entanglement risk.
4. Toxic materials and garbage shall be removed from the work site and safely stored or disposed of at the end of each work day.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-2.

MM-GP-4-8 (Open Space Adjacency): To reduce indirect impacts, future proposed projects constructed adjacent to open space areas shall implement the following measures:

1. If the project has the potential to affect sensitive biological resources (e.g., nesting birds) by increasing ambient Noise levels, a qualified biologist shall be contracted to implement appropriate avoidance measures, such as sound walls, buggers, and changes in project phasing or timing.
2. Landscaping in projects near open space areas shall avoid the use of exotic plants, particularly invasive species, to the greatest extent possible to prevent infestation of the adjacent lands.
3. Open space-adjacent projects with the potential to introduce or increase the presence of domestic animals, such as cats and dogs, or animals associated with urban development (e.g., rats), shall include an assessment of the potential impacts associated with an increased in domestic and/or urban animals in the area. Appropriate avoidance and minimization measures may include, but are not limited to, the use of exclusion fencing, requirements to keep pets leashed, feral animal control programs, spay/neuter programs, homeowner education programs, and programs designed to minimized accessibility of pest attractants (e.g., food waste) shall be considered.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-3 and MM-WCSP-BIO-6.

MM-GP-4-9 (Nesting Bird Survey): The City of Yucaipa shall require applicants for future development projects to contract with a qualified biologist to conduct a preconstruction general nesting bird survey within all suitable nesting habitats that may be impacted by active construction during general avian breeding season (February 1 through August 31) or pursuant to current generally accepted protocols. The preconstruction surveys shall be conducted no more than 3 days prior to initiation of construction. If no active avian nests are identified within the proposed development project area or within a 300-foot buffer of the proposed development project area, no further mitigation is necessary. If active nests of avian species covered by the MBTA are detected within the proposed development project area or within a 300-foot buffer of the proposed development project area, construction shall be halted until the young have fledged, until a qualified biologist has determined the nest is inactive, or until appropriate mitigation measures that respond to the specific situation have been developed and implemented in consultation with the regulatory agencies. Based on the discretion of the qualified biologist, the 300-foot buffer may be expanded as appropriate to the species.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-6.

MM-GP-4-9 (Bats): If a project is determined to have the potential to affect bat roosting habitat (e.g., bridges, culverts, palm trees, hollow trees, buildings, crevices, caves, mines, etc.), potential roosts shall be surveyed by a qualified bat biologist prior to initiating project activities. If bats are found, the following avoidance measures shall be implemented:

- If bats are present or potentially present, then work on top of, under, around, or near the roosting structure(s) shall be scheduled outside the bat maternity season (general between March 1 and September 1 with variations depending on species).
- Gasoline and diesel engines shall not be stored or operated under any bridge.
- Night work, or use of night lighting, shall be avoided within the vicinity of the roosting structure(s).
- Exclusionary devices shall not be used if bats may be raising young (e.g., during bat maternity season). If exclusionary devises are used, they shall not contain mesh components that may entangle and/or injure bats. Exclusionary devices shall only be used following consultation with and approval by the CDFW, and under the direct guidance of a CDFW-approved bat biologist.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

The results of this BTR serve as documentation of the completion of the conditions outlined in MM-GP-4-9. No special-status bats were determined to have a moderate or high potential to occur and therefore these species were not analyzed within the BTR and the conditions within this measure are not applicable to the BTR.

7.2 Wilson Creek Estates Residential Subdivision EIR Mitigation Measures

The following mitigation measures are included within the Wilson Creek Estates Final EIR (AECOM 2016). These measures will be incorporated into the MMRP for the Project.

MM-WCE-BIO-1 (Vegetation Clearing): The property owner or Project contractor will be responsible to schedule vegetation clearing and grading activities outside of the typical avian nesting season (February 15 through August 31, or as determined by a qualified biologist based on observations in the field) to the maximum extent practical in order to comply with the MBTA and relevant sections of the California FGC. If vegetation clearing during the breeding season is unavoidable, avian nesting surveys and protection must be implemented as provided in MM-WCE-BIO-5.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-6.

MM-WCE-BIO-2 (Wilson Creek Estates Rare Plant Surveys): Due to their potential for occurrence on the site, additional surveys for sensitive plants, including slender-horned spineflower, white-bracted spineflower, Parry's spineflower, and Plummer's mariposa lily, shall be completed during the spring blooming period prior to final map recordation and prior to construction of grading for common areas and streets, or of individual lots. The blooming period for Parry's spineflower is April through June, and Plummer's mariposa lily is May through July. Surveys during May would encompass both species; however, known reference populations should be visited to determine if April/May for Parry's spineflower would be better and another survey in June should occur to locate Plummer's mariposa lily. Should surveys indicate of the presence of these species, the Project proponent shall contact CDFW to determine appropriate strategies. Acceptable mitigation options may include:

- Avoidance of sensitive plant locations;
- Payment of an in-lieu fee; or,
- Replacement of plants. Ground disturbance in areas where sensitive plants have been documented shall not be allowed to proceed until a mitigation option commensurate with the level of impact has been selected and approved by the City.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

The results of this BTR serve as documentation of the completion of the conditions outlined in MM-WCE-BIO-2. Focused surveys for special-status plants were conducted within Phases 1, 2, and 3 of the Project. Focused surveys were not conducted for Phases 4 and 5. A measure stipulating that focused surveys for special-status plants occur prior to Phases 4 and 5 construction activities has been incorporated into this BTR as MM-WCSP-BIO-1.

MM-WCE-BIO-3 (Flagging): During Project grading activities, the limits of grading and construction activities within the Project footprint shall be clearly delineated with temporary staking, flagging, or similar materials by the property owner or Project contractor. Grading of the Project footprint shall be minimized to the greatest extent feasible and access to it shall be via preexisting/maintained access routes to the greatest extent possible.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-2.

MM-WCE-BIO-4 (Waters Permitting): Prior to the issuance of grading permits for any ground disturbing activities occurring in areas that contain FEMA 100-year flood zones or regulated aquatic resources such as washes, streams, or wetlands, the developer or landowner shall either: 1) Obtain federal and/or state permits authorizing the proposed work, including a Clean Water Act Section 404 Permit, Clean Water Act Section 401 Water Quality Certification, Lake/Streambed Alteration

Agreement, and/or Waste Discharge Requirements; or, 2) Obtain statements from the U.S. Army Corps of Engineers, CDFW, and Santa Ana RWQCB indicating that such permits are not required, and provide these statements to the City. A grading permit shall not be issued, and no vegetation shall be removed from these areas, until the conditions above are satisfied. If federal or State permits are obtained, the permittee shall comply with all permit conditions when implementing the proposed activities, including any seasonal timing restrictions, impact avoidance measures, limitations on construction means and methods, site restoration, compensatory mitigation, and reporting requirements.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

Conditions stipulated in this measure for regulatory permitting and avoidance and minimization measures have also been incorporated into this BTR as MM-WCSP-BIO-2, MM-WCSP-BIO-3, and MM-WCSP-BIO-13.

MM-WCE-BIO-5 (Wilson Creek Estates Nesting Bird Survey): Within 72 hours prior to vegetation clearing or grading that would occur during the avian breeding season (typically February 1 through August 31 in the Project region, or as determined by a qualified biologist based on observations in the field), the developer shall have a City-approved biologist conduct a survey to determine if active nests of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code are present in the disturbance zone or within 200 feet (500 feet for raptors or listed species) of the disturbance zone. If active nests are detected, clearing and construction within 200 feet of the nest (500 feet for raptors and listed species) shall be postponed until the nest is vacated and juveniles have fledged, as determined by the biologist. This buffer shall be established in the field by highly visible means. The biologist shall be present and monitor vegetation removal, and shall have the authority to stop work to protect nesting birds or other biological resources, or if violations of laws or permit conditions would occur. If it is necessary to perform work inside the avoidance buffer, the biological monitor must be present and will ensure that construction activities are not affecting the nest. The monitor shall impose any necessary restrictions, including limiting work durations, installing visual barriers, or prohibiting work within the avoidance buffer, to protect the success of the nest and ensure compliance with federal and state law.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-6.

MM-WCE-BIO-6 (Oak Tree Removal): Prior to the issuance of grading permits for infrastructure facilities (Project roadways and backbone infrastructure) it will be the responsibility of the project proponent (master developer) to obtain the necessary permits for removal of protected oak trees as applicable. Subsequent oak tree removal permits outside of the public right-of-way will be the responsibility of the individual lot owners as applicable. Removal of oak trees will also be subject to nesting surveys prior to the issuance of permits, consistent with the requirements identified under MM-WCE-BIO-5.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-16.

MM-WCE-BIO-7 (Wilson Creek Estates Burrowing Owl): A pre-construction survey for burrowing owls shall be conducted by a City-approved biologist, no more than 14 days prior to commencement of grading, and shall be submitted to the Planning Division for approval. The survey shall be conducted according to the CDFW's 2012 Staff Report on Burrowing Owl Mitigation. If active burrowing owl burrows are detected on-site, they shall not be excavated or disturbed during the breeding season (February 1 through August 31). Outside the breeding season, burrowing owl burrows shall only be removed pursuant to a Burrowing Owl Exclusion Plan prepared in accordance with the 2012 Staff Report on Burrowing Owl Mitigation and approved by CDFW.

Project Compliance and/or Associated Project Mitigation Measures (Section 7.3):

This measure has been incorporated into this BTR as MM-WCSP-BIO-7.

7.3 Wine Country Specific Plan Mitigation Measures

MM-WCSP-BIO-1 Focused Special-Status Plant Survey and Avoidance. Within Phases 4 and 5, a focused special-status plant survey shall be conducted prior to ground-disturbing activities. The survey shall be conducted for Yucaipa onion, Jaeger's milk-vetch, Parry's spineflower, white-bracted spineflower, California satintail, Hall's monardella, salt spring checkerbloom, southern jewelflower, and San Bernardino aster, or as otherwise required by an updated habitat assessment conducted by a qualified biologist. Surveys shall occur at the appropriate time of year to capture the characteristics necessary to identify the taxon. Surveys shall be conducted consistent with California Native Plant Society protocols and by a qualified botanist knowledgeable of the local flora. The results of the survey shall be summarized in a report and would be valid for a maximum of 2 years. If no special-status plants are found during the survey, no further mitigation would be required.

If special-status plants are observed, the full extent of the occurrence of a special-status plant species within the survey area shall be recorded using GPS. The location of each special-status plant occurrence shall be mapped and number of individuals for each occurrence documented. The outer extent of each occurrence shall be flagged for avoidance (to the extent feasible).

For direct impacts to special-status plant species, one or a combination of the following strategies shall be implemented:

- Avoidance and Minimization. Impacts to special-status plant populations shall be avoided to the greatest extent possible and minimized where avoidance is not feasible. Where Project impacts to special-status plant species cannot be avoided, mitigation is required and is discussed further below.
- Salvage. If impacts to special-status plants cannot be avoided and it is feasible to effectively salvage the plants, a qualified ecologist shall develop a restoration and mitigation plan based

on the life history of the species impacted, as necessary, to mitigate Project impacts. The plan shall include, at minimum, (a) collection/salvage measures for plants and/or seed banks to retain intact soil conditions and maximize success likelihood; (b) details regarding storage of plants and/or seed banks; (c) location of the proposed recipient site and detailed site preparation and plant introduction techniques details for top soil storage, as applicable; (d) time of year that the salvage and replanting or seeding shall occur and the methodology of the replanting; I a description of the irrigation, if used; (f) success criteria; and (g) a detailed monitoring program, commensurate with the plan's goals.

MM-WCSP-BIO-2 Construction-Related Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources Prior to issuance of a construction permit within 500 feet of proposed open space or suitable habitat for special-status species (i.e., all undeveloped land within the Project site) with potential to occur in the Project site, construction plans and conditions of approval shall include the following to address indirect impacts to special-status species:

- **Biological Monitoring.** A qualified Project biologist approved by the City of Yucaipa shall monitor ground-disturbing and vegetation clearing activities for the duration of the Project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat, species of concern, and other sensitive biological resources outside the Project footprint. Once ground-disturbing and vegetation clearing activities are complete, the Project biologist shall conduct weekly checks in order to inspect construction fencing and ensure that all applicable requirements from the mitigation measures are being upheld.
- **Worker Environmental Awareness Training.** Prior to grading, a preconstruction meeting shall be required that includes a training session for Project personnel by a qualified biologist. The training shall include (1) a description of the species of concern and its habitats; (2) the general provisions of the applicable regulations pertaining to biological resources, including the Endangered Species Act and the Clean Water Act; (3) the need to adhere to the provisions of the Endangered Species Act, the Clean Water Act, and other applicable regulations; (4) the penalties associated with violating the provisions of the Endangered Species Act, Clean Water Act, and other applicable regulations; (5) the general measures that are being implemented to conserve the species of concern as they relate to the Project; and (6) the access routes to and Project site boundaries within which the Project activities must be accomplished. Additionally, the training shall include the measures and mitigation requirements for the applicable resources. Copies of the mitigation measures and any required permits from the resource agencies will be made available to construction personnel.
- **Delineation of Property Boundaries.** Before beginning activities that would cause impacts, the contractor shall, in consultation with the biological monitor, clearly delineate the boundaries with fencing, stakes, or flags, consistent with the grading plan, within which the impacts will take place. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area. In addition, any avoided environmental resources will be clearly delineated. Prior to implementing construction activities, the biological monitor shall verify that the flagging clearly delineates the construction limits and any sensitive environmental resources to be avoided.
- **Standard Dust Control Measures.** Standard dust control measures as per the South Coast Air Quality Management District shall be implemented to reduce impacts on nearby plants and

wildlife. Measures include controlling speed to 15 mph or less on unpaved roads, replacing ground cover in disturbed areas as quickly as possible, frequently watering active work sites, installation of shaker plates, and suspending excavation and grading operations during periods of high winds.

- Stormwater Pollution Prevention Plan. Prior to issuance of a grading permit for construction, the applicant shall submit a Stormwater Pollution Prevention Plan (SWPPP) to the City of Yucaipa that specifies best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving off site and into receiving waters. The requirements of the SWPPP shall be incorporated into design specifications and construction contracts. Best management practices categories employed on site would include erosion control, sediment control, and non-stormwater (good housekeeping). Best management practices recommended for the construction phase shall include, but not be limited to, the following:
  - Limiting grading to the minimum area necessary for construction, operation, and decommissioning of the Project
  - Limiting vegetation disturbance/removal to the maximum extent practicable
  - Implementing fiber rolls and sandbags around drainage areas and the site perimeter
  - Stockpiling and disposing of demolition debris, concrete, and soil properly
  - Installation of a stabilized construction entrance/exit and stabilization of disturbed areas
  - Proper protections for fueling and maintenance of equipment and vehicles
  - Managing waste, aggressively controlling litter, and implementing sediment controls
  - Soil stabilization in disturbed areas by revegetation

The following water quality measures will be included in the SWPPP:

- Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
- Projects shall be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern, as feasible. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats shall be timed to avoid the breeding season of riparian species.
- When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
- Water pollution and erosion control plans shall be developed and implemented in accordance with the Regional Water Quality Control Board.

- Minimize Spills of Hazardous Materials. All vehicles and equipment shall be maintained in proper condition to minimize the potential for fugitive emissions of motor oil, antifreeze,

hydraulic fluid, grease, or other hazardous materials. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be immediately cleaned up and the contaminated soil shall be properly handled or disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated staging area.

- **Wildlife Hazards.** The following measures will be implemented to ensure that wildlife do not become trapped, entangled, injured, or poisoned by constructuction activities:
  - Structures in which wildlife may become trapped (e.g., open pipes, pits, trenches, etc.) shall be tightly covered at the end of each work day. If covering the structure is not possible, an escape ramp shall be provided to allow any wildlife that falls in to safely escape.
  - Debris piles, construction materials, equipment, and other items that may be used as wildlife refuge shall be inspected for wildlife at the start of each work day and prior to disturbance. If wildlife is discovered, it shall either be moved out of harm's way by a qualified biologist, or allowed to move off of the Project site on its own.
  - Nets and mesh shall be made of loose weave material that is not fused at the intersections of the weave, as nets with welded weaves present an entanglement risk.
  - Toxic materials and garbage shall be removed from the work site and safely stored or disposed of at the end of each work day.
- **Invasive Weeds.** In order to reduce the spread of invasive plant species, landscape plants shall not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).
- **Night Work.** All construction activities will be conducted during the daytime and lights will not be kept on overnight in the construction area, as practicable. If night-lighting is required during construction activities, all exterior lighting along undeveloped land shall be fully shielded and directed downward in a manner that will prevent light spillage or glare into the adjacent open space.

MM-WCSP-BIO-3 Long-Term Indirect Impacts to Special-Status Plants, Wildlife, and Aquatic Resources Prior to issuance of a construction permit within 500 feet of suitable habitat for special-status species with potential to occur in the Project site, construction plans and conditions of approval shall include the following to address indirect impacts to special-status species:

- **Runoff:** Future development within 500 feet of suitable habitat for special-status species shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System requirements, to ensure that the quantity and quality of runoff discharged is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into proposed open space or suitable habitat for special-status species. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes. This can be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.
- **Toxicants:** Land uses that use chemicals or generate bioproducts such as manure, fertilizer, or vineyard waste that are potentially toxic or may adversely affect plant species, wildlife species, habitat, or water quality shall incorporate measures to ensure that application of such

chemicals does not result in discharges. Measures such as those employed to address drainage issues shall be implemented.

- **Lighting:** Night lighting shall be directed away from proposed open space and/or suitable habitat for special-status species to protect species from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting is not increased. Any trails that intersect proposed open space will not include night lighting.
- **Noise:** Proposed noise-generating land uses affecting suitable habitat for special-status species shall incorporate setbacks, berms, or walls to minimize the effects of noise on resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. For planning purposes, wildlife should not be subject to noise that would exceed residential noise standards.
- **Invasive Species:** When approving landscape plans for future development, emphasis will be placed on using native species that occur in the region. Invasive, non-native plant species listed on the most recent California Invasive Plant Council inventory (https://www.cal-ipc.org/plants/inventory/) with a rating of moderate or high shall not be included in landscaping.
- **Barriers:** Future development shall incorporate barriers, where appropriate in individual project designs, to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in proposed open space and/or suitable habitat for special-status wildlife. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. Any proposed trails through open space will have gates that close at nighttime, as well as signage and appropriate barriers to keep people and domestic animals on the trail.
- **Restoration of Temporary Impacts:** Prior to issuance of a grading or construction permit within the Project, grading and construction plans shall include the following note regarding any temporary impacts to uplands:
  - Site construction areas subjected to temporary ground disturbance in undeveloped areas shall be subjected to revegetation with an application of a native seed mix, if necessary, prior to or during seasonal rains to promote passive restoration of the area to pre-Project conditions (except that no invasive plant species will be restored). An area subjected to "temporary" disturbance means any area that is disturbed but will not be subjected to further disturbance as part of the Project. If any grading occurred in areas intended to remain undeveloped, the site will be recontoured to natural grade. This measure does not apply to situations in urban/developed areas that are temporarily impacted and will be returned to an urban/developed land use. Prior to seeding temporary ground disturbance areas, the Project biologist will review the seeding palette to ensure that no seeding of invasive plant species, as identified in the most recent version of the California Invasive Plant Inventory for the region, will occur.

MM-WCSP-BIO-4 Pre-Construction Pond Check. A pre-construction pond check shall occur within the construction area prior to the rainy season before start of construction activities. If no potential habitat for western spadefoot is found during the survey, no further mitigation would be required.

If potential habitat for western spadefoot is identified, construction fencing appropriate for amphibian exclusion will be installed around the construction area. A pre-construction pond check and focused survey for western spadefoot will be conducted the winter prior to grading activities

within the construction area. The pond check will occur within 24 hours of the winter season's first three rain events and prioritize ponded features that hold water for 45 days or greater. Ideally, these rain events would produce a minimum of 0.2 inches during a 24-hour period.

If western spadefoot are detected during surveys within the fenced construction footprint, then biologists shall collect western spadefoot adults from areas within 300 feet of known occupied pools. Adults shall be relocated outside of the construction footprint to portions of Wilson Creek (see **MM-WCSP-BIO-5**) that have suitable breeding habitat and few or no western spadefoot individuals. Relocation of western spadefoot will follow the latest amphibian handling guidelines provided by the U.S. Geological Survey.

MM-WCSP-BIO-5 Open Space Conservation. Future development of the Project outside of Wilson Creek Estates will prioritize the configuration of open space such that a minimum 1,000-foot corridor is created along Wilson Creek where feasible with the limits of the Project boundary. In areas where creating a minimum 1,000 foot corridor is not feasible, the constricted part of the corridor will occupy a length no longer than 500 feet. Throughout the open space, the following measures will be implemented:

- Lighting will be directed toward development and shielded away from the open space.
- Trails will not be in use from dusk to dawn, pets must be on leashes, and the trails will only be used for hiking and biking.
- Trails may be temporarily closed to control unauthorized access.
- When feasible, the open space corridor will be buffered by vineyards, parks, or naturally landscaped berms to reduce light and noise affects within the corridor.

MM-WCSP-BIO-6 Pre-Construction Nesting Bird Survey. Construction activities shall avoid the migratory bird nesting season (typically January 1 through September 30) to reduce any potential significant impact to birds that may be nesting within the construction area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of fully protected species (including white-tailed kite), protected migratory birds, and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when an active nest buffer is in place. No Project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active.

MM-WCSP-BIO-7 Pre-construction Burrowing Owl Surveys and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation

or grading activities and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife; CDFW]) in 2012 or current version.

- If burrowing owls are detected, a burrowing owl relocation plan shall be prepared and implemented in consultation with the City of Yucaipa. The relocation plan shall discuss the avoidance of disturbance to burrows during the nesting season for burrowing owls (February 1 through August 31), as well as appropriate buffers to be established around occupied burrows as determined by a qualified biologist. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.
- Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the CDFW 2012 Staff Report on Burrowing Owl Mitigation or current version.
- Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

MM-WCSP-BIO-8 Pre-Construction Clearance Surveys. Pre-construction clearance surveys for special-status wildlife shall be conducted by a qualified Project biologist within 14 days of the initiation of ground disturbance or vegetation clearing within and adjacent to construction areas. Surveys shall be appropriate for detecting potentially occurring species, such as Dulzura pocket mouse, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, Los Angeles pocket mouse, Southern California legless lizard, California glossy snake, coastal whiptail, red diamondback rattlesnake, Blainville's horned lizard, and coast patch-nosed snake. Surveys need not be conducted in all areas simultaneously, as long as they are conducted within 14 days of the initiation of ground disturbance or vegetation clearing in each area individually. If special-status species are detected, appropriate buffers shall be established, as necessary and as appropriate for the species, unless it is not feasible to avoid the species. If possible, non-listed special-status wildlife species may be captured and relocated to suitable habitat nearby where they are safe from construction activities. Surveys and relocation of these species may only be conducted by the qualified Project biologist.

- If non-listed special-status reptiles or small mammals are detected, they will be moved out of harm's way.

- The Project biologist shall remain available at all times after initiation of ground disturbance or vegetation clearing, in case special-status wildlife species enter the construction area. If non-listed special-status species are detected in the construction area after initiation of ground disturbance or vegetation clearing, the qualified Project biologist shall take measures to move the species, or encourage it to move, to a safe place away from construction activities.

MM-WCSP-BIO-9 Pre-Construction American Badger Surveys and Avoidance. Impacts to American badger individuals and wintering and natal dens shall be avoided and minimized during construction activities through the following measures.

Pre-Construction Surveys (Wintering)

During the colder months (generally between November 1 and February 15, when daily temperatures do not exceed 45°F), pre-construction surveys shall be conducted by the Project biologist in suitable habitat no earlier than 14 days prior to construction activities to determine whether American badger winter dens are present within the construction zone or within 100 feet of the construction zone boundary.

Avoidance Measures (Wintering)

If an American badger winter den is occupied within the construction zone or within 100 feet of the construction zone, then the den location shall be clearly marked with fencing or flagging in a manner that does not isolate the badger from intact adjacent habitat or prevent the badger from accessing the den, to avoid inadvertent impacts on the den. If it is not practicable to avoid the wintering den during construction activities, an attempt will be made to trap or flush the individual and relocate it to suitable open space habitat. Additionally, badgers can be relocated by slowly excavating the burrow, either by hand or mechanized equipment under the direct supervision of the Project biologist, removing no more than 4-inches at a time. After necessary trapping, flushing, or burrow excavation is completed, construction may proceed and the vacated winter den may be collapsed. If trapping is required, trapping will be limited to November 16 through the last day of February in accordance with Section 461, Title 14 of the California Code of Regulations (14 CCR 461). A written report documenting the badger removal shall be provided to the California Department of Fish and Wildlife within 30 days of relocation.

Pre-Construction Surveys (Natal Dens)

During the late winter and summer (generally from March 15 through July 31), when American badgers may use natal dens for birthing and pup rearing, pre-construction surveys shall be conducted by the Project biologist no earlier than 14 days prior to ground-disturbing construction activities to determine whether American badger natal dens are present within the Project construction zone or within 200 feet of the construction zone.

Avoidance Measures (Natal Dens)

If natal dens are detected during construction, construction activities shall be halted within 200 feet of the natal den. This buffer may be reduced based on the location of the den or type of construction activity, based on the direction of the Project biologist. Construction activities shall not

preclude the ability of the documented badgers to disperse to on-site open space or off-site habitat when the natal den is vacated (i.e., habitat suitable for dispersal must be maintained until dispersal occurs). Construction will be postponed or halted in these areas until It is determined by the Project biologist that the young are no longer dependent on the natal den. To avoid inadvertent impacts during construction and to ensure that construction activities are at least 200 feet from active natal dens, any active natal dens within the survey area shall be clearly marked with fencing or flagging in a manner that will not inhibit normal behavioral activities (e.g., foraging and dispersing from the site) by the mother and pups.

MM-WCSP-BIO-10 Pre-Construction Survey for Crotch Bumble Bee. While Crotch bumble bee is a candidate for listing under the California Endangered Species Act, a pre-construction survey for Crotch bumble bee shall be conducted within the construction footprint prior to the start of ground-disturbing construction activities occurring during the Crotch bumble bee nesting period (February 1 through October 31). A pre-construction survey shall be conducted prior to each phase of Project implementation. The survey shall ensure that no nests for Crotch bumble bee are located within the construction area. The pre-construction survey shall include (1) a habitat assessment and (2) focused surveys, both of which shall be based on recommendations described in the Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species, released by the California Department of Fish and Wildlife (CDFW) on June 6, 2023, or the most current version at the time of construction.

The habitat assessment shall, at a minimum, include historical and current species occurrences; document potential habitat onsite including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and human-made structures that may support bumble bee colonies, such as rock walls, rubble, and furniture. The habitat assessment shall be repeated prior to February 1 in each year ground-disturbing activities occur to determine if nesting resources are present within the impact area. If nesting resources are present in the impact area, focused surveys shall be conducted.

The focused survey shall be performed by a biologist with expertise in surveying for bumble bees and include at least three survey passes that are not on sequential days or in the same week, preferably spaced 2 to 4 weeks apart. The timing of these surveys shall coincide with the Colony Active Period (April 1 through August 31 for Crotch bumble bee). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys shall not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors shall wait at least 1 hour following rain. Optimal surveys are conducted when there are sunny to partly sunny skies and a temperature greater than 60°F. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the biologist shall watch the nest resources for up to 5 minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency such that their presence would be apparent after 5 minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. Biologists should be able to view several burrows at one time to sufficiently determine if

bees are entering/exiting them, depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point to determine which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification shall include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation, if able. The bee shall be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee-identifying characteristics cannot be adequately captured in the container due to movement, the container shall be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly.

If Crotch bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests. If nest resources occupied by Crotch bumble bee are detected within the construction area, no construction activities shall occur within 100 feet of the nest, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources shall be avoided for the duration of the Crotch bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, as the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources (see MM-WCSP-BIO-5).

A written survey report shall be submitted to the City of Yucaipa and CDFW within 30 days of the pre-construction survey. The report shall include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report shall include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers and a detailed habitat assessment. If Crotch bumble bee nests are observed, the survey report shall also include recommendations for avoidance, and the location information shall be submitted to the California Natural Diversity Database at the time of, or prior to, submittal of the survey report.

If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the CESA Incidental Take Permit process. If the nest resources cannot be avoided, as outlined in this measure, the Project applicant shall consult with CDFW regarding the need to obtain an Incidental Take Permit. Any measures determined to be necessary

through the Incidental Take Permit process to offset impacts to Crotch bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

In the event an Incidental Take Permit is needed, mitigation for direct impacts to Crotch bumble bee shall be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

MM-WCSP-BIO-11 Coastal California Gnatcatcher Protocol Survey. A protocol coastal California gnatcatcher shall be conducted by a qualified biologist in Phases 4 and 5 prior to ground-disturbing activities. Surveys shall be conducted in accordance with the U.S. Fish and Wildlife (USFWS) 2019 Coastal California Gnatcatcher Presence/Absence Survey Protocol, or current version. The results of the survey shall be summarized in a report and would be valid for a maximum of 2 years. If no coastal California gnatcatcher are found during the survey, no further mitigation would be required.

If coastal California gnatcatcher are detected, the Project shall receive authorization from the USFWS through the federal Endangered Species Act Incidental Take Permit process, including the preparation of a Biological Assessment, for take of coastal California gnatcatcher. Any measures determined to be necessary through the Incidental Take Permit process to offset impacts to coastal California gnatcatcher may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

Mitigation for direct impacts to coastal California gnatcatcher will be fulfilled through compensatory mitigation at a 2:1 habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation will be accomplished either through off-site conservation or through a USFWS-approved mitigation bank. If mitigation is not purchased through a mitigation bank and lands are conserved separately, a cost estimate will be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source will be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount will be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will take into account all

management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

MM-WCSP-BIO-12 Burrowing Owl Protocol Survey. A protocol burrowing owl survey shall be conducted by a qualified biologist in Phases 4 and 5 prior to ground-disturbing activities. Surveys shall be conducted in accordance with the California Department of Fish and Wildlife 2012 Staff Report on Burrowing Owl Mitigation or current version. The results of the survey shall be summarized in a report and would be valid for a maximum of 2 years. If no burrowing owl are found during the survey, no further mitigation would be required; however, the Project must comply with **MM-WCSP-BIO-7**.

If burrowing owl are detected, the full extent of the occurrence of occupied burrowing owl habitat within the survey area shall be recorded using GPS. The outer extent of each occurrence shall be flagged for avoidance (to the extent feasible).

For direct impacts to burrowing owl, impacts to burrowing owl shall be avoided to the greatest extent possible and minimized where avoidance is not feasible. Where Project impacts to burrowing owl cannot be avoided, a burrowing owl protection plan will be prepared and implemented, as summarized in **MM-WCSP-BIO-7**.

MM-WCSP-BIO-13 Aquatic Resource Avoidance, Permitting, and Protection. The Project site supports aquatic resources that are considered jurisdictional under the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Future development will fully avoid aquatic resources. If aquatic resources are fully avoided, no further mitigation would be required; however, the Project must comply with **MM-WCSP-BIO-2** and **MM-WCSP-BIO-3.**

If full avoidance is not possible, prior to construction activity, the applicant shall coordinate with USACE and the Santa Ana RWQCB (Region 8) to assure conformance with the requirements of Section 401 of the Clean Water Act and the Porter–Cologne Water Quality Control Act. Prior to activity within CDFW-jurisdictional streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements.

Future development shall mitigate to ensure no-net-loss of waters at a minimum of 1:1 with establishment or re-establishment credits for impacts on aquatic resources as a part of an overall strategy to ensure no net loss, or at a higher ratio if establishment or re-establishment credits are not available. Mitigation shall be completed through use of a mitigation bank or other applicant-sponsored mitigation. Final mitigation ratios and credits shall be determined in consultation with USACE, RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process.

Should applicant-sponsored mitigation be implemented, a habitat mitigation and monitoring plan shall be prepared in accordance with resource agency guidelines and approved by the agencies in accordance with the proposed program permits. The habitat mitigation and monitoring plan will include but is not limited to a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and

monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity.

MM-WCSP-BIO-14 Culvert Undercrossing. A wildlife undercrossing shall be constructed where proposed improvements to Jefferson Street cross over Wilson Creek. The undercrossing will adequately convey coyotes, mule deer, and smaller-sized wildlife. The wildlife undercrossing shall utilize existing or manufactured topography. The crossing shall be designed to provide a greater or equal to 0.6 openness ratio (calculated as width times height divided by length in meters). Crossing shall have a raised floor and/or side platform to allow dry passage for wildlife when water is flowing. The design should consider the use of berms to protect the undercrossing from light and noise.

MM-WCSP-BIO-15 Wildlife Movement. In accordance with the recommendations made in **MM-GP-4-6**, the future development will implement the following design standards to facilitate wildlife movement through the Project site:

- Adhere to low density zoning standards to the greatest extent practicable
- Adhere to clustering of development
- Provide shielded lighting adjacent to sensitive habitat areas
- Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries
- Encourage preservation of native habitat on the undeveloped remainder of developed parcels
- Minimize road/driveway development to help prevent loss of habitat due to roadkill and habitat loss
- Use native, drought-resistant plant species in landscape design
- Participate in local/regional recreational trail design effort

MM-WCSP-BIO-16 Tree Removal Permit. Prior to the issuance of grading permits it will be the responsibility of the Project proponent to obtain the necessary permits for removal of trees, including oak trees, as well as the removal of plants within 200 feet of a streambank. The Project proponent will provide the appropriate plot plan or other documentation required by the City of Yucaipa.

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8 References

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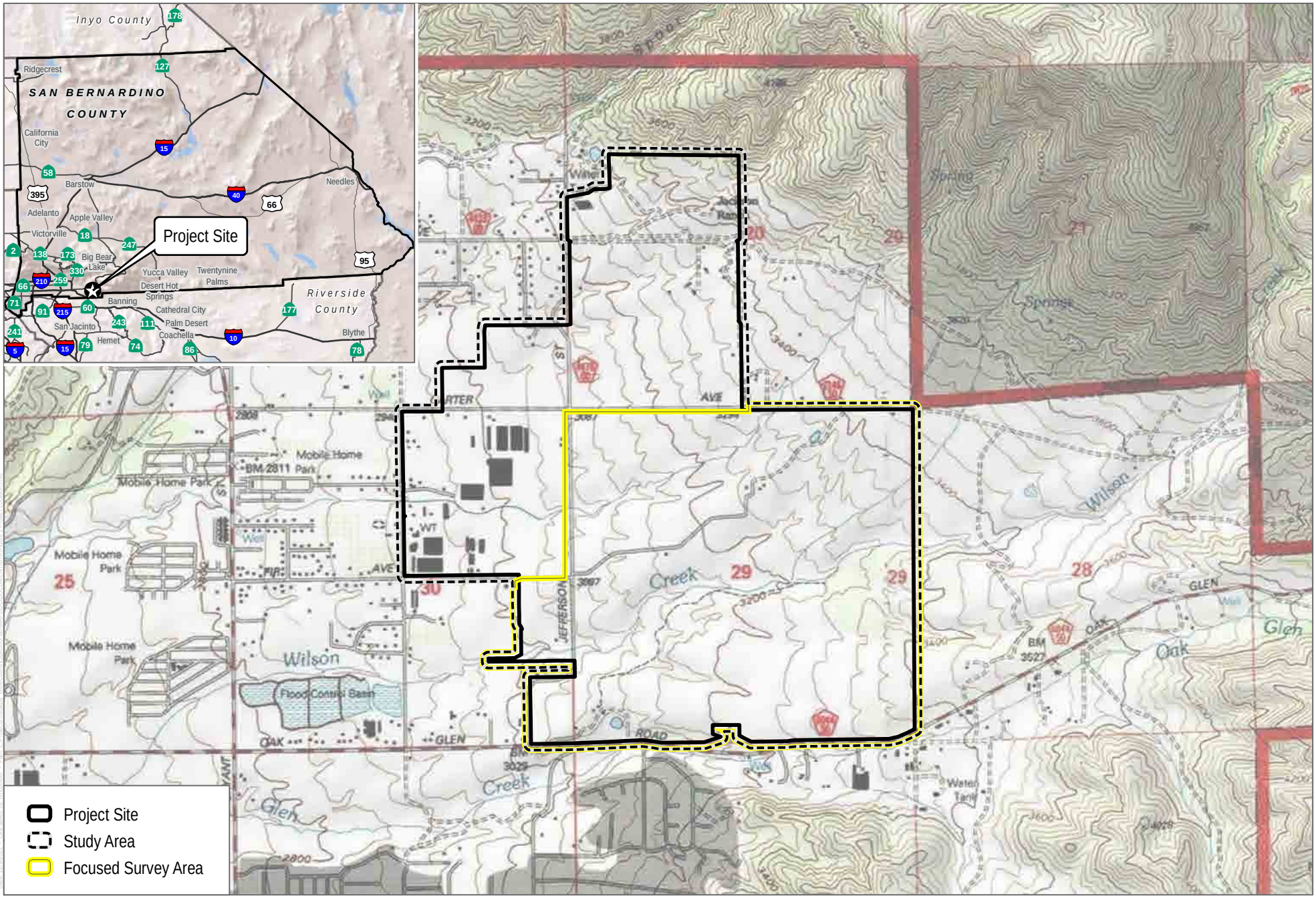
Appendix A
Figures



SOURCE: USA Topo Maps 7.5 Minute Series Yucaipa and Forest Falls Quadrangle
Township 1S; Range 1W; Section 19-21, 28-32

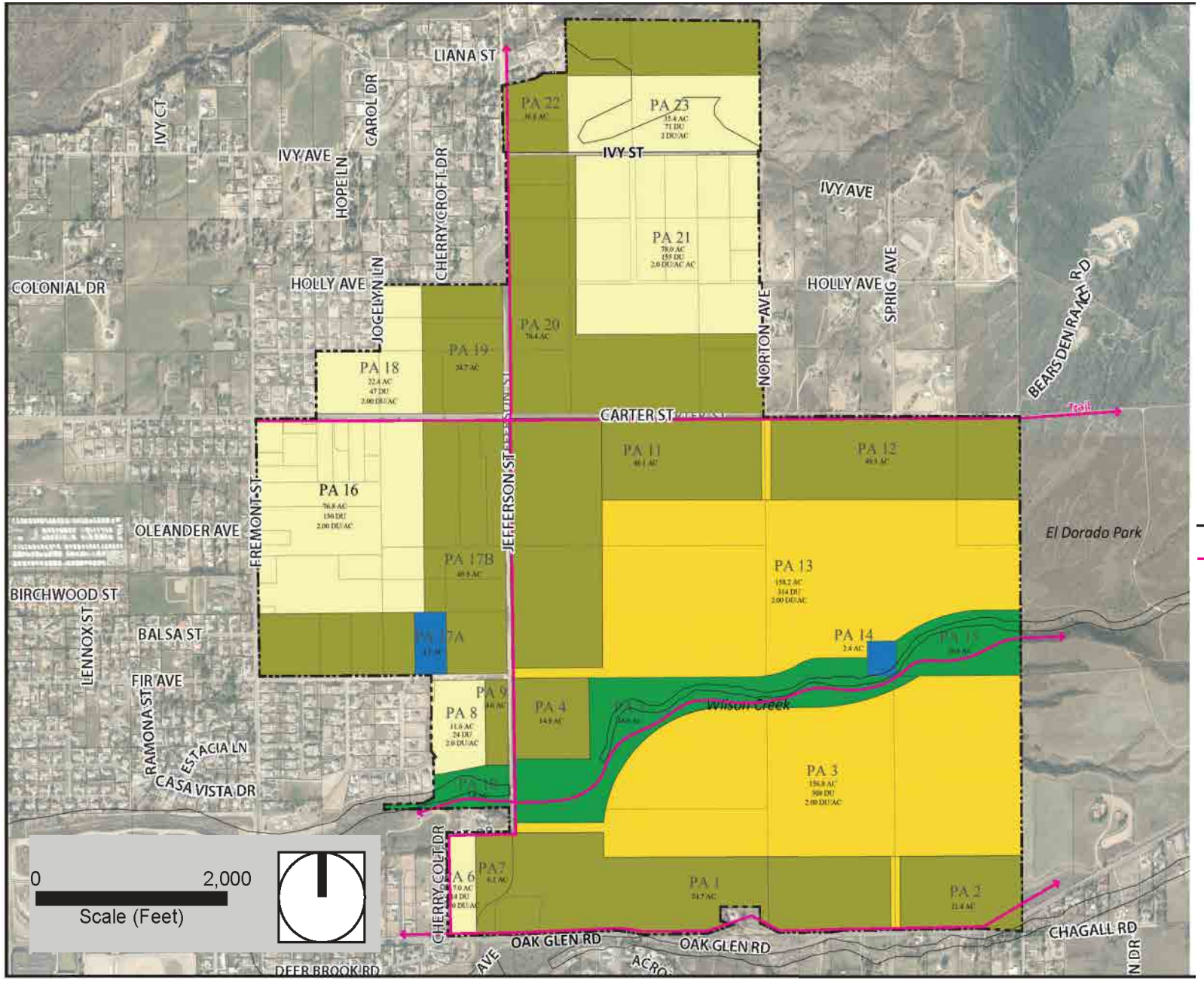
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Vicinity Map

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Color	Land Use	Acres
	Agriculture	465.5
	Riparian Area	73.6
	Water District	7.1
	Estates	232.4
	Villas	315.0
	Total	1093.6

Land Use	Acres
Residential Total	547.4
Non-Residential Total	546.2
Grand Total	**1093.6**

SOURCE: Placeworks 2022

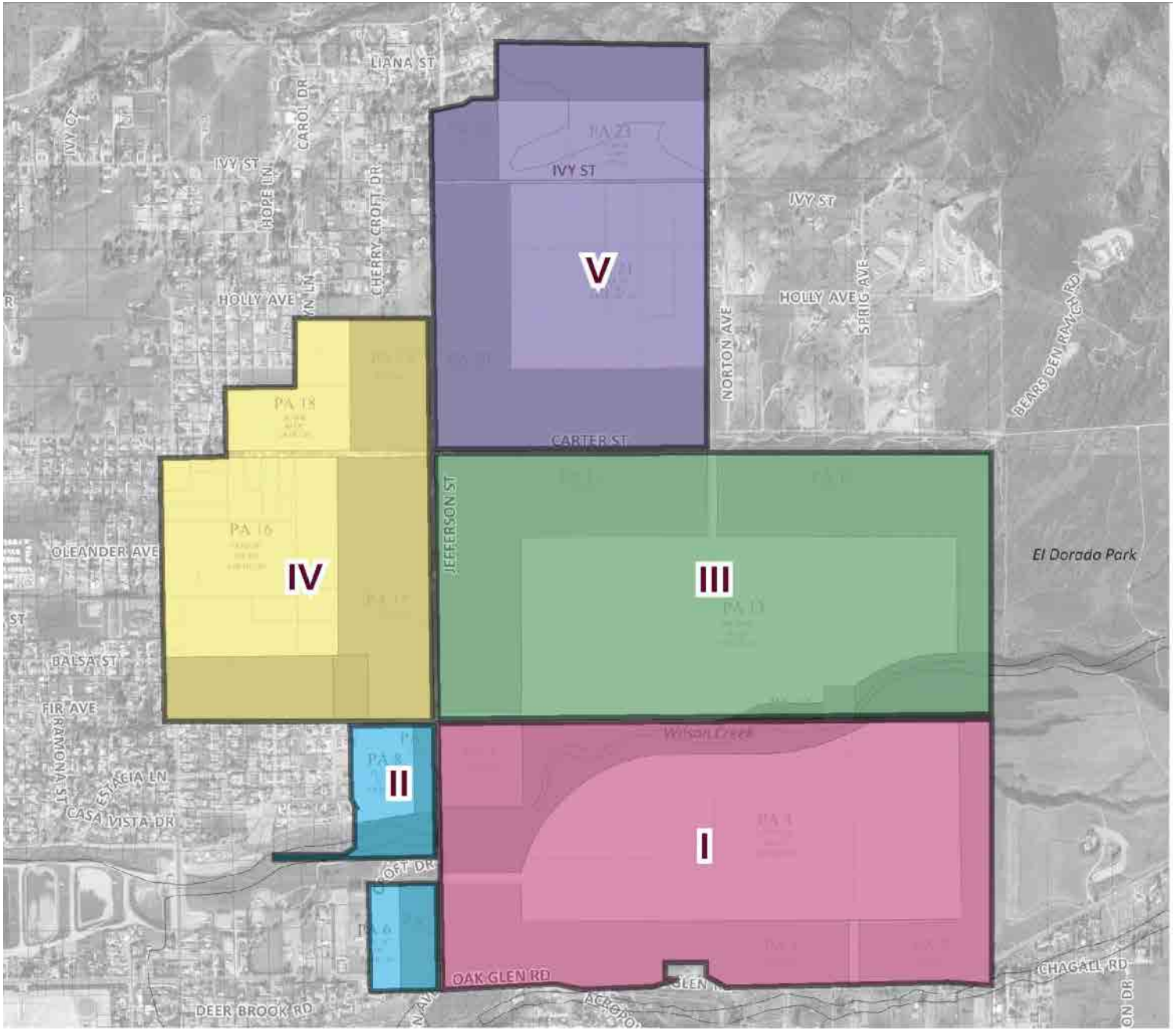
FIGURE 2A

Land Use Plan I

SOURCE: Placeworks 2022

FIGURE 2B

Land Use Plan II



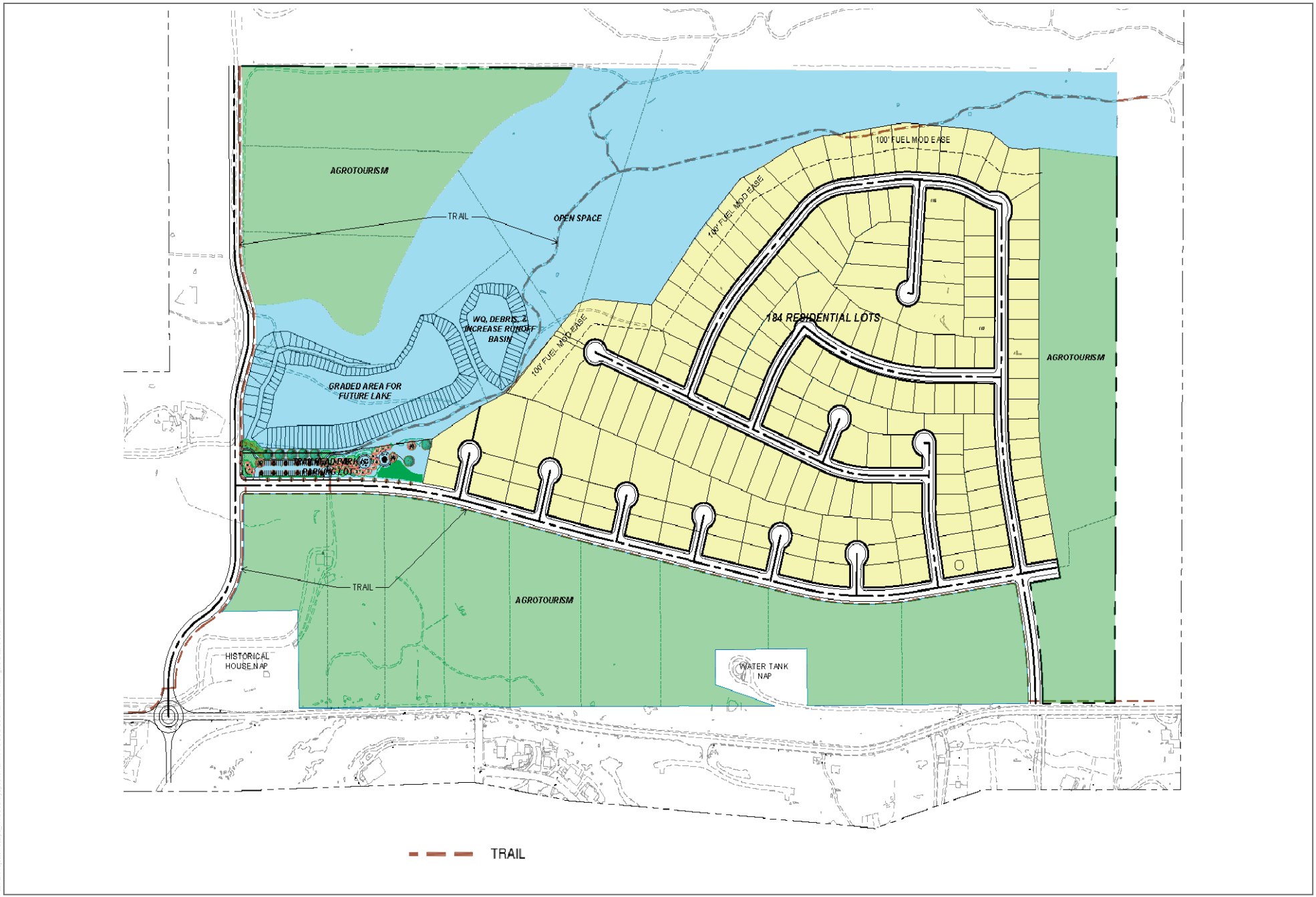
SOURCE: Placeworks 2022

FIGURE 2C

Project Phases

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

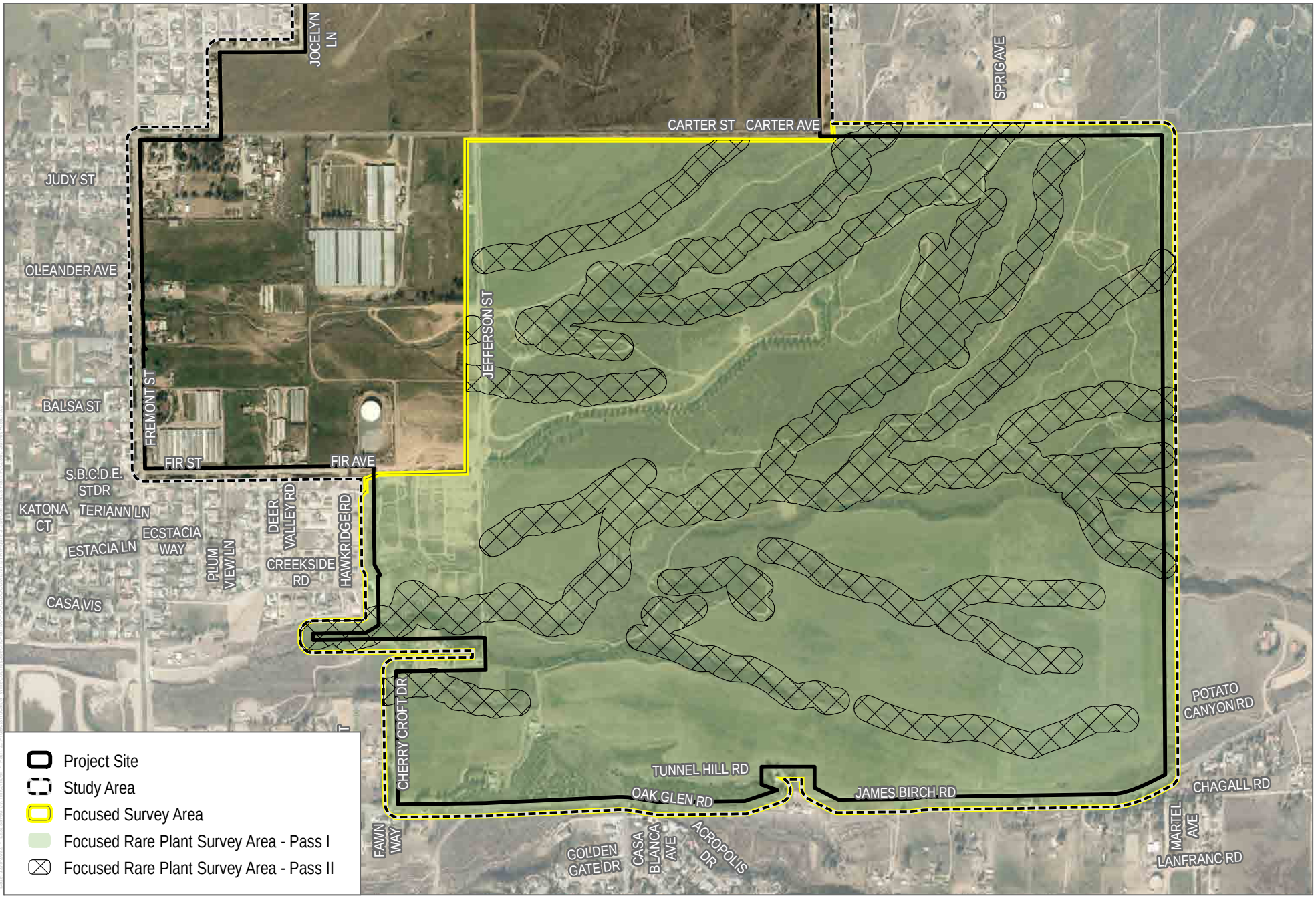
DUDEK



SOURCE: Epic Engineers 2022

FIGURE 2D

Wilson Creek Estates Site Plan



SOURCE: Esri World Imagery Basemap 2022; San Bernadino County 2022

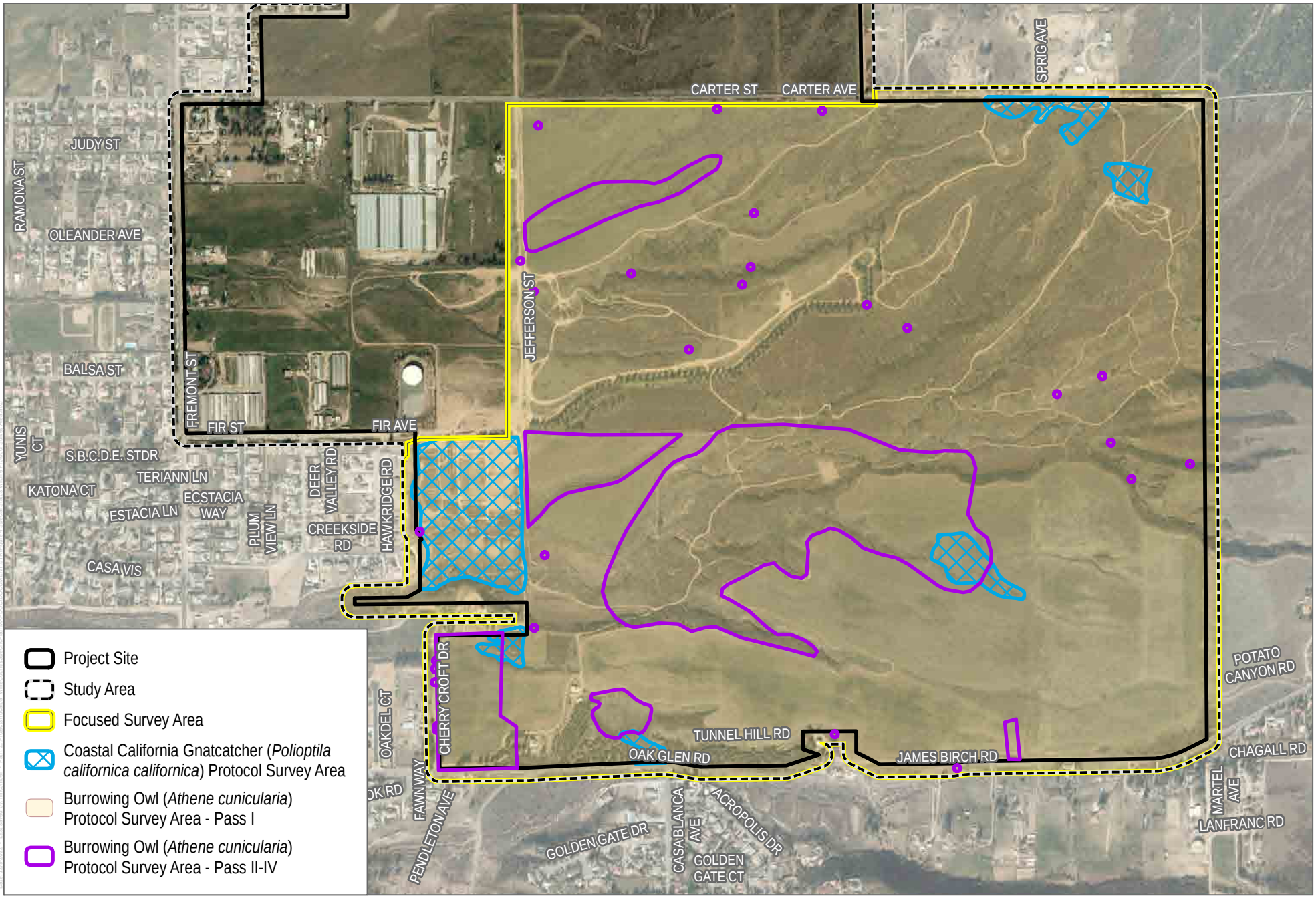
DUDEK

0 500 1,000 Feet

FIGURE 3

Special-Status Plant Focused Survey Area

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Esri World Imagery Basemap 2022; San Bernadino County 2022

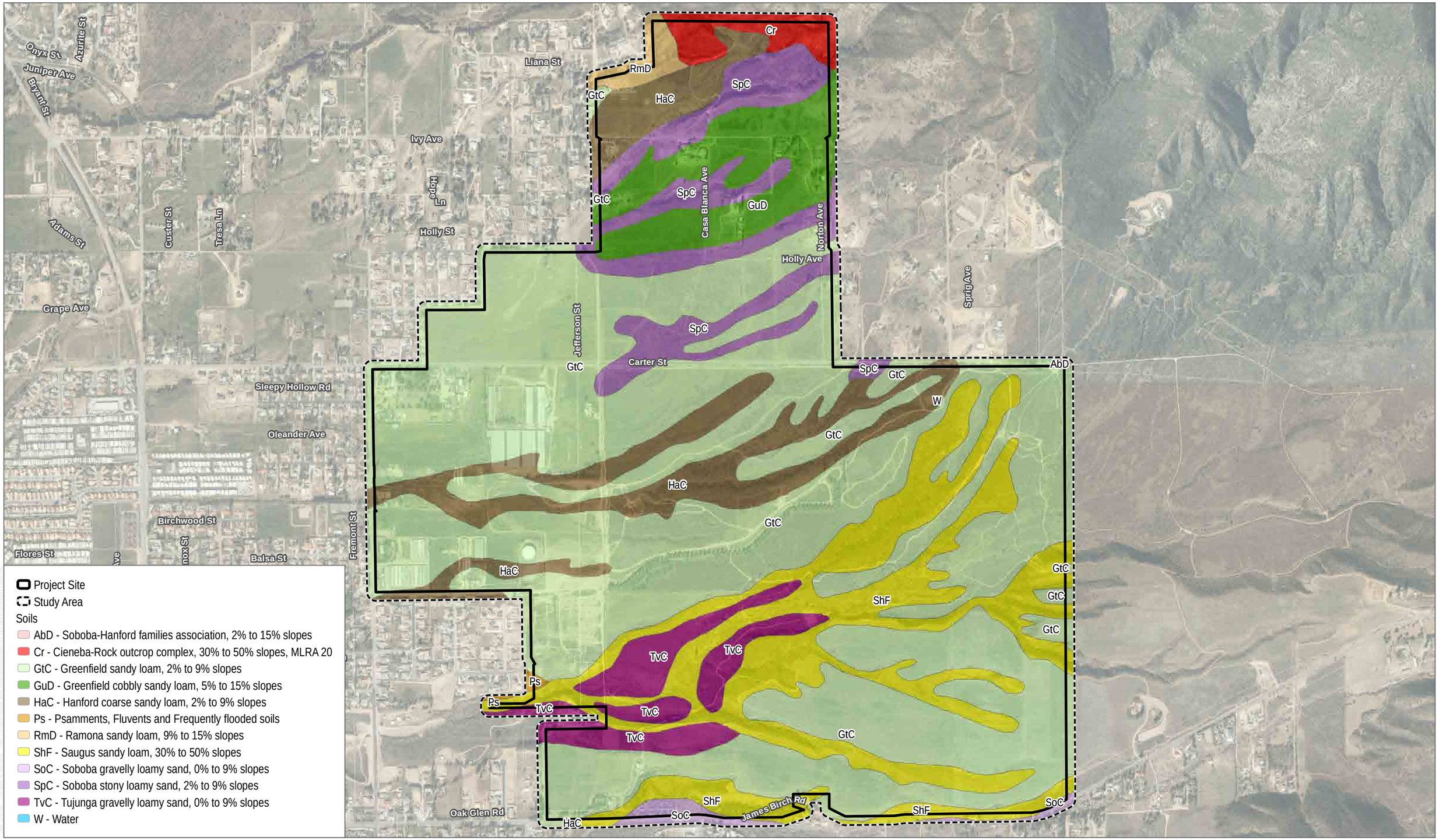
DUDEK

0 500 1,000 Feet

FIGURE 4

Special-Status Wildlife Protocol Survey Areas

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



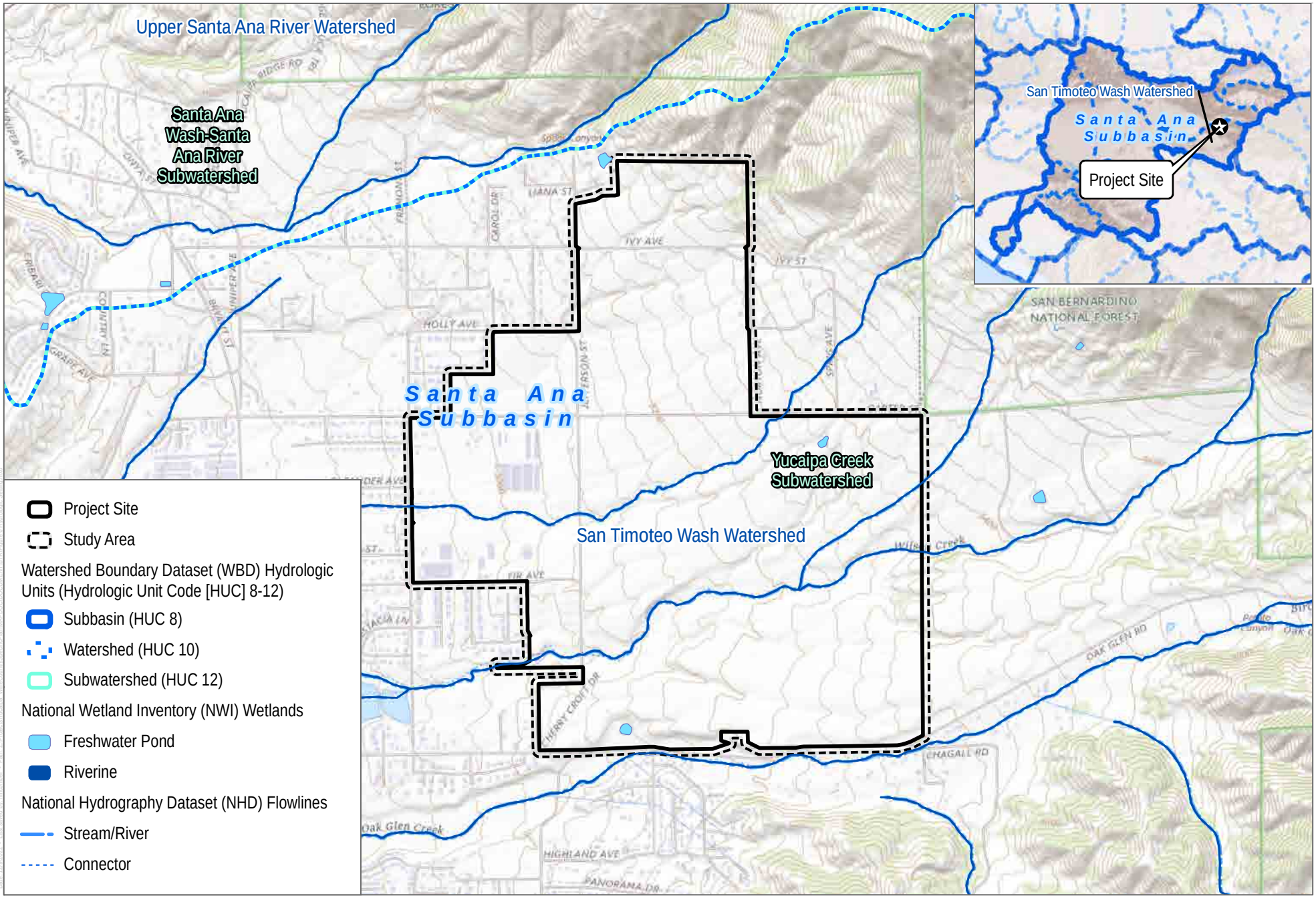
SOURCE: Esri World Imagery Basemap (accessed 2022); San Bernadino County 2022; USDA 2022

DUDEK

0 500 1,000 Feet

FIGURE 5

Soils Map



SOURCE: USGS Topo Maps; San Bernadino County 2022; USGS 2022; NWI 2022

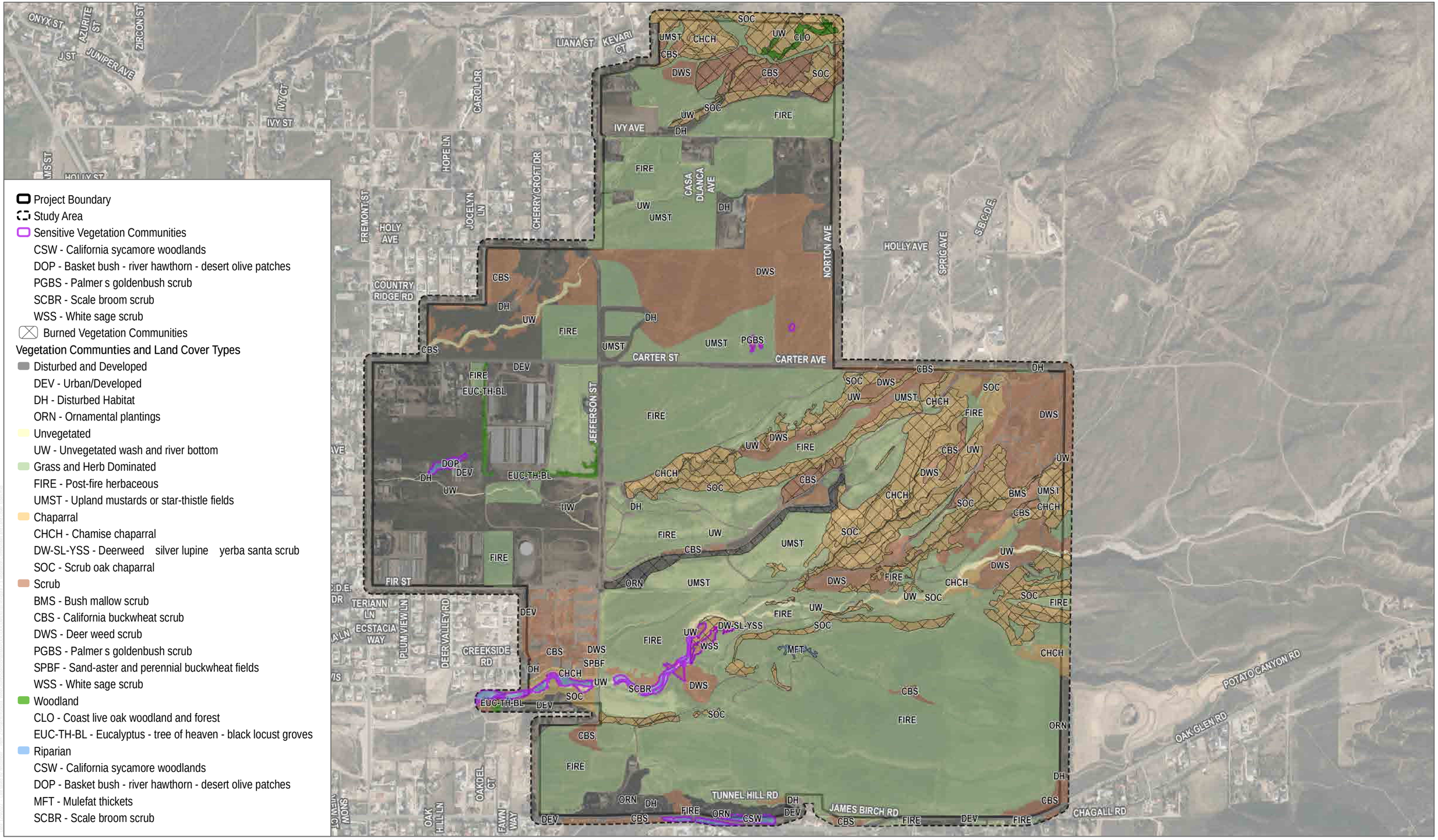
DUDEK

0 1,000 2,000 Feet

FIGURE 6

Hydrologic Resources Map

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

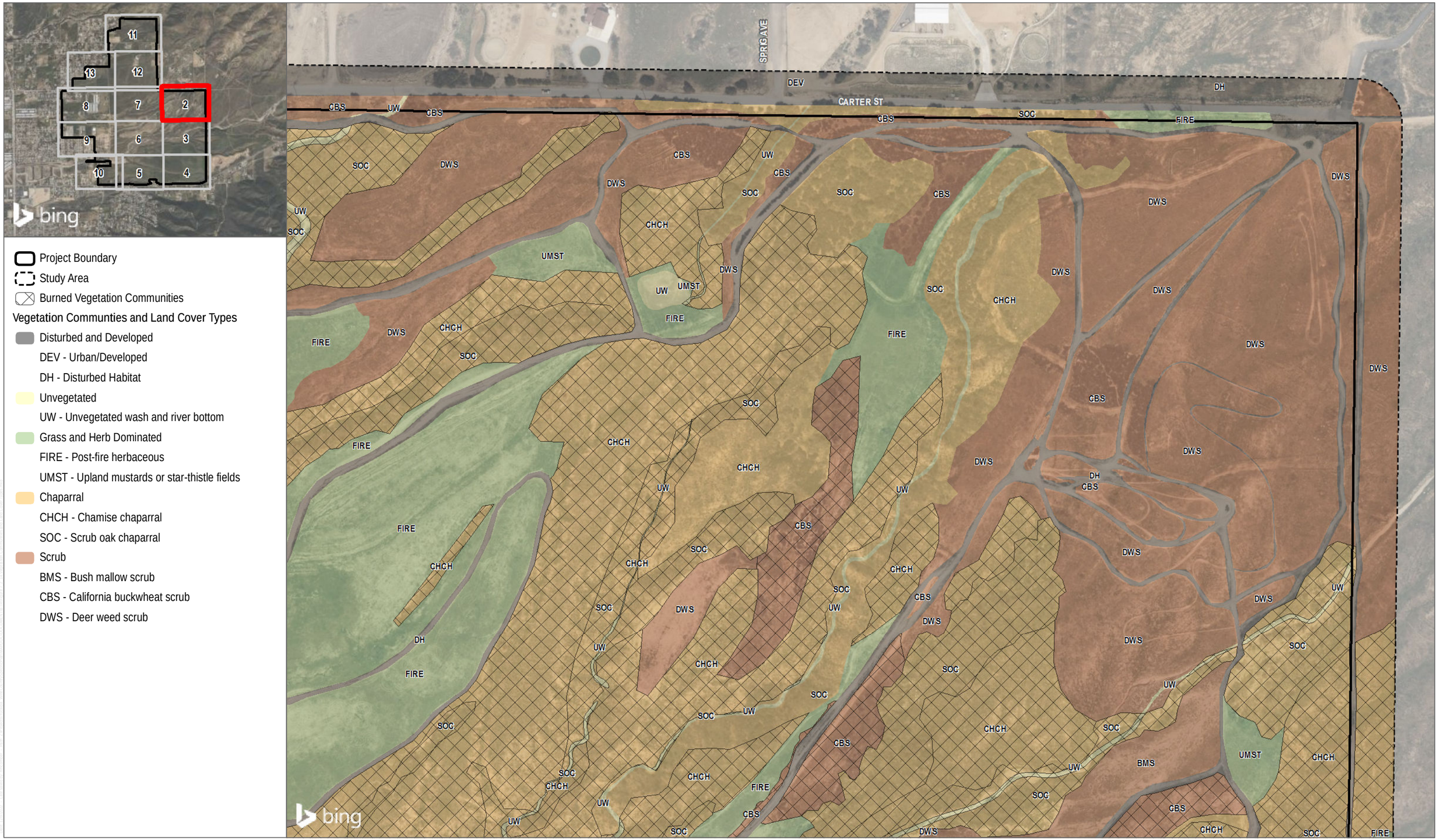
DUDEK

0 500 1,000 Feet

FIGURE 7-1

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-2

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

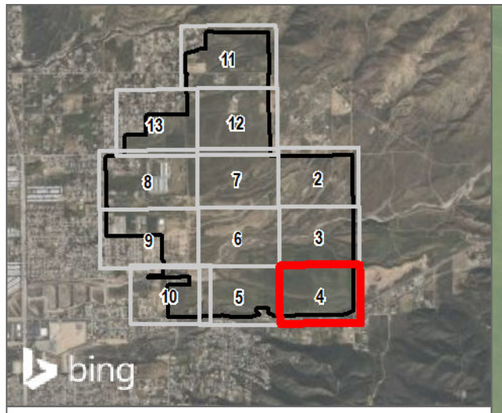
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-3

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary
Study Area
Burned Vegetation Communities

Vegetation Communities and Land Cover Types

Disturbed and Developed
DEV - Urban/Developed
DH - Disturbed Habitat
ORN - Ornamental plantings
Unvegetated
UW - Unvegetated wash and river bottom
Grass and Herb Dominated
FIRE - Post-fire herbaceous
Chaparral
SOC - Scrub oak chaparral
Scrub
CBS - California buckwheat scrub
DWS - Deer weed scrub

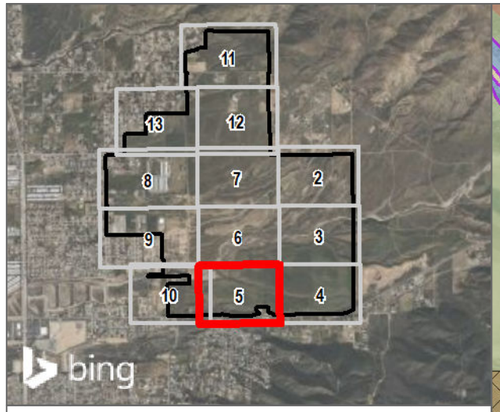
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-4

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



- Project Boundary
- Study Area
- Sensitive Vegetation Communities
  - CSW - California sycamore woodlands
  - SCBR - Scale broom scrub
  - WSS - White sage scrub
- Burned Vegetation Communities

Vegetation Communities and Land Cover Types

- Disturbed and Developed
  - DEV - Urban/Developed
  - DH - Disturbed Habitat
  - ORN - Ornamental plantings
- Unvegetated
  - UW - Unvegetated wash and river bottom
- Grass and Herb Dominated
  - FIRE - Post-fire herbaceous
- Chaparral
  - SOC - Scrub oak chaparral
- Scrub
  - CBS - California buckwheat scrub
  - DWS - Deer weed scrub
  - WSS - White sage scrub
- Riparian
  - CSW - California sycamore woodlands
  - SCBR - Scale broom scrub

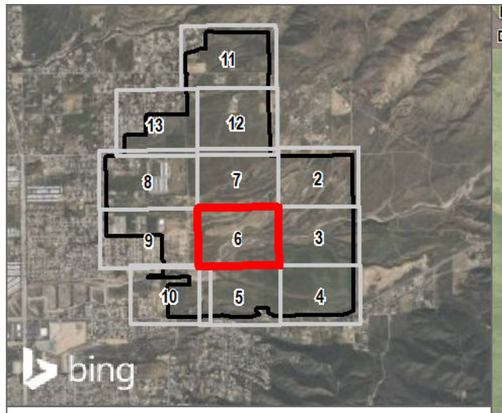
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-5

Vegetation Communities and Land Cover Types

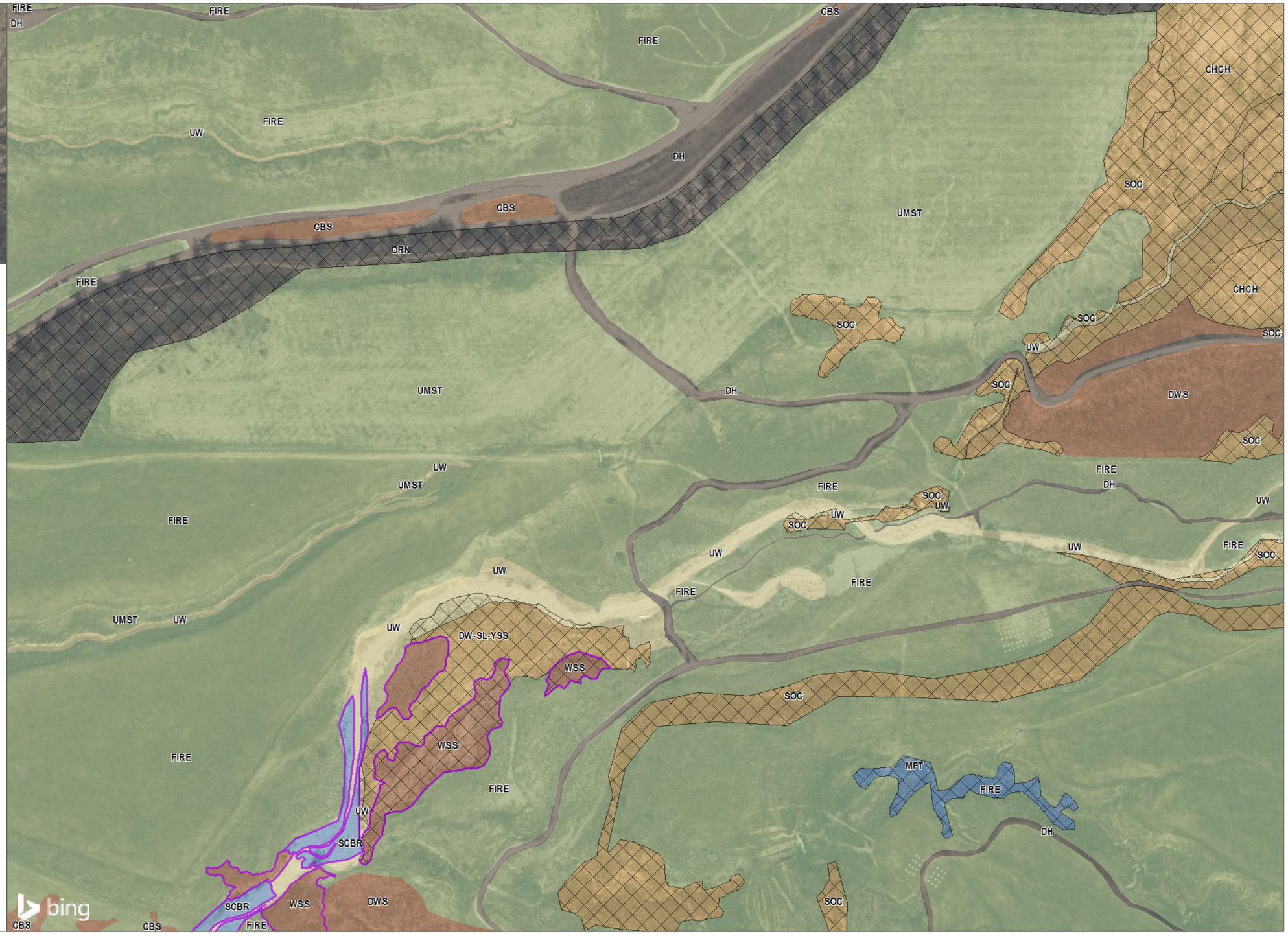
Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



- Project Boundary
- Study Area
- Sensitive Vegetation Communities
  - SCBR - Scale broom scrub
  - WSS - White sage scrub
- Burned Vegetation Communities

Vegetation Communities and Land Cover Types

- Disturbed and Developed
  - DEV - Urban/Developed
  - DH - Disturbed Habitat
  - ORN - Ornamental plantings
- Unvegetated
  - UW - Unvegetated wash and river bottom
- Grass and Herb Dominated
  - FIRE - Post-fire herbaceous
  - UMST - Upland mustards or star-thistle fields
- Chaparral
  - CHCH - Chamise chaparral
  - DW-SL-YSS - Deerweed silver lupine yerba santa scrub
  - SOC - Scrub oak chaparral
- Scrub
  - CBS - California buckwheat scrub
  - DWS - Deer weed scrub
  - WSS - White sage scrub
- Riparian
  - MFT - Mulefat thickets
  - SCBR - Scale broom scrub



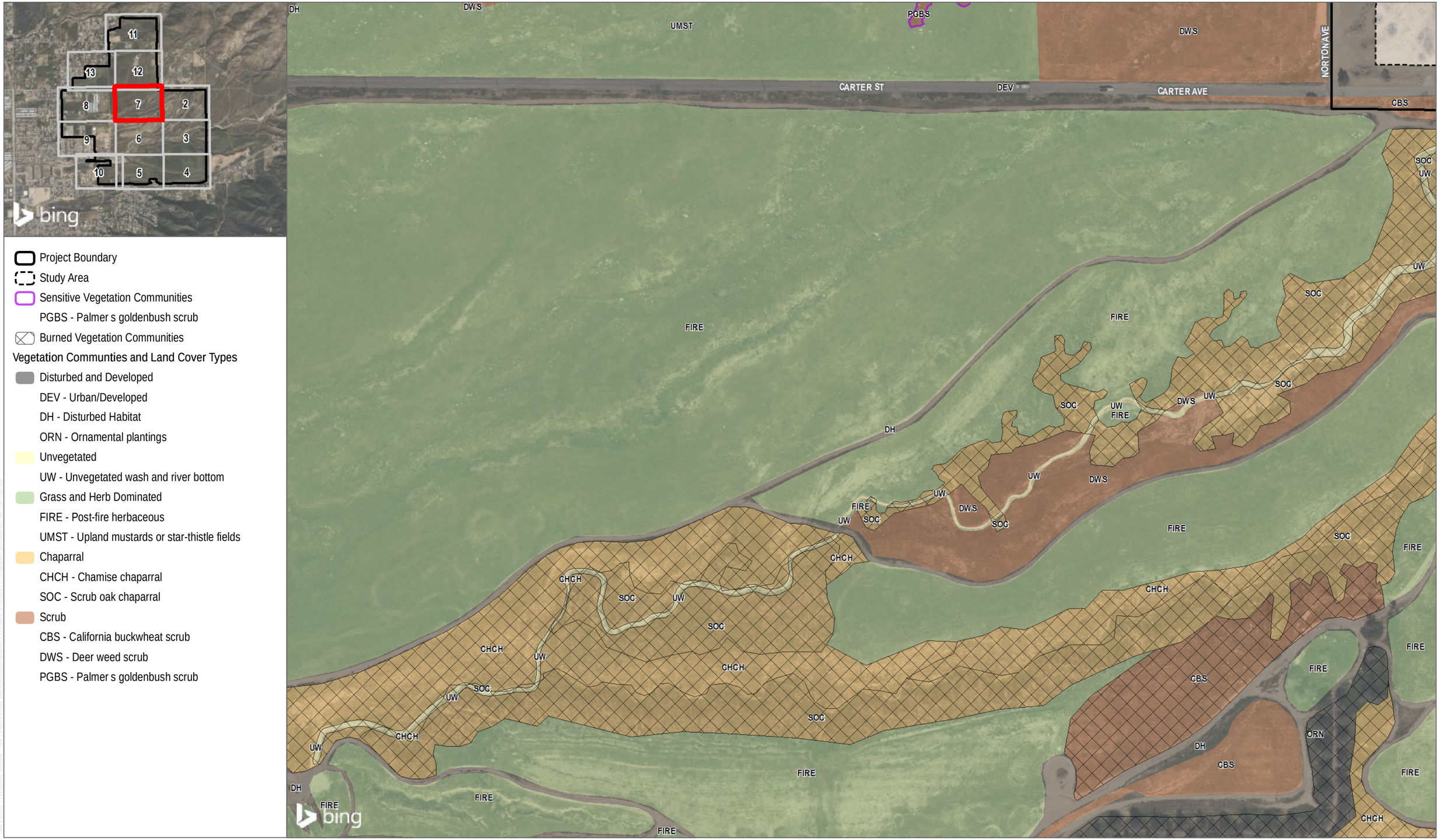
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-6

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



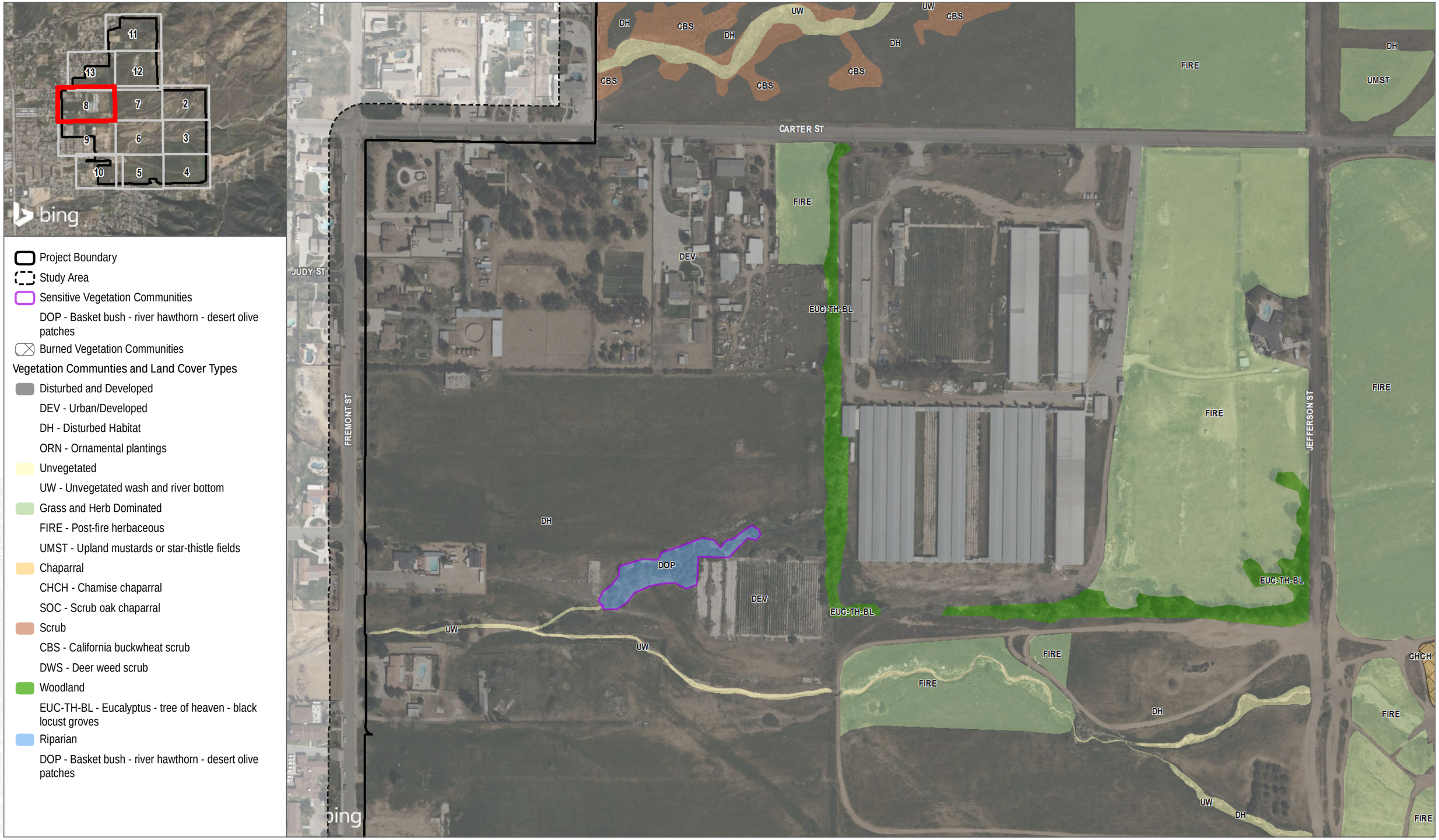
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-7

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



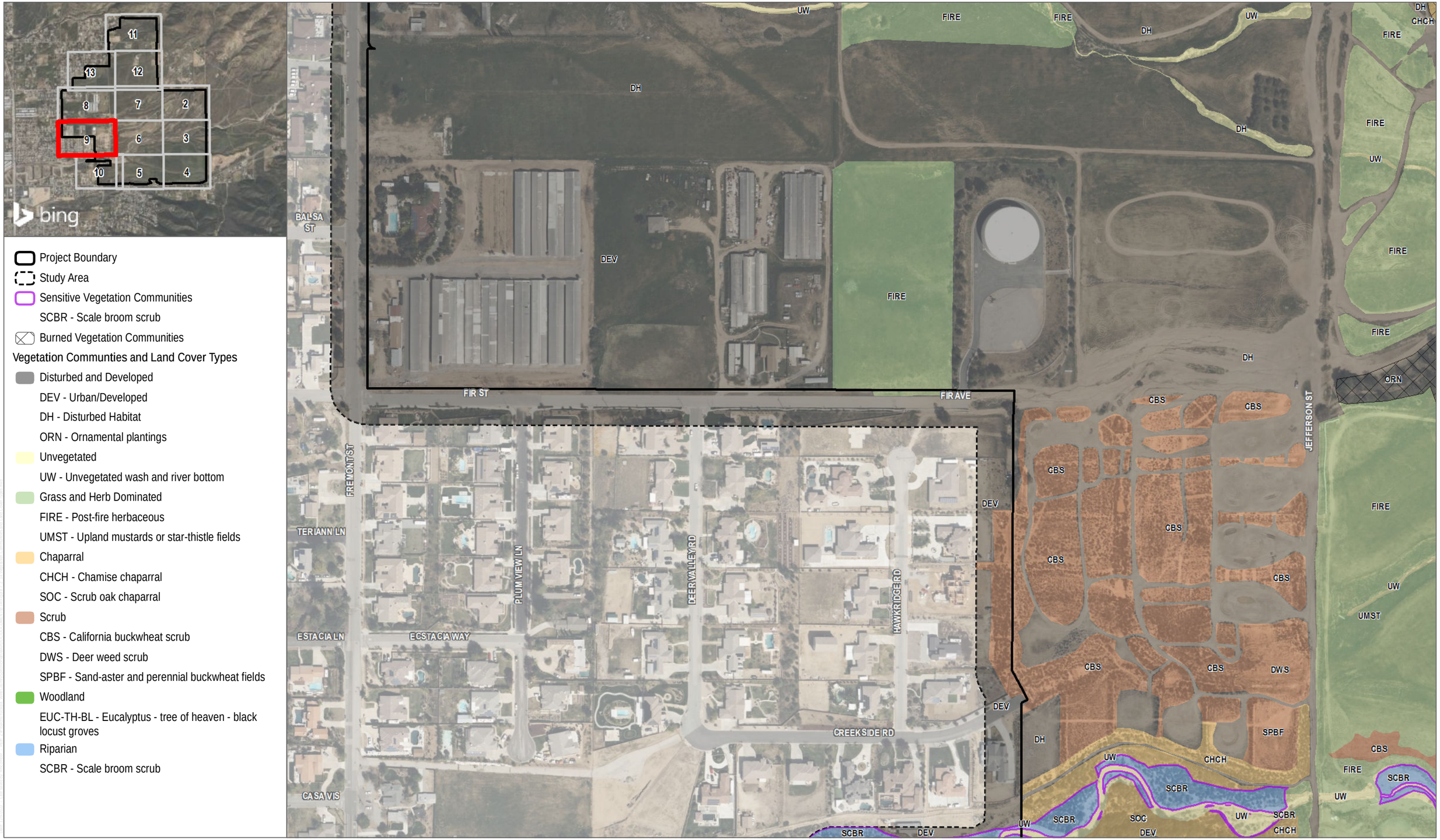
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 7-8

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



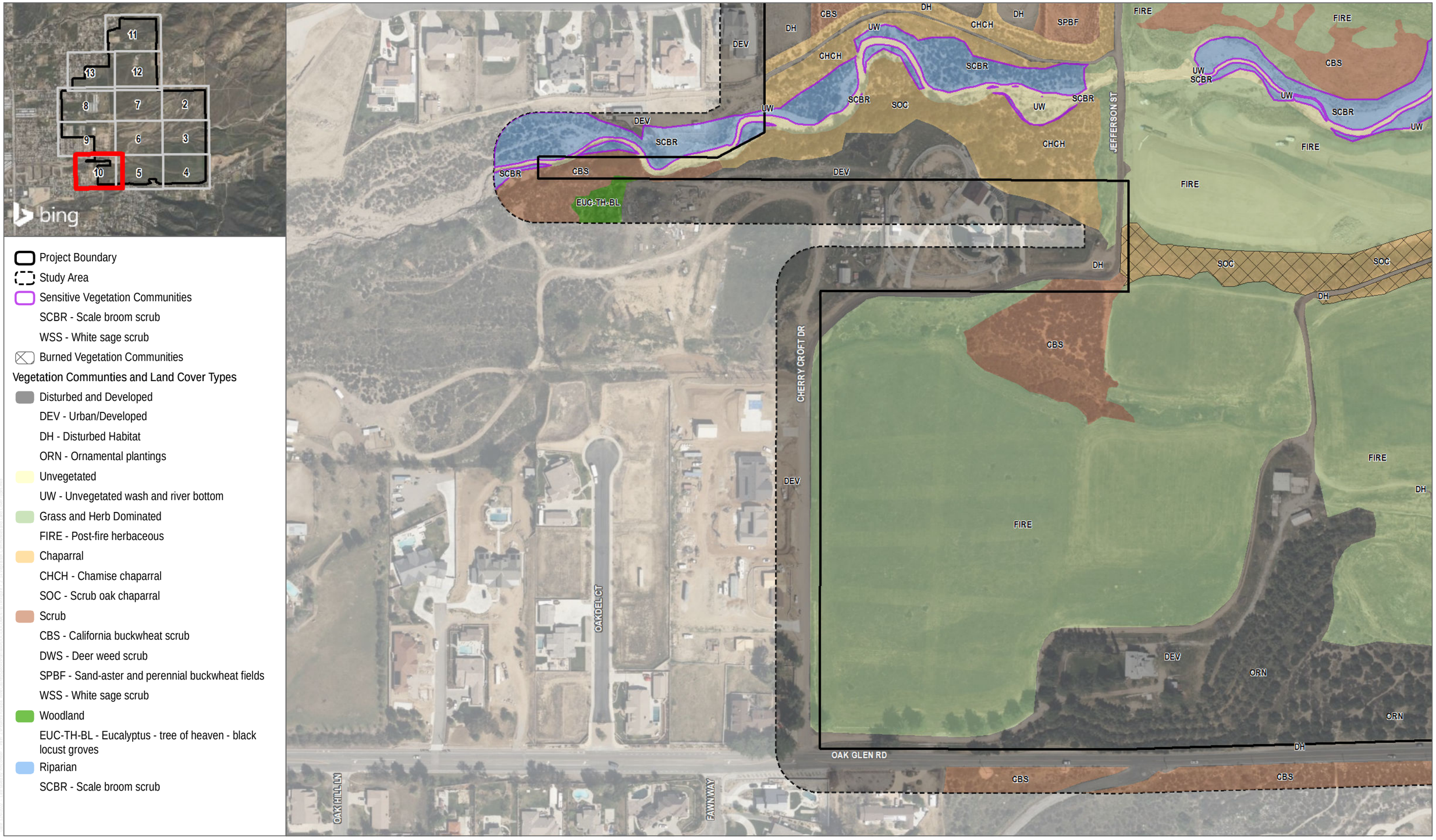
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 7-9

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 7-10

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

Project Boundary
Study Area
Burned Vegetation Communities

Vegetation Communities and Land Cover Types

- Disturbed and Developed
  - DEV - Urban/Developed
  - DH - Disturbed Habitat
- Unvegetated
  - UW - Unvegetated wash and river bottom
- Grass and Herb Dominated
  - FIRE - Post-fire herbaceous
  - UMST - Upland mustards or star-thistle fields
- Chaparral
  - CHCH - Chamise chaparral
  - SOC - Scrub oak chaparral
- Scrub
  - CBS - California buckwheat scrub
  - DWS - Deer weed scrub
- Woodland
  - CLO - Coast live oak woodland and forest

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 120 240 Feet

FIGURE 7-11

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

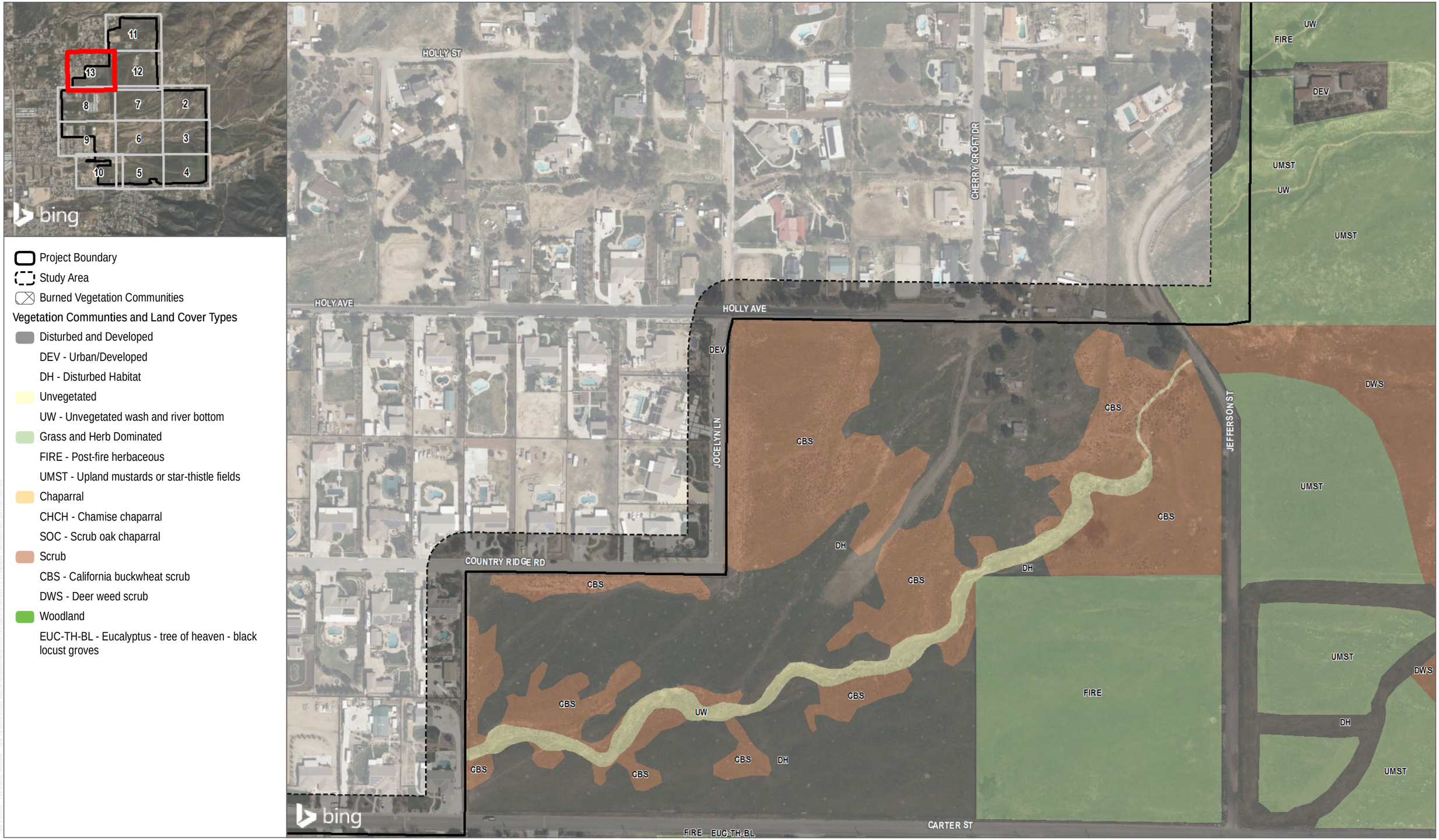
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 112.5 225 Feet

FIGURE 7-12

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



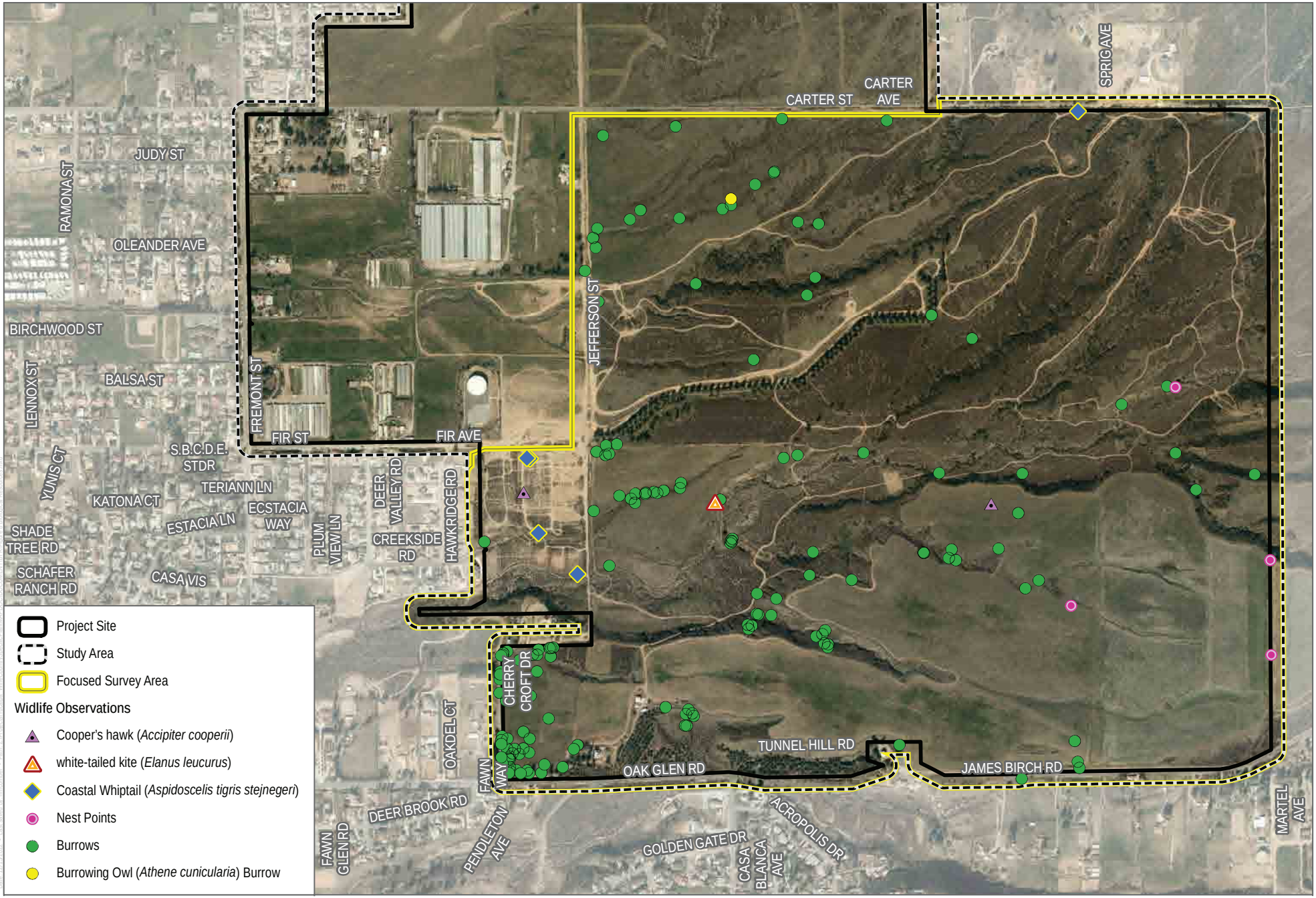
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 7-13

Vegetation Communities and Land Cover Types

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

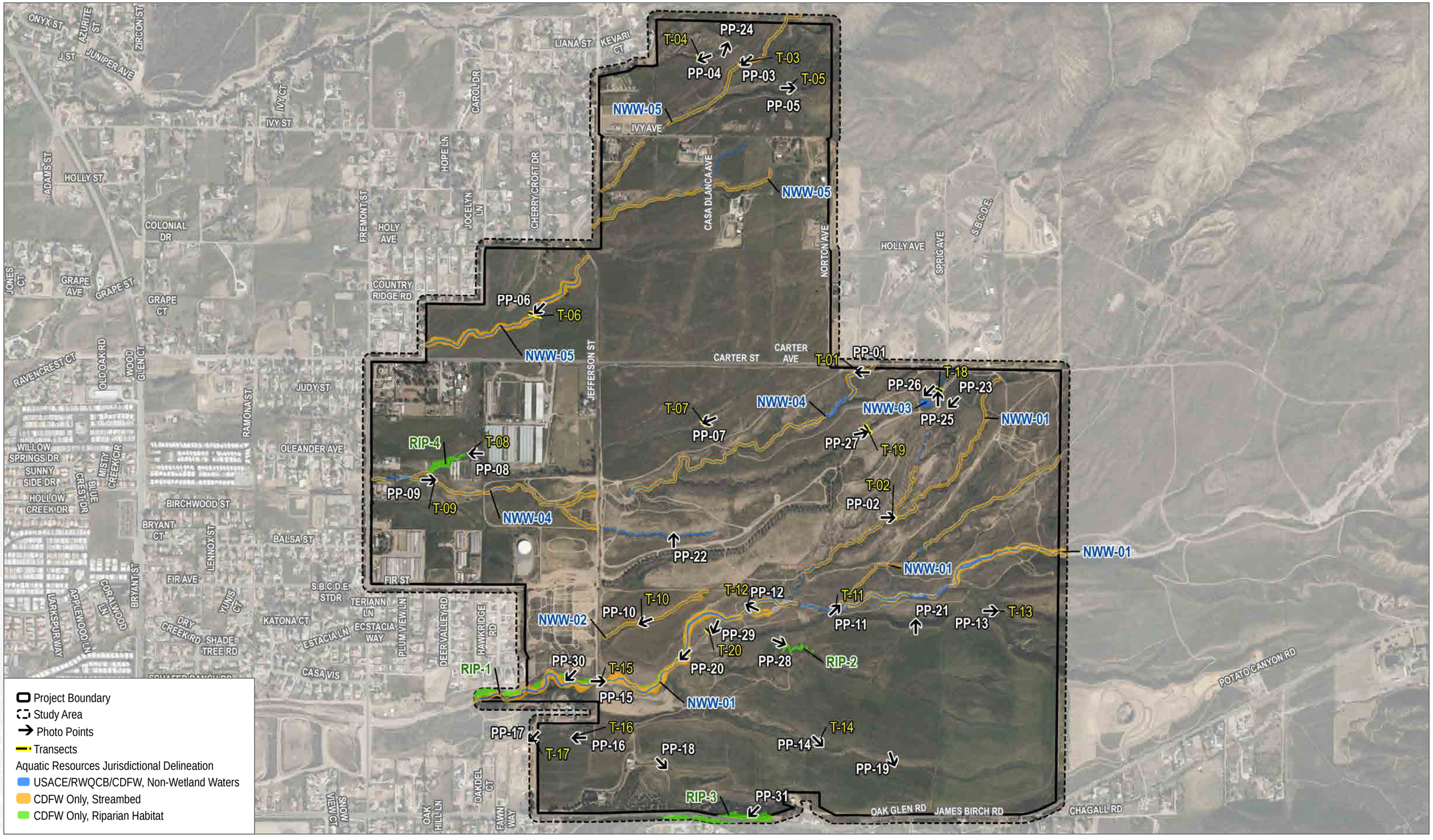


SOURCE: Esri World Imagery Basemap 2022; San Bernadino County 2022

FIGURE 8

Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

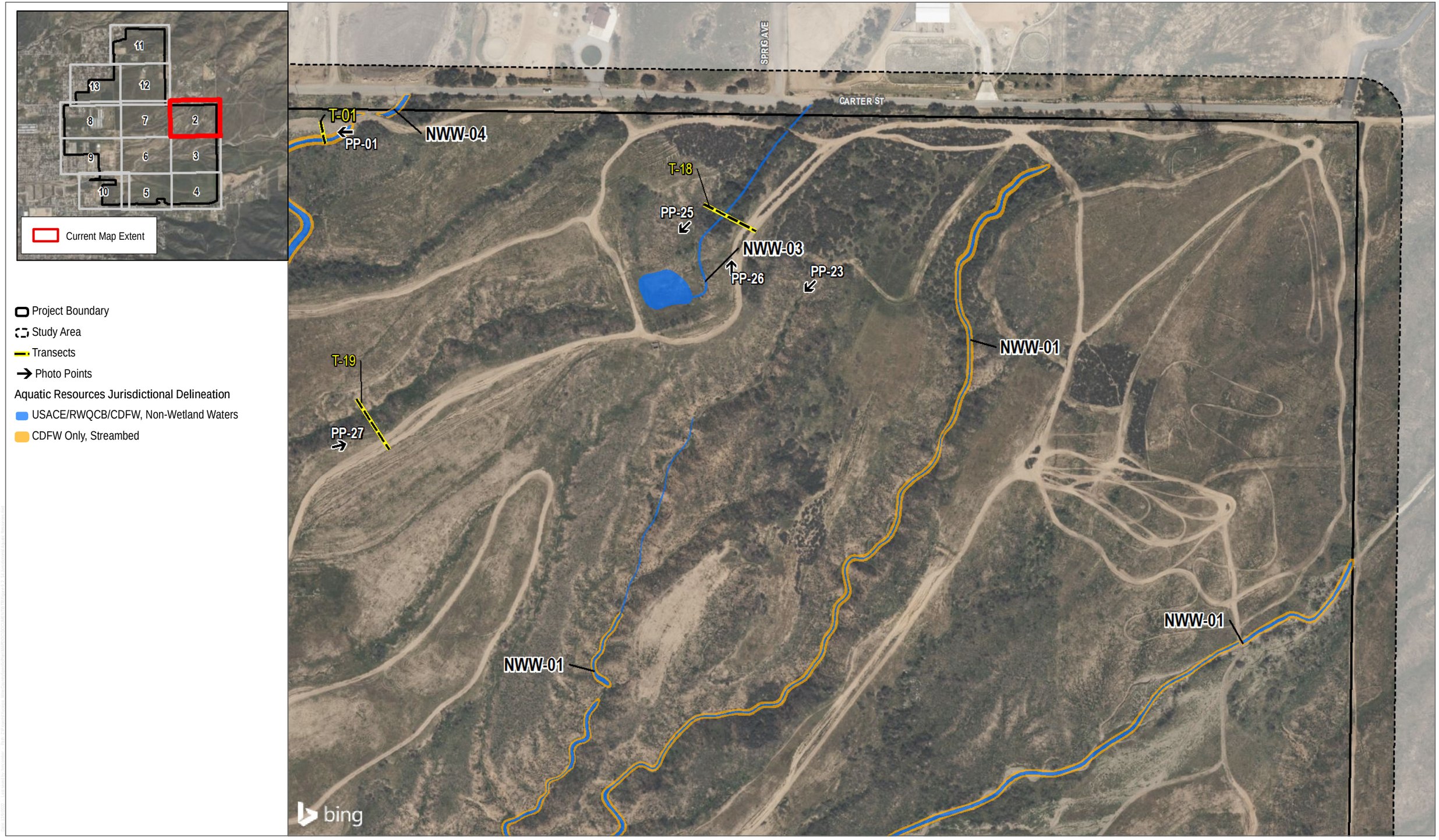
DUDEK

0 500 1,000 Feet

FIGURE 9-1

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



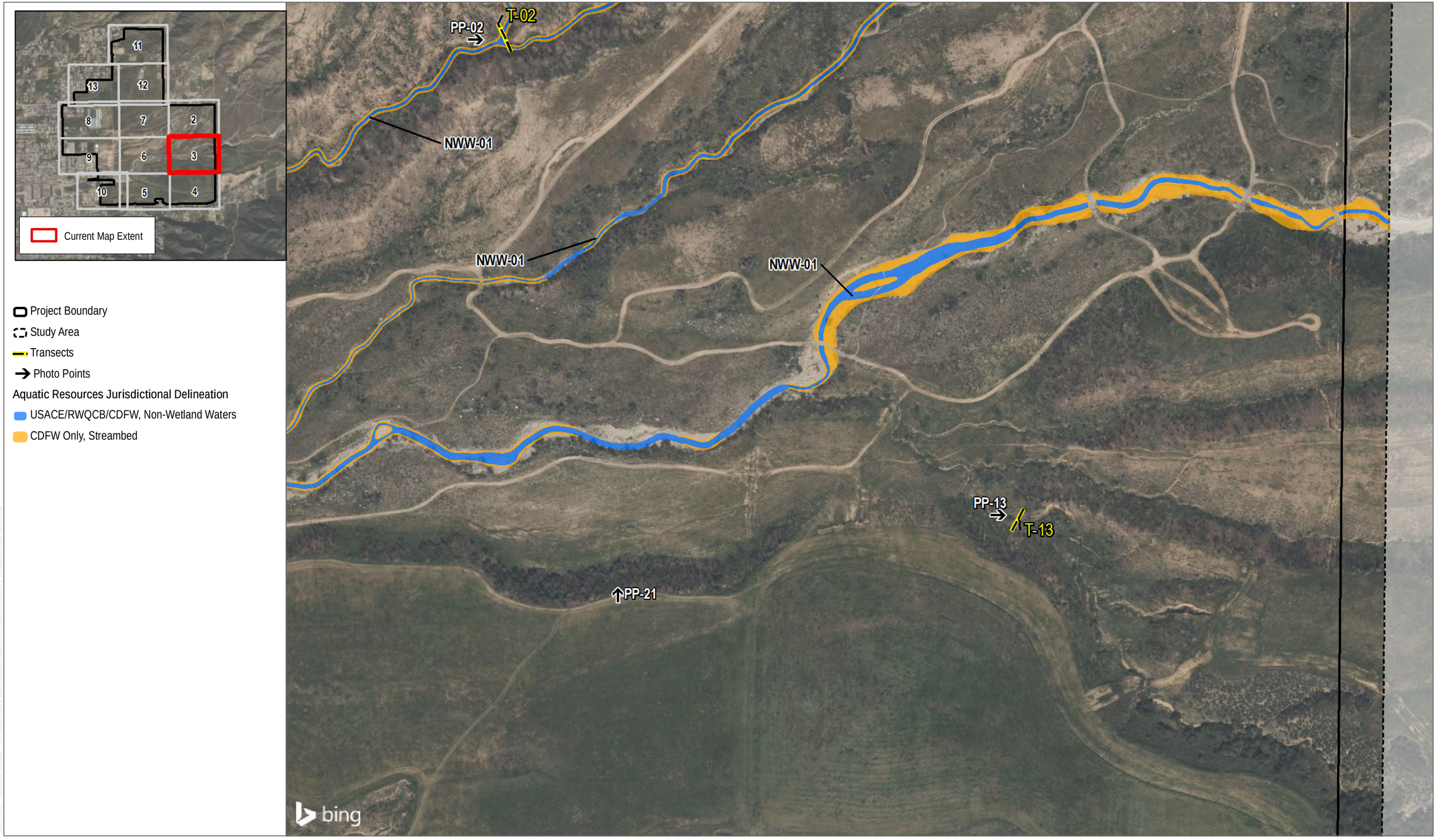
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 9-2

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



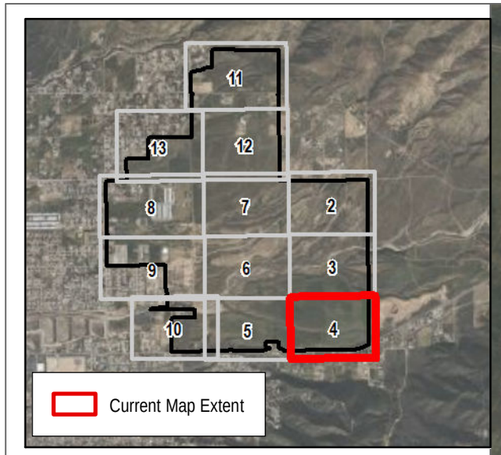
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 9-3

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Transects

Photo Points

PP-19

JAMES BIRCH RD

OAK GLEN RD

POTATO CANYON RD

CHAGALL RD

MARTE AVE

bing

SOURCE: Bing Maps; San Bernadino County 2022

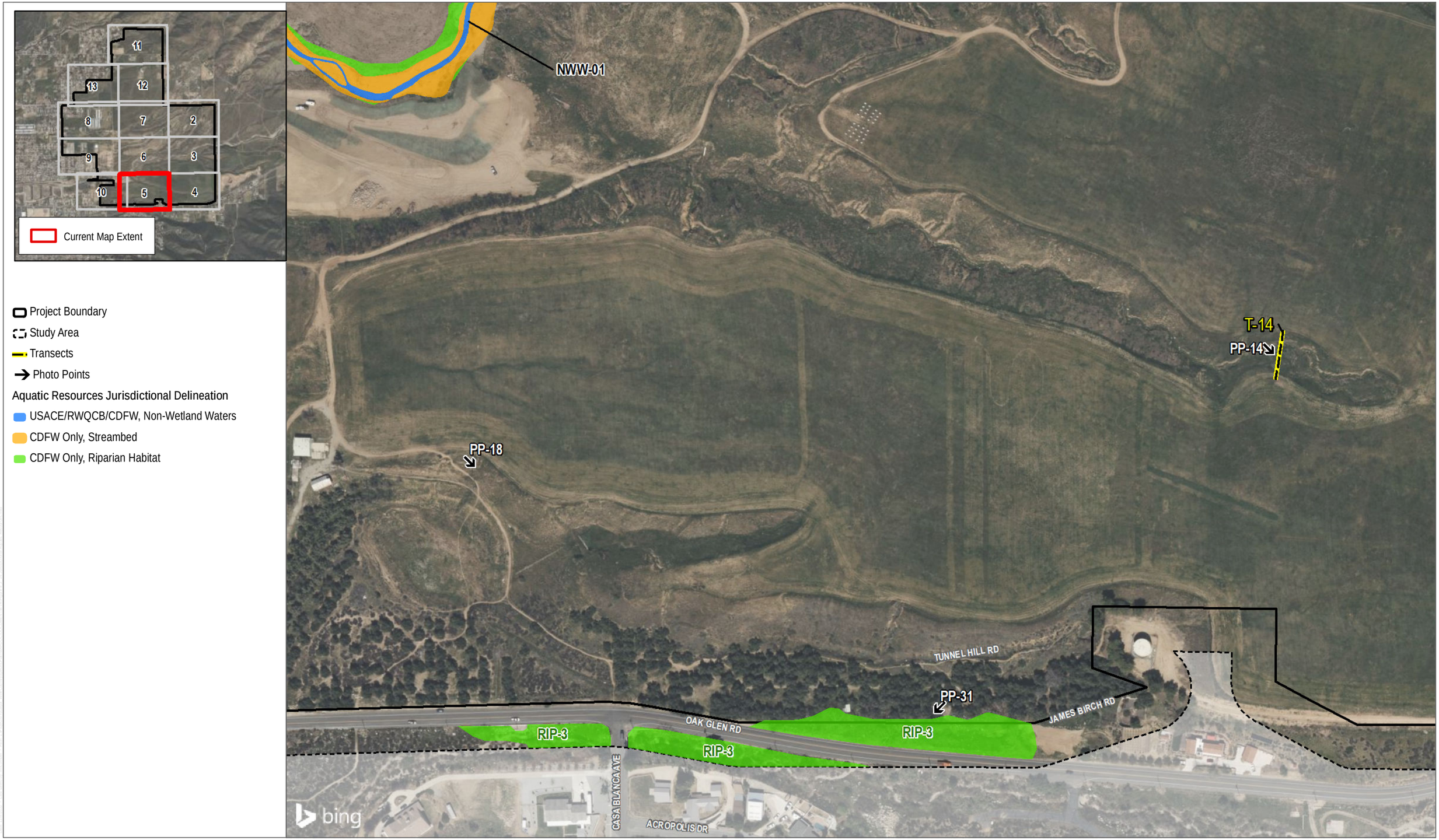
DUDEK

0 100 200 Feet

FIGURE 9-4

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

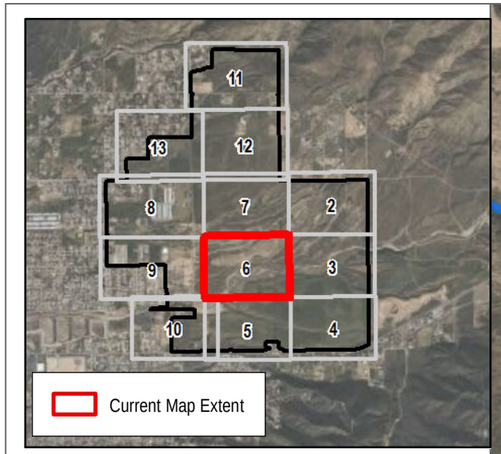
DUDEK

0 100 200 Feet

FIGURE 9-5

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

PP-22

NWW-05

NWW-02

NWW-01

T-10

PP-10

T-12

PP-12

T-11

PP-11

T-20

PP-29

RIP-1

PP-20

RIP-1

PP-28

RIP-2

bing

SOURCE: Bing Maps; San Bernadino County 2022

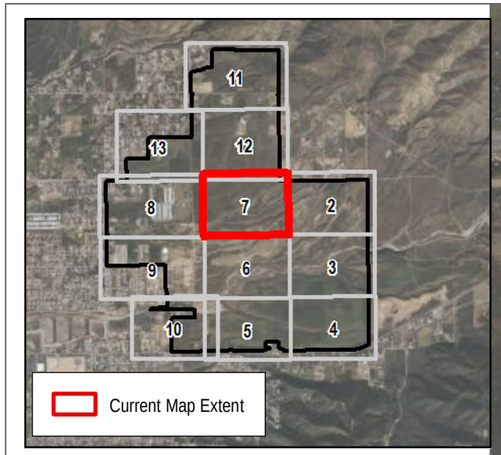
DUDEK

0 100 200 Feet

FIGURE 9-6

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

SOURCE: Bing Maps; San Bernadino County 2022

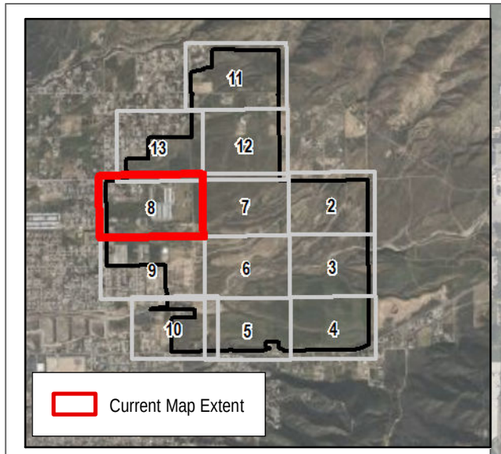
DUDEK

0 100 200 Feet

FIGURE 9-7

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 120 240 Feet

FIGURE 9-8

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

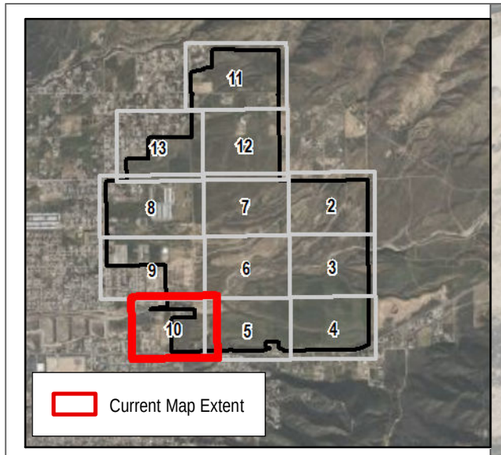
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 9-9

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

SOURCE: Bing Maps; San Bernadino County 2022

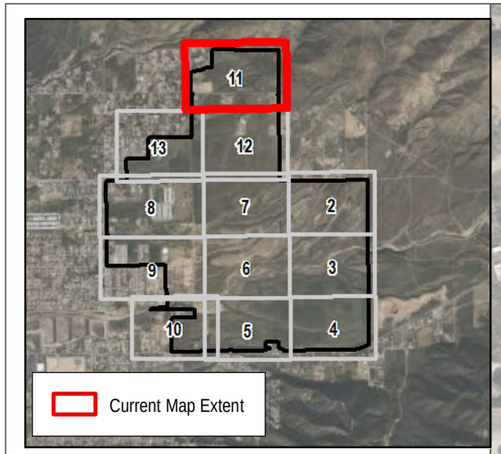
DUDEK

0 100 200 Feet

FIGURE 9-10

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

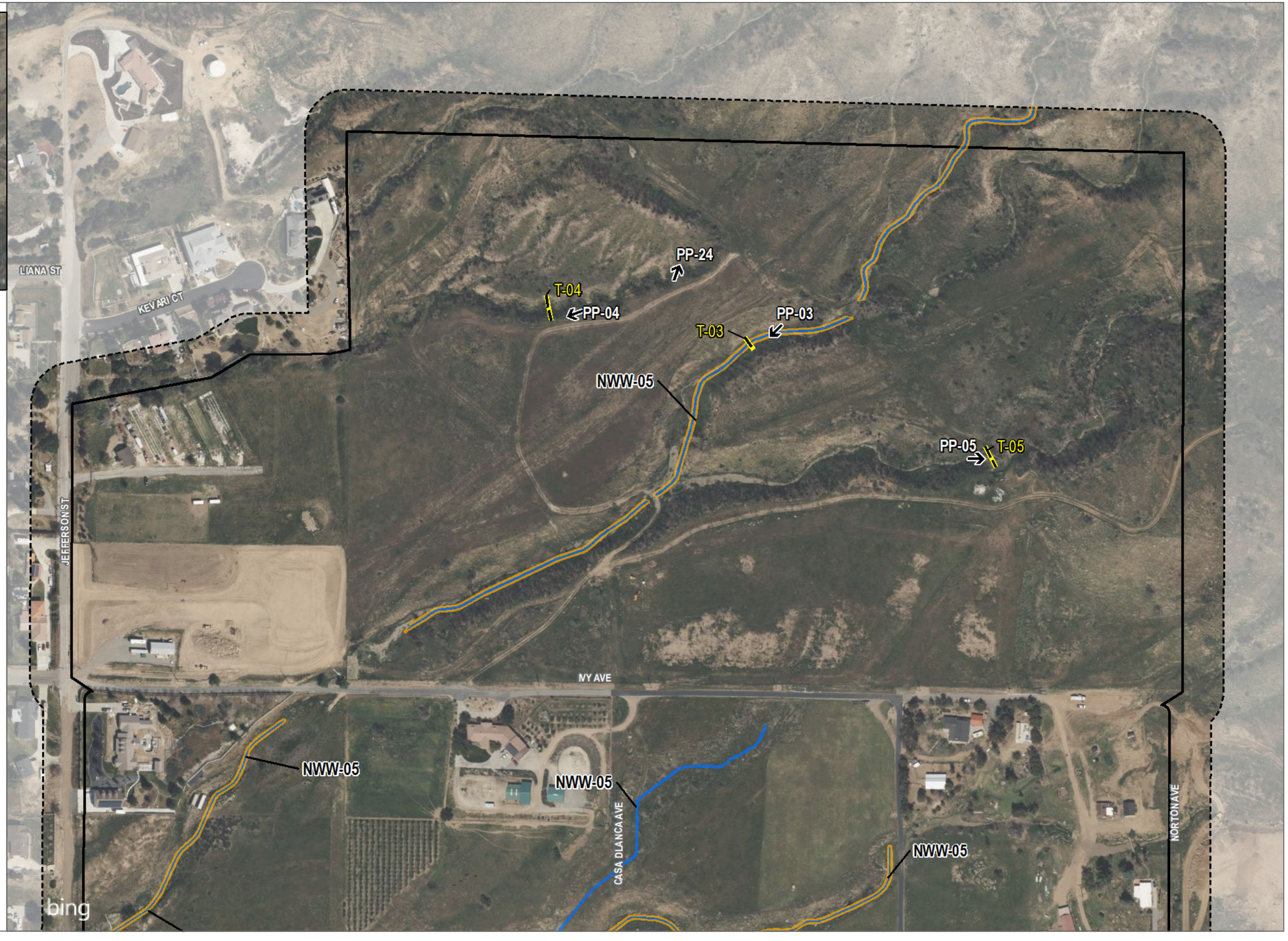
Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed



SOURCE: Bing Maps; San Bernadino County 2022

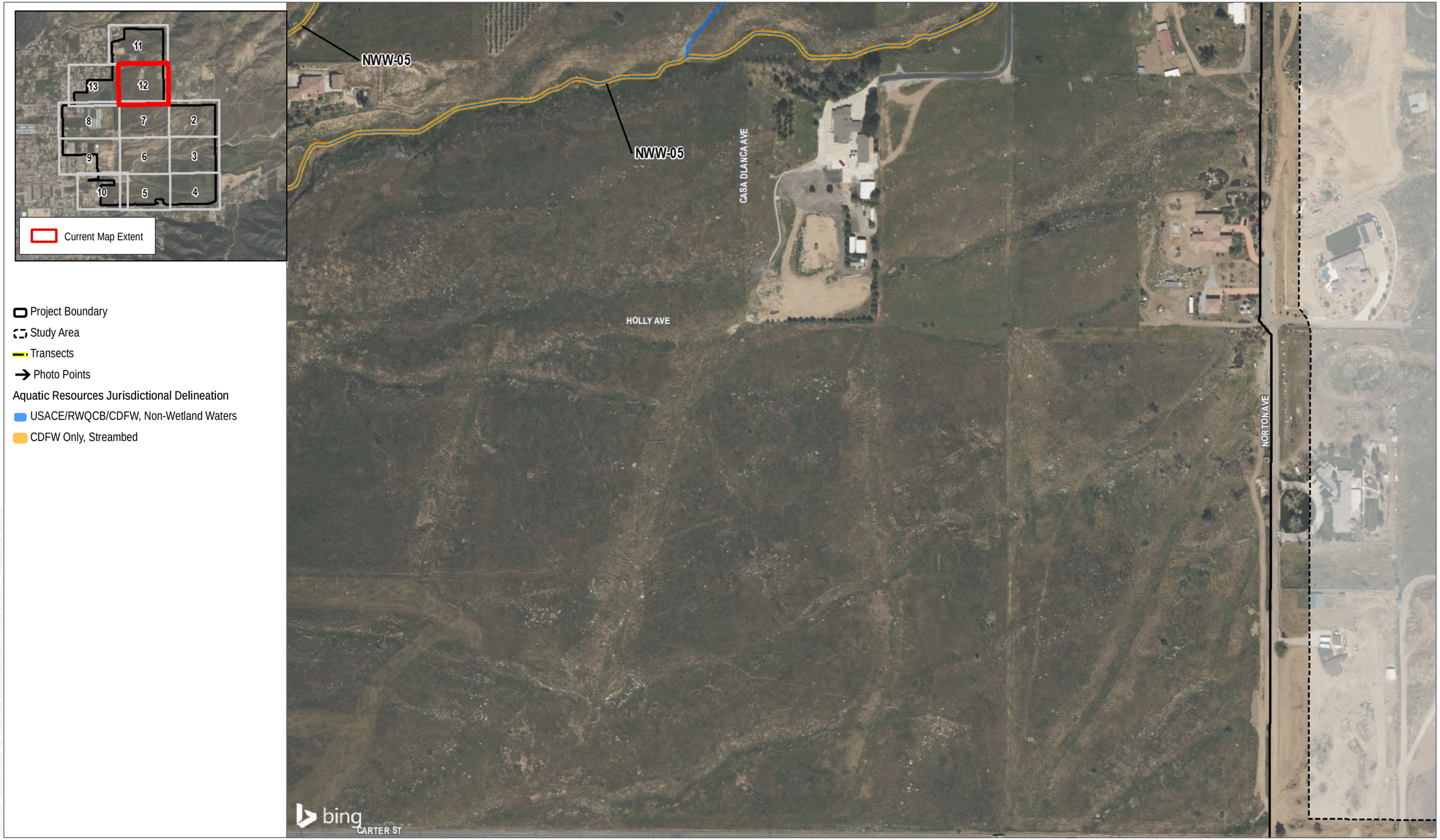
DUDEK

0 120 240 Feet

FIGURE 9-11

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

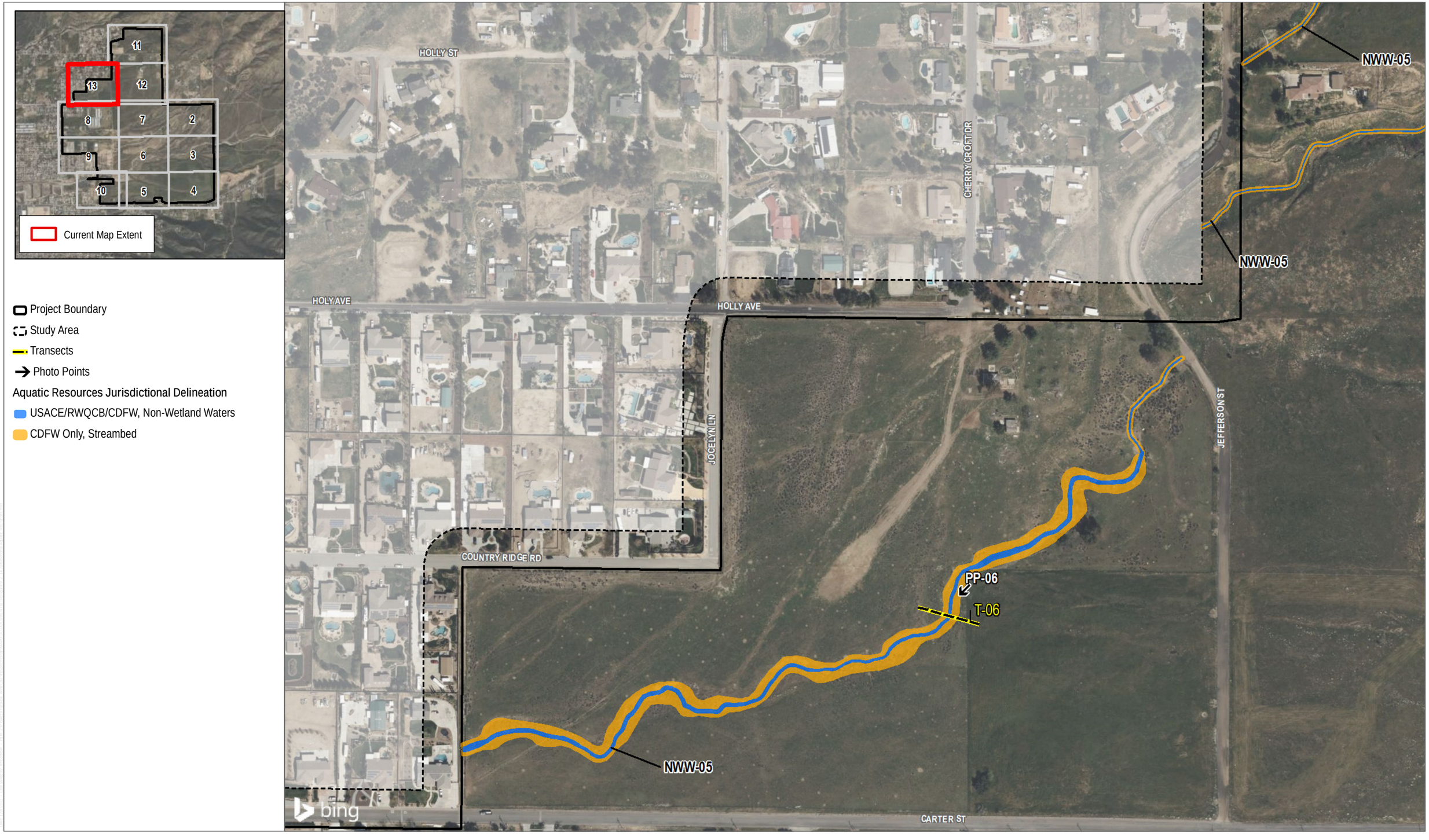
DUDEK

0 115 230 Feet

FIGURE 9-12

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



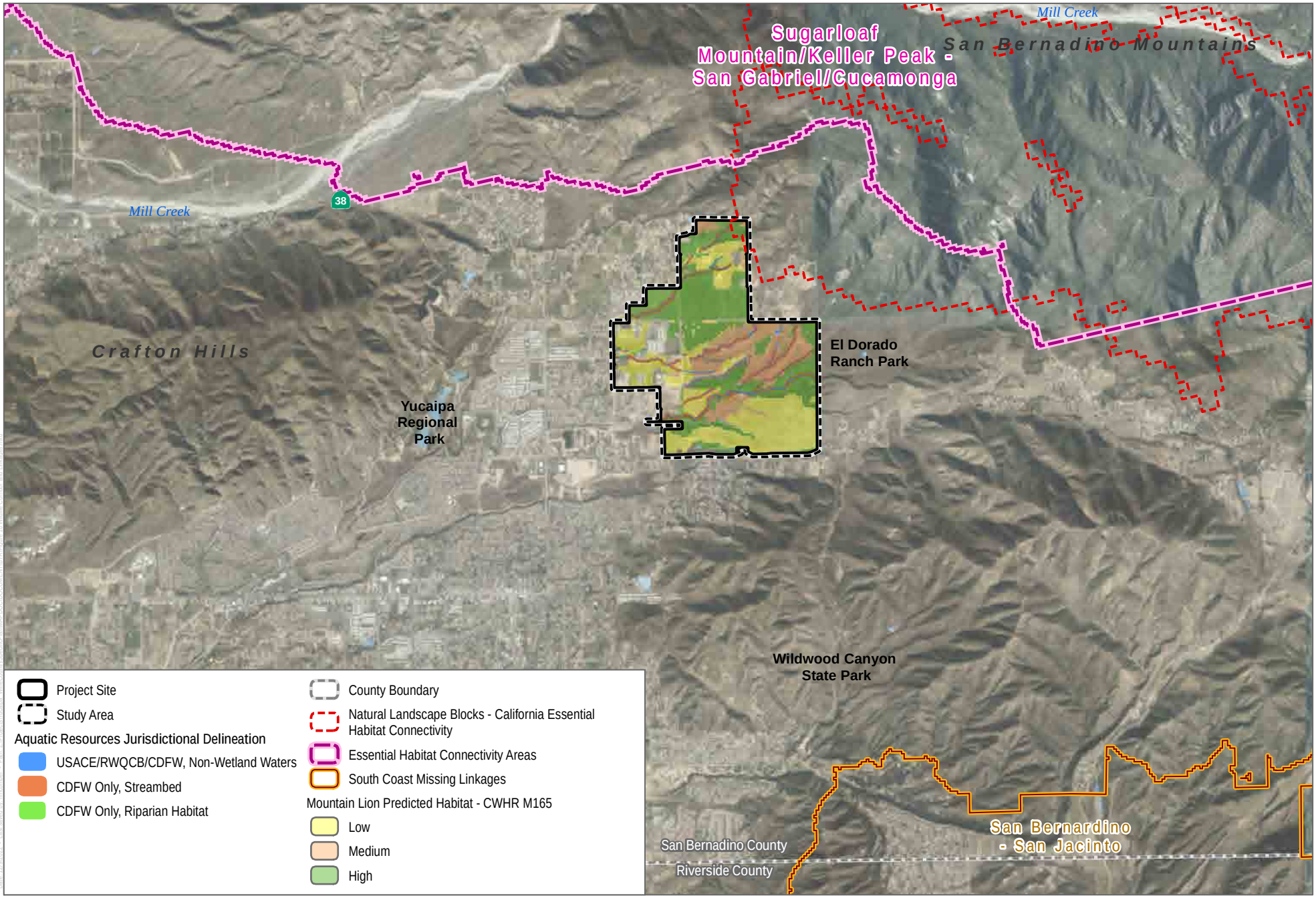
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 9-13

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Esri World Imagery Basemap 2022; San Bernadino County 2022; CDFW 2022; USFWS 2022

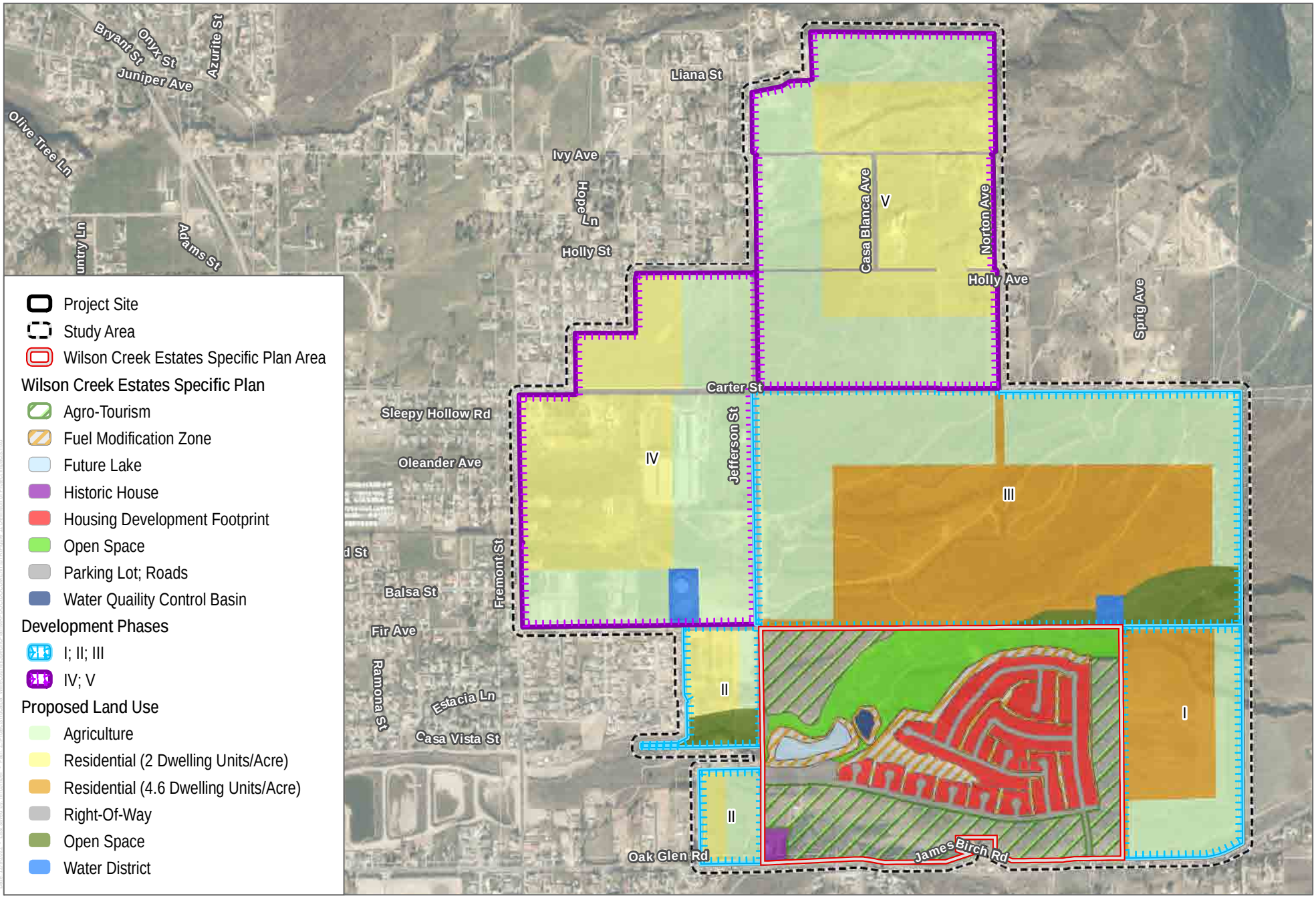
DUDEK

0 2,550 5,100 Feet

FIGURE 10

Wildlife Corridors and Linkages

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

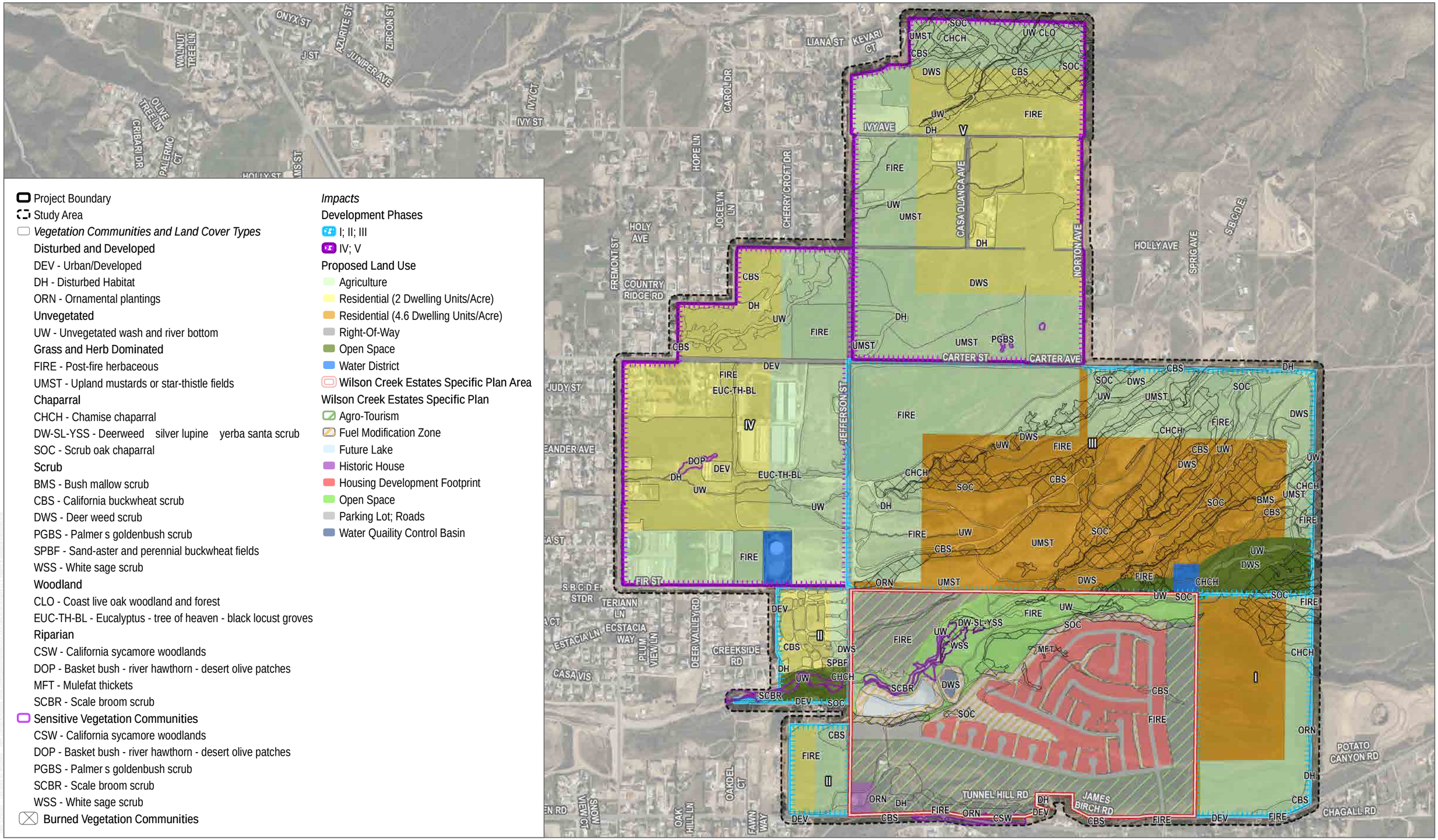


SOURCE: Bing Maps; San Bernadino County 2022

0 700 1,400 Feet

FIGURE 11

Definition of Project Impacts



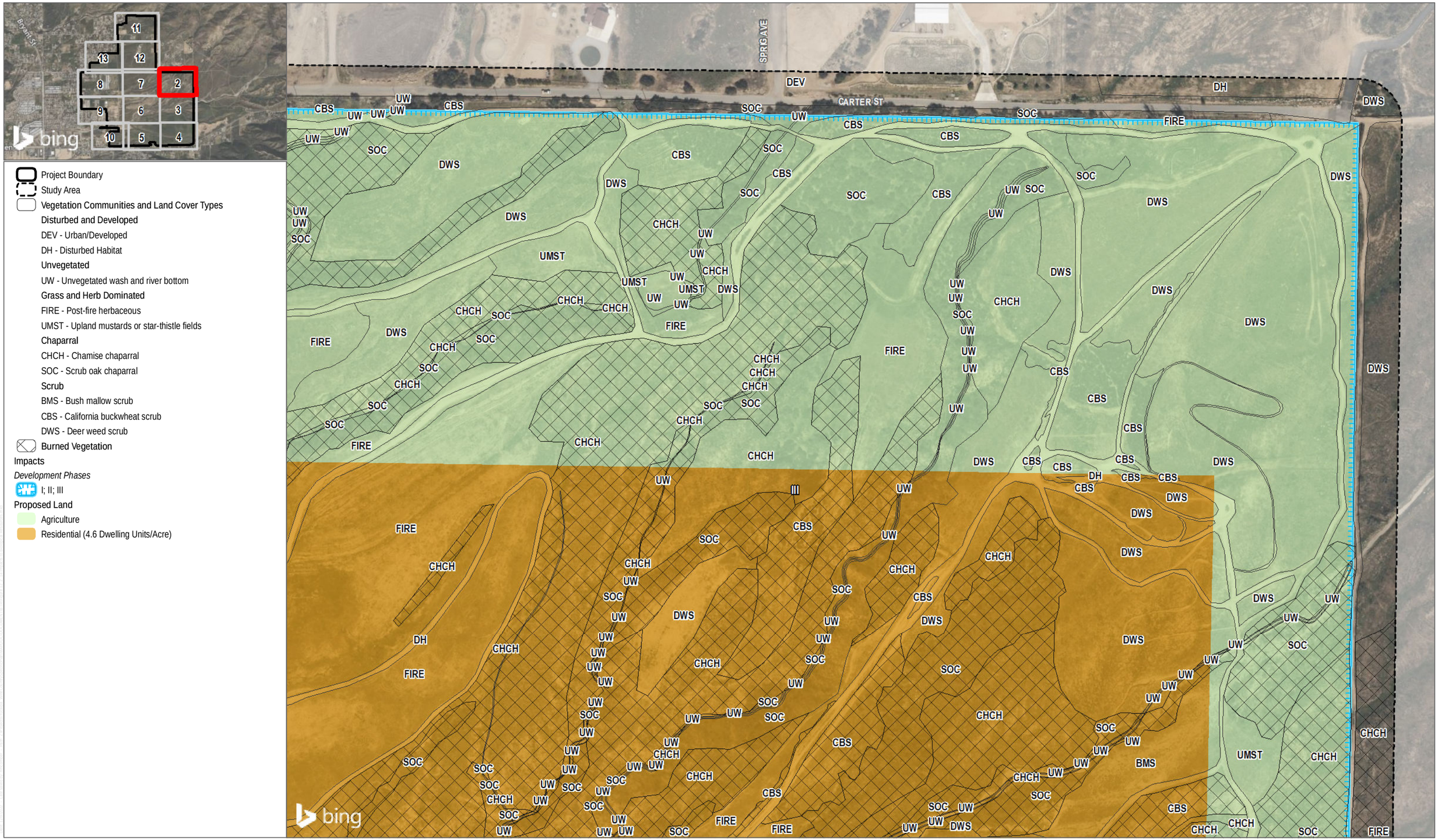
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

FIGURE 12-1

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



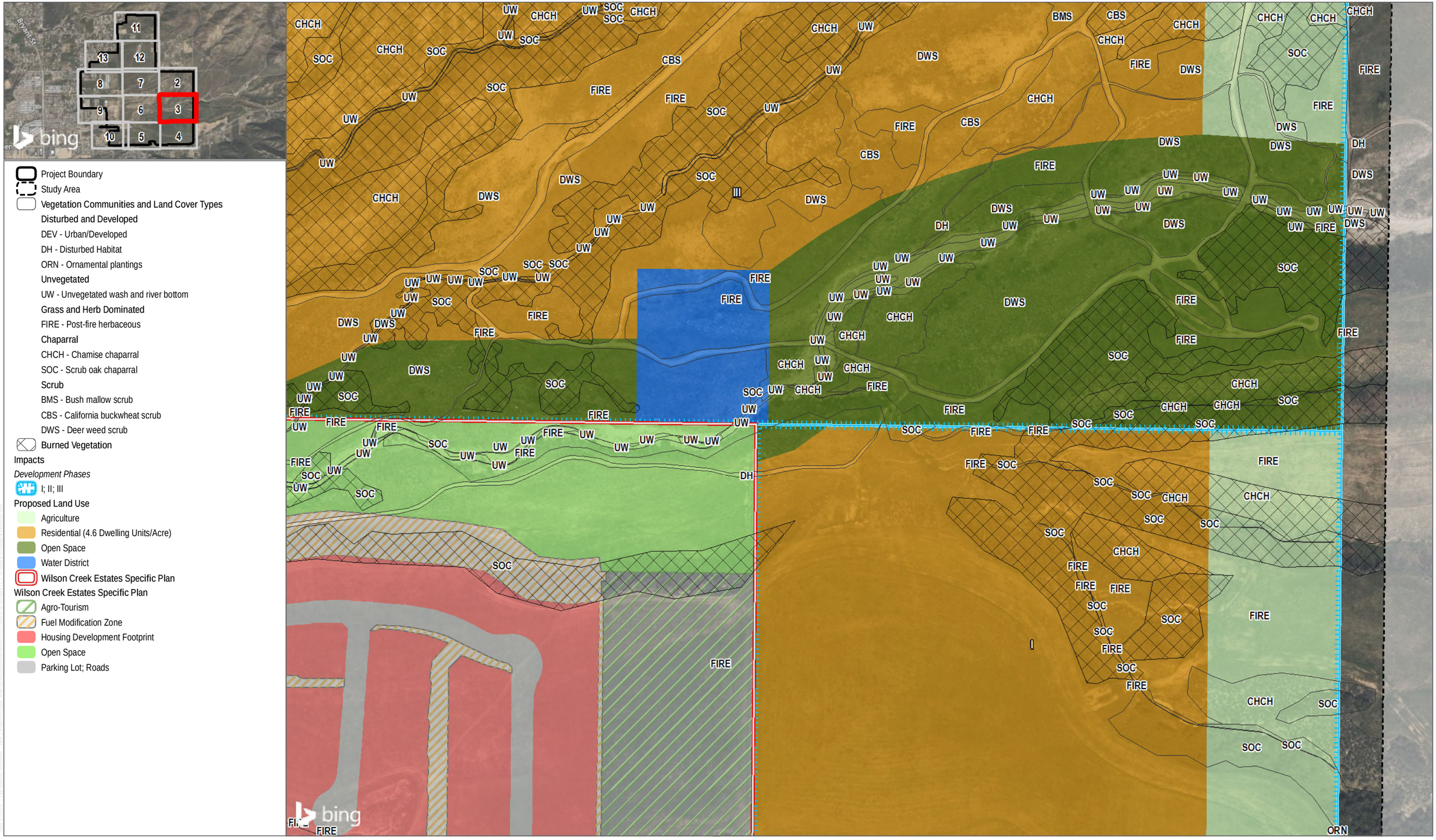
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 12-2

Impacts to Biological Resources



SOURCE: Bing Maps; San Bernadino County 2022

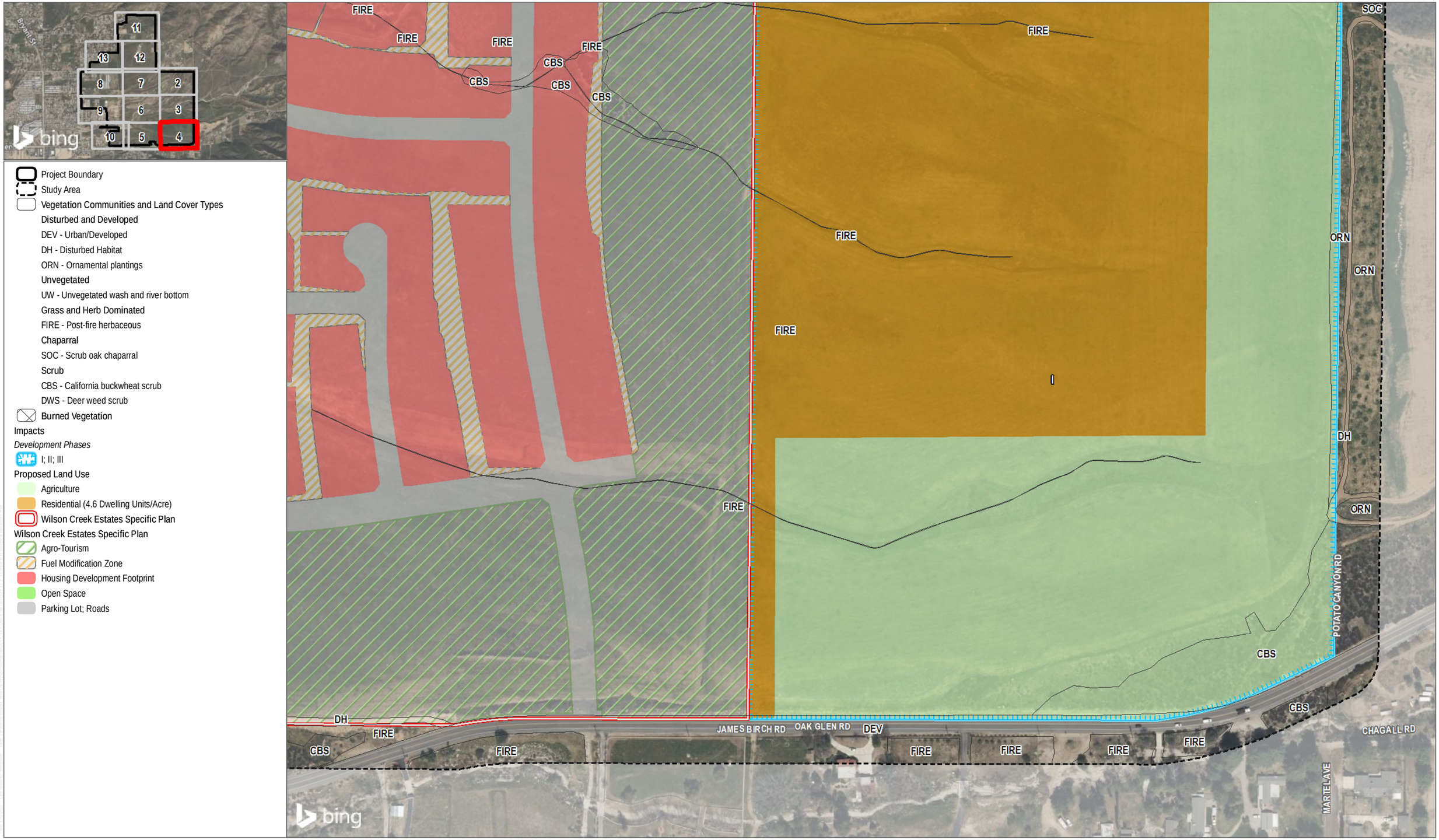
DUDEK

0 100 200 Feet

FIGURE 12-3

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 12-4

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 12-5

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

- Project Boundary
- Study Area
- Vegetation Communities and Land Cover Types
  - **Disturbed and Developed**
    - DEV - Urban/Developed
    - DH - Disturbed Habitat
    - ORN - Ornamental plantings
  - **Unvegetated**
    - UW - Unvegetated wash and river bottom
  - **Grass and Herb Dominated**
    - FIRE - Post-fire herbaceous
    - UMST - Upland mustards or star-thistle fields
  - **Chaparral**
    - CHCH - Chamise chaparral
    - DW-SL-YSS - Deerweed silver lupine yerba santa scrub
    - SOC - Scrub oak chaparral
  - **Scrub**
    - CBS - California buckwheat scrub
    - DWS - Deer weed scrub
    - WSS - White sage scrub
  - **Riparian**
    - MFT - Mulefat thickets
    - SCBR - Scale broom scrub
- Sensitive Vegetation Communities
  - SCBR - Scale broom scrub
  - WSS - White sage scrub
- Burned Vegetation

Impacts

Development Phases

- I; II; III

Proposed Land Use

- Agriculture
- Residential (4.6 Dwelling Units/Acre)
- Right-Of-Way
- Open Space
- Wilson Creek Estates Specific Plan

Wilson Creek Estates Specific Plan

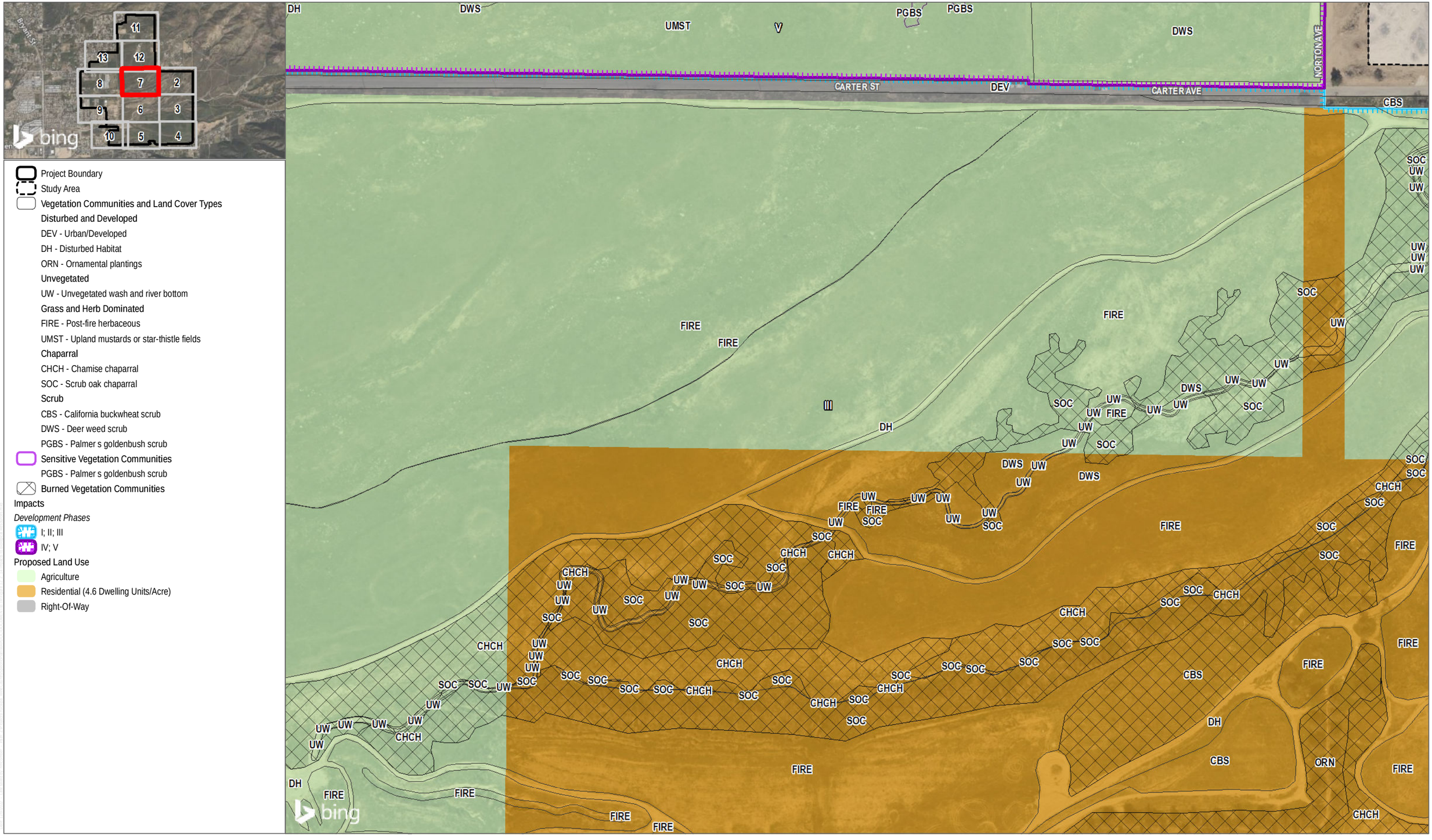
- Agro-Tourism
- Fuel Modification Zone
- Housing Development Footprint
- Open Space
- Parking Lot; Roads
- Water Quaility Control Basin

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 12-6

Impacts to Biological Resources



SOURCE: Bing Maps; San Bernadino County 2022

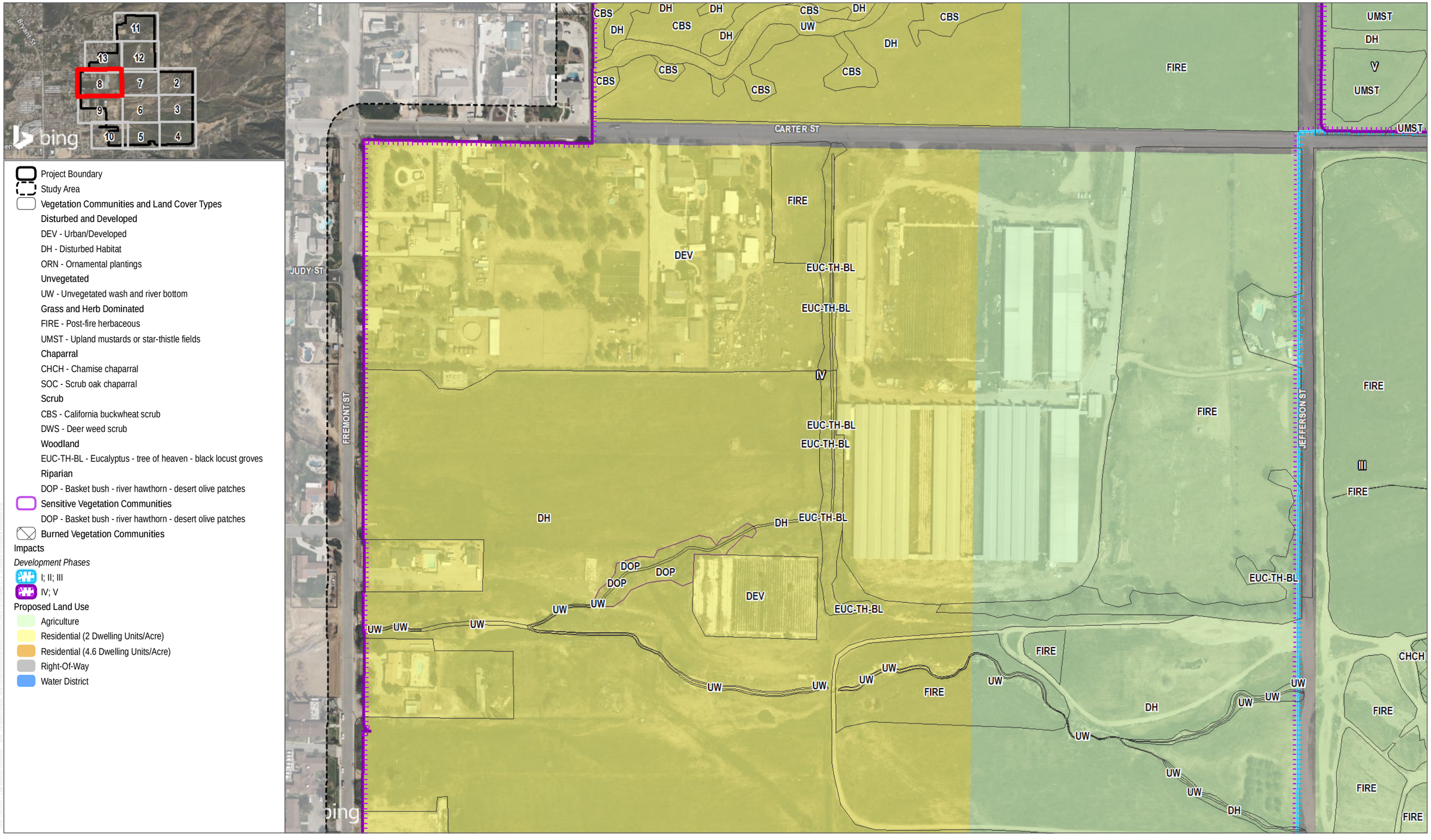
DUDEK

0 100 200 Feet

FIGURE 12-7

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



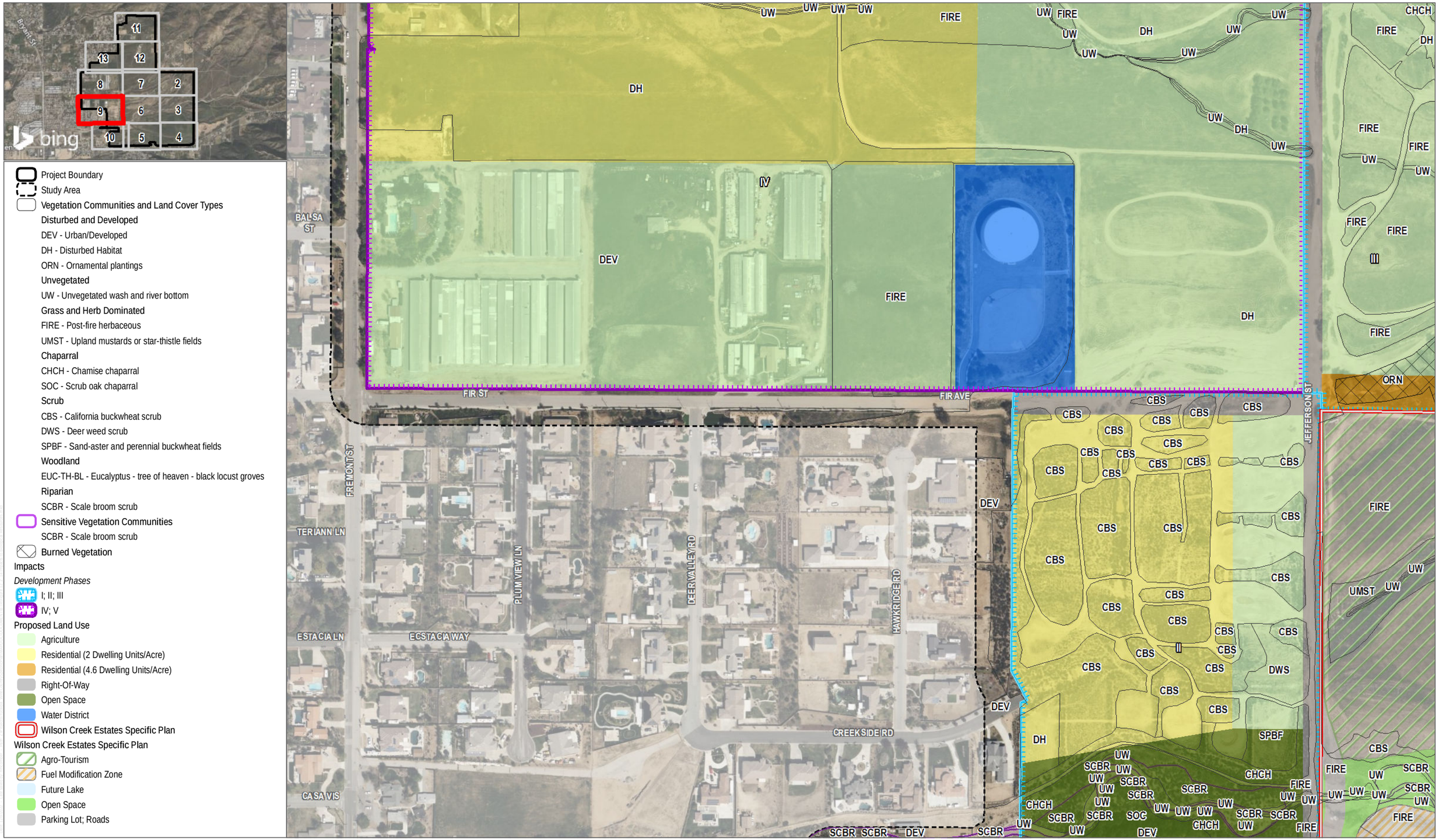
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 120 240 Feet

FIGURE 12-8

Impacts to Biological Resources



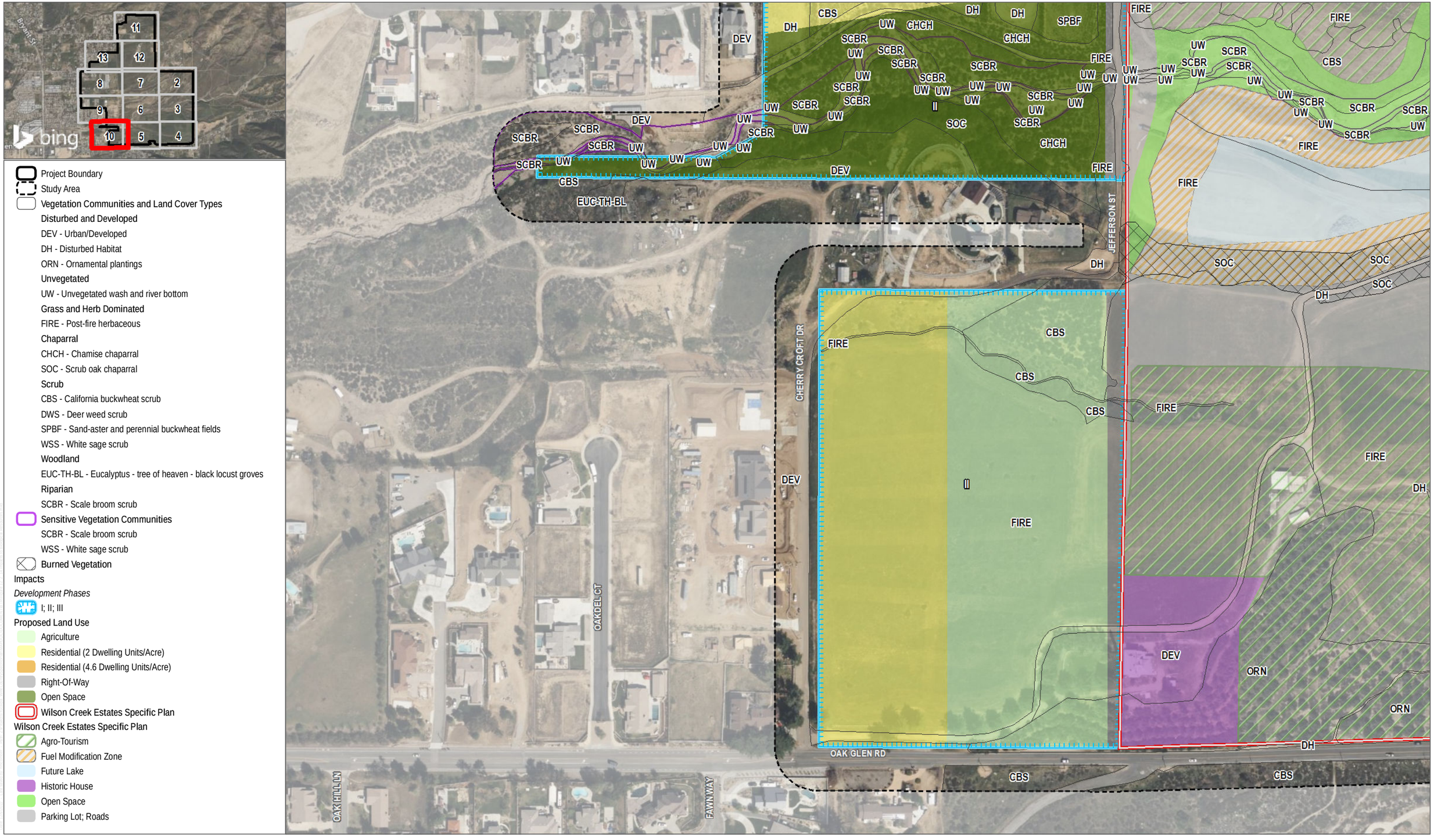
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 120 240 Feet

FIGURE 12-9

Impacts to Biological Resources



SOURCE: Bing Maps; San Bernadino County 2022

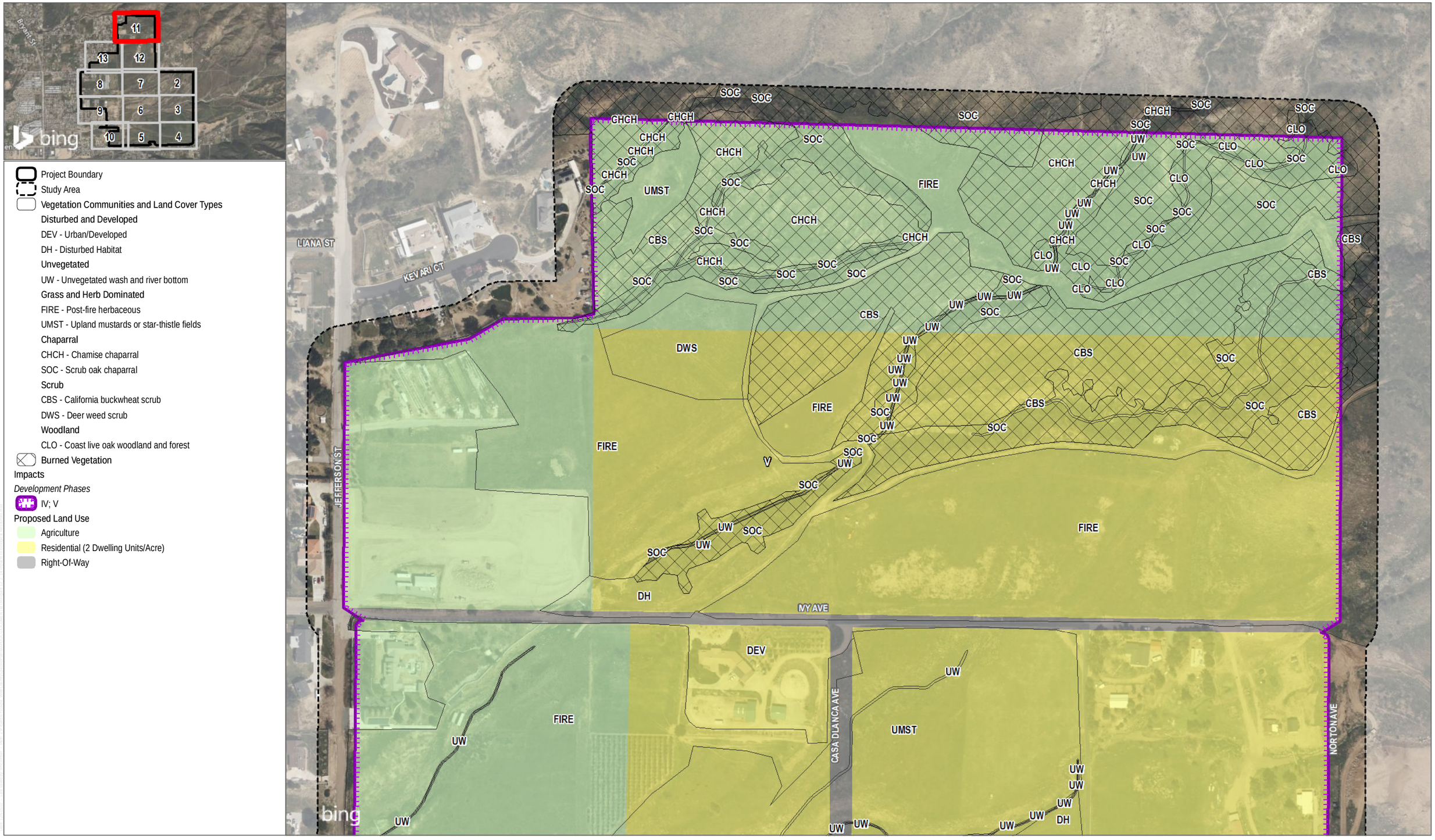
DUDEK

0 100 200 Feet

FIGURE 12-10

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

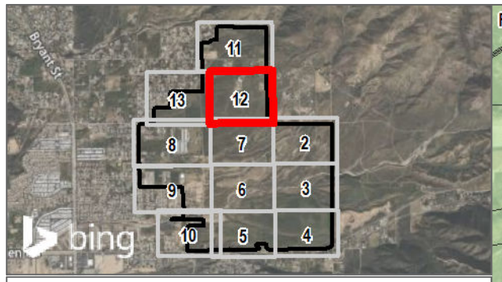


SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 12-11

Impacts to Biological Resources



- Project Boundary
- Study Area
- Vegetation Communities and Land Cover Types
  - Disturbed and Developed
    - DEV - Urban/Developed
    - DH - Disturbed Habitat
  - Unvegetated
    - UW - Unvegetated wash and river bottom
  - Grass and Herb Dominated
    - FIRE - Post-fire herbaceous
    - UMST - Upland mustards or star-thistle fields
  - Chaparral
    - CHCH - Chamise chaparral
    - SOC - Scrub oak chaparral
  - Scrub
    - CBS - California buckwheat scrub
    - DWS - Deer weed scrub
    - PGBS - Palmer s goldenbush scrub
- Sensitive Vegetation Communities
  - PGBS - Palmer s goldenbush scrub
- Burned Vegetation Communities

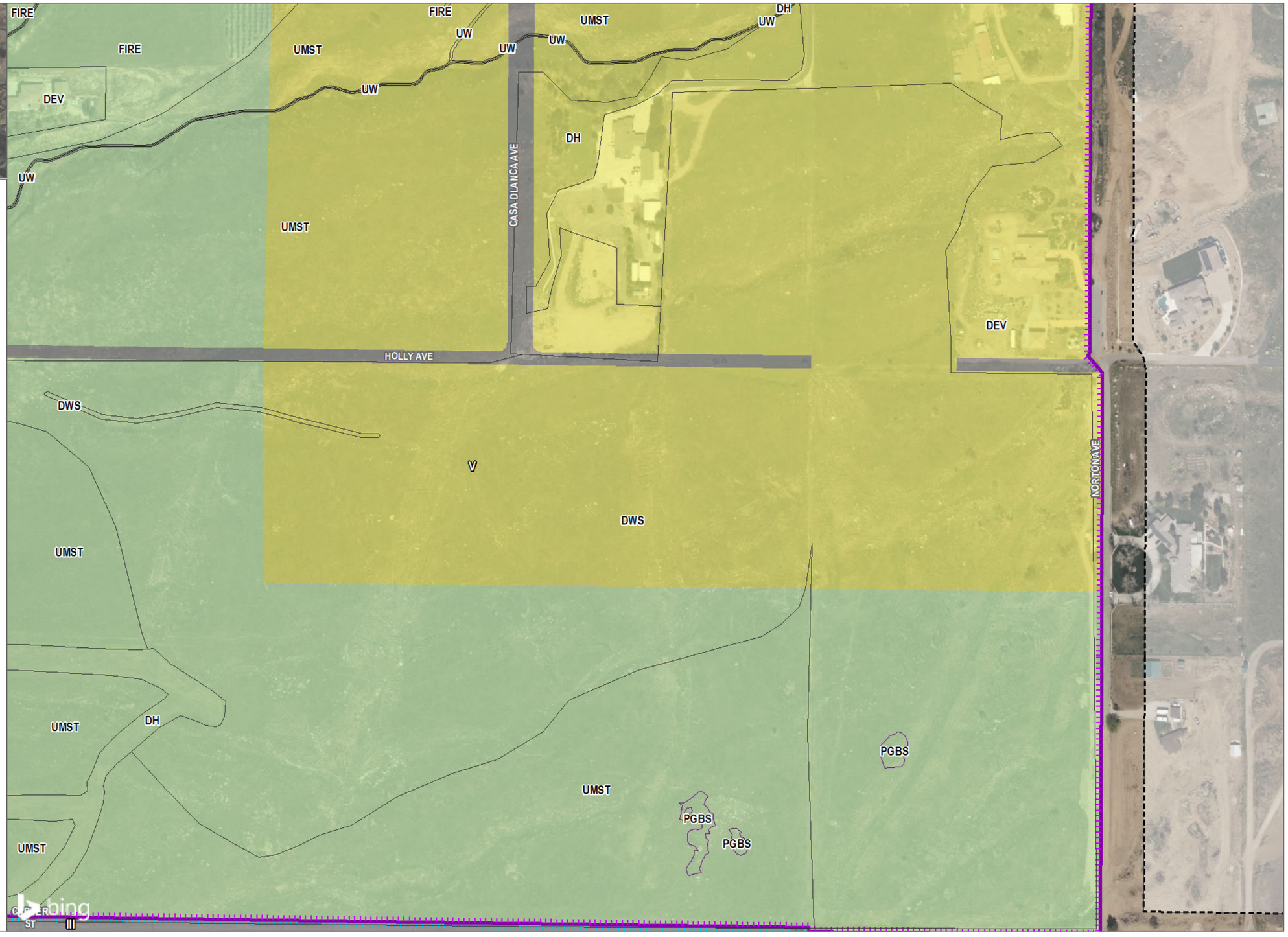
Impacts

Development Phases

- I; II; III
- IV; V

Proposed Land Use

- Agriculture
- Residential (2 Dwelling Units/Acre)
- Right-Of-Way



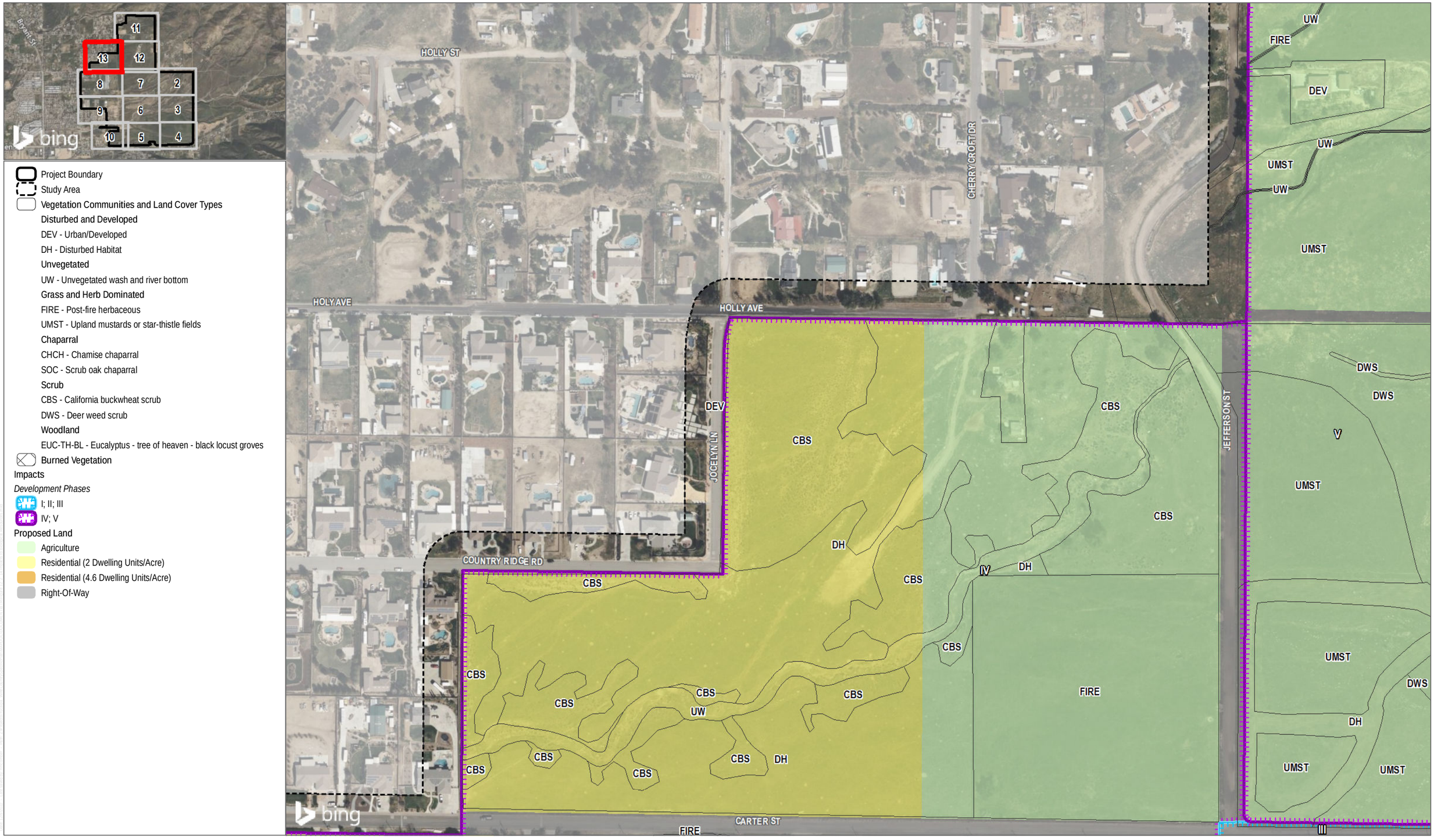
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 12-12

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



- Project Boundary
- Study Area
- Vegetation Communities and Land Cover Types
  - **Disturbed and Developed**
    - DEV - Urban/Developed
    - DH - Disturbed Habitat
  - **Unvegetated**
    - UW - Unvegetated wash and river bottom
  - **Grass and Herb Dominated**
    - FIRE - Post-fire herbaceous
    - UMST - Upland mustards or star-thistle fields
  - **Chaparral**
    - CHCH - Chamise chaparral
    - SOC - Scrub oak chaparral
  - **Scrub**
    - CBS - California buckwheat scrub
    - DWS - Deer weed scrub
  - **Woodland**
    - EUC-TH-BL - Eucalyptus - tree of heaven - black locust groves
- Burned Vegetation

Impacts

Development Phases

- I; II; III
- IV; V

Proposed Land

- Agriculture
- Residential (2 Dwelling Units/Acre)
- Residential (4.6 Dwelling Units/Acre)
- Right-Of-Way

SOURCE: Bing Maps; San Bernadino County 2022

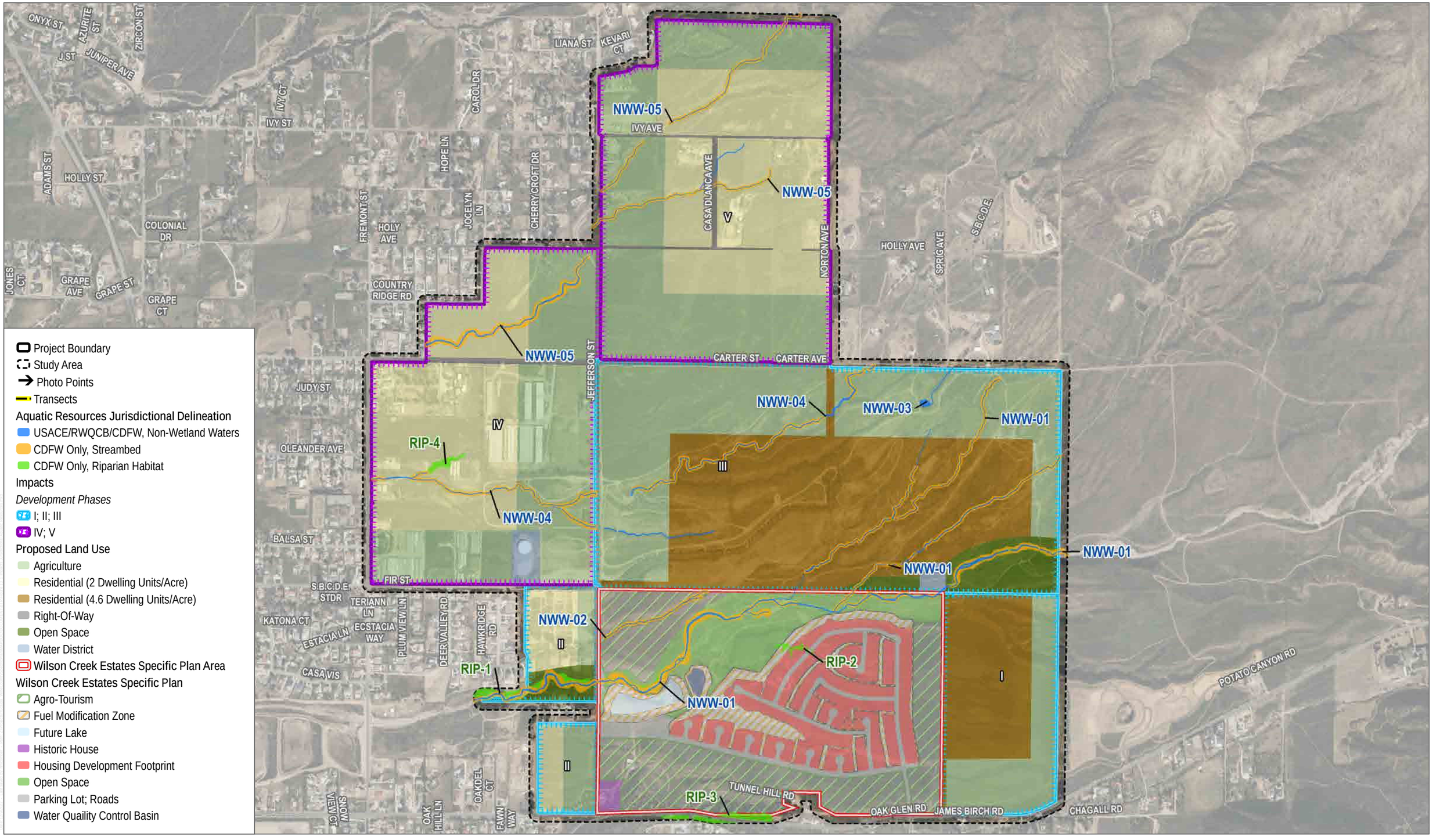
DUDEK

0 115 230 Feet

FIGURE 12-13

Impacts to Biological Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

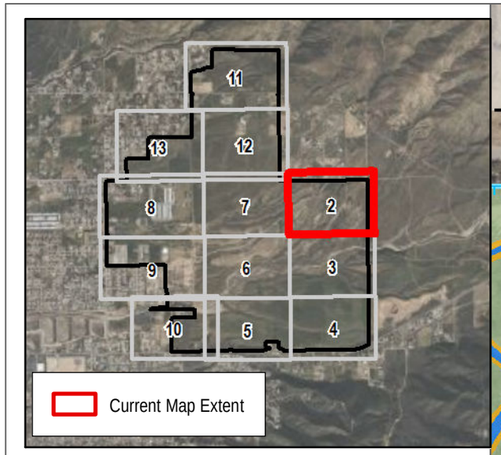
DUDEK

0 500 1,000 Feet

FIGURE 13-1

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

Impacts

Development Phases

I; II; III

Proposed Land Use

Agriculture

Residential (4.6 Dwelling Units/Acre)

SOURCE: Bing Maps; San Bernadino County 2022

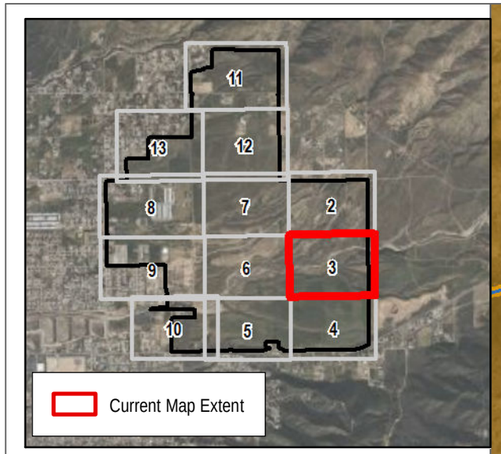
DUDEK

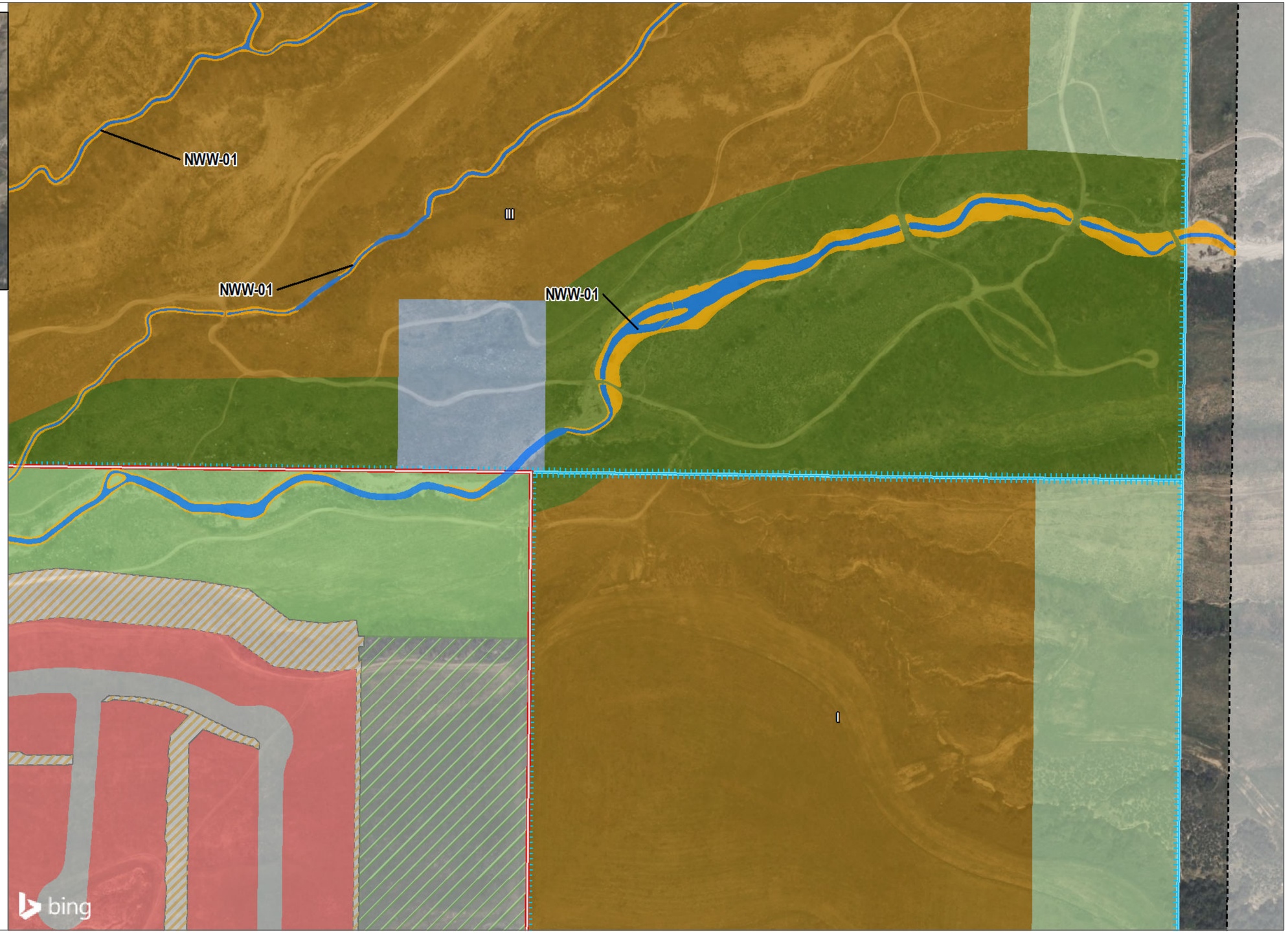
0 100 200 Feet

FIGURE 13-2

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report





Project Boundary

Study Area

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

Impacts

Development Phases

I; II; III

Proposed Land Use

Agriculture

Residential (4.6 Dwelling Units/Acre)

Open Space

Water District

Wilson Creek Estates Specific Plan Area

Wilson Creek Estates Specific Plan

Agro-Tourism

Fuel Modification Zone

Housing Development Footprint

Open Space

Parking Lot; Roads

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 13-3

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 13-4

Impacts to Jurisdictional Aquatic Resources

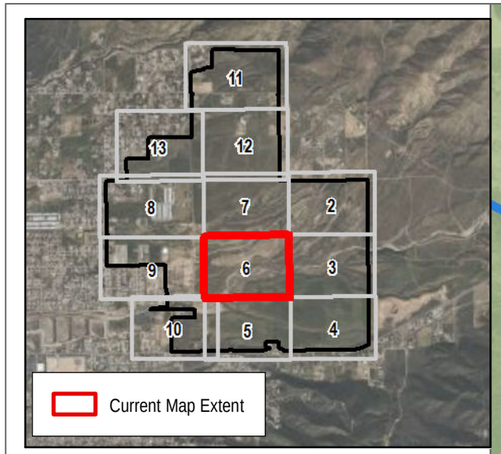
Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 13-5

Impacts to Jurisdictional Aquatic Resources



Project Boundary

Study Area

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

Impacts

Development Phases

I; II; III

Proposed Land Use

Agriculture

Residential (4.6 Dwelling Units/Acre)

Right-Of-Way

Open Space

Wilson Creek Estates Specific Plan Area

Wilson Creek Estates Specific Plan

Agro-Tourism

Fuel Modification Zone

Housing Development Footprint

Open Space

Parking Lot; Roads

Water Quaility Control Basin

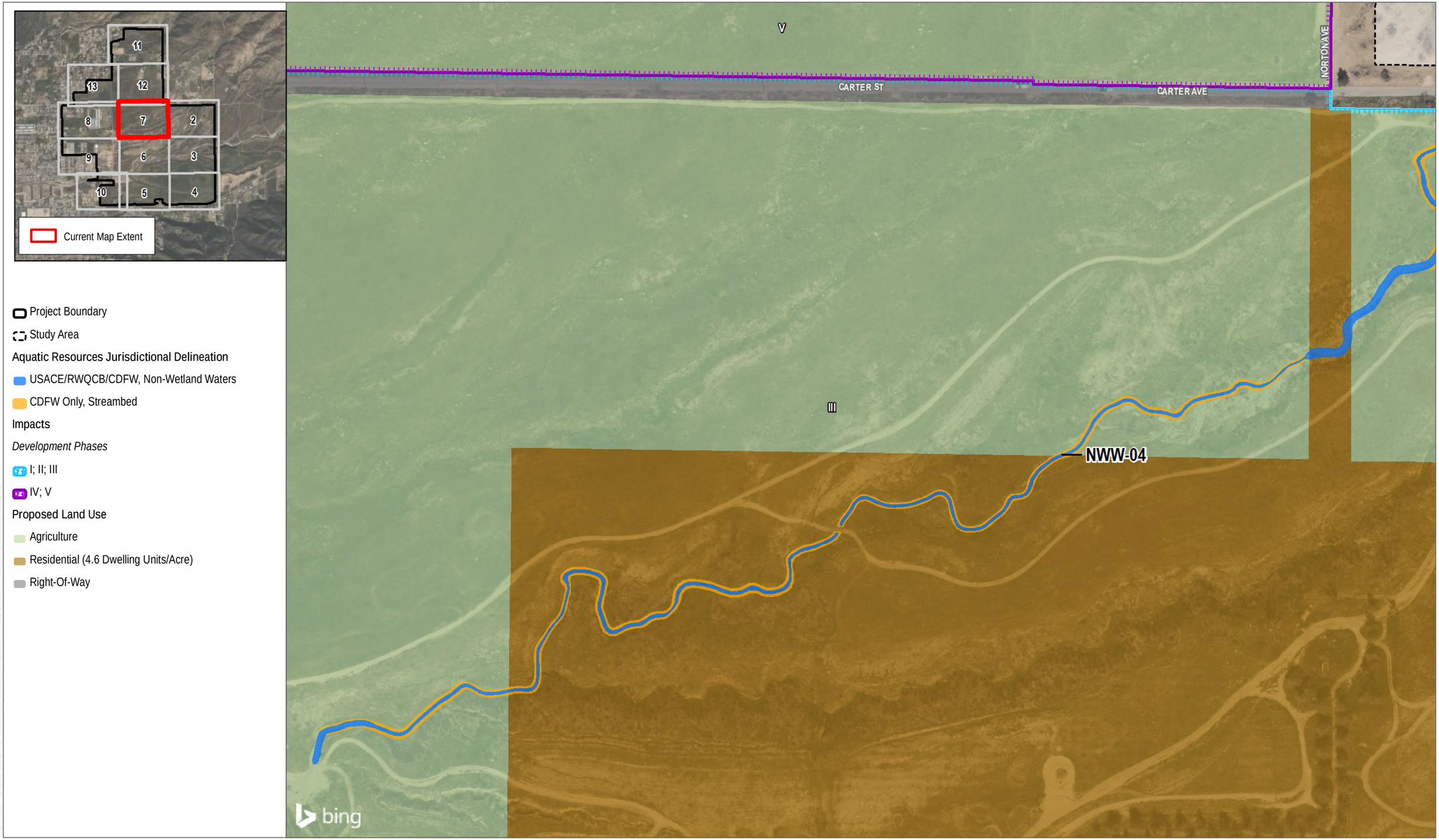
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 13-6

Impacts to Jurisdictional Aquatic Resources



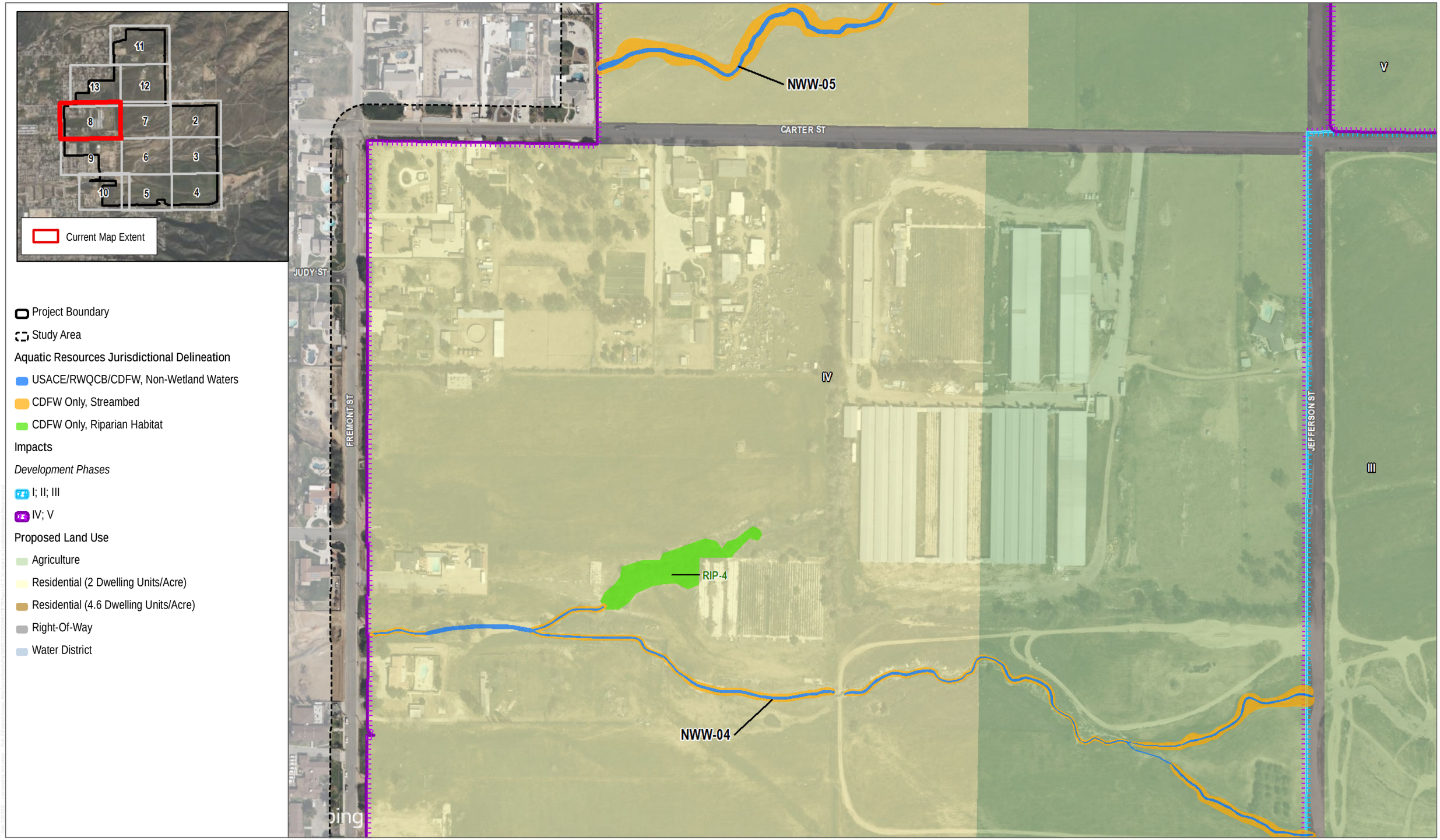
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 100 200 Feet

FIGURE 13-7

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



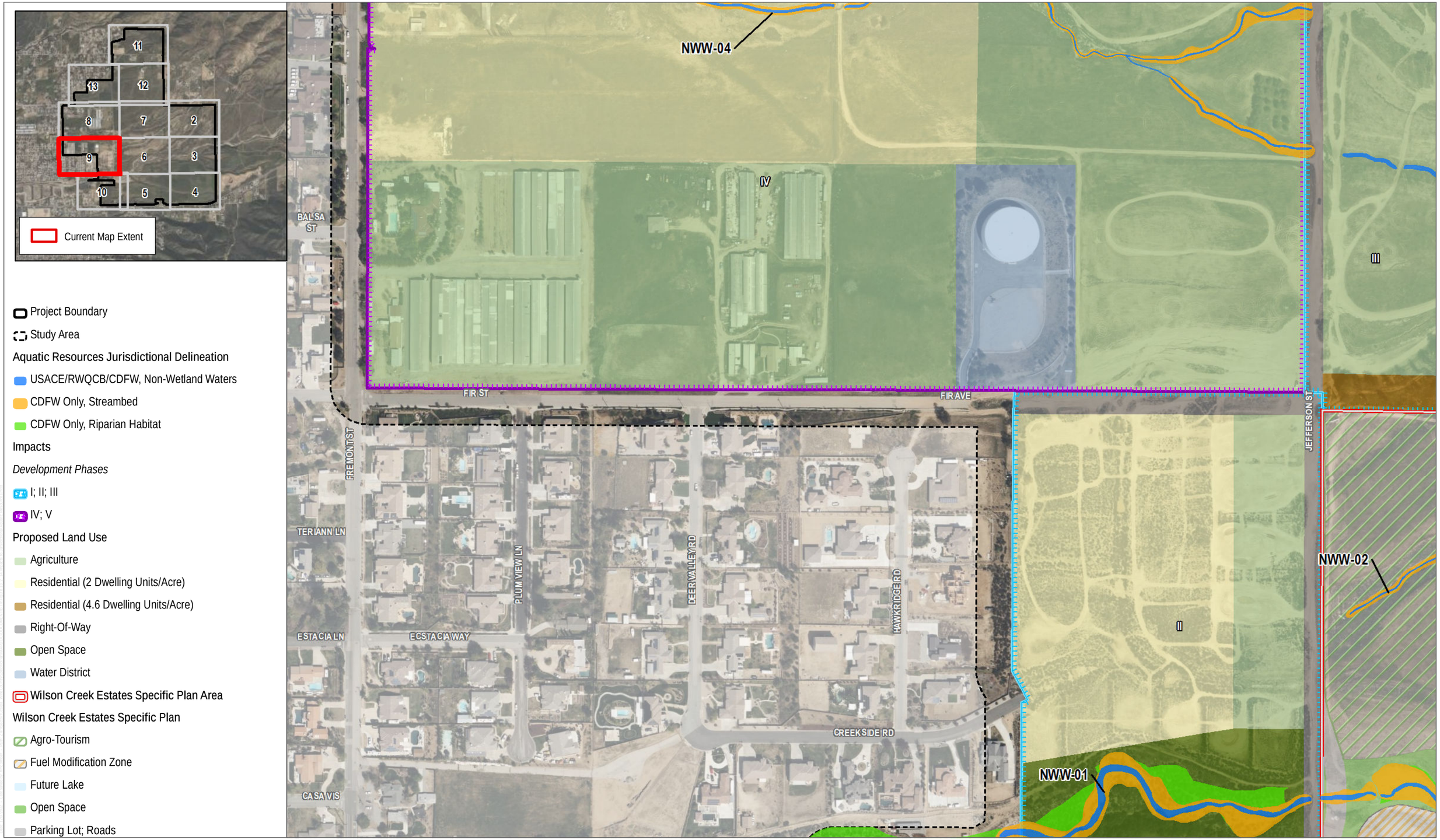
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 13-8

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

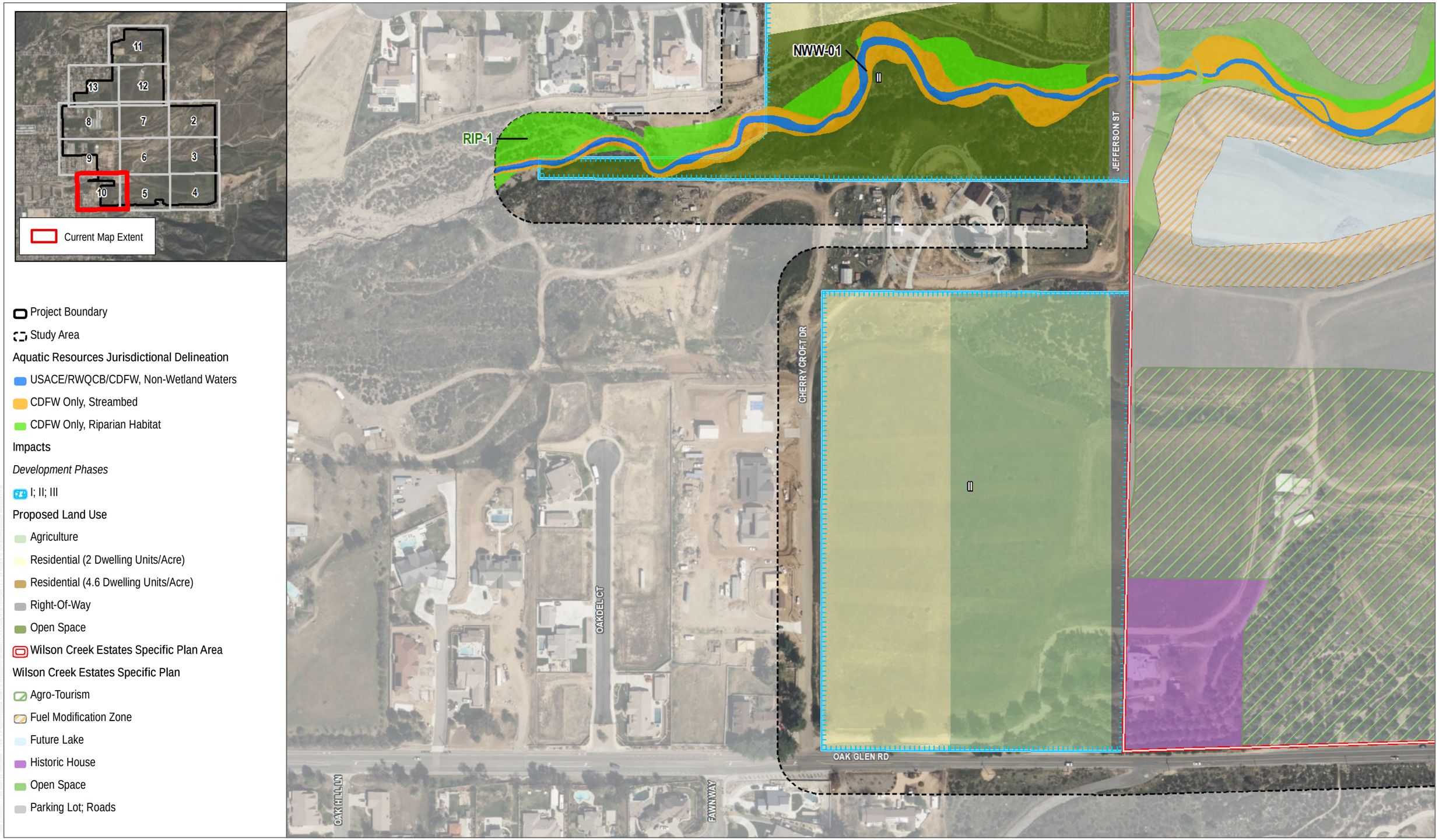


SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 13-9

Impacts to Jurisdictional Aquatic Resources



SOURCE: Bing Maps; San Bernadino County 2022

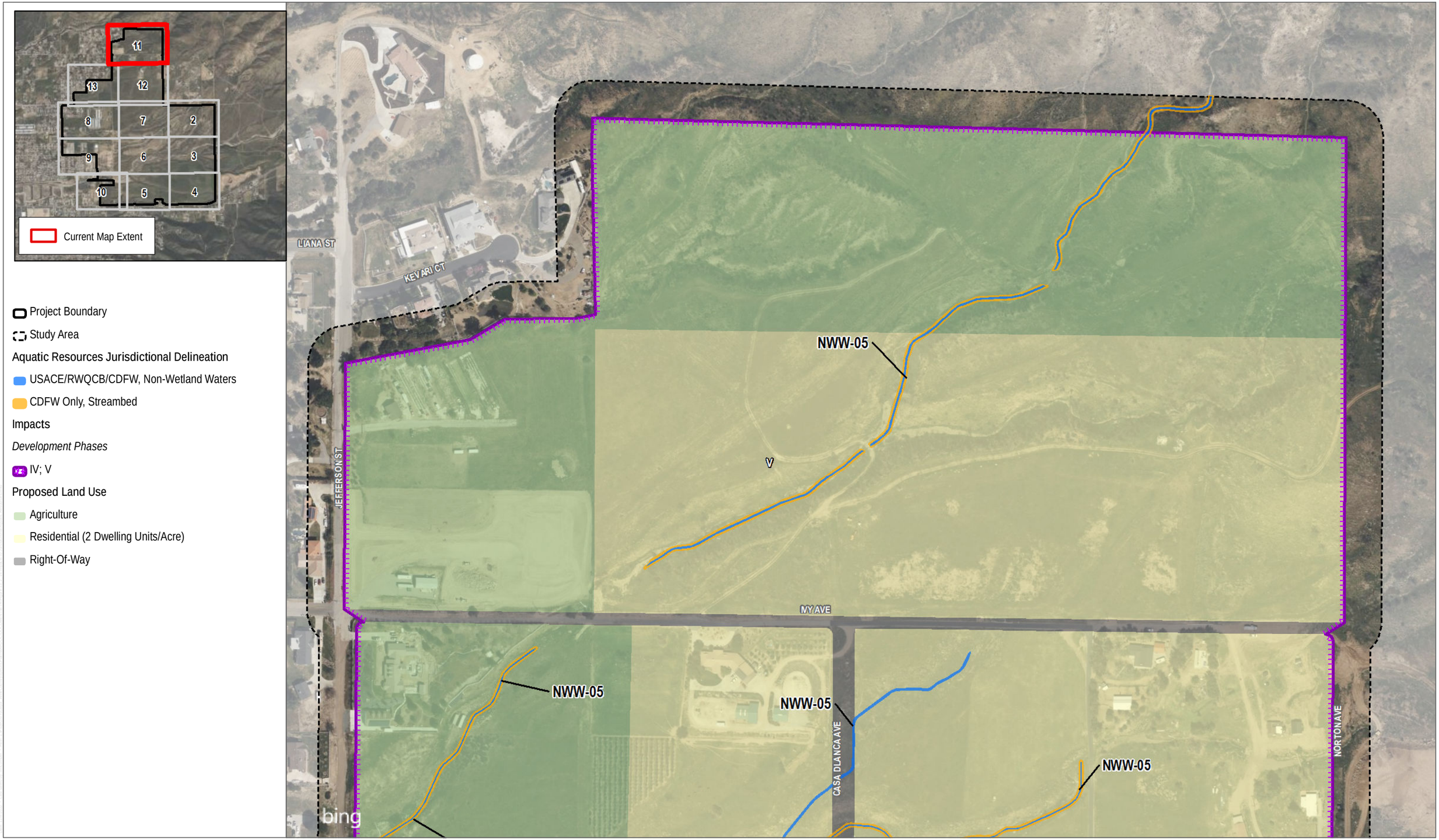
DUDEK

0 100 200 Feet

FIGURE 13-10

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



SOURCE: Bing Maps; San Bernadino County 2022

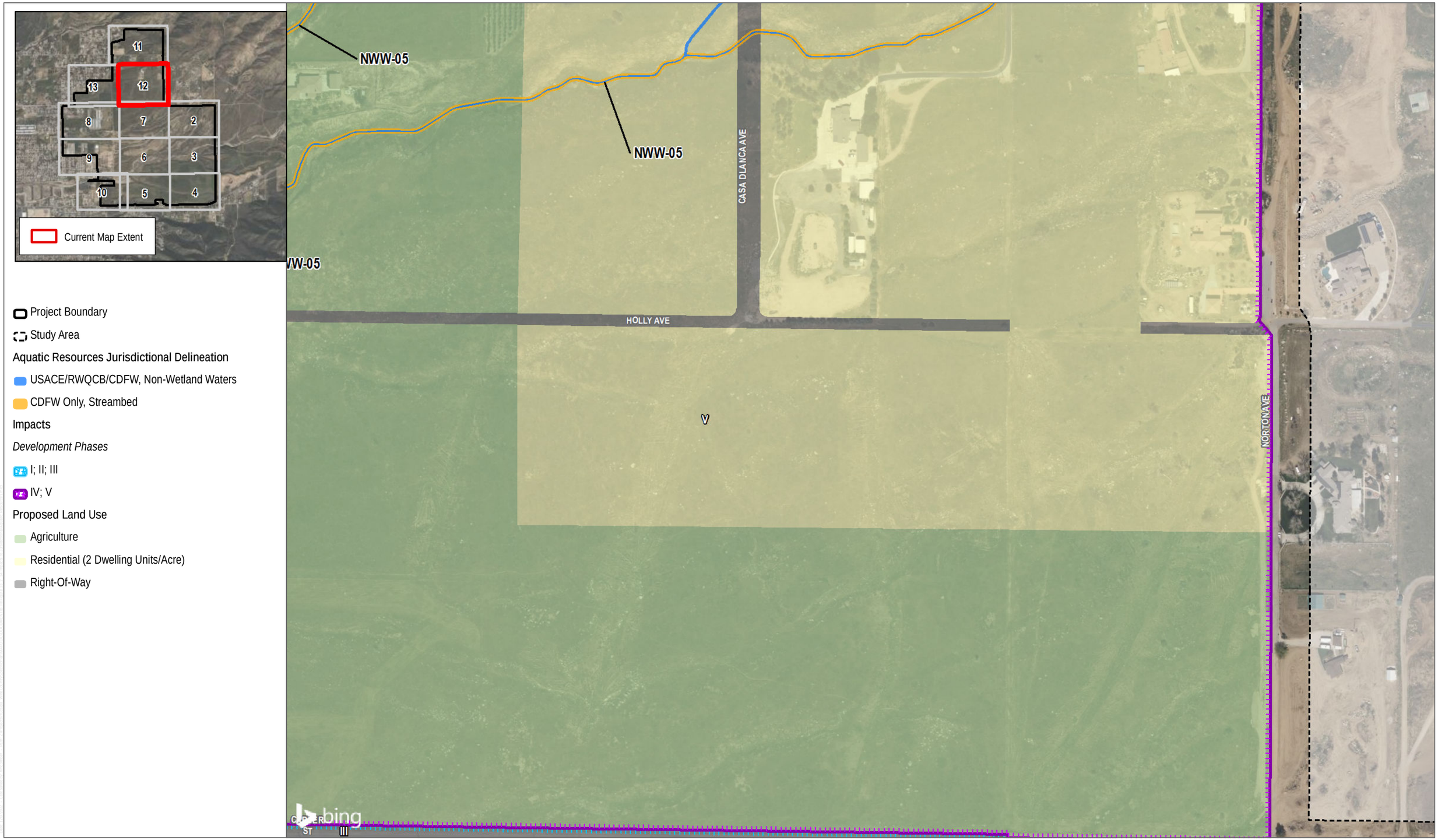
DUDEK

0 120 240 Feet

FIGURE 13-11

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

Impacts

Development Phases

I; II; III

IV; V

Proposed Land Use

Agriculture

Residential (2 Dwelling Units/Acre)

Right-Of-Way

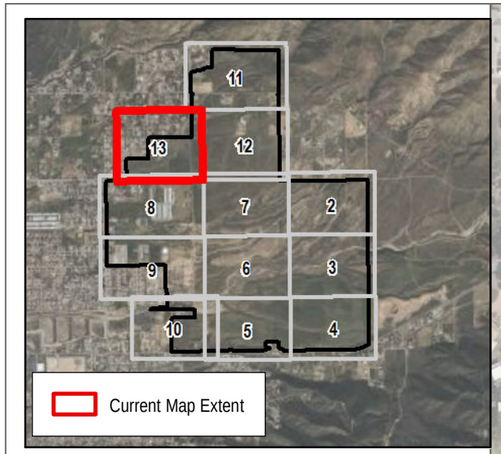
SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 13-12

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report



Project Boundary

Study Area

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

Impacts

Development Phases

I; II; III

IV; V

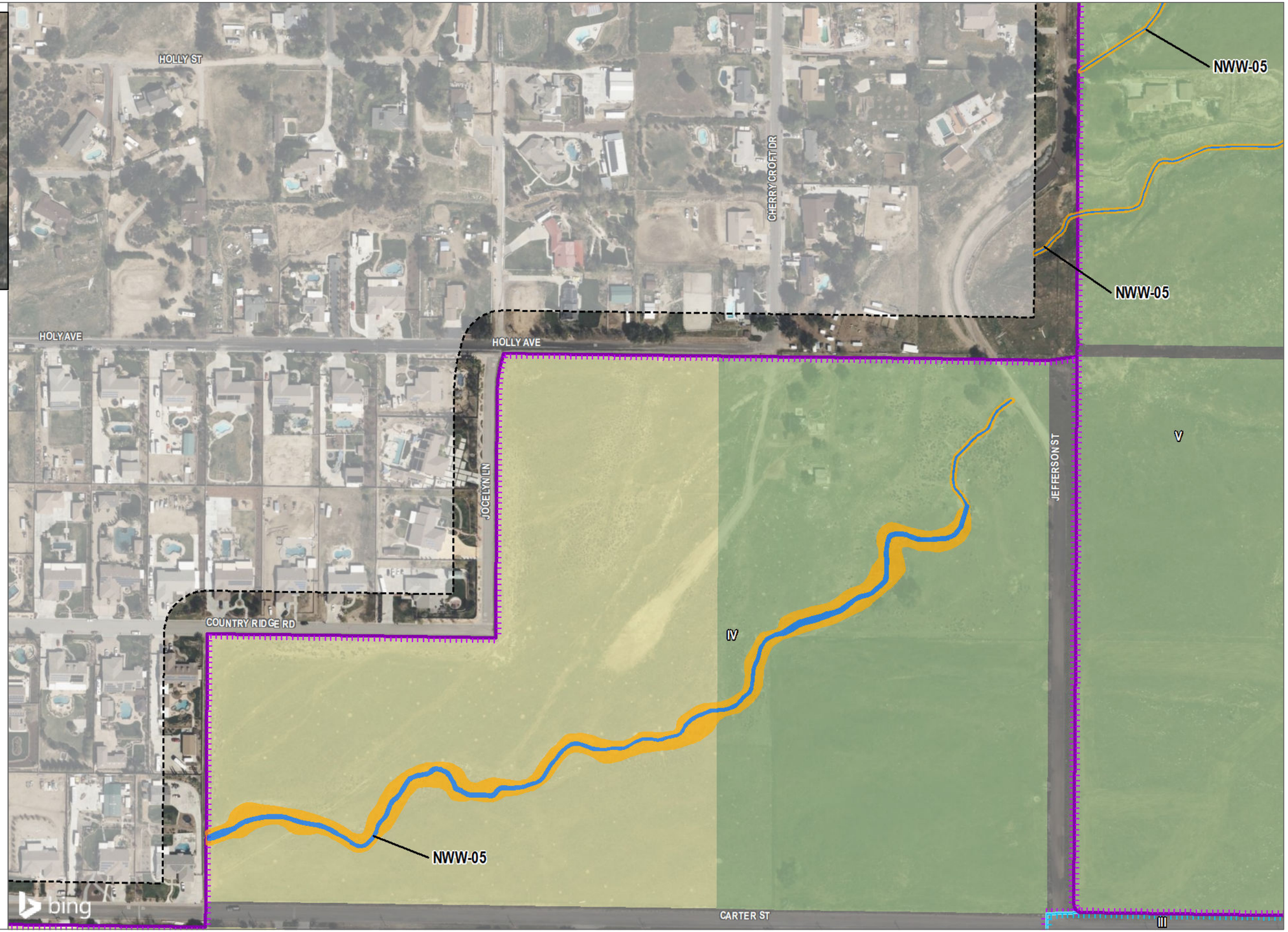
Proposed Land Use

Agriculture

Residential (2 Dwelling Units/Acre)

Residential (4.6 Dwelling Units/Acre)

Right-Of-Way



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 13-13

Impacts to Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Biological Resources Technical Report

Appendix B
Photo Documentation

Photo 1. View of recovering burned coast live oak woodland and forest community in the northern portion of the Project site, facing northeast.

Photo 2. View of deer weed scrub community in the northern portion of the project site, facing southwest.

Photo 3. View of recovering burned scrub oak chaparral in the northern portion of the Project site, facing east.

Photo 4. View of post-fire herbaceous community in the northern portion of the Project site, facing southwest.

Photo 5. View of recovering burned scrub oak chaparral in the northern portion of the Project site, facing southwest.

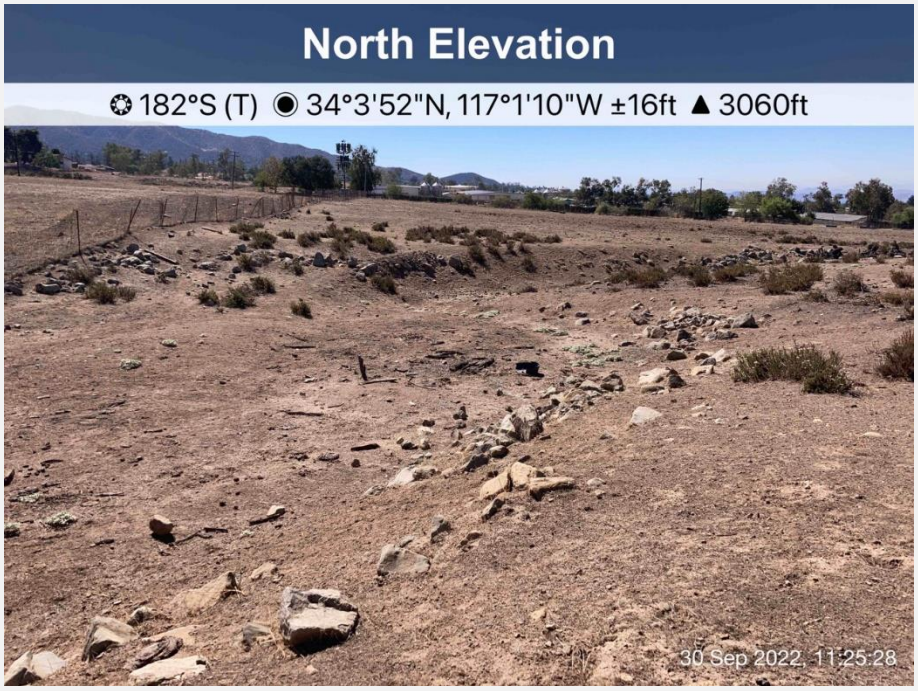


Photo 6. View of unvegetated wash and river bottom in northwest portion of the Project site, facing south.

Photo 7. View of upland mustards or star-thistle fields in the central portion of the Project site, facing east.

Photo 8. View of Basket bush - river hawthorn - desert olive patch in the western portion of the Project site, facing southwest.

Photo 9. View of a disturbed and developed area in the western portion of the Project site, facing northwest.

Photo 10. View of upland mustards or star-thistle fields in the western portion of the Project site, facing south.

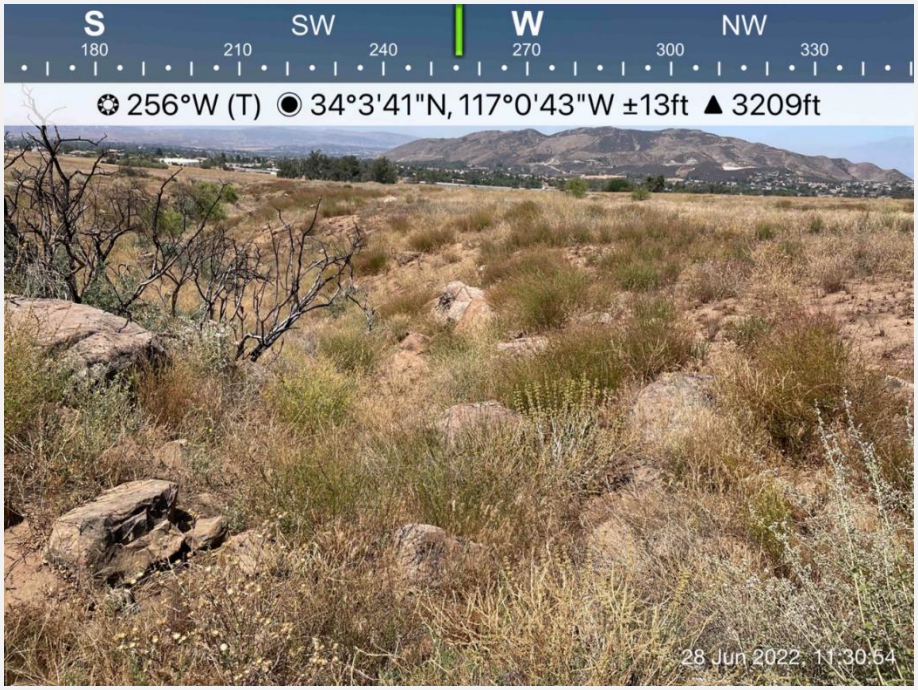


Photo 11. View of post-fire herbaceous community in the central portion of the Project site, facing west.

Photo 12. View of unvegetated wash and river bottom in the central portion of the Project site, facing southwest.

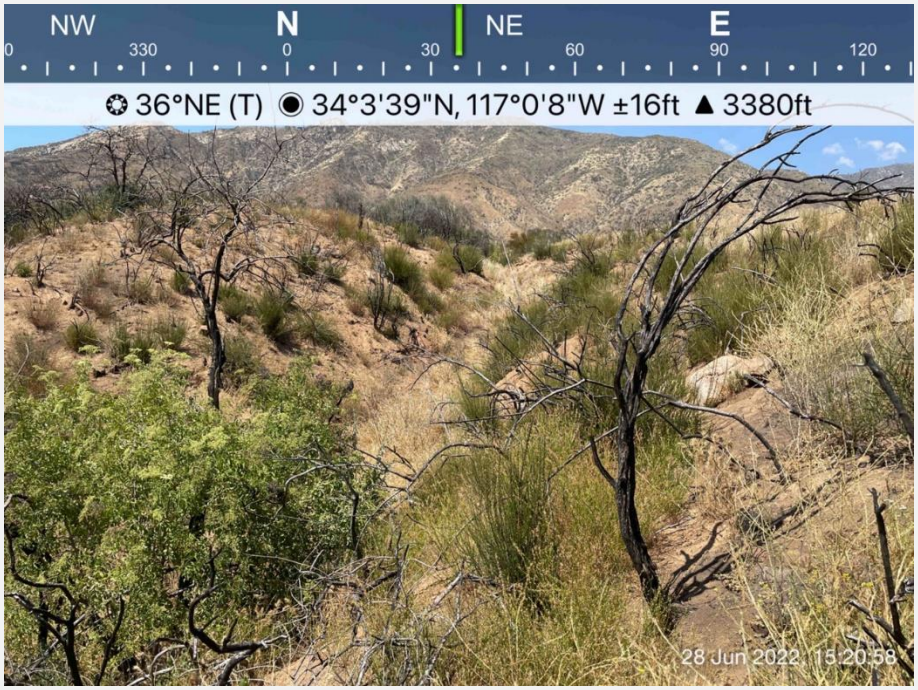


Photo 13. View of recovering burned deer weed scrub in the eastern portion of the Project site, facing northeast.

Photo 14. View of burned ornamental plantings along road in the central portion of the Project site, facing southwest.

Photo 15. View of recovering burned chamise chaparral in the eastern portion of the Project site, facing west.

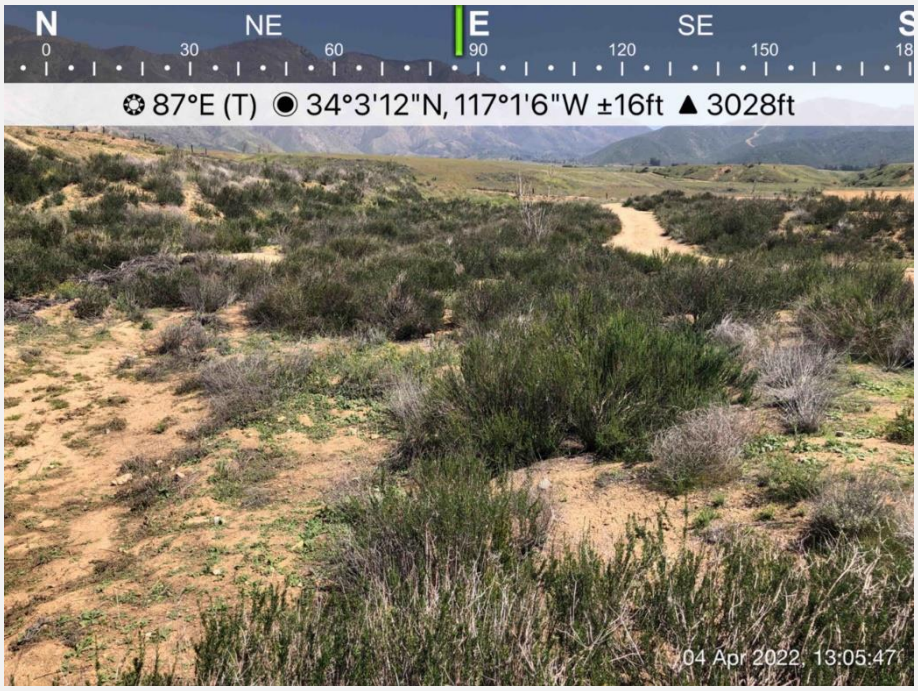


Photo 16. View of California buckwheat scrub and disturbed habitat in the western portion of the Project site, facing east.

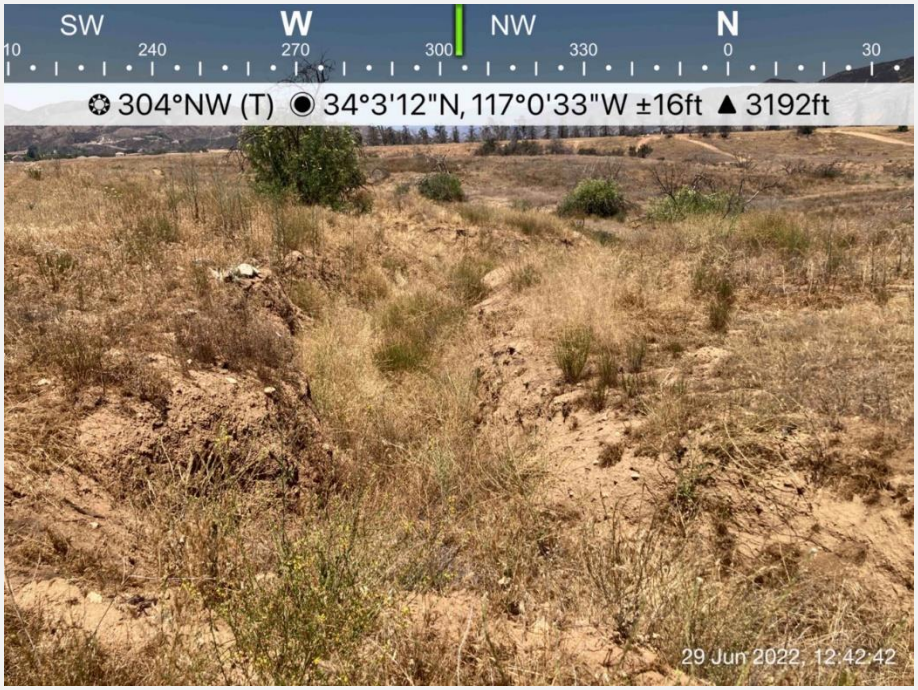


Photo 17. View of a ditch grown over with post-fire herbaceous species in the southern portion of the Project site, facing northwest.

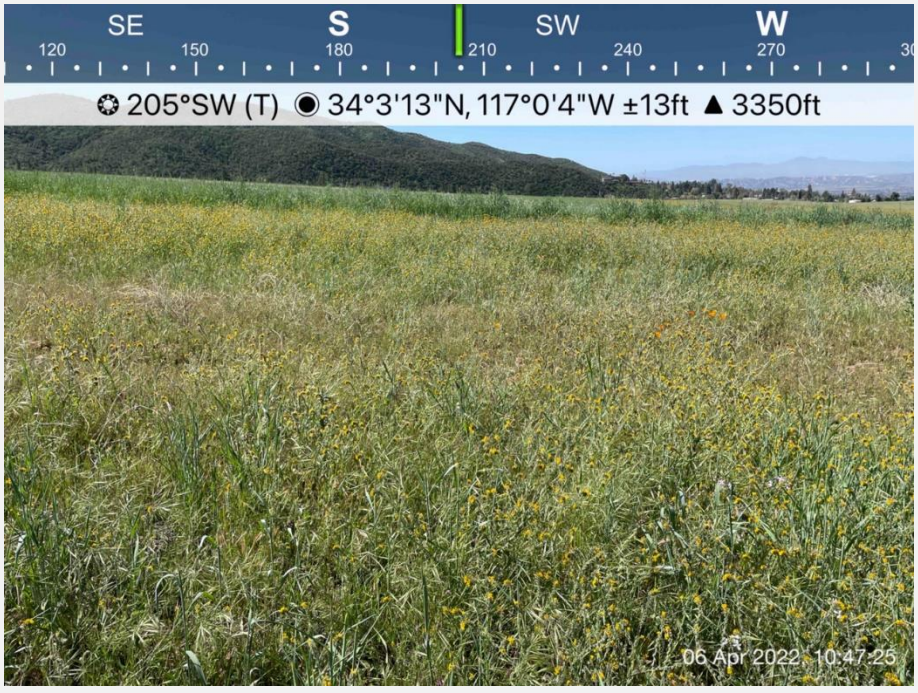


Photo 18. View of post-fire herbaceous community in the southeastern portion of the Project site, facing southwest.

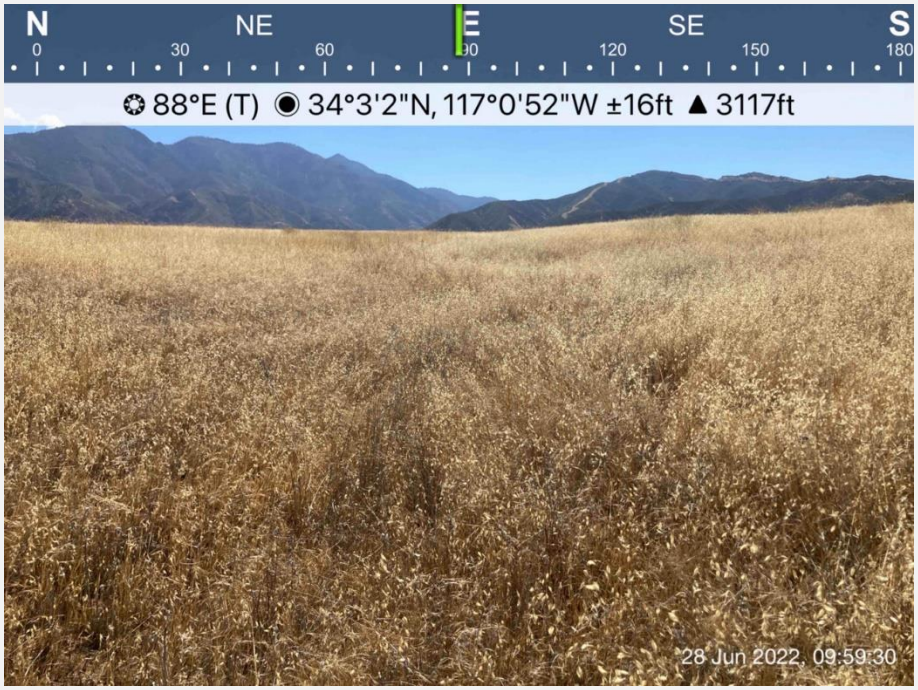


Photo 19. View of post-fire herbaceous community in the southern portion of the Project site, facing east.

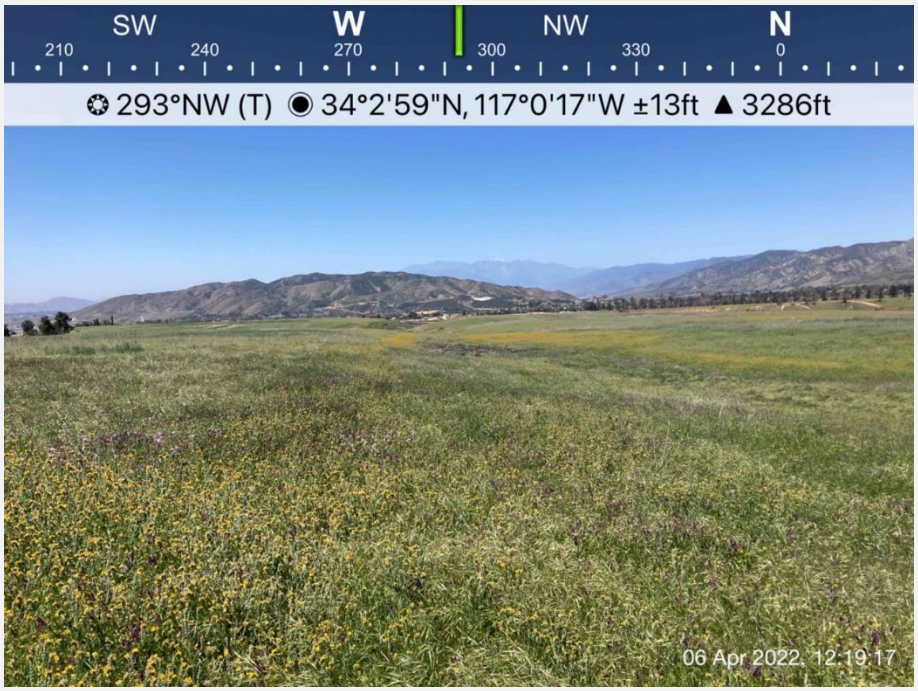


Photo 20. View of post-fire herbaceous community in the southern portion of the Project site, facing northwest.

Appendix C
Plant Compendium

Vascular Species

Eudicots

AMARANTHACEAE – AMARANTH FAMILY

Amaranthus blitoides – mat amaranth

ANACARDIACEAE – SUMAC OR CASHEW FAMILY

Rhus aromatica – skunkbush sumac
Rhus ovata – sugarbush
Toxicodendron diversilobum – poison oak

APIACEAE – CARROT FAMILY

* *Anthriscus caucalis* – bur chervil
Bowlesia incana – hoary bowlesia
Sanicula crassicaulis – Pacific blacksnakeroot

ASTERACEAE – SUNFLOWER FAMILY

Acourtia microcephala – sacapellote
Ambrosia acanthicarpa – flatspine bur ragweed
Ambrosia psilostachya – western ragweed
Artemisia californica – California sagebrush
Artemisia douglasiana – Douglas' sagewort
Artemisia dracunculus – wild tarragon
Baccharis salicifolia ssp. *salicifolia* – mulefat
* *Carduus pycnocephalus* ssp. *pycnocephalus* – Italian plumeless thistle
* *Centaurea melitensis* – Maltese star-thistle
* *Centaurea solstitialis* – yellow star-thistle
Chaenactis glabriuscula – yellow pincushion
Cirsium occidentale var. *occidentale* – cobwebby thistle
Cirsium occidentale – cobwebby thistle
Corethrogyne filaginifolia – sand-aster
Encelia farinosa – brittle bush
Ericameria linearifolia – narrowleaf goldenbush
Ericameria pinifolia – pinebush
* *Erigeron bonariensis* – asthmaweed
Erigeron canadensis – Canadian horseweed
Erigeron foliosus var. *foliosus* – leafy fleabane
Eriophyllum confertiflorum var. *confertiflorum* – golden-yarrow
* *Gazania linearis* – treasureflower

Gutierrezia sarothrae – broom snakeweed
Helianthus annuus – common sunflower
Helianthus gracilentus – slender sunflower
Heterotheca grandiflora – telegraphweed
* *Hypochaeris glabra* – smooth cat's ear
* *Lactuca serriola* – prickly lettuce
Lepidospartum squamatum – scale broom
Logfia filaginoides – California cottonrose
* *Logfia gallica* – narrowleaf cottonrose
Malacothrix saxatilis – cliff desertdandelion
Matricaria discoidea – disc mayweed
Pseudognaphalium beneolens – Wright's cudweed
Pseudognaphalium californicum – ladies' tobacco
Rafinesquia californica – California plumeseed
Senecio flaccidus – threadleaf ragwort
* *Sonchus oleraceus* – common sowthistle
Stephanomeria exigua ssp. *deanei* – Deane's wirelettuce
Stephanomeria virgata – rod wirelettuce
Tetradymia comosa – hairy horsebrush
Uropappus lindleyi – Lindley's silverpuffs

BORAGINACEAE – BORAGE FAMILY

Amsinckia intermedia – common fiddleneck
Amsinckia menziesii – Menzies' fiddleneck
Cryptantha barbigera – bearded cryptantha
Cryptantha intermedia – Clearwater cryptantha
Cryptantha microstachys – Tejon cryptantha
Emmenanthe penduliflora – whisperingbells
Eriodictyon trichocalyx var. *trichocalyx* – hairy yerba santa
Eucrypta chrysanthemifolia – spotted hideseed
Heliotropium curassavicum var. *oculatum* – seaside heliotrope
Phacelia brachyloba – shortlobe phacelia
Phacelia cicutaria var. *hispida* – caterpillar phacelia
Phacelia distans – distant phacelia
Phacelia minor – wild Canterbury bells
Phacelia ramosissima – branching phacelia
Plagiobothrys canescens var. *canescens* – valley popcornflower

BRASSICACEAE – MUSTARD FAMILY

Boechera californica – California rockcress
* *Brassica nigra* – black mustard

* *Hirschfeldia incana* – shortpod mustard
* *Raphanus raphanistrum* – wild radish
* *Raphanus sativus* – cultivated radish
* *Sisymbrium altissimum* – tall tumblemustard
* *Sisymbrium irio* – London rocket
* *Sisymbrium officinale* – hedgemustard
* *Sisymbrium orientale* – Indian hedgemustard

CACTACEAE – CACTUS FAMILY

Cylindropuntia bernardina – brownspined pricklypear

Opuntia littoralis – coast prickly pear

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera interrupta – chaparral honeysuckle

Lonicera subspicata var. *denudata* – Santa Barbara honeysuckle

CARYOPHYLLACEAE – PINK FAMILY

* *Herniaria hirsuta* var. *hirsuta* – hairy rupturewort
* *Herniaria hirsuta* – hairy rupturewort
* *Spergularia rubra* – red sandspurry
* *Spergularia villosa* – hairy sandspurry
* *Stellaria media* – common chickweed

CHENOPODIACEAE – GOOSEFOOT FAMILY

* *Chenopodium album* – lambsquarters

Chenopodium californicum – California goosefoot

* *Chenopodium murale* – nettleleaf goosefoot
* *Salsola tragus* – prickly Russian thistle

CISTACEAE – ROCK-ROSE FAMILY

Crocanthemum scoparium var. *scoparium* – no common name

CONVOLVULACEAE – MORNING-GLORY FAMILY

Calystegia macrostegia ssp. *arida* – island false bindweed

* *Convolvulus arvensis* – field bindweed

Cuscuta californica var. *papillosa* – chaparral dodder

Cuscuta californica – chaparral dodder

CUCURBITACEAE – GOURD FAMILY

Marah macrocarpa – Cucamonga manroot

ERICACEAE – HEATH FAMILY

Arctostaphylos glandulosa ssp. *glandulosa* – Eastwood's manzanita
Arctostaphylos glauca – bigberry manzanita
Arctostaphylos pringlei – pink-bract manzanita

EUPHORBIACEAE – SPURGE FAMILY

Croton californicus – California croton
Croton setiger – dove weed
Euphorbia albomarginata – whitemargin sandmat
Euphorbia polycarpa – smallseed sandmat

FABACEAE – LEGUME FAMILY

* *Acacia baileyana* – cootamundra wattle
Acmispon americanus var. *americanus* – American bird's-foot trefoil
Acmispon glaber var. *glaber* – common deerweed
Acmispon glaber – deer weed
Acmispon maritimus var. *maritimus* – coastal bird's-foot trefoil
Amorpha californica var. *californica* – California false indigo
Amorpha fruticosa – false indigo bush
Lupinus bicolor – miniature lupine
Lupinus concinnus – bajada lupine
* *Melilotus albus* – yellow sweetclover
* *Melilotus indicus* – annual yellow sweetclover
* *Spartium junceum* – Spanish broom
* *Vicia villosa* ssp. *villosa* – winter vetch
* *Vicia villosa* – winter vetch

FAGACEAE – OAK FAMILY

Quercus acutidens – hybrid oak
Quercus berberidifolia – Inland scrub oak
Quercus wislizeni var. *wislizeni* – interior live oak

GARRYACEAE – SILK TASSEL FAMILY

Garrya fremontii – bearbrush

GERANIACEAE – GERANIUM FAMILY

* *Erodium botrys* – longbeak stork's bill
* *Erodium brachycarpum* – shortfruit stork's bill
* *Erodium cicutarium* – redstem stork's bill

LAMIACEAE – MINT FAMILY

* *Marrubium vulgare* – horehound
Salvia apiana – white sage
Salvia columbariae – chia
Scutellaria tuberosa – Danny's skullcap
Trichostema lanceolatum – vinegarweed

LOASACEAE – LOASA FAMILY

Mentzelia micrantha – San Luis blazingstar

MALVACEAE – MALLOW FAMILY

Malacothamnus fasciculatus var. *fasciculatus* – Mendocino bushmallow
Sidalcea malviflora ssp. *malviflora* – dwarf checkerbloom

MELIACEAE – MAHOGANY FAMILY

* *Melia azedarach* – Chinaberrytree

MONTIACEAE – MONTIA FAMILY

Calandrinia menziesii – red maids
Calyptridium monandrum – common pussypaws
Claytonia perfoliata – miner's lettuce

MYRTACEAE – MYRTLE FAMILY

* *Eucalyptus camaldulensis* – river redgum
* *Eucalyptus globulus* – Tasmanian bluegum
* *Eucalyptus polyanthemos* – redbox

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Abronia villosa – desert sand verbena

OLEACEAE – OLIVE FAMILY

* *Olea europaea* – olive

ONAGRACEAE – EVENING PRIMROSE FAMILY

Camissoniopsis hirtella – Santa Cruz Island suncup
Camissoniopsis micrantha – miniature suncup
Clarkia purpurea ssp. *quadrivulnera* – winecup clarkia
Clarkia purpurea – winecup clarkia
Epilobium brachycarpum – tall annual willowherb
Epilobium canum ssp. *canum* – hummingbird trumpet
Epilobium canum – hummingbird trumpet

PAEONIACEAE – PEONY FAMILY

Paeonia californica – California peony

PAPAVERACEAE – POPPY FAMILY

Argemone munita – flatbud pricklypoppy
Ehrendorferia chrysantha – golden eardrops
Eschscholzia californica – California poppy

PHRYMACEAE – LOPSEED FAMILY

Diplacus brevipes – widethroat yellow monkeyflower
Erythranthe guttata – common monkey flower

PLANTAGINACEAE – PLANTAIN FAMILY

Antirrhinum coulterianum – Coulter's snapdragon
Keckiella antirrhinoides – bush penstemon
Keckiella cordifolia – heartleaf keckiella
Penstemon heterophyllus var. *australis* – foothill beardtongue
Penstemon spectabilis var. *spectabilis* – showy penstemon
Penstemon spectabilis var. *subviscosus* – showy penstemon

PLATANACEAE – PLANE TREE, SYCAMORE FAMILY

Platanus racemosa – California sycamore

POLEMONIACEAE – PHLOX FAMILY

Allophyllum gilioides ssp. *gilioides* – dense false gilyflower
Gilia capitata – bluehead gilia
Navarretia atractyloides – hollyleaf pincushionplant
Navarretia hamata ssp. *hamata* – hooked pincushionplant
Saltugilia splendens ssp. *grantii* – Grant's splendid woodland-gilia

POLYGONACEAE – BUCKWHEAT FAMILY

Eriogonum elongatum var. *elongatum* – longstem buckwheat
Eriogonum fasciculatum var. *fasciculatum* – California buckwheat
Eriogonum fasciculatum var. *foliolosum* – California buckwheat
Eriogonum fasciculatum var. *polifolium* – California buckwheat
Eriogonum gracile var. *gracile* – slender woolly buckwheat
* *Polygonum aviculare* – prostrate knotweed
* *Rumex crispus* – curly dock
Rumex hymenosepalus – canaigre dock

RANUNCULACEAE – BUTTERCUP FAMILY

Clematis lasiantha – pipestem clematis
Delphinium parryi ssp. *parryi* – San Bernardino larkspur

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus crassifolius – hoary leaf ceanothus
Ceanothus leucodermis – chaparral whitethorn
Rhamnus crocea – redberry buckthorn
Rhamnus ilicifolia – hollyleaf redberry

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum – chamise
Cercocarpus betuloides var. *betuloides* – birchleaf mountain mahogany
Drymocallis glandulosa var. *glandulosa* – sticky cinquefoil
Heteromeles arbutifolia – toyon
Prunus ilicifolia ssp. *ilicifolia* – mainland cherry

RUBIACEAE – MADDER FAMILY

Galium angustifolium ssp. *angustifolium* – narrowleaf bedstraw

SALICACEAE – WILLOW FAMILY

Populus fremontii ssp. *fremontii* – Fremont cottonwood
Salix lasiolepis – arroyo willow

SCROPHULARIACEAE – FIGWORT FAMILY

Scrophularia californica – California figwort

SIMAROUBACEAE – QUASSIA OR SIMAROUBA FAMILY

* *Ailanthus altissima* – tree of heaven

SOLANACEAE – NIGHTSHADE FAMILY

Datura wrightii – sacred thorn-apple
* *Nicotiana glauca* – tree tobacco
Nicotiana quadrivalvis – Indian tobacco
Solanum umbelliferum – bluewitch nightshade
Solanum xanti – Purple nightshade

URTICACEAE – NETTLE FAMILY

Urtica dioica ssp. *holosericea* – stinging nettle
* *Urtica urens* – dwarf nettle

VERBENACEAE – VERVAIN FAMILY

* *Verbena pulchella* – South American or beaked mock vervain

VIBURNACEAE – MUSKROOT FAMILY

Sambucus mexicana – blue elderberry

Gymnosperms and Gnetophytes

PINACEAE – PINE FAMILY

* *Pinus halepensis* – aleppo pine

Monocots

AGAVACEAE – AGAVE FAMILY

Chlorogalum pomeridianum – wavyleaf soap plant

Hesperoyucca whipplei – chaparral yucca

IRIDACEAE – IRIS FAMILY

Sisyrinchium bellum – western blue-eyed grass

LILIACEAE – LILY FAMILY

Calochortus splendens – splendid mariposa lily

POACEAE – GRASS FAMILY

* *Avena barbata* – slender oat
* *Bromus diandrus* – ripgut brome
* *Bromus hordeaceus* – soft brome
* *Bromus madritensis* – compact brome
* *Bromus rubens* – red brome
* *Bromus tectorum* – cheatgrass
* *Cynodon dactylon* – Bermudagrass

Elymus condensatus – giant wild rye

* *Festuca myuros* – rat-tail fescue
* *Hordeum murinum* – mouse barley

Melica imperfecta – smallflower melicgrass

* *Schismus barbatus* – common Mediterranean grass
* *Secale cereale* – cereal rye

Stipa cernua – nodding needlegrass

Stipa pulchra – purple needlegrass

THEMIDACEAE – BRODIAEA FAMILY

Bloomeria crocea var. *crocea* – common goldenstar

Dipterostemon capitatus – bluedicks

* signifies introduced (non-native) species

Appendix D
Wildlife Compendium

Invertebrate

Tarantula Hawks

POMPILIDAE – SPIDER WASPS

Pepsis sp. – tarantula hawk

Birds

Blackbirds, Orioles and Allies

ICTERIDAE – BLACKBIRDS

Icterus bullockii – Bullock's oriole

Icterus cucullatus – hooded oriole

Sturnella neglecta – western meadowlark

Bushtits

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus – bushtit

Falcons

FALCONIDAE – CARACARAS AND FALCONS

Falco sparverius – American kestrel

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Spinus lawrencei – Lawrence's goldfinch

Spinus psaltria – lesser goldfinch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

Myiarchus cinerascens – ash-throated flycatcher

Sayornis nigricans – black phoebe

Sayornis saya – Say's phoebe

Tyrannus vociferans – Cassin's kingbird

Hawks

ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii – Cooper's hawk
Buteo jamaicensis – red-tailed hawk
Elanus leucurus – white-tailed kite
Haliaeetus leucocephalus – bald eagle

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird
Calypte costae – Costa's hummingbird

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Aphelocoma californica – California scrub-jay
Corvus brachyrhynchos – American crow
Corvus corax – common raven

Kingfishers

ALCEDINIDAE – KINGFISHERS

Megaceryle alcyon – belted kingfisher

Mockingbirds and Thrashers

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Mimus polyglottos – northern mockingbird
Toxostoma redivivum – California thrasher

New World Quail

ODONTOPHORIDAE – NEW WORLD QUAIL

Callipepla californica – California quail

New World Vultures

CATHARTIDAE – NEW WORLD VULTURES

Cathartes aura – turkey vulture

Old World Warblers and Gnatcatchers

POLIOPTILIDAE – GNATCATCHERS

Polioptila caerulea – blue-gray gnatcatcher

Owls

STRIGIDAE – TYPICAL OWLS

Bubo virginianus – great horned owl

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Patagioenas fasciata – band-tailed pigeon

Zenaida macroura – mourning dove

* *Columba livia* – rock pigeon (rock dove)

Roadrunners and Cuckoos

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner

Silky Flycatchers

PTILOGONATIDAE – SILKY-FLYCATCHERS

Phainopepla nitens – phainopepla

Swallows

HIRUNDINIDAE – SWALLOWS

Petrochelidon pyrrhonota – cliff swallow

Wood Warblers and Allies

PARULIDAE – WOOD-WARBLERS

Setophaga coronata – yellow-rumped warbler

Setophaga nigrescens – black-throated gray warbler

Woodpeckers

PICIDAE – WOODPECKERS AND ALLIES

Colaptes auratus – northern flicker
Melanerpes formicivorus – acorn woodpecker
Dryobates nuttallii – Nuttall's woodpecker

Wrens

TROGLODYTIDAE – WRENS

Troglodytes aedon – house wren
Thryomanes bewickii – Bewick's wren

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Chondestes grammacus – lark sparrow
Melozone crissalis – California towhee
Pipilo maculatus – spotted towhee
Spizella breweri – Brewer's sparrow
Zonotrichia leucophrys – white-crowned sparrow

Typical Warblers, Parrotbills, Wrentit

SYLVIIDAE – SYLVIID WARBLERS

Chamaea fasciata – wrentit

Invertebrates

Butterflies

LYCAENIDAE – BLUES, HAIRSTREAKS, AND COPPERS

Icaricia acmon acmon – Acmon blue
Leptotes marina – marine blue

NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES

Junonia coenia – common buckeye
Limenitis lorquini – Lorquin's admiral
Nymphalis antiopa – mourning cloak

RIODINIDAE – METALMARKS

Apodemia mormo virgulti – Behr's metalmark

HESPERIIDAE – SKIPPERS

Erynnis funeralis – funereal duskywing

PIERIDAE – WHITES AND SULFURS

Phoebis sennae – cloudless sulphur

Pieris rapae – cabbage white

Pontia protodice – checkered white

Mammals

Canids

CANIDAE – WOLVES AND FOXES

Canis latrans – coyote

Domestic

FELIDAE – CATS

* *Felis catus* – domestic cat

Hares and Rabbits

LEPORIDAE – HARES AND RABBITS

Sylvilagus audubonii – desert cottontail

Sylvilagus bachmani – brush rabbit

Pocket Gophers

GEOMYIDAE – POCKET GOPHERS

Thomomys bottae – Botta's pocket gopher

Squirrels

SCIURIDAE – SQUIRRELS

Otospermophilus beecheyi – California ground squirrel

Ungulates

CERVIDAE – DEERS

Odocoileus hemionus – mule deer

Raccoons

PROCYONIDAE – RACCOONS AND RELATIVES

Procyon lotor – northern raccoon

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

Uta stansburiana – common side-blotched lizard

TEIIDAE – WHIPTAIL LIZARDS

Aspidoscelis tigris stejnegeri – coastal whiptail

Snakes

COLUBRIDAE – COLUBRID SNAKES

Coluber flagellum – coachwhip

VIPERIDAE – VIPERS

Crotalus oreganus – western rattlesnake

* signifies introduced (non-native) species

Appendix E

Special-Status Plant Species Potentially Occurring within the Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; Sandy/annual herb/(Jan)Mar–Sep/ 245–5,245	**Not expected to occur**. While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation, the study area is located north of the species' known geographic range (CCH 2022). Additionally, the nearest CNDDB occurrence is approximately 10 miles south of the study area (CDFW 2022).	**Not expected to occur**. While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation, the study area is located north of the species' known geographic range (CCH 2022). Additionally, the nearest CNDDB occurrence is approximately 10 miles south of the study area (CDFW 2022).
Allium howellii var. *clokeyi*	Mt. Pinos onion	None/None/1B.3	Great Basin scrub, Meadows and seeps, Pinyon and juniper woodland/ perennial bulbiferous herb/Apr–June/ 4,265–6,065	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Allium marvinii	Yucaipa onion	None/None/1B.2	Chaparral/perennial bulbiferous herb/ Apr–May/2,490–3,490	**Low potential to occur**. While the study area is located within the species' known elevation range and suitable chaparral vegetation is present, this species was not detected during the May 2022 focused surveys. The study area is just north of the species' known geographic range (CCH 2022).	**Moderate potential to occur**. The study area is located within the species' known elevation range and suitable chaparral vegetation is present. The study area is just north of the species' known geographic range (CCH 2022).
Arenaria lanuginosa var. *saxosa*	rock sandwort	None/None/2B.3	Subalpine coniferous forest, Upper montane coniferous forest; Mesic, Sandy/perennial herb/July–Aug/ 4,770–8,530	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Arenaria paludicola	marsh sandwort	FE/SE/1B.1	Marshes and swamps; Openings, Sandy/perennial stoloniferous herb/ May–Aug/10–560	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Astragalus hornii var. *hornii*	Horn's milk-vetch	None/None/1B.1	Meadows and seeps, Playas; Alkaline, Lake Margins/annual herb/May–Oct/195–2,785	**Not expected to occur**. The site is outside of the species' known elevation range and there is no suitable vegetation present.	**Not expected to occur**. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Astragalus lentiginosus var. *coachellae*	Coachella Valley milk-vetch	FE/None/1B.2	Desert dunes, Sonoran Desert scrub/ annual/perennial herb/Feb–May/ 130–2,145	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, this species' geographic range is further east within the San Gorgonio Pass and Coachella Valley (CCH 2022).	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, this species' geographic range is further east within the San Gorgonio Pass and Coachella Valley (CCH 2022).
Astragalus lentiginosus var. *sierrae*	Big Bear Valley milk-vetch	None/None/1B.2	Meadows and seeps, Mojavean desert scrub, Pinyon and juniper woodland, Upper montane coniferous forest; Gravelly (sometimes), Rocky (sometimes)/perennial herb/Apr–Aug/5,905–8,530	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Astragalus leucolobus	Big Bear Valley woollypod	None/None/1B.2	Lower montane coniferous forest, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Rocky/perennial herb/May–July/ 3,605–9,465	**Not expected to occur**. The study area is located just below the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks rocky soils preferred by this species (USDA 2022).	**Not expected to occur**. The study area is located just below the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks rocky soils preferred by this species (USDA 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Astragalus pachypus var. *jaegeri*	Jaeger's milk-vetch	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Rocky (sometimes), Sandy (sometimes)/perennial shrub/Dec–June/1,195–3,195	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub to support this species.
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE/None/1B.1	Playas, Valley and foothill grassland, Vernal pools; Alkaline/annual herb/ Apr–Aug/455–1,640	**Not expected to occur**. While suitable grassland habitat is present, the site is outside of the species' known elevation range and does not support suitable alkaline soils (USDA 2022). Additionally, there are no CNDDB occurrences within 5 miles of the study area and all occurrences are south of the study area (CDFW 2022; CCH 2022).	**Not expected to occur**. While suitable grassland habitat is present, the site is outside of the species' known elevation range and does not support suitable alkaline soils (USDA 2022). Additionally, there are no CNDDB occurrences within 5 miles of the study area and all occurrences are south of the study area (CDFW 2022; CCH 2022).
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; Alkaline/annual herb/Apr–Oct/35–655	**Not expected to occur**. While suitable coastal scrub habitat is present, the site is outside of the species' known elevation range and does not support suitable alkaline soils (USDA 2022). Additionally, there are no CNDDB occurrences within 5 miles of the study site and all CCH records are south or well west of the study area (CDFW 2022; CCH 2022).	**Not expected to occur**. While suitable coastal scrub habitat is present, the site is outside of the species' known elevation range and does not support suitable alkaline soils (USDA 2022). Additionally, there are no CNDDB occurrences within 5 miles of the study site and all CCH records are south or well west of the study area (CDFW 2022; CCH 2022).
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; Gravelly (sometimes), Sandy (sometimes)/perennial evergreen shrub/(Feb)Mar–June/230–2,705	**Not expected to occur**. While suitable chaparral habitat and sandy soils are present within the study area, the site is outside of the species' known elevation range. Additionally, there are no CNDDB occurrences within 5 miles of the study area (CDFW 2022). All CCH records are east or south of the study area (CCH 2022).	**Not expected to occur**. While suitable chaparral habitat and sandy soils are present within the study area, the site is outside of the species' known elevation range. Additionally, there are no CNDDB occurrences within 5 miles of the study area (CDFW 2022). All CCH records are east or south of the study area (CCH 2022).
Boechera parishii	Parish's rockcress	None/None/1B.2	Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Carbonate (sometimes), Rocky/ perennial herb/Apr–May/5,805–9,805	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks rocky soils preferred by this species (USDA 2022).	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks rocky soils preferred by this species (USDA 2022).
Botrychium crenulatum	scalloped moonwort	None/None/2B.2	Bogs and fens, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Upper montane coniferous forest/ perennial rhizomatous herb/June–Sep/ 4,160–10,760	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Bouteloua trifida	three-awned grama	None/None/2B.3	Mojavean desert scrub/perennial herb/ (Apr)May–Sep/2,295–6,560	**Not expected to occur.** While the study area is located within the species' known elevation range, it is outside of the species' geographic range (CCH 2022). There is no suitable Mojavean desert scrub present to support this species.	**Not expected to occur.** While the study area is located within the species' known elevation range, it is outside of the species' geographic range (CCH 2022). There is no suitable Mojavean desert scrub present to support this species.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; Mesic/ perennial bulbiferous herb/Apr–July/ 2,325–7,840	**Not expected to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, the vast majority of CCH records are north of the study area north of San Gorgonio Mountain with just a few records well south of the study area south of Alpine Village (CCH 2022).	**Not expected to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, the vast majority of CCH records are north of the study area north of San Gorgonio Mountain with just a few records well south of the study area south of Alpine Village (CCH 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Calyptridium pygmaeum	pygmy pussypaws	None/None/1B.2	Subalpine coniferous forest, Upper montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/ annual herb/ June–Aug/6,495–10,200	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Carex occidentalis	western sedge	None/None/2B.3	Lower montane coniferous forest, Meadows and seeps/perennial rhizomatous herb/June–Aug/5,395–10,285	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Castilleja cinerea	ash-gray paintbrush	FT/None/1B.2	Meadows and seeps, Mojavean desert scrub, Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest/perennial herb (hemiparasitic)/June–Aug/5,905–9,710	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur.** The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/1B.2	Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest; Mesic/annual herb (hemiparasitic)/ May–Aug/ 4,265–7,840	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; Alkaline/annual herb/ Apr–Sep/0–2,095	**Not expected to occur**. While there is suitable grassland habitat present, the study area is outside of the species' known elevation range. Additionally, the study area does not support suitable alkaline soils (USDA 2022).	**Not expected to occur**. While there is suitable grassland habitat present, the study area is outside of the species' known elevation range. Additionally, the study area does not support suitable alkaline soils (USDA 2022).
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps/ 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 vegetation present. Additionally, there are no CNDDB occurrences within 5 miles of the study area (CDFW 2022).	**Not expected to occur**. The site is outside of the species' known elevation range and there is no suitable vegetation present. Additionally, there are no CNDDB occurrences within 5 miles of the study area (CDFW 2022).
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Openings, Rocky (sometimes), Sandy (sometimes)/annual herb/Apr–June/900–4,000	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral, coastal scrub, and grassland vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral, coastal scrub, and grassland vegetation to support this species.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/1B.2	Coastal scrub, Mojavean desert scrub, Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/ annual herb/Apr–June/985–3,935	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral vegetation to support this species.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None/None/2B.2	Marshes and swamps/annual vine (parasitic)/July–Oct/50–920	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3	Chaparral, Coastal scrub, Riparian scrub; Mesic/annual herb/(Jan–May)June–Oct/ 2,095–5,245	**Not expected to occur**. There is suitable chaparral vegetation present, and the study area is within the specie's known elevational range. However, this species has a split geographic range with records well south of the study area, south of Banning, and well north of the study area, north of Lake Arrowhead (CCH 2022).	**Not expected to occur**. There is suitable chaparral vegetation present, and the study area is within the specie's known elevational range. However, this species has a split geographic range with records well south of the study area, south of Banning, and well north of the study area, north of Lake Arrowhead (CCH 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub; Sandy/annual herb/ Apr–June/655–2,490	**Not expected to occur**. While there is suitable chaparral vegetation present, the study area is outside of the species' known elevation range. There are extant CNDDB occurrences approximately 7 miles northwest of the study area (CDFW 2022), however, they occur at elevations ranging between 1,280 and 1,600 feet above mean sea level, while the study area occurs at elevations ranging between 3,000 and 3,500 feet above mean sea level.	**Not expected to occur**. While there is suitable chaparral vegetation present, the study area is outside of the species' known elevation range. There are extant CNDDB occurrences approximately 7 miles northwest of the study area (CDFW 2022), however, they occur at elevations ranging between 1,280 and 1,600 feet above mean sea level, while the study area occurs at elevations ranging between 3,000 and 3,500 feet above mean sea level.
Eremogone ursina	Big Bear Valley sandwort	FT/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Pinyon and juniper woodland; Mesic, Rocky/perennial herb/May–Aug/ 5,905–9,510	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/ perennial herb/Apr–Sep/300–2,000	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range. There are extant CNDDB occurrences approximately 5 miles west of the study area (CDFW 2022); however, they occur at elevations ranging between 1,500 and 2,000 feet above mean sea level, while the study area occurs at elevations ranging between 3,000 and 3,500 feet above mean sea level.	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range. There are extant CNDDB occurrences approximately 5 miles west of the study area (CDFW 2022); however, they occur at elevations ranging between 1,500 and 2,000 feet above mean sea level, while the study area occurs at elevations ranging between 3,000 and 3,500 feet above mean sea level.
Eriogonum kennedyi var. *austromontanum*	southern mountain buckwheat	FT/None/1B.2	Lower montane coniferous forest, Pebble (Pavement) plain/perennial herb/ June–Sep/5,805–9,480	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Eriogonum microthecum var. *lacus-ursi*	Bear Lake buckwheat	None/None/1B.1	Great Basin scrub, Lower montane coniferous forest; Clay/perennial shrub/July–Aug/6,560–6,885	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Erythranthe exigua	San Bernardino Mountains monkeyflower	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest; Clay, Mesic/annual herb/May–July/ 5,905–7,595	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Erythranthe purpurea	little purple monkeyflower	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest/ annual herb/May–June/6,230–7,545	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Gilia leptantha ssp. *leptantha*	San Bernardino gilia	None/None/1B.3	Lower montane coniferous forest/ annual herb/June–Aug/4,920–8,395	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Heuchera parishii	Parish's alumroot	None/None/1B.3	Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; Carbonate (sometimes), Rocky/perennial rhizomatous herb/ June–Aug/4,920–12,465	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/ Feb–July(Sep)/230–2,655	**Not expected to occur**. Although there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.	**Not expected to occur**. Although there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.
Horkelia wilderae	Barton Flats horkelia	None/None/1B.1	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest/perennial herb/May–Sep/ 5,495–9,595	**Not expected to occur.** While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.	**Not expected to occur.** While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Meadows and seeps, Mojavean desert scrub, Riparian scrub; Mesic/perennial rhizomatous herb/Sep–May/0–3,985	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation, this species was not detected during the May or September 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and coastal scrub vegetation to support this species.
Ivesia argyrocoma var. *argyrocoma*	silver-haired ivesia	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest/perennial herb/ June–Aug/4,795–9,710	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps, Playas, Vernal pools/annual herb/Feb–June/5–4,000	**Not expected to occur**. There is no suitable vegetation present within the study area.	**Not expected to occur**. There is no suitable vegetation present within the study area.
Lewisia brachycalyx	short-sepaled lewisia	None/None/2B.2	Lower montane coniferous forest, Meadows and seeps; Mesic/perennial herb/(Feb)Apr–June(July)/4,490–7,545	**Not expected to occur**. The site is outside of the species' known elevation range and there is no suitable vegetation present.	**Not expected to occur**. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; Mesic/perennial bulbiferous herb/July–Aug/4,000–9,005	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Malacothamnus parishii	Parish's bush-mallow	None/None/1A	Chaparral, Coastal scrub/perennial deciduous shrub/June–July/1,000–1,490	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.
Mentzelia tricuspis	spiny-hair blazing star	None/None/2B.1	Mojavean desert scrub; Gravelly, Sandy, Slopes, Washes/annual herb/ Mar–May/490–4,195	**Not expected to occur**. There is no Mojavean desert scrub vegetation present within the study area to support this species and the study area is outside of the species' geographic range (CCH 2022).	**Not expected to occur**. There is no Mojavean desert scrub vegetation present within the study area to support this species and the study area is outside of the species' geographic range (CCH 2022).
Monardella macrantha ssp. *hallii*	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/2,395–7,200	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral and grassland vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral and grassland vegetation to support this species.
Nama stenocarpa	mud nama	None/None/2B.2	Marshes and swamps/annual/ perennial herb/Jan–July/15–1,640	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Navarretia peninsularis	Baja navarretia	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; Mesic/annual herb/ (May)June–Aug/4,920–7,545	**Not expected to occur**. While there is suitable chaparral habitat present, the site is outside of the species' known elevation range.	**Not expected to occur**. While there is suitable chaparral habitat present, the site is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Oxytropis oreophila var. *oreophila*	rock-loving oxytrope	None/None/2B.3	Alpine boulder and rock field, Subalpine coniferous forest; Gravelly (sometimes), Rocky (sometimes)/perennial herb/ June–Sep/11,150–12,465	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Packera bernardina	San Bernardino ragwort	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest/perennial herb/May–July/ 5,905–7,545	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Parnassia cirrata var. *cirrata*	San Bernardino grass-of-Parnassus	None/None/1B.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; Mesic, Streambanks/ perennial herb/Aug–Sep/4,100–8,005	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Pelazoneuron puberulum var. *sonorensis*	Sonoran maiden fern	None/None/2B.2	Meadows and seeps/perennial rhizomatous herb/Jan–Sep/165–2,000	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Perideridia parishii ssp. *parishii*	Parish's yampah	None/None/2B.2	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest/perennial herb/June–Aug/ 4,805–9,840	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Petalonyx linearis	narrow-leaf sandpaper-plant	None/None/2B.3	Mojavean desert scrub, Sonoran desert scrub; Rocky (sometimes), Sandy (sometimes)/perennial shrub/ (Jan–Feb)Mar–May(June–Dec)/-80–3,655	**Not expected to occur**. There is no suitable vegetation present to support this species and this species occurs in the desert regions east of the study area (CCH 2022).	**Not expected to occur**. There is no suitable vegetation present to support this species and this species occurs in the desert regions east of the study area (CCH 2022).
Phlox dolichantha	Big Bear Valley phlox	None/None/1B.2	Pebble (Pavement) plain, Upper montane coniferous forest/perennial herb/May–July/6,000–9,740	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Physaria kingii ssp. *bernardina*	San Bernardino Mountains bladderpod	FE/None/1B.1	Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest; Carbonate (usually)/perennial herb/May–June/6,065–8,855	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks carbonate soils (USDA 2022).	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species. Additionally, the study area lacks carbonate soils (USDA 2022).
Poa atropurpurea	San Bernardino blue grass	FE/None/1B.2	Meadows and seeps/perennial rhizomatous herb/(Apr)May–July(Aug)/4,460–8,050	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Pseudorontium cyathiferum	Deep Canyon snapdragon	None/None/2B.3	Sonoran desert scrub/annual herb/ Feb–Apr/0–2,620	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Pyrrocoma uniflora var. *gossypina*	Bear Valley pyrrocoma	None/None/1B.2	Meadows and seeps, Pebble (Pavement) plain/perennial herb/July–Sep/ 5,245–7,545	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Ribes divaricatum var. *parishii*	Parish's gooseberry	None/None/1A	Riparian woodland/perennial deciduous shrub/Feb–Apr/215–985	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Sidalcea hickmanii ssp. *parishii*	Parish's checkerbloom	None/SR/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest/ perennial herb/(May)June–Aug/ 3,280–8,195	**Not expected to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, this species occurs in the mountains northeast of the study area or north of Santa Barbara (CCH 2022).	**Not expected to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, this species occurs in the mountains northeast of the study area or north of Santa Barbara (CCH 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Sidalcea malviflora ssp. *dolosa*	Bear Valley checkerbloom	None/None/1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian woodland, Upper montane coniferous forest/perennial herb/May–Aug/4,900–8,805	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/perennial herb/ Mar–June/50–5,015	**Low potential to occur.** While the study area is located within the species' known elevation and geographic range and contains suitable chaparral and coastal scrub vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation and geographic range and contains suitable chaparral and coastal scrub vegetation to support this species.
Sidalcea pedata	bird-foot checkerbloom	FE/SE/1B.1	Meadows and seeps, Pebble (Pavement) plain/perennial herb/May–Aug/ 5,245–8,200	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Streptanthus campestris	southern jewelflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; Rocky/perennial herb/(Apr)May–July/ 2,950–7,545	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable chaparral vegetation, this species was not detected during the May 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable chaparral vegetation to support this species.
Streptanthus juneae	June's jewelflower	None/None/1B.2	Chaparral, Lower montane coniferous forest; Openings/perennial herb/June–Aug/ 7,070–7,775	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.	**Not expected to occur**. While there is suitable chaparral habitat present, the study area is outside of the species' known elevation range.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland; Streambanks/perennial rhizomatous herb/July–Nov/5–6,690	**Low potential to occur.** While the study area is located within the species' known elevation range and contains suitable coastal scrub and grassland vegetation, this species was not detected during the September 2022 focused surveys.	**Moderate potential to occur.** The study area is located within the species' known elevation range and contains suitable coastal scrub and grassland vegetation, and streambanks to support this species.
Taraxacum californicum	California dandelion	FE/None/1B.1	Meadows and seeps/perennial herb/ May–Aug/5,310–9,185	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Thelypodium stenopetalum	slender-petaled thelypodium	FE/SE/1B.1	Meadows and seeps/perennial herb/ May–Sep/5,245–8,200	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	None/None/2B.1	Marshes and swamps, Meadows and seeps, Riparian forest, Vernal pools; Alkaline/ annual herb/May–Sep/15–1,425	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.
Viola pinetorum ssp. *grisea*	grey-leaved violet	None/None/1B.2	Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest/ perennial herb/Apr–July/4,920–11,150	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.	**Not expected to occur**. The study area is outside of the species' known elevation range and there is no suitable vegetation present to support this species.

Notes: CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database

Status Designations
FE: Federally endangered
FT: Federally threatened
SE: State endangered
SC: State listed candidate species
SR: State rare

CRPR (California Rare Plant Rank):

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

Threat Rank:

1: seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
2: moderately threatened in California (20%–80% of 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)

References

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Appendix F

Special-Status Wildlife Species Potentially Occurring within the Study Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Amphibians					
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	**Not expected to occur**. The study area lacks perennial water features necessary for breeding. Water features present within the study area are primarily ephemeral, fed by storm water runoff from adjacent mountains. The closest CNDDB occurrence is mapped approximately 13 miles northwest, near West Fork City Creek (CDFW 2022).	**Not expected to occur**. The study area lacks perennial water features necessary for breeding. Water features present within the study area are primarily ephemeral, fed by storm water runoff from adjacent mountains. The closest CNDDB occurrence is mapped approximately 13 miles northwest, near West Fork City Creek (CDFW 2022).
Rana muscosa	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**. The study area lacks perennial water features necessary for breeding. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains. The closest CNDDB occurrence is mapped approximately 2 miles northeast in near Mill Creek Road, however this is a historical occurrence is possibly extirpated (CDFW 2022).	**Not expected to occur**. The study area lacks perennial water features necessary for breeding. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains. The closest CNDDB occurrence is mapped approximately 2 miles northeast in near Mill Creek Road, however this is a historical occurrence is possibly extirpated (CDFW 2022).
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Moderate potential to occur**. The study area contains suitable ephemeral water features in chaparral, coastal scrub, and valley–foothill woodlands habitat. The nearest mapped CNDDDB occurrence is located 3 miles in temporary rain pools where adult, larvae, and egg masses were observed (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable ephemeral water features in chaparral, coastal scrub, and valley–foothill woodlands habitat. The nearest mapped CNDDDB occurrence is located 3 miles in temporary rain pools where adult, larvae, and egg masses were observed (CDFW 2022).
Birds					
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	**Not expected to occur.** The study area lacks marsh/wetland habitats with cattails or tules that are typically associated with nesting colonies. Additionally, most regional CNDDB occurrences are associated with marsh habitats. However, the study area could potentially be used for foraging. The closest CNDDB occurrence is approximately 6 miles away from the study area (CDFW 2022).	**Not expected to occur.** The study area lacks marsh/wetland habitats with cattails or tules that are typically associated with nesting colonies. Additionally, most regional CNDDB occurrences are associated with marsh habitats. However, the study area could potentially be used for foraging. The closest CNDDB occurrence is approximately 6 miles away from the study area (CDFW 2022).
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	**Not expected to nest or winter; Moderate potential to forage.** The study area contains open/semi-open shrubland and grassland habitat suitable for nesting and wintering. Some large trees suitable for nesting are present within the study area; however, many were burned as a result of the El Dorado Fire and therefore do not contain sufficient canopy structure to support nesting. In addition, trees present within the study area generally are adjacent to more urbanized portions of the study area and golden eagle is generally adverse to urbanization. The nearest CNDDB occurrence is approximately 5 miles south, recorded in 1980 (CDFW 2022).	**Not expected to nest or winter; Moderate potential to forage.** The study area contains open/semi-open shrubland and grassland habitat suitable for nesting and wintering. Additionally, some large trees suitable for nesting are present within the study area; however, many were burned as a result of the El Dorado Fire and therefore do not contain sufficient canopy structure to support nesting. In addition, trees present within the study area generally are adjacent to more urbanized portions of the study area and golden eagle is generally adverse to urbanization. The nearest CNDDB occurrence is approximately 5 miles south, recorded in 1980 (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**High potential to occur.** The study area contains suitable grassland and scrub habitat. Field surveys conducted in the spring of 2022 were positive for burrowing owl sign (i.e., pellets) from a previous season, but no individuals were observed.	**High potential to occur.** The study area contains suitable grassland and scrub habitat. In addition, suitable burrows and burrowing owl sign (i.e., pellets) were mapped within Phases 1, 2, and 3 during the 2022 focused surveys.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Not expected to occur**. The study area is outside what is generally considered to be the current breeding range in California (CDFW 2022), but it does contain suitable foraging habitat by migratory individuals. The nearest CNDDB occurrence is less than 1 mile away from the study area in Yucaipa proper; however, this is a historical occurrence from 1900 (CDFW 2022).	**Not expected to occur**. The study area is outside what is generally considered to be the current breeding range in California (CDFW 2022), but it does contain suitable foraging habitat by migratory individuals. The nearest CNDDB occurrence is less than 1 mile away from the study area in Yucaipa proper; however, this is a historical occurrence from 1900 (CDFW 2022).
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Not expected to occur.** The study area lacks suitable riparian woodland and forest habitat required for nesting. The nearest CNDDB occurrence is approximately 12 miles away near the Santa Ana River (CDFW 2022).	**Not expected to occur.** The study area lacks suitable riparian woodland and forest habitat required for nesting. The nearest CNDDB occurrence is approximately 12 miles away near the Santa Ana River (CDFW 2022).
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	**Not expected to occur.** No suitable nesting habitat present, as the study area lacks moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons. The nearest CNDDB occurrence is approximately 6 miles northeast near Forest Falls (CDFW 2022).	**Not expected to occur.** No suitable nesting habitat present, as the study area lacks moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons. The nearest CNDDB occurrence is approximately 6 miles northeast near Forest Falls (CDFW 2022).
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Present.** The study area contains grasslands and disturbed areas suitable for foraging. Additionally, the study area contains some trees suitable for nesting; however, many were burned as a result of the El Dorado fire and therefore do not contain sufficient canopy structure to support nesting.	**High potential to occur.** The study area contains grasslands and disturbed areas suitable for foraging. Additionally, the study area contains some trees suitable for nesting; however, many were burned as a result of the El Dorado fire and therefore do not contain sufficient canopy structure to support nesting.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	**Not expected to occur.** The study area lacks suitable riparian habitat required for nesting. The nearest CNDDB occurrence is approximately 2 miles away near the Mill Creek Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).	**Not expected to occur.** The study area lacks suitable riparian habitat required for nesting. The nearest CNDDB occurrence is approximately 2 miles away near the Mill Creek Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	**Present**. While the study area lacks suitable forest habitats and surface water features necessary for nesting, a bald eagle was observed flying overhead during the 2022 field surveys. This individual may move through the study area, but is not expected to nest or winter.	**Not expected to nest or winter.**. While the study area lacks suitable forest habitats and surface water features necessary for nesting, a bald eagle was observed flying overhead of Phases 1, 2, and 3 during the 2022 field surveys. Bald eagle may move through the study area, but is not expected to nest or winter.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	**Not expected to occur.** The study area lacks suitable riparian habitat required for nesting and foraging. The nearest CNDDB occurrence is approximately 6 miles away near San Timoteo Canyon Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).	**Not expected to occur.** The study area lacks suitable riparian habitat required for nesting and foraging. The nearest CNDDB occurrence is approximately 6 miles away near San Timoteo Canyon Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. The nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road (CDFW 2022).	**Moderate potential to occur**. The study area contains open habitats with scattered shrubs and trees suitable for nesting/foraging. The nearest CNDDB occurrence is approximately 9 miles away near San Timoteo Canyon Road (CDFW 2022).
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	**Not expected to occur.** The study area lacks large stands of sage scrub habitat and is located at an elevation well above the range in which the majority of the coastal California gnatcatcher nests. Additionally, coastal California gnatcatcher field surveys conducted in 2022 were negative.	**Low potential to occur.** The study area is located at the northern limit of this species' geographic range, lacks large stands of sage scrub habitat, and is located at an elevation well above the range in which the majority of coastal California gnatcatcher nests. However, fragmented stands of California buckwheat are present within this portion of the study area and could support this species.
Progne subis (nesting)	purple martin	None/SSC	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	**Low potential to occur.** The study area contains woodland habitat suitable for nesting and foraging. However, there are only two CNDDB occurrence, both approximate 7 miles away, and both historical, from 1897 and 1910 (CDFW 2022). Most recent eBird sightings in the vicinity are during the migration season, so the species is expected to be a transient in the study area.	**Low potential to occur.** The study area contains woodland habitat suitable for nesting and foraging. However, there are only two CNDDB occurrence, both approximate 7 miles away, and both historical, from 1897 and 1910 (CDFW 2022). Most recent eBird sightings in the vicinity are during the migration season, so the species is expected to be a transient in the study area.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Not expected to occur**. The study area lacks suitable riparian vegetation necessary for nesting and foraging. Nearest CNDDB occurrence is approximately 6 miles southwest, along San Timoteo Canyon Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).	**Not expected to occur**. The study area lacks suitable riparian vegetation necessary for nesting and foraging. Nearest CNDDB occurrence is approximately 6 miles southwest, along San Timoteo Canyon Road. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Not expected to occur**. The study area lacks suitable riparian habitat required for nesting and foraging. The nearest CNDDB occurrence is approximately 5 miles away near the town of Crafton. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).	**Not expected to occur**. The study area lacks suitable riparian habitat required for nesting and foraging. The nearest CNDDB occurrence is approximately 5 miles away near the town of Crafton. All nearby CNDDB occurrences are associated with riparian habitats (CDFW 2022).
Fishes					
Catostomus santaanae	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.** The study area lacks suitable perennial surface water features.	**Not expected to occur.** The study arealacks suitable perennial surface water features.
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/SCE	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	**Not expected to occur.** The study arealacks suitable perennial surface water features.	**Not expected to occur.** The study arealacks suitable perennial surface water features.
Rhinichthys osculus ssp. 8	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.** The study arealacks suitable perennial surface water features.	**Not expected to occur.** The study arealacks suitable perennial surface water features.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Mammals					
Antrozous pallidus	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 occur**. The study area contains suitable grassland, shrubland, and woodland habitat that could support the foraging for this species. However, the study area lacks rocky outcrops or manmade structures for roosting. The nearest mapped CNDDB occurrence is approximately 8 miles west in Redlands but is a historical occurrence from 1929 (CDFW 2022).	**Low potential to occur**. The study area contains suitable grassland, shrubland, and woodland habitat that could support the foraging of this species. However, the study area lacks rocky outcrops or manmade structures for roosting. The nearest mapped CNDDB occurrence is approximately 8 miles west in Redlands but is a historical occurrence from 1929 (CDFW 2022).
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	**High potential to occur.** The study area contains suitable coastal scrub, oak woodland and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles southwest in Banning (CDFW 2022).	**High potential to occur.** The study area contains suitable coastal scrub, oak woodland and open habitat. Additionally, a large portion of the study area has been disturbed by fire, which could be suitable to this disturbance adapted species. The nearest mapped CNDDB occurrence is approximately 10 miles southwest in Banning (CDFW 2022).
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are multiple CNDDB occurrences less than 5 miles west of the study area (CDFW 2022).	**High potential to occur.** The study area contains suitable coastal scrub, chaparral, and annual grassland habitat. There are multiple CNDDB occurrences less than 5 miles west of the study area (CDFW 2022).
Dasypterus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	**Low potential to occur**. The study area lacks suitable valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats. The study area contains freshwater in Wilson Creek which could provide foraging for this species, but no roosting habitat is present within the site. There are nearby CNDDB occurrences; however, the metadata of this occurrence states that it is not spatially accurate and therefore just associated with the region (CDFW 2022).	**Low potential to occur**. The study area lacks suitable valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats. The study area contains freshwater in Wilson Creek which could provide foraging for this species, but no roosting habitat is present within the site. There are nearby CNDDB occurrences; however, the metadata of this occurrence states that it is not spatially accurate and therefore just associated with the region (CDFW 2022).
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, SCE	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	**Not expected to occur.** While the study area contains suitable coastal scrub habitat, it lacks river and stream terraces. Most local CNDDB occurrences are associated with the Santa Ana River floodplain (CDFW 2022). A focused habitat assessment for the San Bernardino kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment found that the study area primarily consists of chamise and chaparral at higher elevations and grasslands and disturbed habitats at lower elevations. Wilson Creek runs through the southern part of the study area, but lacks habitat suitable for this species. Focused surveys for San Bernardino kangaroo rat along Wilson Creek immediately west of the study area did not record either SBKR in 2012 (Cadre Environmental 2012; Tom Dodson & Associates); 2016 (Jericho Systems 2016), or 2017 (Jericho Systems 2017).	**Not expected to occur.** While the study area contains suitable coastal scrub habitat, it lacks river and stream terraces. Most local CNDDB occurrences are associated with the Santa Ana River floodplain (CDFW 2022). A focused habitat assessment for the San Bernardino kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment found that the study area primarily consists of chamise and chaparral at higher elevations and grasslands and disturbed habitats at lower elevations. Wilson Creek runs through the southern part of the study area, but lacks habitat suitable for this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	**Not expected to occur.** The study area contains small patches of suitable sparse grassland habitat in the southwestern part of the study area, however no potential burrows were found. In addition, the study area is outside of the known geographic range for this species. The study area is north of all known records, with the nearest mapped CNDDB occurrence being approximately 8 miles south of the study area in Nicklin (CDFW 2022).	**Not expected to occur.** The study area contains suitable perennial and annual grassland, and coastal scrub general habitat. The study area is north of all known records, with the nearest mapped CNDDB occurrence being approximately 8 miles south of the study area in Nicklin (CDFW 2022). A focused habitat assessment for the Stephens' kangaroo rat was conducted within the study area by a permitted biologist. The habitat assessment concluded that there is no suitable habitat for this species.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	**Low potential to occur.** The study area contains suitable chaparral and coastal scrub habitat that could support the foraging of this species. However, the study area lacks crevices, rocky canyons, cliffs and tunnel microhabitats necessary for roosting. The nearest CNDDB occurrence is approximately 12 miles west of the study area, near the Santa Ana River (CDFW 2022).	**Low potential to occur.** The study area contains suitable chaparral and coastal scrub habitat that could support the foraging of this species. However, the study area lacks crevices, rocky canyons, cliffs and tunnel microhabitats necessary for roosting. The nearest CNDDB occurrence is approximately 12 miles west of the study area, near the Santa Ana River (CDFW 2022).
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC	Coniferous and deciduous forests, including riparian forests	**Not expected to occur.** The study area lacks forested habitat. The nearest CNDDB occurrence is 5 miles northeast in the San Bernardino National Forest. Local CNDDB occurrences are all located in high elevations in the San Bernardino mountains (CDFW 2022).	**Not expected to occur.** The study area lacks forested habitat. The nearest CNDDB occurrence is 5 miles northeast in the San Bernardino National Forest. Local CNDDB occurrences are all located in high elevations in the San Bernardino mountains (CDFW 2022).
Leptonycteris yerbabuenae	lesser long-nosed bat	FPD/SSC	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands	**Not expected to occur.** While the study area contains suitable oak woodland habitat, it lacks critical nectar, pollen and fruit sources from agaves, saguaro, and organ pipe cactus. One CNDDB occurrence is mapped in the 9 7.5-minute USGS quadrangles containing and surrounding the study area. However, the occurrence likely represents a vagrant male during migration (CDFW 2022).	**Not expected to occur.** While the study area contains suitable oak woodland habitat, it lacks critical nectar, pollen and fruit sources from agaves, saguaro, and organ pipe cactus. One CNDDB occurrence is mapped in the 9 7.5-minute USGS quadrangles containing and surrounding the study area. However, the occurrence likely represents a vagrant male during migration (CDFW 2022).
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	**High potential to occur**. The study area contains suitable chaparral and coastal scrub habitat. The nearest CNDDB occurrence is approximately 2.5 miles west of the study area near Mill Creek Road (CDFW 2022).	**High potential to occur**. The study area contains suitable chaparral and coastal scrub habitat. The nearest CNDDB occurrence is approximately 2.5 miles west of the study area near Mill Creek Road (CDFW 2022).
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	**Not expected to occur.** The study area lacks Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases habitats. One CNDDB occurrence is mapped in the 9 7.5-minute USGS quadrangles containing and surrounding the study area. This occurrence is approximately 11 miles west of the study area, in the city of San Bernardino (CDFW 2022).	**Not expected to occur.** The study area lacks Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases habitats. One CNDDB occurrence is mapped in the 9 7.5-minute USGS quadrangles containing and surrounding the study area. This occurrence is approximately 11 miles west of the study area, in the city of San Bernardino (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 8 miles south of the study area (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub, but the substrate is not as sandy as typically preferred by this species. The nearest CNDDB occurrence is a historical record, mapped approximately 8 miles south of the study area (CDFW 2022).
Perognathus alticola alticolus	white-eared pocket mouse	None/SSC	Arid ponderosa pine communities	**Not expected to occur**. No suitable arid ponderosa pine habitat is present within the study area to support this species.	**Not expected to occur**. No suitable arid ponderosa pine habitat is present within the study area to support this species.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (NRCS 2022). The nearest CNDDB occurrence is approximately 5 miles away in Highland Springs (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable grassland and coastal scrub. Additionally, the study area is primarily composed of sandy soils, a preferred microhabitat characteristic of the Los Angeles pocket mouse (NRCS 2022). The nearest CNDDB occurrence is approximately 5 miles away in Highland Springs (CDFW 2022).
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**High potential to occur**. The study area contains suitable dry, open, treeless areas, and grassland and coastal scrub habitat. Additionally, the two most prominent soils series mapped in the area (Greenfield and Saugus) are described as friable (USDA 2022). Finally, the study area contains burrows that have potential to support American badger. The nearest CNDDB occurrence is approximately 2 miles northeast near Mill Creek Road (CDFW 2022).	**High potential to occur**. The study area contains suitable dry, open, treeless areas, and grassland and coastal scrub habitat. Additionally, the two most prominent soils series mapped in the area (Greenfield and Saugus) are described as friable (USDA 2022). Finally, the study area contains burrows that have potential to support American badger. The nearest CNDDB occurrence is approximately 2 miles northeast near Mill Creek Road (CDFW 2022).
Reptiles					
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	**Moderate potential to occur**. The study area contains suitable dry washes, and valley–foothill, chaparral, and scrub habitat. Additionally, the most prominent soils series mapped in the area are described as sandy loam soils. However, the study area is generally dominated by annual grass and forbs, therefore the vegetation may be too dense for this species to occur. The nearest CNDDB occurrence is approximately 0.5 miles southwest in Yucaipa (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable dry washes, and valley–foothill, chaparral, and scrub habitat. Additionally, the most prominent soils series mapped in the area are described as sandy loam soils. However, the study area is generally dominated by annual grass and forbs, therefore the vegetation may be too dense for this species to occur. The nearest CNDDB occurrence is approximately 0.5 miles southwest in Yucaipa (CDFW 2022).
Arizona elegans occidentalis	California glossy snake	None/SSC	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	**Moderate potential to occur**. The study area contains suitable grassland and chaparral habitat with some open areas. Additionally, the most prominent soils series mapped in the area are described as generally loose, sandy loam soils (USDA 2022). The nearest CNDDB occurrence approximately 6 miles northwest along Greenspot Road (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable grassland and chaparral habitat with some open areas. Additionally, the most prominent soils series mapped in the area are described as generally loose, sandy loam soils (USDA 2022). The nearest CNDDB occurrence approximately 6 miles northwest along Greenspot Road (CDFW 2022).
Aspidoscelis tigris stejnegeri	Coastal tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	**Present.** The study area contains suitable chaparral and woodland habitat. This species was detected during 2022 surveys.	**High potential to occur.** The study area contains suitable chaparral and woodland habitat. This species was not detected within Phases 4 and 5 during 2022 surveys, but was detected immediately south within the remainder of the study area.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Phases 1, 2, and 3, including the Wilson Creek Specific Plan Potential to Occur	Phases 4 and 5 Potential to Occur
Charina umbratica	southern rubber boa	None/ST	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	**Not expected to occur**. The eastern boundary of the study area overlaps with CNDDB occurrences that cover a large geographic area to the east and north of the study area, but that is due to the records being displayed at the quadrangle level and not having specific locations due to concerns from poaching (CDFW 2022). The study area is well below the elevation range of the species. study area	**Not expected to occur**. The eastern boundary of the study area overlaps with CNDDB occurrences that cover a large geographic area to the east and north of the study area, but that is due to the records being displayed at the quadrangle level and not having specific locations due to concerns from poaching (CDFW 2022). The study area is well below the elevation range of the species. study area
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	**Moderate potential to occur**. The study area contains suitable coastal scrub, chaparral, and oak woodland habitat. The nearest CNDDB occurrence is approximately 8 miles northwest near Greenspot Road. All local CNDDB occurrences record dead adult individuals found on roads (CDFW 2022).	**Moderate potential to occur**. The study area contains suitable coastal scrub, chaparral, and oak woodland habitat. The nearest CNDDB occurrence is approximately 8 miles northwest near Greenspot Road. All local CNDDB occurrences record dead adult individuals found on roads (CDFW 2022).
Emys marmorata	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.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains.	**Not expected to occur.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**High potential to occur**. The study area contains suitable coastal scrub, chaparral and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence is approximately 0.5 miles west of the study area where one adult was observed (CDFW 2022).	**High potential to occur**. The study area contains suitable coastal scrub, chaparral and annual grassland habitat. Additionally, the most prominent soils series mapped in the area are described as generally sandy loam soils. The nearest mapped CNDDB occurrence is approximately 0.5 miles west of the study area where one adult was observed (CDFW 2022).
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	**High potential to occur**. The study area contains suitable shrubby coastal scrub and chaparral vegetation. The nearest CNDDB occurrence is approximately 2 miles northwest of the study area near Mill Creek Road (CDFW 2022).	**High potential to occur**. The study area contains suitable shrubby coastal scrub and chaparral vegetation. The nearest CNDDB occurrence is approximately 2 miles northwest of the study area near Mill Creek Road (CDFW 2022).
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	**Not expected to occur.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains.	**Not expected to occur.** The study area lacks perennial water features. Water features present within the study area are ephemeral, fed by storm water runoff from adjacent mountains.
Invertebrates					
Bombus crotchii	Crotch bumble bee	None/SCT	Open grassland and scrub communities supporting suitable floral resources.	**High potential to occur**. The study area contains grassland and scrub communities with *Phacelia, Clarkia, Eriogonum, Eschscholzia and Antirrhinum* species which have been identified as preferred food plant genera. The eastern portion of the study area overlaps with CNDDB record of this species in Calimesa; however, the exact location of the record is unknown (CDFW 2022).	**High potential to occur**. The study area contains grassland and scrub communities with *Phacelia, Clarkia, Eriogonum, Eschscholzia and Antirrhinum* species which have been identified as preferred food plant genera. The eastern portion of the study area overlaps with CNDDB record of this species in Calimesa; however, the exact location of the record is unknown (CDFW 2022).

Status Abbreviations
FE: Federally listed as endangered
FT: Federally listed as threatened
FPE: Federally proposed for listing as endangered
PFT: Federally proposed for listing as threatened
FC: Federal candidate species (former Category 1 candidates)

FPD: Federally proposed for delisting
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
BLM: Bureau of Land Management Sensitive Species
USFS: U.S. Forest Service Sensitive Species
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
SE: State listed as endangered
ST: State listed as threatened
SC: State candidate for listing as threatened or endangered
SCE: State candidate for listing as endangered
SCT: State candidate for listing as threatened
SCD: State candidate for delisting
CDF: California Department of Forestry Sensitive Species
Known to occur: the species has been documented on the study area by a reliable source.
High potential to occur: the species has not been documented on the study area but is known to recently occur in the vicinity and suitable habitat is present.
Moderate potential to occur: the species has not been documented on the study area or in the vicinity, but the site is within the known range of the species and suitable habitat for the species is present.
Low potential to occur: the species has not been documented on the study area or in the vicinity, but the site is within the known range of the species; however, suitable habitat for the species onsite is of low quality.
Not expected to occur: the study area is outside the known geographic or elevational range of the species and/or the site does not contain suitable habitat for the species.

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Appendix G
Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Yucaipa Valley Wine Country Specific Plan

FEBRUARY 2023

Prepared for:

CITY OF YUCAIPA
34272 Yucaipa Boulevard
Yucaipa, California 92399
Contact: Benjamin Matlock

Prepared by:

DUDEK

605 Third Street
Encinitas, California 92024
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Anna Cassady
Biologist

Megan Enright
Senior Biologist

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APPENDICES

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
CDFW	California Department of Fish and Wildlife
NWI	National Wetlands Inventory
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
Project	Yucaipa Valley Wine Country Specific Plan
RIP	riparian
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers

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1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This report presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Yucaipa Valley Wine Country Specific Plan (Project) located in the City of Yucaipa, San Bernardino County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively defined as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This report presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review area using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. A request for USACE Jurisdictional Determination is provided in Appendix A.[1]

1.2 Contact Information

Contact information for the Project applicant and agent are provided in Table 1.[2] Access to the review area is not restricted, but if a site visit is requested, the Project applicant or agent will accompany regulatory staff to the review area.[3] The City of Yucaipa is the Project applicant and landowner.

Table 1. Contact Information

Project Applicant	City of Yucaipa	**Agent**	Dudek
Contact Name	Benjamin Matlock	**Contact Name**	Anna Cassady
Address	34272 Yucaipa Boulevard Yucaipa, CA 92399	**Address**	605 Third Street Encinitas, California 92024
Phone	909-797-2489 Ext. 261	**Phone**	951-300-1088
Email	bmatlock@yucaipa.org	**Email**	acassady@dudek.com

1 Minimum Standards Item 1 (Request for Jurisdictional Determination)
2 Minimum Standards Item 2 (Contact Information)
3 Minimum Standards Item 3 (Site Access Statement)

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2 Review Area Description and Landscape Setting[4]

The approximately 1,194.76-acre review area for the proposed Project is located within the City of Yucaipa in San Bernadino County. The review area consists of 185 property parcels and a 100-foot survey buffer (Table 2) (Figure 1, Vicinity Map).[5] The approximate center of the Project is at latitude 34.054792, longitude −117.018353. Directions to the review area are as follows: from the intersection of Interstates 10 and 215 in San Bernadino, drive east on Interstate 10 for approximately 11 miles before taking exit 85 towards Oak Glen Road. Drive northeast on Oak Glen Road for 6 miles before arriving at the review area's southern boundary. [6] The northern edge of the review area is 1.75 miles away, near the intersection of Jefferson Street and Liana Street.

Topography in the review area is variable, characterized mainly by flat to gently sloping mesas that are broken up by steep canyons and slopes which contain aquatic features. Generally, the ground elevation increases from south to north within the review area, ranging from 3,225 above mean sea level near Oak Glen Road, to 3,355 feet above mean sea level near Jefferson Street. The review area is mapped on Sections 29 and 30 of Township 1 South, Range 1 West, within the Yucaipa 7.5-minute U.S. Geological Survey topographic quadrangle map.

4 Minimum Standards Item 10 (Description of Existing Field Conditions)
5 Minimum Standard Item 14 (Site Location Map)
6 Minimum Standards Item 4 (Directions)

Table 2. List of Assessor's Parcel Numbers within the Review Area

Accessor's Parcel Numbers within the Wine Country Review Area							
032-019-127	032-023-122	032-025-119	032-025-156	032-103-150	032-108-120	032-119-401	032-144-116
032-019-136	032-023-123	032-025-120	032-025-157	032-103-151	032-108-121	032-124-105	032-148-117
032-019-137	032-023-124	032-025-121	032-025-158	032-103-152	032-108-122	032-124-107	032-148-124
032-019-158	032-023-125	032-025-123	032-026-102	032-103-153	032-108-123	032-124-108	032-148-125
032-021-101	032-023-126	032-025-124	032-102-129	032-104-105	032-108-214	032-124-109	032-148-129
032-021-164	032-023-127	032-025-125	032-103-102	032-104-107	032-109-101	032-124-110	032-148-130
032-021-165	032-023-128	032-025-129	032-103-107	032-104-108	032-109-103	032-124-117	032-148-131
032-021-169	032-023-140	032-025-130	032-103-108	032-104-109	032-109-104	032-124-118	032-148-132
032-021-170	032-024-102	032-025-131	032-103-111	032-104-110	032-109-105	032-124-119	032-149-105
032-021-171	032-024-103	032-025-132	032-103-112	032-104-111	032-109-106	032-124-120	032-149-106
032-021-175	032-024-104	032-025-133	032-103-114	032-104-112	032-110-101	032-124-121	032-149-111
032-021-185	032-024-108	032-025-134	032-103-115	032-104-113	032-110-102	032-124-122	032-149-112
032-022-101	032-024-109	032-025-135	032-103-116	032-104-114	032-110-112	032-135-109	032-149-113
032-023-101	032-024-110	032-025-136	032-103-118	032-104-115	032-110-122	032-135-110	032-149-114
032-023-102	032-024-111	032-025-137	032-103-120	032-107-111	032-110-125	032-135-119	032-149-115
032-023-103	032-024-112	032-025-138	032-103-121	032-107-132	032-110-126	032-139-101	032-149-116
032-023-109	032-024-113	032-025-139	032-103-124	032-108-102	032-111-103	032-139-120	032-149-117
032-023-110	032-024-117	032-025-143	032-103-126	032-108-103	032-112-109	032-141-109	032-150-105
032-023-111	032-024-118	032-025-145	032-103-128	032-108-104	032-112-144	032-141-111	032-150-106
032-023-112	032-024-119	032-025-146	032-103-130	032-108-113	032-118-122	032-141-112	032-150-117
032-023-113	032-025-106	032-025-151	032-103-139	032-108-114	032-118-128	032-143-119	032-144-116
032-023-114	032-025-108	032-025-152	032-103-144	032-108-115	032-119-226	032-143-128	032-148-117
032-023-121	032-025-112	032-025-153	032-103-149	032-108-119	032-119-234	032-143-129	032-148-124

2.1 Soils[7]

Soil types within the review area are shown in Table 3 and on Figure 2, Soils Map. Hydric soils are indicated by shading (USDA 2022a, 2022b).

Table 3. Soils within the Review Area

Mapping Unit Symbol	Soil Name	Hydric Rating	Acreage
Cr	Cienaba-Rock Outcrop Complex	Not Hydric	18.73
GuD	Greenfield Cobbly Sandy Loam, 5 to 15 percent slopes	Not Hydric	65.39
GtC	Greenfield Sandy Loam, 2 to 9 percent slopes	Not Hydric	661.31
HaC	Hanford Coarse Sandy Loam, 2 to 9 percent slopes	Not Hydric	110.23
Ps	Psamments and Fluvents, frequently flooded	Partially Hydric	1.34
RmD	Ramona Sandy Loam, 9 to 15 percent slopes	Not Hydric	9.78
ShF	Saugus Sandy Loam, 30 to 50 percent slopes	Not Hydric	182.09
SoC	Soboba Gravelly Loamy Sand, 0 to 9 percent slopes	Partially Hydric	10.17
SpC	Soboba Sandy Loamy Sand, 2 to 9 percent slopes	Not Hydric	82.42
AbD	Soboba-Hanford families association, 2 to 15 percent slopes	Unknown Hydric	0.28
TvC	Tujunga Gravelly Loamy Sand, 0 to 9 percent slopes	Not Hydric	51.46
W	Water (not a soil type)	N/A	0.15
		Total	**1,193.35**

Note: Shaded rows indicate hydric soils.

2.2 Vegetation

A total of 20 vegetation communities were mapped in the review area within the following six land cover types: disturbed and developed, unvegetated, grass and herb dominated, chaparral, scrub, and woodland. The acreages of the mapped vegetation alliances/associations and other land covers in the study area are presented in Table 4.

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
Grass and Herb Dominated			
Post-fire herbaceous	N/A	*N/A*	437.4
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	80.9
Non-Native Grassland	N/A	N/A	31.9

[7] Minimum Standards Item 13 (Soil Descriptions)

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
Chaparral			
Chamise chaparral	*Adenostoma fasciculatum* Alliance	*Adenostoma fasciculatum*	52.0
		Adenostoma fasciculatum–Eriogonum fasciculatum	2.3
		Adenostoma fasciculatum–(Lotus scoparius - Eriodictyon spp.*)*	1.1
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia–Adenostoma fasciculatum*	17.3
		Quercus berberidifolia	64.1
Deerweed–silver lupine–yerba santa scrub	*Lotus scoparius–Lupinus albifrons–Eriodictyon* spp. Alliance	*Eriodictyon californicum*–herbaceous	1.5
Scrub			
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	61.9
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	112.1
Palmer's goldenbush scrub[2]	*Ericameria palmeri* Alliance	*Ericameria palmeri*	0.3
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia–Eriogonum (elongatum, nudum)* Alliance	*Corethrogyne filaginifolia*	0.6
Bush mallow scrub	*Malacothamnus fasciculatus–Malacothamnus* spp. *Alliance*	*Malacothamnus fasciculatus*	1.4
White sage scrub[2]	*Salvia apiana* Alliance	*Salvia apiana*	0.7
—	—	*Salvia apiana–Hesperoyucca whipplei*	0.9
Riparian			
Mulefat thickets	*Baccharis salicifolia* Alliance	*Baccharis salicifolia–Sambucus nigra*	0.5
California sycamore woodlands[2]	*Platanus racemosa–Quercus agrifolia* Alliance	*Platanus racemosa–Baccharis salicifolia*	1.7
Basket bush–river hawthorn–desert olive patches[2]	*Rhus trilobata–Crataegus rivularis–Forestiera pubescens Alliance*	*Sambucus nigra*	0.7
Scale broom scrub[2]	*Lepidospartum squamatum* Alliance	*Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan	2.2
		Lepidospartum squamatum–Amsinckia menziesii	1.6

Table 4. Vegetation Communities and Land Cover Types within the Review Area

Vegetation Community or Land Cover Type	Alliance	Association	Total Acreage[1]
		Lepidospartum squamatum–ephemeral annuals	0.01
Woodland			
Coast live oak woodland and forest	*Quercus agrifolia* Alliance	*Quercus agrifolia*	2
Eucalyptus–tree of heaven–black locust groves	*Ailanthus altissima* Alliance	*Ailanthus altissima*	1
		Eucalyptus (globulus, camaldulensis)	2
Unvegetated			
Unvegetated wash and river bottom	N/A	N/A	13.7
Disturbed and Developed			
Ornamental plantings	N/A	N/A	18.7
Urban/Developed	N/A	N/A	157.8
Disturbed Habitat	N/A	N/A	125.0
		Total[1]	**1,193.4**

Notes:
1 Totals may not sum due to rounding.
2 Communities listed by California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2022).

2.3 Watershed

The review area is in the Yucaipa Creek subwatershed, Hydrologic Unit Code 12-180702030402, which lies within the Santa Ana subbasin (Figure 3, Hydrology Map). The Yucaipa Creek subwatershed is 45.6 square miles (29,266 acres) and contains Yucaipa Creek. Wilson Creek and Oak Glen Creek are also prominent features in the watershed, both flowing into Yucaipa Creek. Yucaipa Creek flows west and north through several downstream features before converging with the Santa Ana River. The Santa Ana River flows south and west, terminating at the Pacific Ocean.

2.4 Review Area Alterations, Current and Past Land Use

The vast majority of the review area is undeveloped open space that has been historically used for agricultural and ranching purposes. Portions of the review area have experienced wildfire events in the past 10 years, the most recent being the El Dorado Fire, which occurred in 2020. Over the last 20 years, the most visible areas of change have occurred near the western section of the review area where some commercial and agriculture facilities have developed or expanded (Google 2022; Historic Aerials 2022). Otherwise, the review area has experienced very little anthropogenic alteration.

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3 Precipitation Data and Analysis[8]

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2022a). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from −4 (extreme drought) to +4 (very wet) (NOAA 2022) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2022a).

Table 5 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 5, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

Table 5. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
06/28/2022	Extreme drought	Dry Season	10	Normal

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition.

Additionally, according to the U.S. Department of Agriculture's Agricultural Applied Climate Information System (USDA 2022c), the area around the review area receives an average of 2.63 inches of precipitation annually.

[8] Minimum Standards Item 11 (Discussion of Hydrology)

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4 Investigation Methods[9]

The jurisdictional delineation was conducted by Dudek Biologists Anna Cassady, Britney Schultz, Dylan Ayers, Eileen Salas, and Sarah Greely on four separate occasions (Table 6). Prior to conducting the jurisdictional delineation, the U.S. Fish and Wildlife Service's National Wetland Inventory (NWI) (USFWS 2022) and the U.S. Geological Survey's National Hydrography Dataset were reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service or U.S. Geological Survey. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device. Both current and historical imagery was used to supplement field investigation efforts, particularly on private lands or in areas where anthropogenic impacts have obscured aquatic indicators normally found in the field. Small portions of the review area were inaccessible and were delineated via topographical data and available aerial imagery. Remote sensing was not used during this delineation.

Table 6. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
06/28/2022	9:07 a.m.–4:14 p.m.	AC, DA, BS, ES	83°F–96°F; 0%–10% cloud cover; 0–3 mph wind
06/29/2022	7:04 a.m.–1:53 p.m.	AC, BS, ES	71°F–90°F; 0% cloud cover; 0–3 mph wind
08/18/2022	9:30 a.m.–1:07 p.m.	DA, SG	78°F–87°F; 40%–50% cloud cover; 0–3 mph wind
09/30/2022	10:13 a.m.–11:37 a.m.	ES, SG	76°F–79°F; 0% cloud cover; 1–3 mph wind

Notes: °F = degrees Fahrenheit; mph = miles per hour; AC = Anna Cassady; BS = Britney Schultz; DA = Dylan Ayers; ES = Eileen Salas; SG = Sarah Greely .

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). 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 (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual.

Wetland Determination Forms were taken at certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present; hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix C.

[9] Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 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 (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979). The CDFW also regulates riparian vegetation communities that occur beyond the limits of regulated streambeds.

5 Aquatic Resource Narrative[10]

5.1 Waters of the United States (USACE)

Approximately 5.65 acres of non-wetland waters potentially regulated by USACE are present in the review area (Figure 4-1).[11] Table 7 provides a detailed summary of delineated aquatic resources potentially regulated by USACE. Table 7 also includes information on each feature identified within the review area; its Cowardin type, if available (Cowardin et al. 1979; USACE 2022b); any OHWM indicators present; the location; and the acreage/linear feet. Narrative descriptions of each non-wetland water feature are included below. A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because Table 7 in this section provides all of the information requested.[12]

Non-Wetland Water-01

Non-Wetland Water (NWW) 01 represents the largest and most prominent aquatic feature in the review area, occurring south of the approximate center of the Project site. NWW-01 includes portions of Wilson Creek, an intermittent stream feature that generally flows east to west across the review area, entering across the Project's eastern border approximately 0.53 miles north of Oak Glen Road (Figures 4-2, 4-3, 4-5, 4-6, 4-9, and 4-10). NWW- 01, which also includes several small tributaries to Wilson Creek, exhibited clear and consistent indicators of an OHWM throughout the length of the feature observed within the review area. The Wilson Creek portions of NWW-01 are well defined with a clear break in slope, change in vegetation cover, and change in soil texture observed throughout. Cross sections T-11, T-12, and T-15 describe conditions observed in Wilson Creek; T-02 describes the smaller tributary portions of NWW-01, which also exhibited similar indicators. Despite the clear signs of recent fluvial action, no flowing water was observed in the feature. NWW-01 leaves the review area's southwestern corner approximately 0.3 miles north of Oak Glen Road.

Non-Wetland Water-02

NWW-02 includes a small aquatic feature near the southwestern corner of the review area. It was observed at the bottom of shallow canyon that occurs between two flat sections of land to the north and south (Figures 4-6 and 4-9). This feature is an unnamed ephemeral stream that originates on site, 0.25 miles east of the intersection of Fir Avenue and Jefferson Street and approximately 0.3 miles northeast of Wilson Creek. NWW-02 showed indicators of an OHWM; cross section T-10 describes a break in slope and change in average sediment texture. No flowing water was observed. NWW-02 terminates on site at Jefferson Street, though flows in the channel may sheet flow south along Jefferson Street, converging with NWW-01 about 500 feet to the south of the apparent termination point. This connection was determined based on observations made during field investigations and during review of current and historical aerials (Google 2022; Historic Aerials 2022).

10 Minimum Standards Item 6 (Aquatic Resource Narrative)
11 Minimum Standards Items 7 and 16 (Delineation Maps)
12 Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

Non-Wetland Water-03

NWW-03 includes a human-made basin and a small section of ephemeral stream channel near the northeastern edge of the review area (Figure 4-2). The basin appears to have been constructed in the path of this unnamed stream in order to accumulate water for agricultural activities. In doing so, flows in the stream that would normally continue southwest remain in the basin; no clear outlet was observed. NWW-03 enters onto the review area via sheet flow across Carter Street from an adjacent private property less than 100 feet to the north. The stream channel portion of NWW-03 exhibited clear indicators of an OHWM as shown in cross section T-18, which describes a break in slope and changes in vegetation cover and soil texture. It flows for approximately 500 feet before reaching the basin. The basin has clear boundaries and is surrounded by sloped earthen walls. No water was observed in this feature during field investigations.

Non-Wetland Water-04

NWW-04 includes several sections of an unnamed ephemeral stream feature and associated tributaries located near the center of the review area (Figures 4-2, 4-7, 4-8, and 4-9). It flows across Carter Street via sheet flow, entering a channel in the review area that exhibited clear indicators of an OHWM; cross section T-01 describes a break in slope and changes in vegetation cover and soil texture. On site, NWW-04 flows southwest in a channel that is surrounded by a mix of flat and undulating undeveloped lands. The stream is relatively wide, with large, transported boulders strewn across portions of the channel. It appears to terminate in the review area approximately 400 feet east of Jefferson Street in an area that is impacted by significant off-highway vehicle use. A review of current and historical aerials suggests that despite this apparent disconnection, waters that reach this part of the NWW-04 channel continue west, flowing overland across Jefferson Street into another section of unnamed ephemeral stream channel (Google 2022; Historic Aerials 2022). NWW-04 continues west after crossing Jefferson Street, accepting flows from two distinct tributaries as it nears the northwestern corner of the review area. The upstream tributary just west of Jefferson Street may have also been disconnected from upstream section by the installation of the street; the downstream tributary accepts flows from a nearby agricultural operation. Indicators of an OHWM are present throughout the feature and its tributaries, though the channel becomes more heavily incised west of Jefferson Street; cross section T-09 describes a sharp break in slope and changes to vegetation cover and soil texture. No water was observed in this feature during field investigations. Upon reaching Fremont Street at the edge of the Project site, NWW-04 appears to flow beneath the roadway, leaving the review area moving west.

Non-Wetland Water-05

NWW-05 is located in the northern portion of the review area and contains two disjointed sections of an unnamed stream feature; the northernmost section originates in the sloped lands off site to the north, the southern section appears to originate on private lands near the review area's northeastern corner (Figures 4-6, 4-8, 4-11, 4-12, and 4-13). After flowing onto the review area, NWW-05 flows south and west in canyons surrounded by sloped lands with private residences in the vicinity; cross section T-03 describes the OHWM in this location. While the two disjointed sections of NWW-05 may converge just outside the review area's northwestern edge in private land, no clear indication of this was recorded in the field, in part due to lack of access to private lands. However, based on current and historical imagery, these two disjointed sections were likely connected in the past. NWW-05 continues southwest after re-entering the review area, flowing through a heavily grazed pasture in a relatively wide section of the stream feature that exhibited an OHWM; cross section T-06 describes a break in slope and changes to soil texture in this area. Despite the heavy compaction of soils in this section of the feature, the high numbers of transported boulders above and below the OHWM of NWW-05 suggest that significant flows have and could occur in the feature. No water was observed in this feature during field investigations.

Based on field investigations, NWI data, and a review of historical imagery, NWW-01, -02, -04, -05, and -06 appear to exhibit a significant nexus with the Pacific Ocean, a traditional navigable water. As such, any impacts to the tributaries observed on site would constitute impacts to USACE jurisdictional waters. This connection is established downstream of the review area via Oak Glen Creek, Wilson Creek, Yucaipa Creek, and the Santa Ana River. NWW-03 does not exhibit a downstream connection to any traditional navigable water; therefore, it is not considered to be a USACE jurisdictional feature.

Besides the non-wetland waters described above, multiple upland swales, drainage ditches, inactive stream channels, and erosional features were also observed within the review area. These features lacked any indicators of an OHWM during field investigations, which excludes them from consideration as potential jurisdictional waters. Additionally, an investigation of historic aerials going back as far as 1938 show many of these non-jurisdictional features to be associated directly with adjacent agricultural or commercial operations. Therefore, they are not depicted in any of the included figures; cross sections T-04, T-05, T-07, T-08, T-13, T-14, T-16, T-17, T-19, and T-20 describe these non-jurisdictional features and were collected to demonstrate the lack of OHWM indicators.

No high-quality hydrophytic vegetation communities typically associated with wetland habitats in this region were observed during the field investigations. Four riparian vegetation communities, *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association, *Sambucus nigra* association, *Baccharis salicifolia–Sambucus nigra* association, and *Platanus racemosa–Baccharis salicifolia* association, were recorded in the review area. Though the *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association community is supported by flows in NWW-01, scale broom (*Lepidospartum squamatum*) is a facultative upland plant species that does not qualify as hydrophytic. Accordingly, USACE wetlands are not present in this vegetation community. *Baccharis salicifolia–Sambucus nigra* association describes areas are typically co-dominated by elderberry (*Sambucus nigra*) and mulefat (*Baccharis salicifolia*); mulefat is considered hydrophytic and elderberry is not. While these two plant species were present in the community observed on site, they were burnt and observed in very low cover amongst upland plants that do not qualify as hydrophytic. Accordingly, USACE wetlands are not present in this vegetation community. The *Platanus racemosa–Baccharis salicifolia* association on site is dominated by California sycamore (*Platanus racemosa*), a facultative plant that qualifies as hydrophytic. This community is in the review area outside the Project, on inaccessible private property. Accordingly, field investigations did not cover this area.

Based on the lack of high-quality, consistent hydrophytic vegetation cover in any of the observed riparian areas, no Wetland Determination Forms were collected in these communities or near any of the features listed in Table 7. Photos of all observed aquatic features delineated within the review area, as well as additional areas reviewed for the presence of these resources, are provided in Appendix D.[13] The locations of these photos are shown in Figures 4-1 through 4-13.

[13] Minimum Standards Item 17 (Ground Photos)

Table 7. USACE Aquatic Resource Summary for the Review Area[14]

Feature Name	Cowardin[1]	Primary OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/Linear Feet[2]
Non-Wetland Waters				
NWW-1	R4	BBS, CAST, CVC	−117.0153, 34.05246	3.16/17,970
NWW-2	R6	BBS, CAST	−117.0148, 34.05474	0.09/1,476
NWW-4	R6	BBS, CAST, CVC	−117.0082, 34.06125	1.41/9,037
NWW-5	R6	BBS, CAST, CVC	−117.0182, 34.05801	0.97/8,563
			Grand Total	**5.63/37,046**

Notes: OHWM = ordinary high-water mark; NWW = non-wetland water; CAST = change in average sediment texture; BBS = break in bank slope; CVS = change in vegetation species; CVC = change in vegetation cover

1 Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2022b).

2 Totals may not sum due to rounding.

5.2 Waters of the State (RWQCB)

All of the features described in Section 5.1, Waters of the United States (USACE), have been identified as waters of the state. These features are subject to regulation by the RWQCB under the Porter-Cologne Water Quality Control Act (Figures 4-1 and 4-2). Table 8 lists all features within the review area that are subject to RWQCB regulation.

Table 8. RWQCB Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
Non-Wetland Waters		
NWW-1	34.05246, -117.0153	3.16/17,970
NWW-2	34.05474, -117.0148	0.09/1,476
NWW-3	34.06166, -117.0045	0.23/652
NWW-4	34.06125, -117.0082	1.41/9,037
NWW-5	34.05801, -117.0182	0.97/8,563
	Grand Total	**5.86/37,699**

Notes: RWQCB = Regional Water Quality Control Board; NWW = non-wetland water

1 Totals may not sum due to rounding.

5.3 CDFW Jurisdiction

All of the features described in Section 5.1 have been identified as streambed potentially regulated by CDFW. In addition, the riparian vegetation communities in the review area described in Section 5.1 are also potentially regulated by CDFW; they are labeled Riparian (RIP) 1 thru RIP-5. Because CDFW regulates from bank to bank, certain portions of the review area where the top of a channel bank extended beyond the OHWM are subject to regulation by CDFW as streambed. These areas are displayed in Figures 4-1 through 4-13. The full extent of CDFW jurisdictional areas are described in Table 9.

14 Minimum Standards Item 9 (Table Listing All Aquatic Resources)

Table 9. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet[1]
CDFW Streambed		
NWW-1	34.05246, -117.0153	8.01/17,970
NWW-2	34.05474, -117.0148	0.41/1,476
NWW-3	34.06166, -117.0045	0.23/652
NWW-4	34.06125, -117.0082	2.46/22,534
NWW-5	34.05801, -117.0182	3.12/24,057
	Streambed Subtotal	*14.22/100,042*
Riparian Habitats		
RIP-1: *Eriogonum fasciculatum–Lepidospartum squamatum* alluvial fan association	34.05201, -117.02192	3.8/9,502
RIP-2: *Baccharis salicifolia–Sambucus nigra* association	34.05341, -117.01040	0.47/913
RIP-3: *Sambucus nigra* association	34.059674, -117.02286	0.63/1,014
RIP-4: - *Platanus racemosa–Baccharis salicifolia* association	34.04833, -117.01432	1.74/1,450
	Riparian Subtotal	*6.64 /12,879*
	Grand Total	**20.38/112,921**

Notes: CDFW = California Department of Fish and Wildlife; NWW = non-wetland water; RIP = riparian.
[1] Totals may not sum due to rounding.

5.4 National Wetland Inventory

The review area contains several mapped resources from the U.S. Fish and Wildlife Service's NWI data (USFWS 2022; see Figure 3). Ephemeral riverine (R6 Cowardin classification) habitats are mapped overlapping with all non-wetland water features in the review area, except NWW-01. NWW-01 overlaps with the intermittent (R4 Cowardin classification) features mapped by the NWI in the review area; this includes portions of Wilson Creek. A freshwater pond is mapped near the northeastern corner of the review area; it corresponds with the basin portion of NWW-03. An additional freshwater pond is mapped near the southern border of the review area, 200 feet north of Oak Glen Road, though it does not correspond with any observed aquatic feature (USACE 2022b).

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6 Results and Conclusions

Based on the jurisdictional delineation and review of relevant information provided in this Aquatic Resources Delineation Report, 5.63 acres of non-wetland waters potentially regulated by USACE were delineated within the review area. Of the five aquatic features recorded in the review area, NWW-01, NWW-02, NWW-04, and NWW-05 may be regulated by USACE given their downstream connection to a traditional navigable water (the Pacific Ocean). NWW-03 is isolated and would not be regulated by USACE. All non-wetland water features in the review area may also be regulated by the RWQCB and CDFW. In addition, CDFW may regulate streambeds beyond the OHWM (to top of bank) and associated riparian habitat. In total, 5.86 acres of non-wetland waters (below OHWM) fall under RWQCB jurisdiction, and 20.38 acres of CDFW streambed (below and above OHWM, to top of bank) and associated riparian habitat occur in the review area.

This report can be used by those agencies to determine if they would regulate the features described herein. The geographic information system (GIS) data for the delineation are provided digitally.[15]

[15] Minimum Standards Item 20 (Digital Data)

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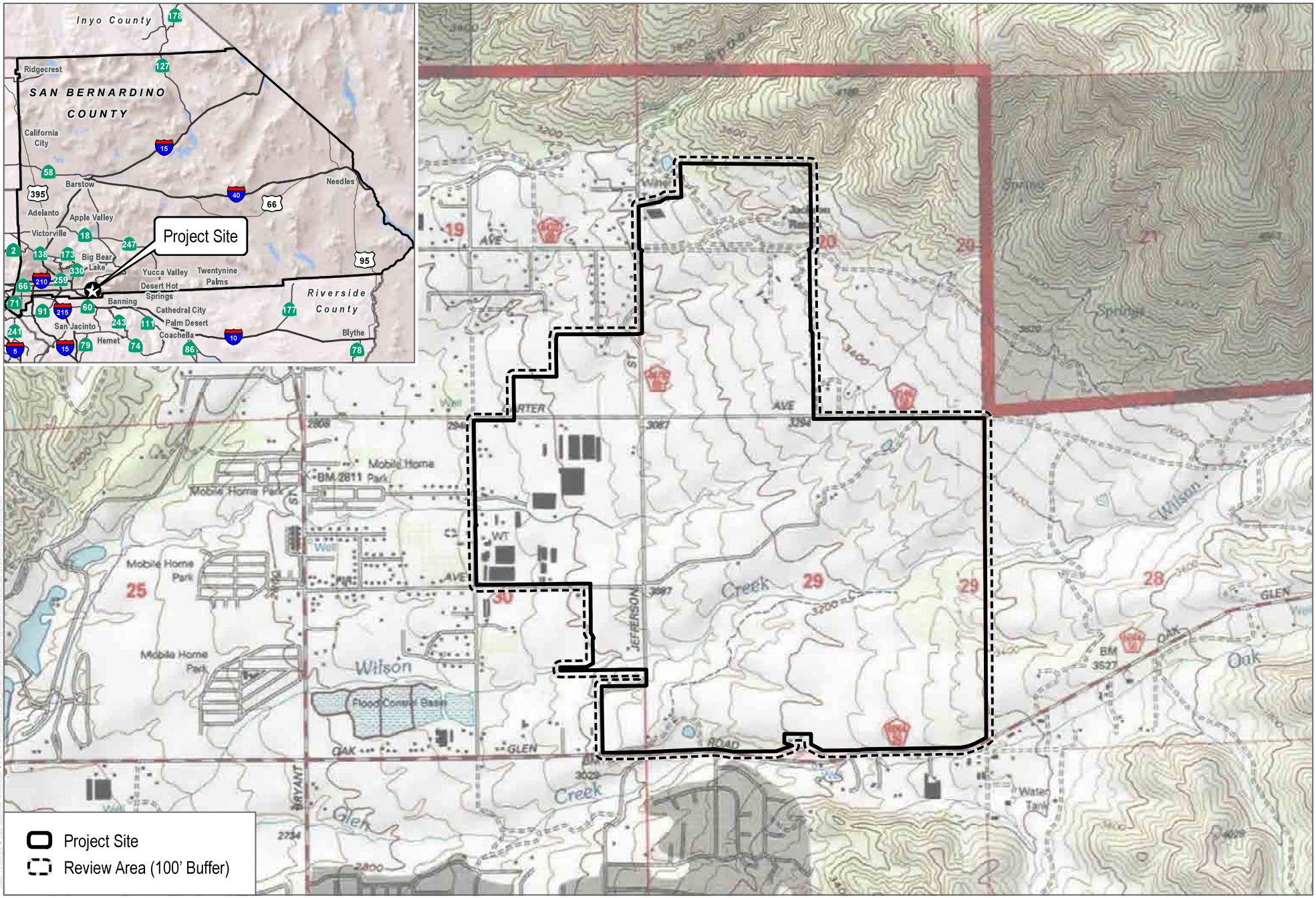

SOURCE: USA Topo Maps 7.5 Minute Series Yucaipa and Forest Falls Quadrangle
Township 1S; Range 1W; Section 19-21, 28-32

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Vicinity Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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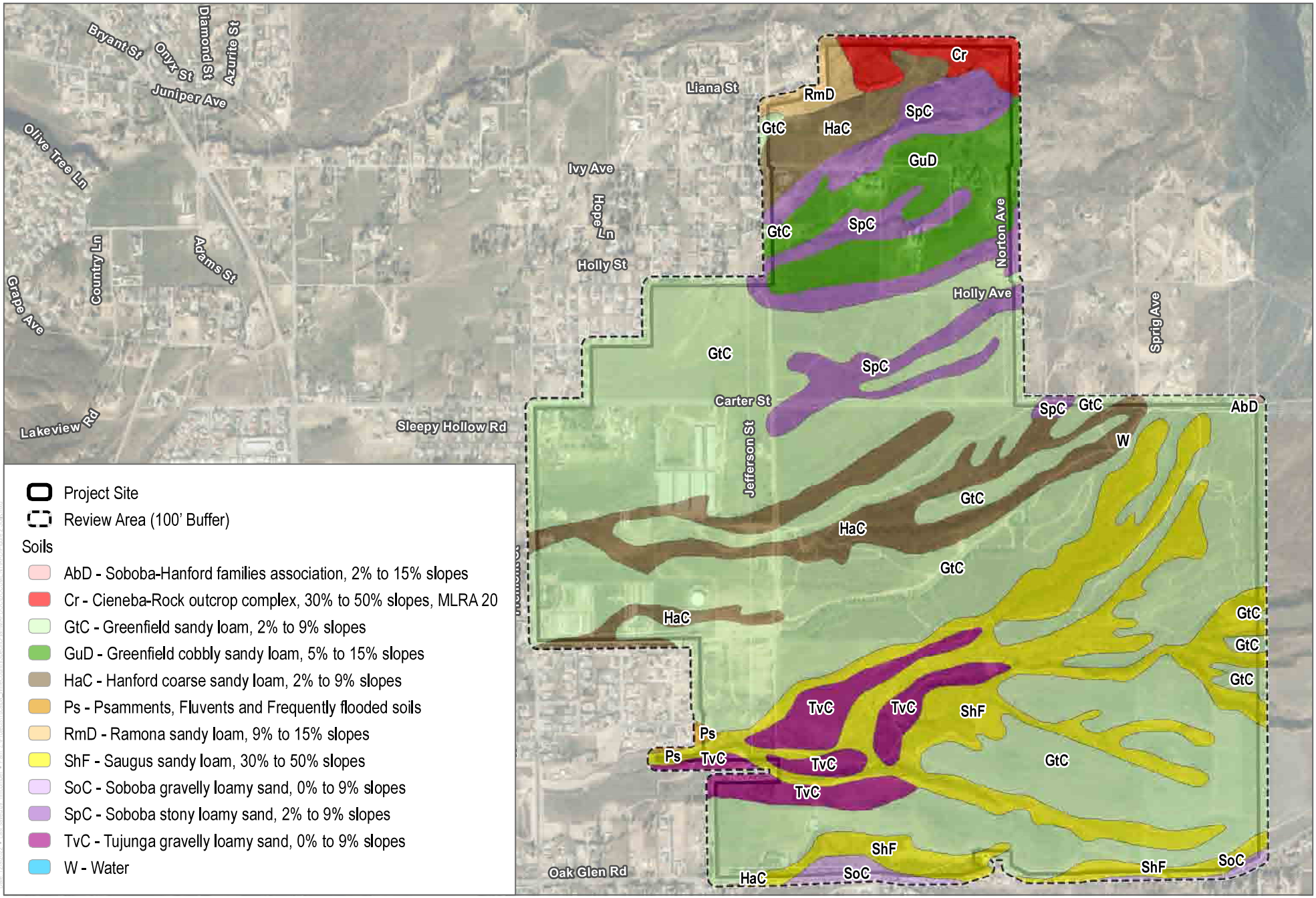

SOURCE: Esri World Imagery Basemap (accessed 2022); San Bernadino County 2022; USDA 2022

DUDEK

0 700 1,400 Feet

FIGURE 2

Soils Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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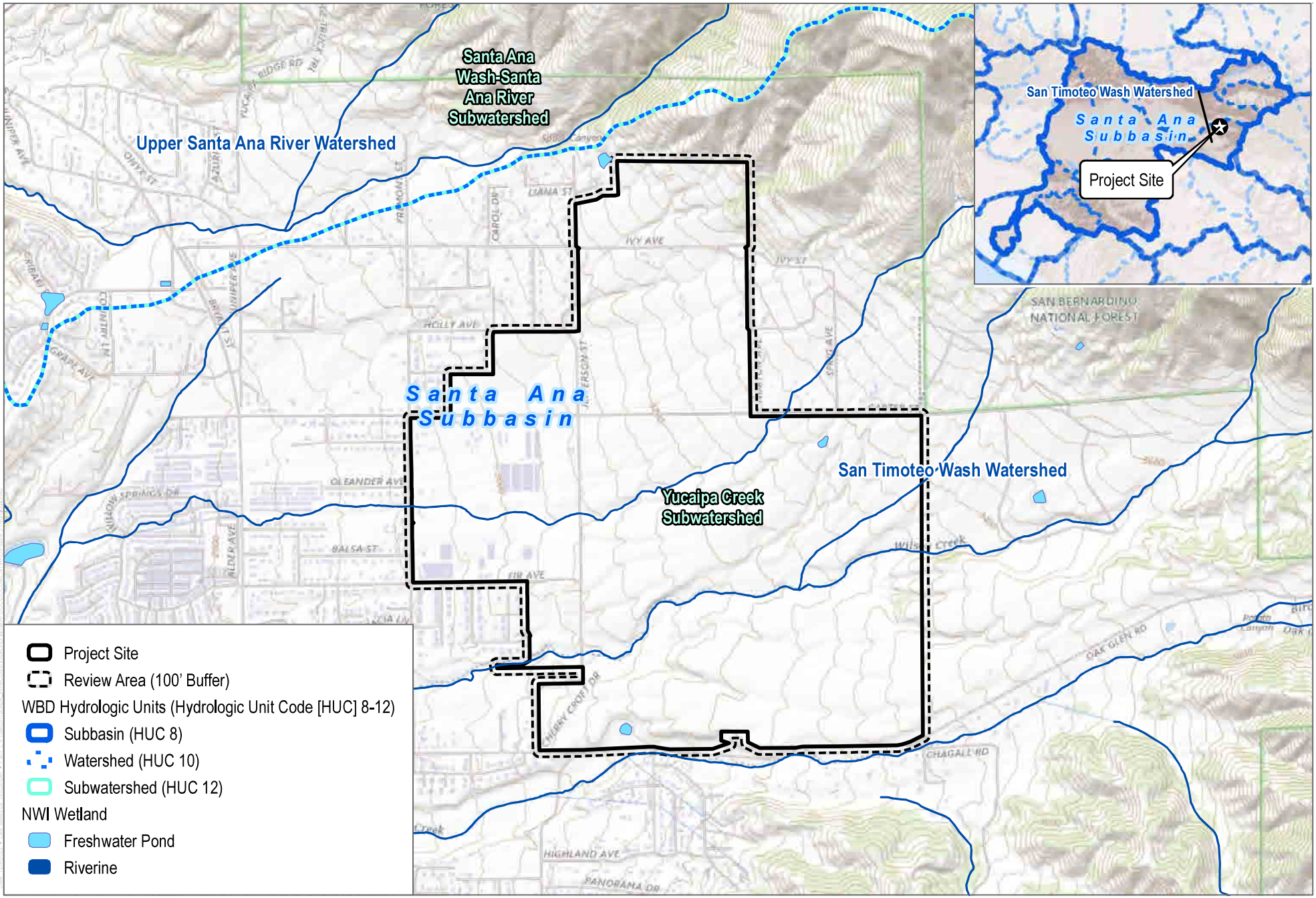

SOURCE: USGS Topo Maps; San Bernadino County 2022; USGS 2022; NWI 2022

FIGURE 3

Hydrology Map

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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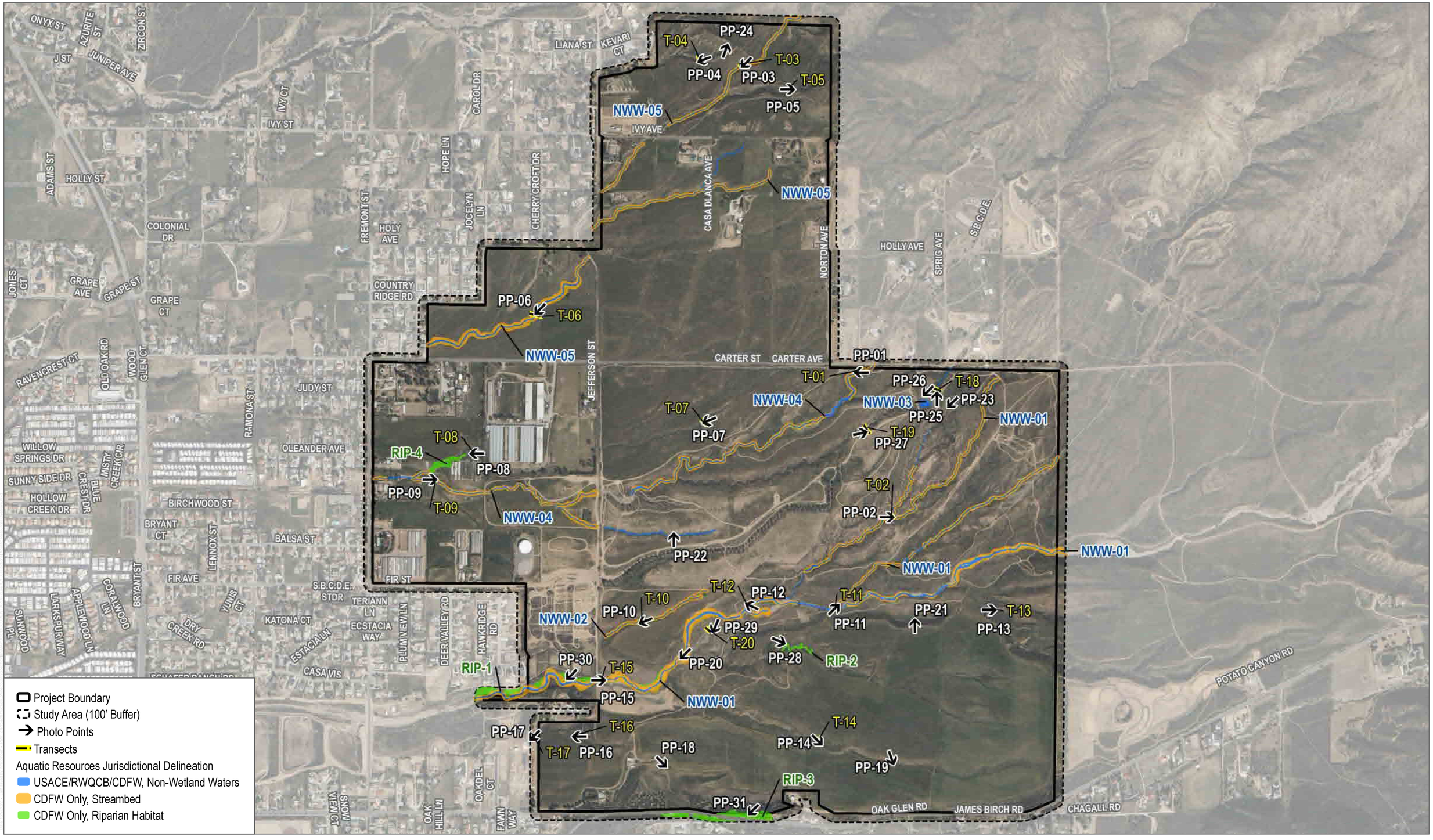

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 500 1,000 Feet

FIGURE 4-1

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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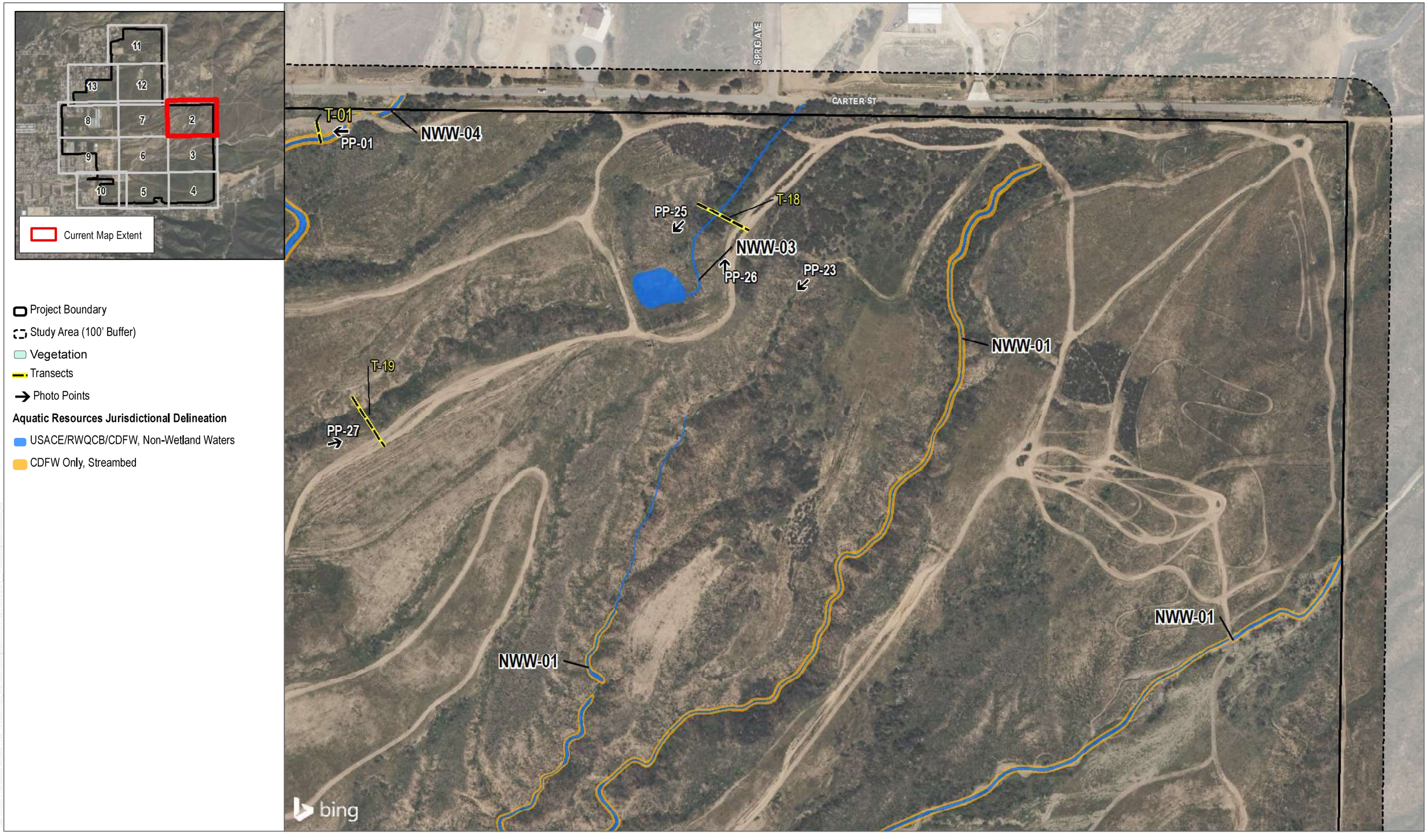

SOURCE: Bing Maps; San Bernadino County 2022

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FIGURE 4-2

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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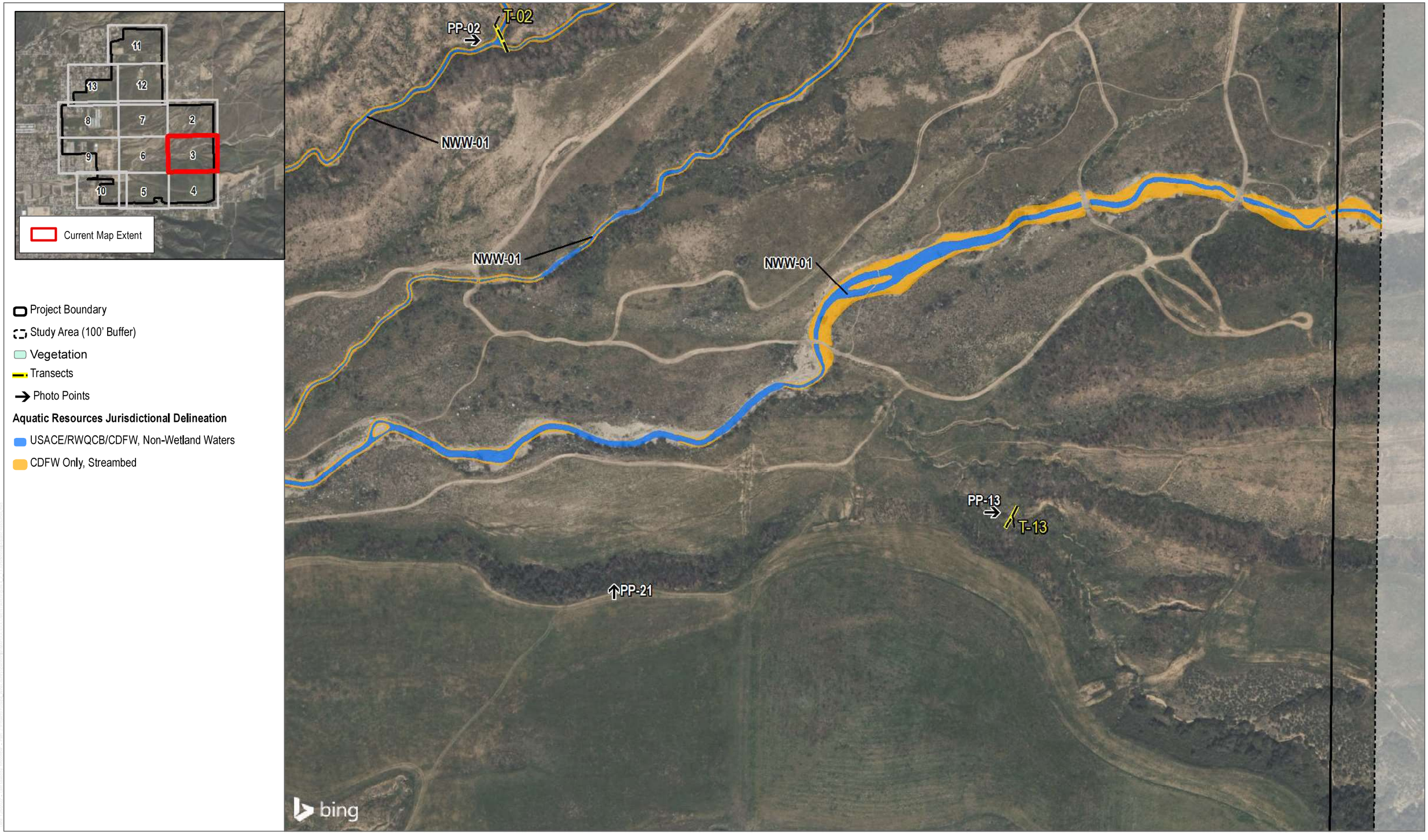

SOURCE: Bing Maps; San Bernadino County 2022

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FIGURE 4-3

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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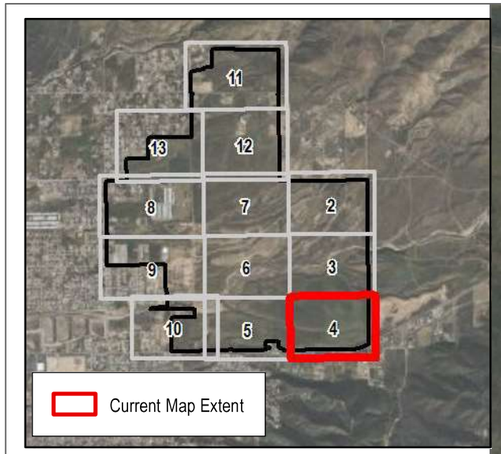

Project Boundary

Study Area (100' Buffer)

Vegetation

Transcects

Photo Points

PP-19

JAMES BIRCH RD

OAK GLEN RD

POTATO CANYON RD

CHAGALL RD

MARTEL AVE

bing

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-4

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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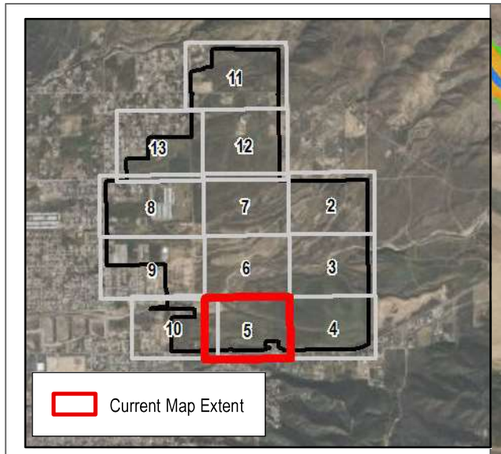


Project Boundary

Study Area (100' Buffer)

Vegetation

Transcects

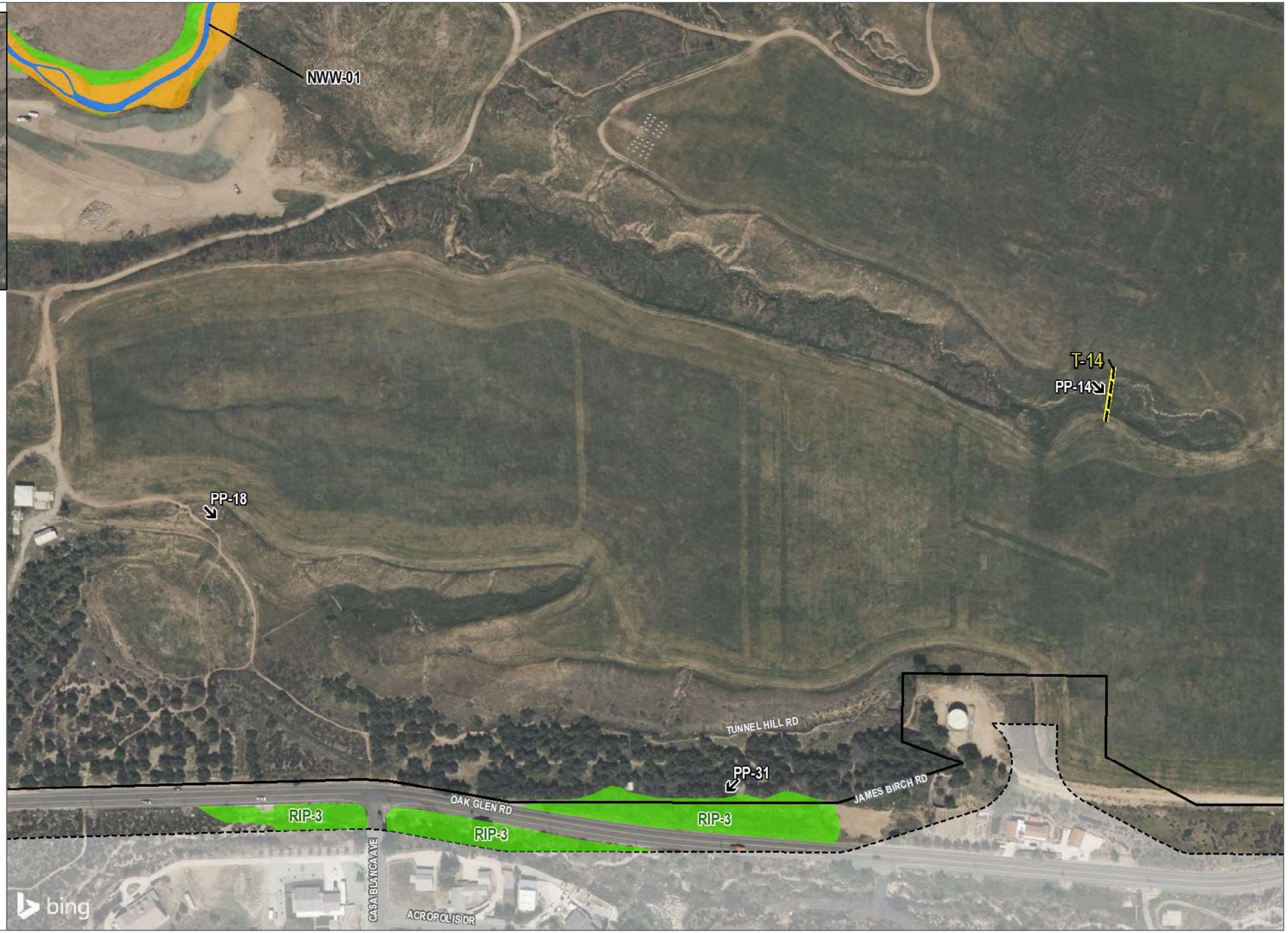
Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-5

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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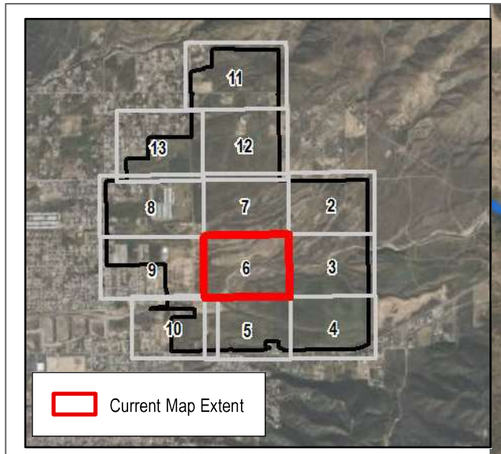

Project Boundary

Study Area (100' Buffer)

Vegetation

Transcects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

PP-22

NWW-05

NWW-01

NWW-02

T-12

PP-12

T-11

PP-11

T-10

PP-10

PP-29

T-20

RIP-1

PP-20

RIP-1

PP-28

RIP-2

bing

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-6

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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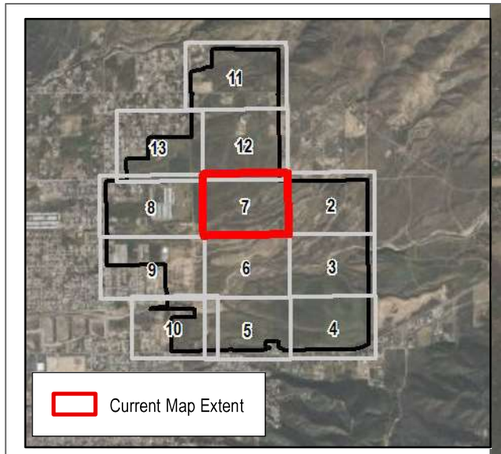

Project Boundary

Study Area (100' Buffer)

Vegetation

Transcripts

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-7

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

INTENTIONALLY LEFT BLANK

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 4-8

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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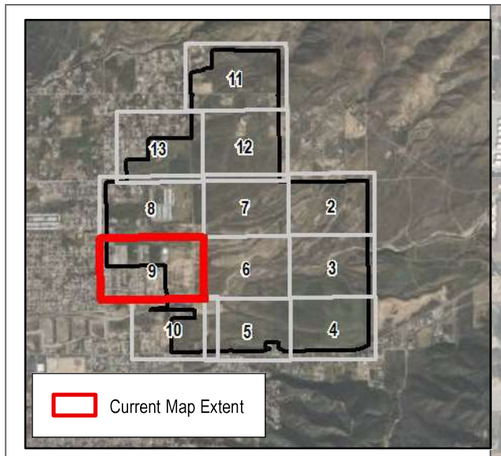


Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

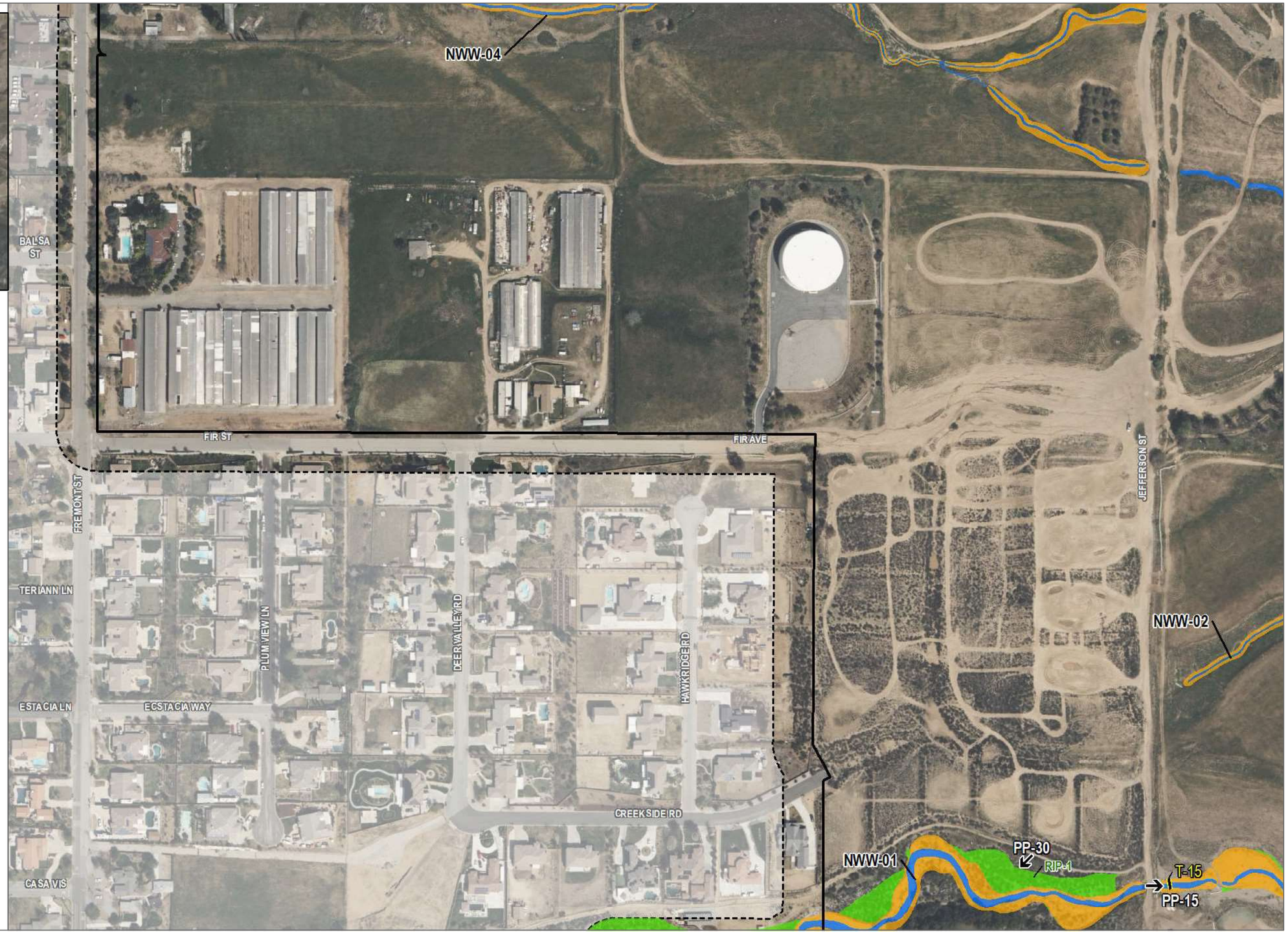
Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat



SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 4-9

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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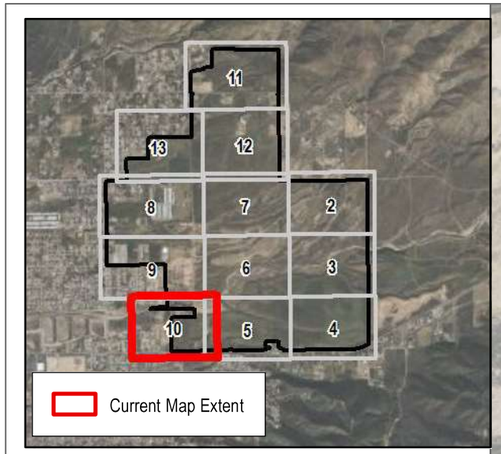

Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

CDFW Only, Riparian Habitat

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK

0 100 200 Feet

FIGURE 4-10

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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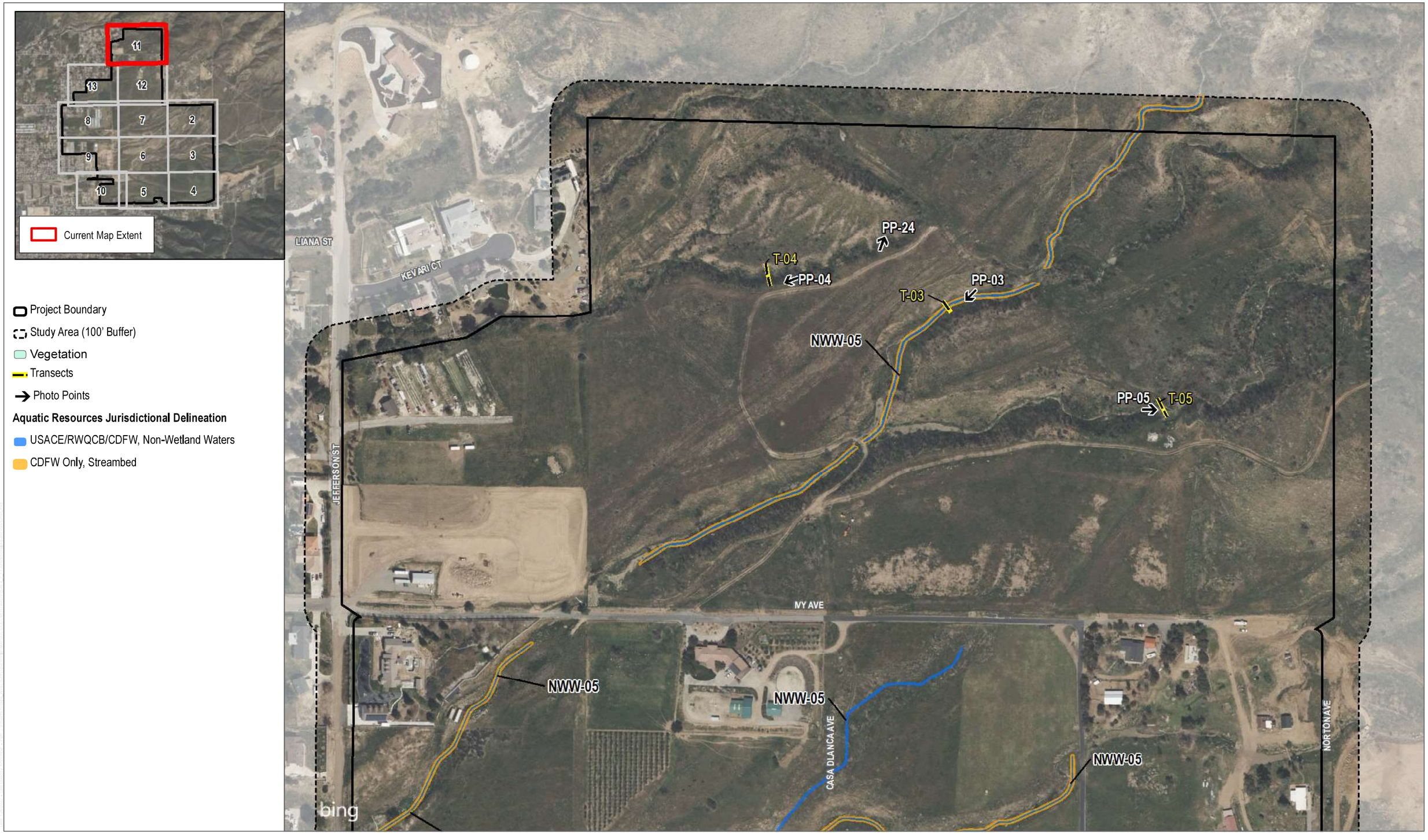

Project Boundary

Study Area (100' Buffer)

Vegetation

Transects

Photo Points

Aquatic Resources Jurisdictional Delineation

USACE/RWQCB/CDFW, Non-Wetland Waters

CDFW Only, Streambed

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 120 240 Feet

FIGURE 4-11

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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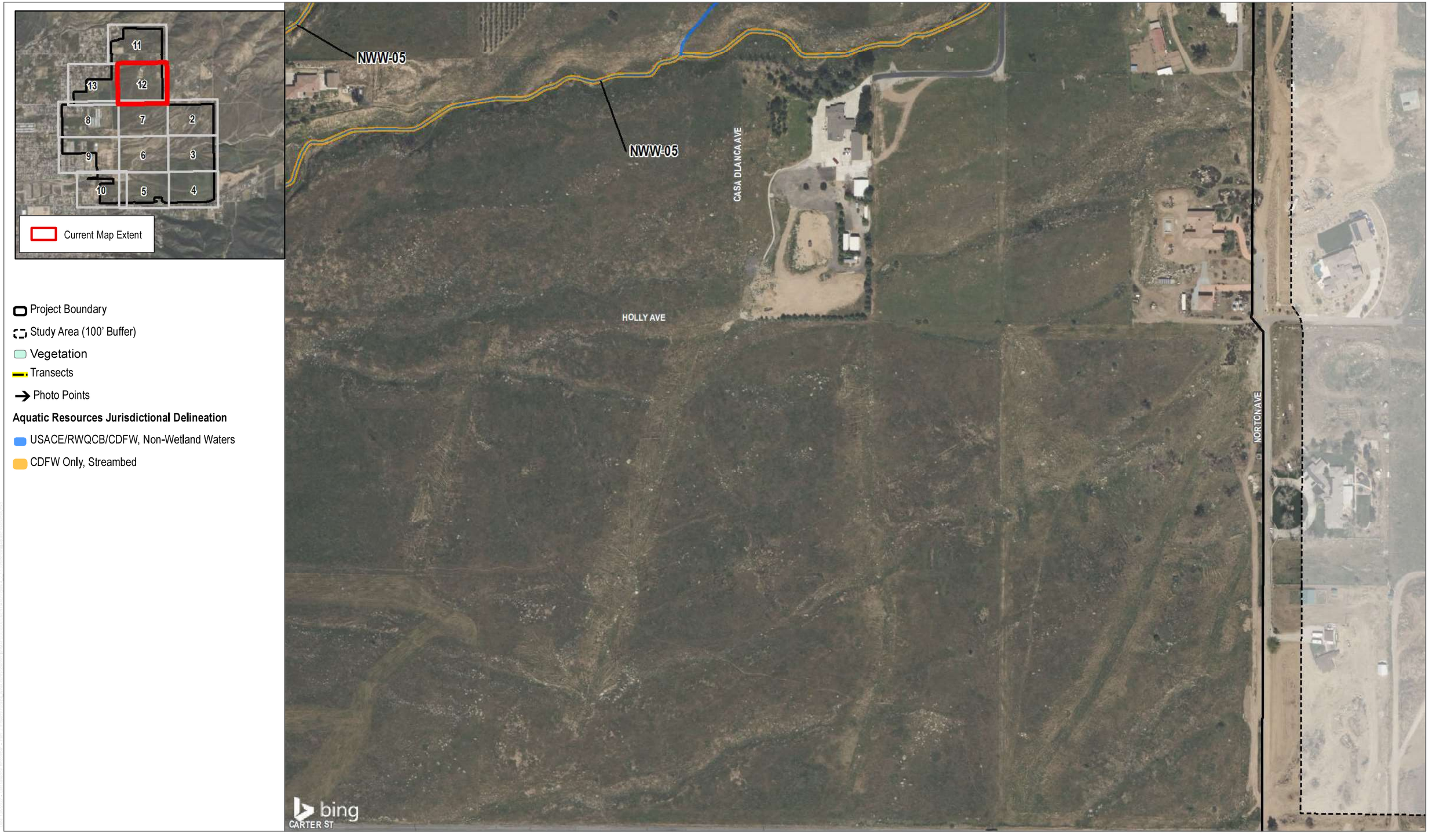

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 4-12

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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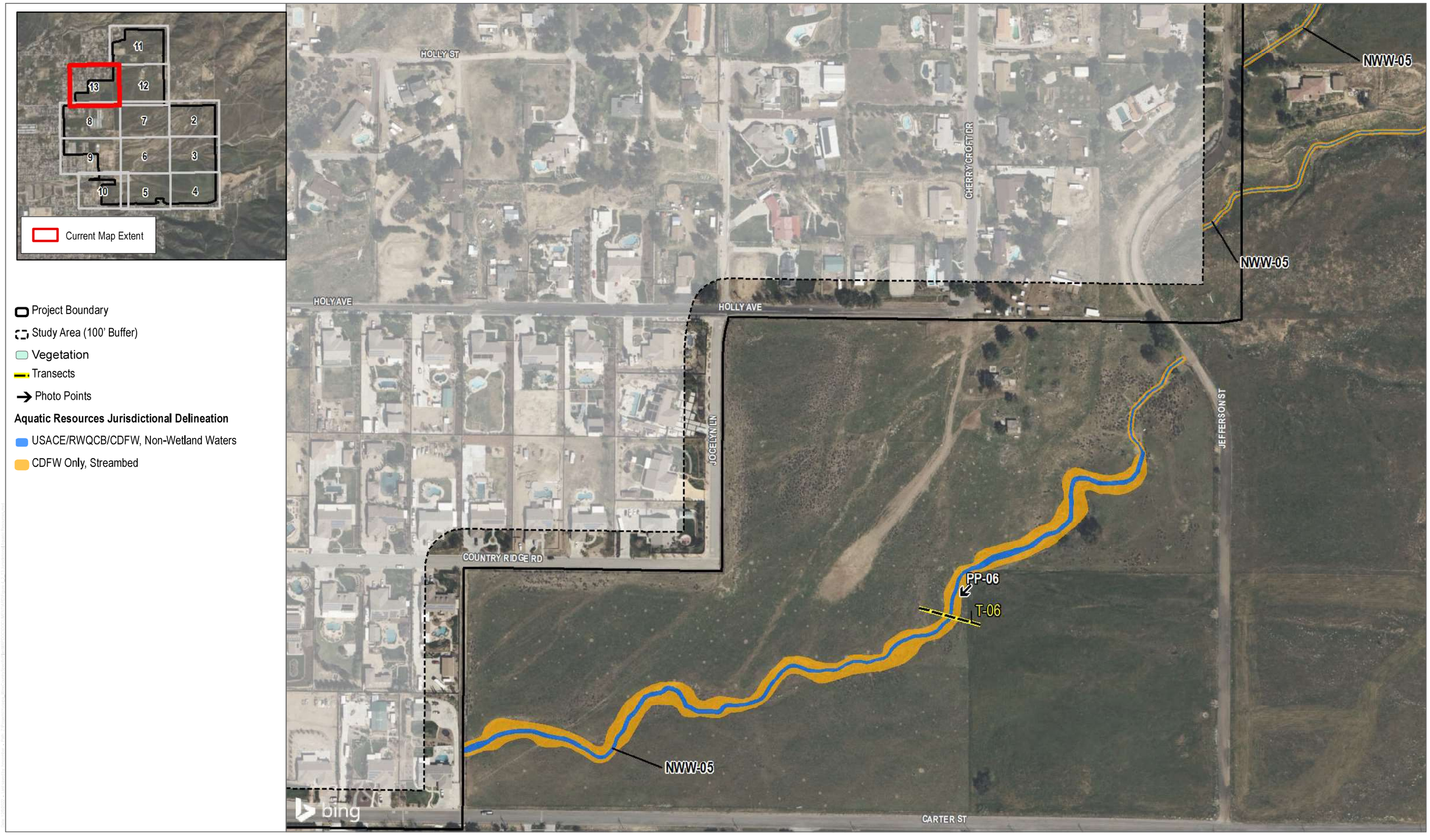

SOURCE: Bing Maps; San Bernadino County 2022

DUDEK 0 115 230 Feet

FIGURE 4-13

Jurisdictional Aquatic Resources

Yucaipa Valley Wine Country Specific Plan Aquatic Resources Delineation Report

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Appendix A
Request for a Jurisdictional Determination

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: District Name Here

- I am requesting a JD on property located at: 36104 Oak Glen Rd
  (Street Address)
  City/Township/Parish: Yucaipa County: San Bernardino State: CA
  Acreage of Parcel/Review Area for JD: 1,194.76
  Section: 29, 30 Township: 1S Range: 1W
  Latitude (decimal degrees): 34.054792 Longitude (decimal degrees): -117.018353
  (For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ___ I currently own this property. ___ I plan to purchase this property.
  [✓] I am an agent/consultant acting on behalf of the requestor.
  [ ] Other (please explain): _____.
- Reason for request: (check as many as applicable)
  [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  [✓] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  [ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
  [ ] A Corps JD is required in order to obtain my local/state authorization.
  [ ] I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
  [ ] I believe that the site may be comprised entirely of dry land.
  [ ] Other: _____
- Type of determination being requested:
  [ ] I am requesting an approved JD.
  [✓] I am requesting a preliminary JD.
  [ ] I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  [ ] I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

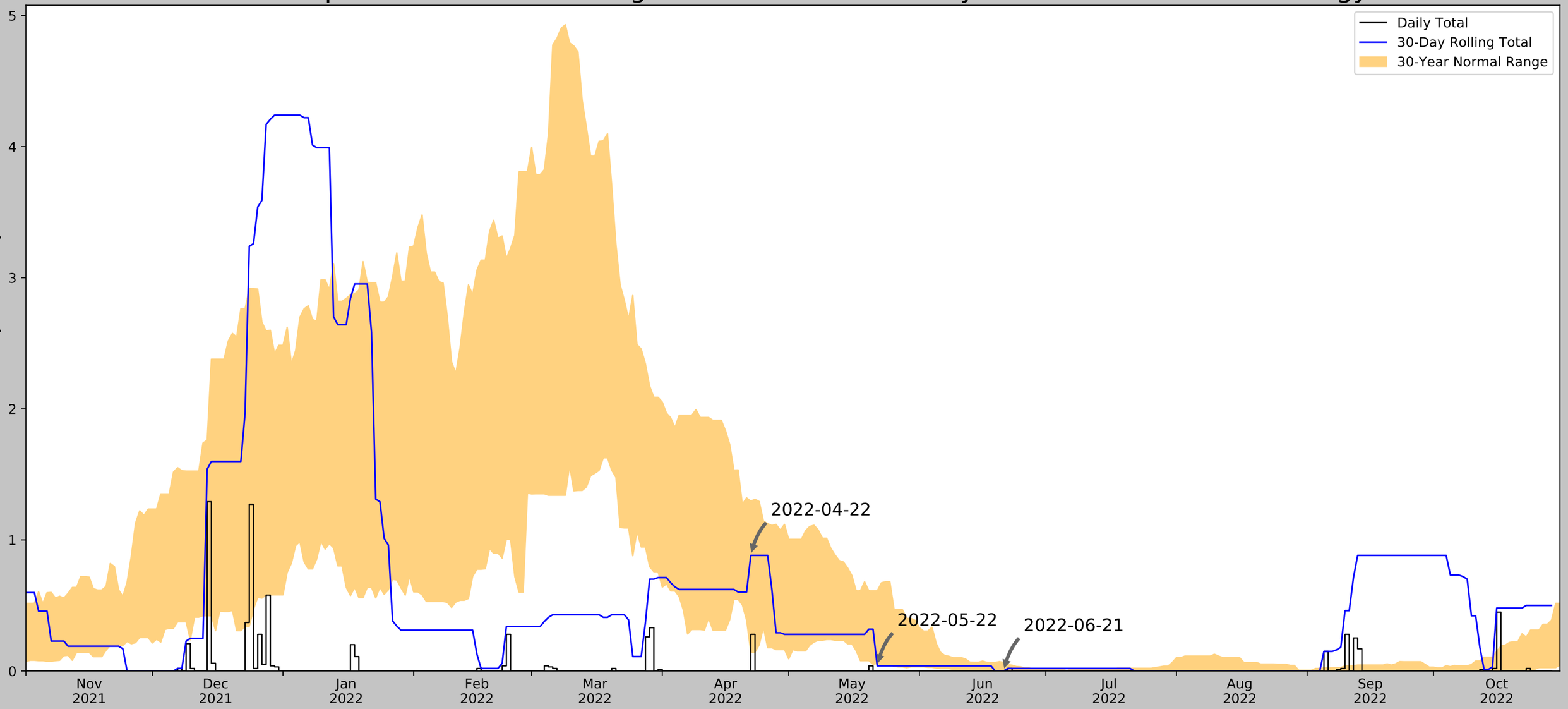
*Signature: _____ Date: _____

- Typed or printed name: Anna Cassady
  Company name: Dudek
  Address: 605 Third Street
  Encinitas, CA 92024
  Daytime phone no.: 951-300-1088
  Email address: acassady@dudek.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Appendix B
Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.058313, -117.005628
Observation Date	2022-06-21
Elevation (ft)	3245.49
Drought Index (PDSI)	Extreme drought
WebWIMP H_2O Balance	Dry Season

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-21	0.0	0.065354	0.0	Normal	2	3	6
2022-05-22	0.056693	0.611811	0.03937	Dry	1	2	2
2022-04-22	0.143701	1.296063	0.88189	Normal	2	1	2
Result							Normal Conditions - 10

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
REDLANDS	34.0369, -117.1947	1410.105	10.925	1835.385	24.967	11218	90
RIVERSIDE 5.8 E	33.9406, -117.2964	1536.089	8.844	125.984	5.094	1	0
SAN BERNARDINO F S 226	34.1344, -117.2539	1140.092	7.54	270.013	5.429	41	0
RIVERSIDE CITRUS EXP	33.9669, -117.3614	985.892	10.704	424.213	9.358	93	0

Appendix C
Data Forms

OHWM DATA SHEET

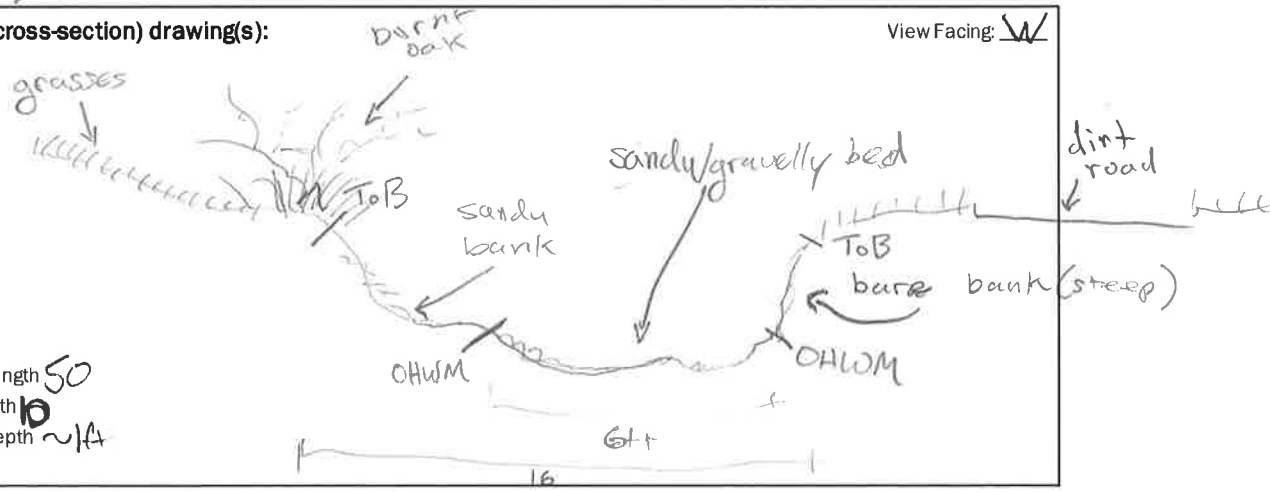
Project: Wine Country **Date:** 6/28/22 **Feature ID:** NWW-04

Investigator(s): Dylan Ayers **Transect ID:** T-01

Site Location: open, undeveloped lands north of Yucaipa.

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 50
☒ OHWM width 10
☒ Channel depth ~1ft
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☒ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☒ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☒ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	20	0	100	0
Below OHWM	0	0	0	100

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-oak	-grasses -rhus	-none

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- recently burnt
- ohv impacts in area
- potential grazing

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☒ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

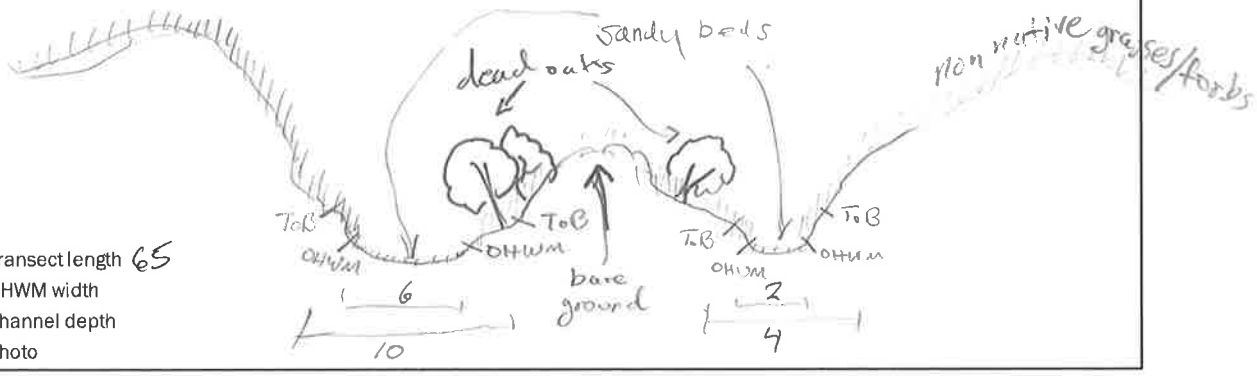
Project: Wine Country **Date:** 6/28/22 **Feature ID:** NWW-01

Investigator(s): Dylan Ayers **Transect ID:** T-02

Site Location: see T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): ☆ convergence of two features shown here View Facing: NE



☒ Transect length 65
☒ OHWM width
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☒ Natural line impressed on the bank
- ☒ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☒ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☒ Scour
- ☐ Deposition
- ☒ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	30	0	80	20
Below OHWM	0	0	0	100

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-oaks -Rhus sp.	-non-native grasses/forbs	-none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- recently burnt
- ohv impacts

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☐ Aerial photography	☑ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

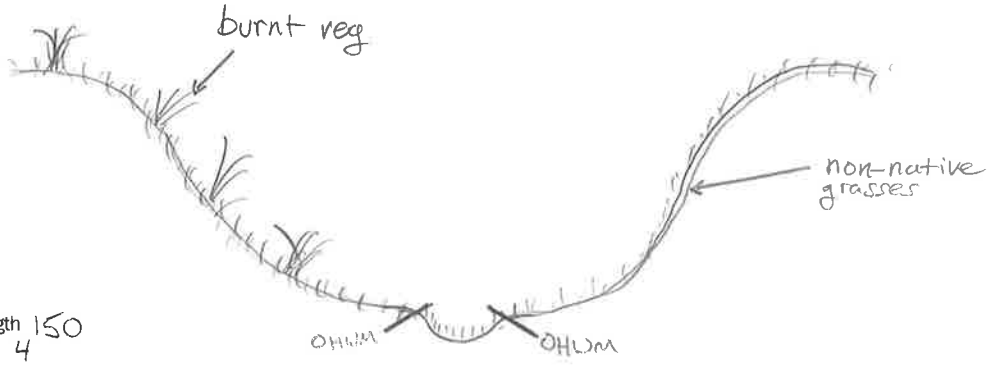
Project: Wine Country **Date:** _____ **Feature ID:** NWW-06

Investigator(s): Dylan Ayers **Transect ID:** T-03

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: SSW



☒ Transect length 150
☒ OHWM width 4
☒ Channel depth ~1
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☒ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	20	100	0
Below OHWM	0	6	90	10

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- non-native grasses - oak (burnt)	- non-native grasses	- none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- recently burnt
- may have accepted ag runoff historically

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☒ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

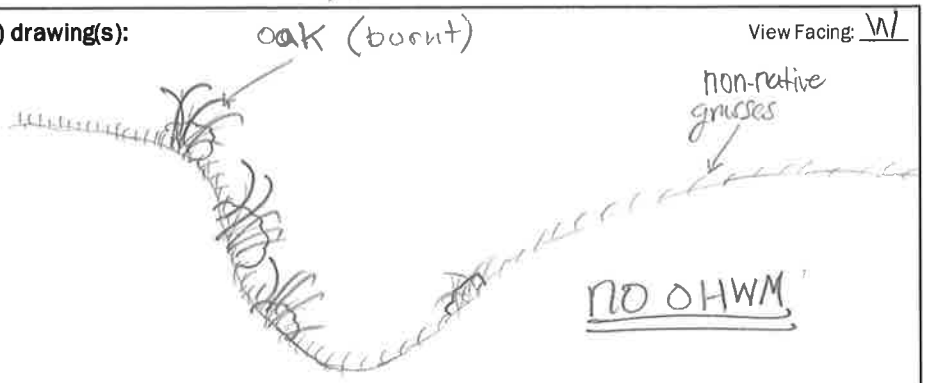
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-04

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 85
☒ OHWM width —
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- NNG - oak (burnt)		

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- historic ag area
- nearby road
- recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

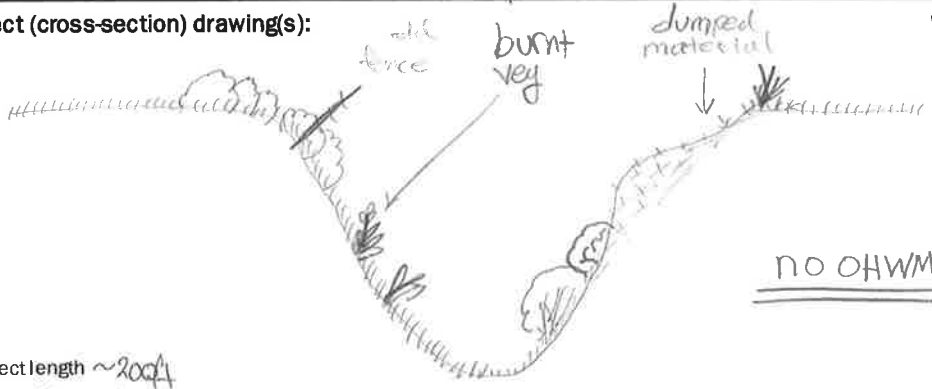
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-05

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: ESE



☑ Transect length ~200ft
☒ OHWM width
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☑ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grass/forbs -oak (burnt)		

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- trash dumping, soils
- nearby road
- area historically used for ag

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

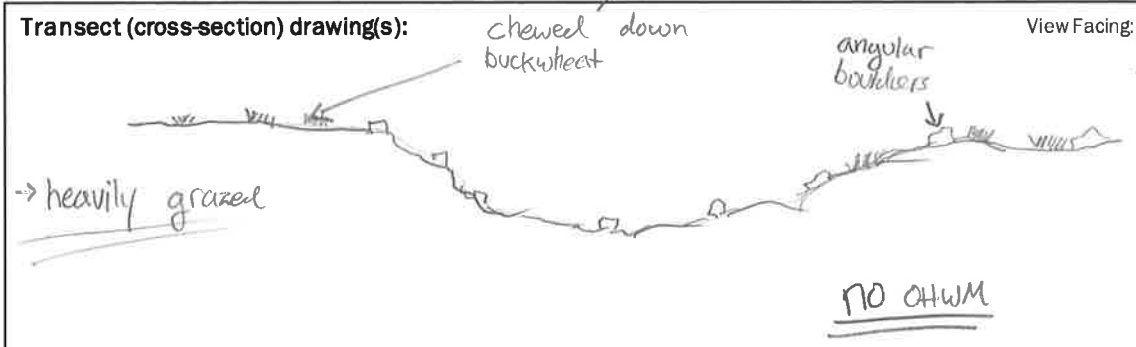
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-06

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 150
☒ OHWM width —
☒ Channel depth —
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- cal. buckwheat - non-native grasses		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic Influences (e.g., erosion, grazing, culverts, etc.):

- heavy grazing
- compacted soils

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

V-3; updated 01/10/2021

OHWM DATA SHEET

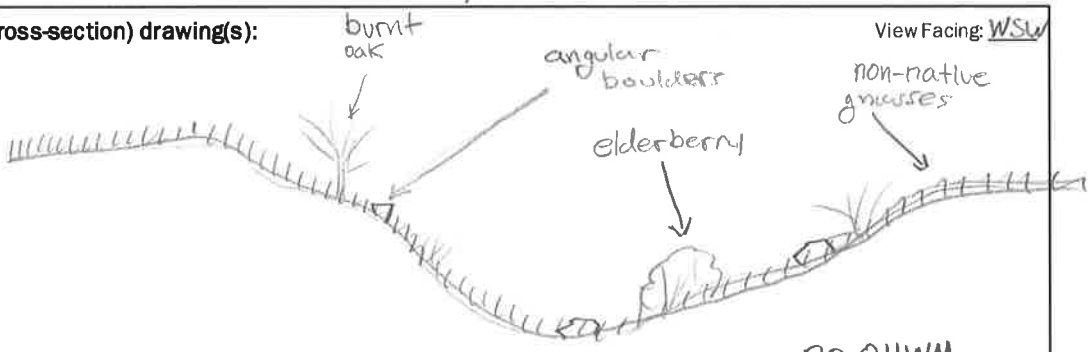
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-07

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: WSW



☒ Transect length 100
☒ OHWM width —
☒ Channel depth —
☑ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☑ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-oak (burnt) -non-native grasses -elderberry		

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- area historically used for ag
- appears relatively untouched

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

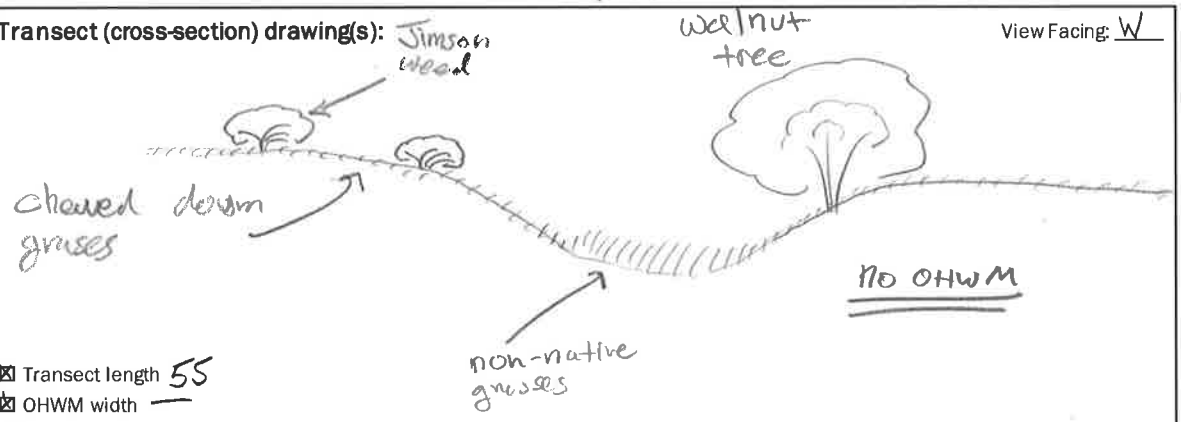
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-08

Site Location: see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☑ Other

Transect (cross-section) drawing(s): View Facing: W



☒ Transect length 55
☒ OHWM width —
☒ Channel depth —
☑ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☑ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- walnut - jimson weed - non-native grasses		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- heavy grazing
- nearby ag operation

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Wine Country **Date:** _____ **Feature ID:** NWW-05

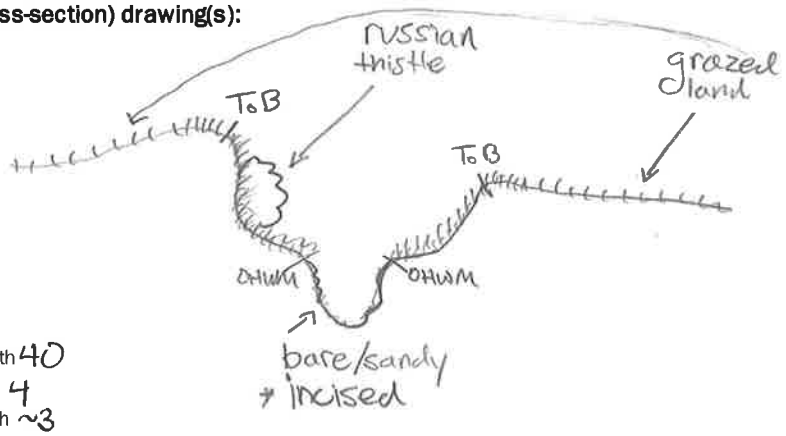
Investigator(s): Dylan Ayers **Transect ID:** T-09

Site Location:

See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 40
☒ OHWM width 4
☒ Channel depth ~3
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X		X	X	
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	100	0
Below OHWM	0	0	0	100

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses	-Russian thistle	-none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- grazing
- nearby ag activity

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

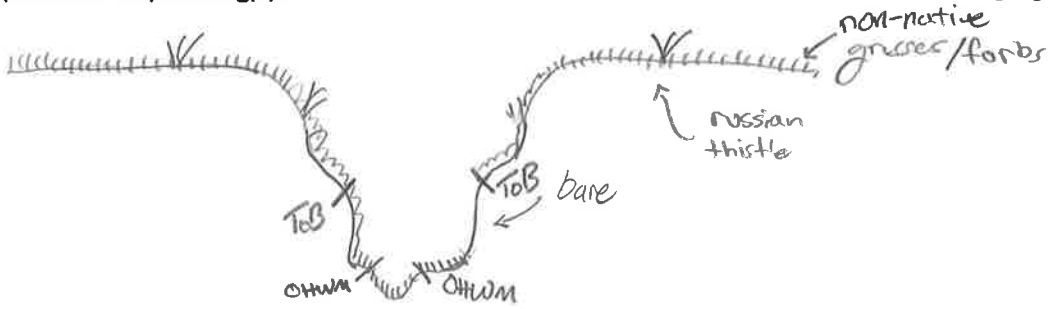
Project: Wine Country **Date:** _____ **Feature ID:** NWW-02

Investigator(s): Dylan Ayers **Transect ID:** T-10

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: WSW



☒ Transect length 87
☒ OHWM width 4
☒ Channel depth 24
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-non-native grasses -russian thistle	-non-native grasses	-none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):
-area historically used for ag

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Wine Country **Date:** _____ **Feature ID:** NWW-01

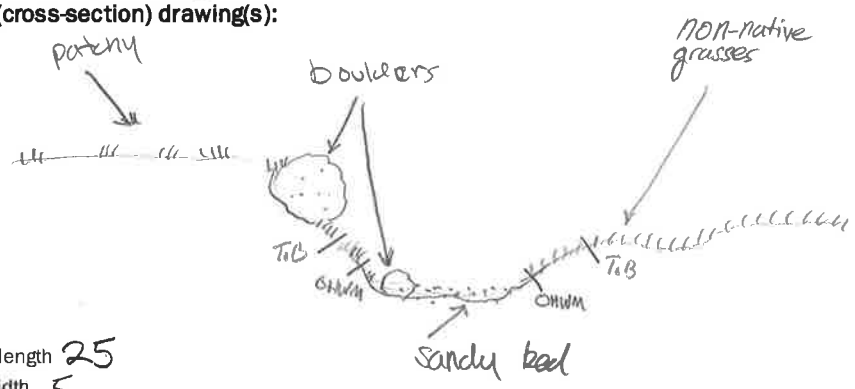
Investigator(s): Dylan Ayers **Transect ID:** T-11

Site Location:

see T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: NE



☒ Transect length 25
☒ OHWM width 5
☒ Channel depth ~1
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				X
Below OHWM		X	X	X	X

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	70	30
Below OHWM	0	0	5	95

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses -Russian thistle	-mustards -non-native grasses	-none

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

Nearby road with potential OHV use

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (If available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

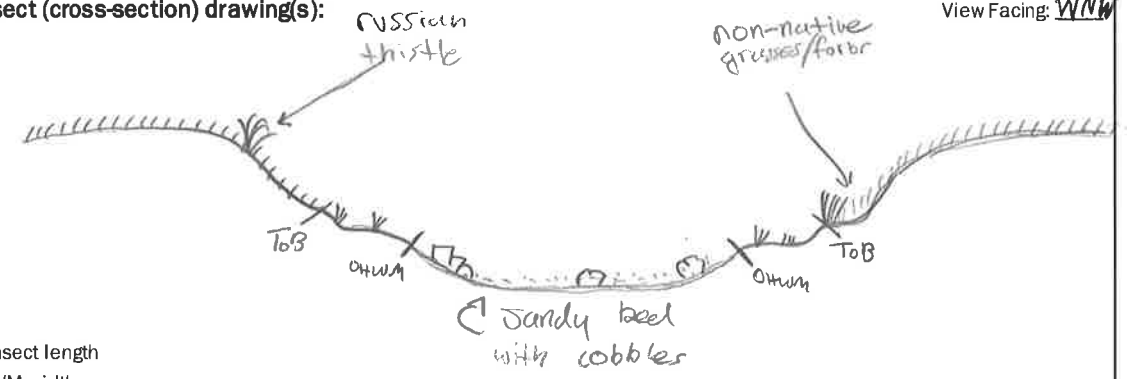
Project: Wine Country Date: _____ Feature ID: NWW-01

Investigator(s): Dylan Ayers Transect ID: T-12

Site Location: See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: WNW



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X		X		
Below OHWM		X	X	X	

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0	0	80	20
Below OHWM	0	0	0	100

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- Nearby road with OHV use

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

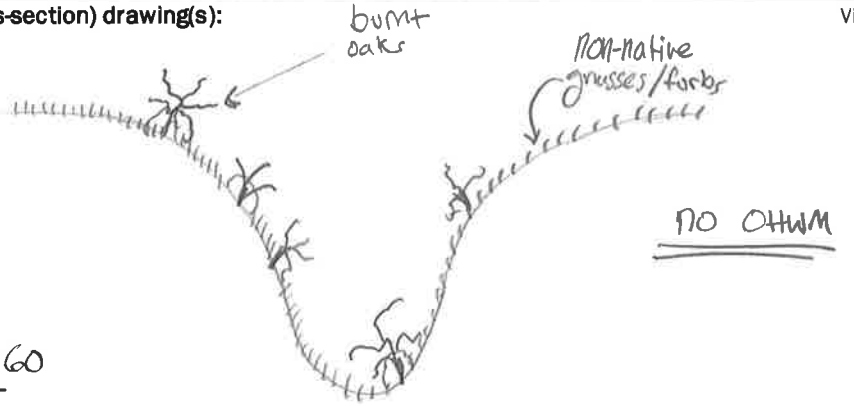
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayers **Transect ID:** T-13

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 60
☒ OHWM width —
☒ Channel depth —
☑ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-oak -non-native grasses/forbs		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- relatively undisturbed
- recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

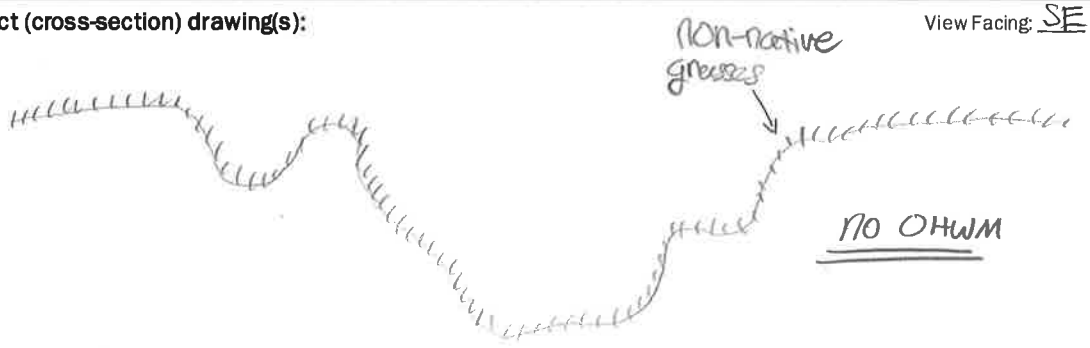
Project: Wine Country **Date:** _____ **Feature ID:** none

Investigator(s): Dylan Ayer **Transect ID:** T-14

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: SE



☒ Transect length 120
☒ OHWM width —
☒ Channel depth —
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- non-native grasses		

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):
-areas historically used for ag activity
-recently burnt

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
☐ Low flow channel or other representative section (OHWM datasheet)

V-3; updated 01/10/2021

OHWM DATA SHEET

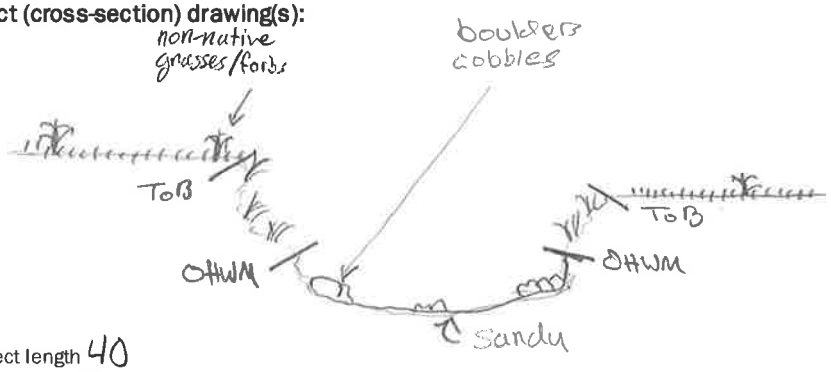
Project: Wine Country **Date:** _____ **Feature ID:** NWW-01

Investigator(s): Dylan Ayers **Transect ID:** T-15

Site Location: See T-01

Feature Type: ☐ Ephemeral ☒ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 40
☒ OHWM width 10
☒ Channel depth
☒ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☒ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X	X			
Below OHWM		X	X	X	X

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	0			
Below OHWM	0			

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-Russian thistle -non-native grasses/forbs	-Russian thistle -non-native grasses/forbs	-none

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

-road bridge crosses feature in this area
-OHV/equestrian impacts

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)
☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

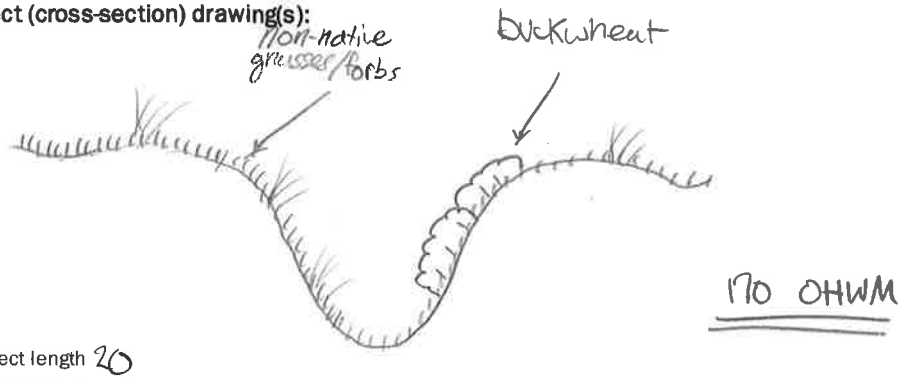
Project: Wine Country Date: _____ Feature ID: none

Investigator(s): Dylan Ayers Transect ID: T-16

Site Location: See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: E



☒ Transect length 20
☒ OHWM width —
☒ Channel depth —
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☒ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs -buckwheat		

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- fence crosses area
- nearby road/residences

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☐ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

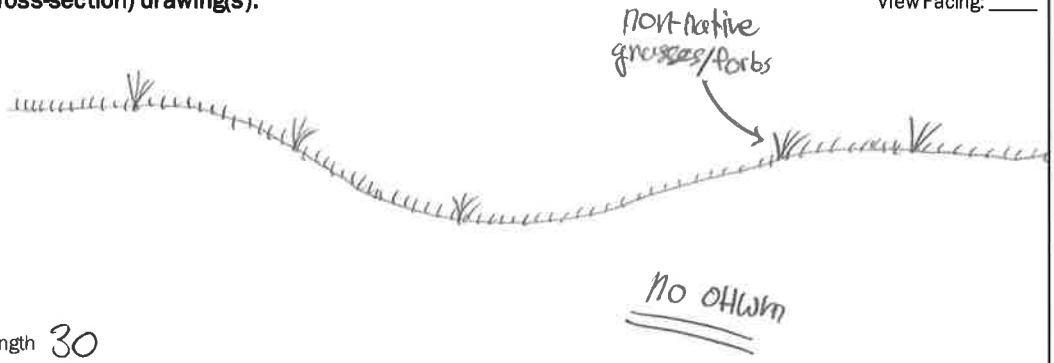
Project: Wine Country **Date:** _____ **Feature ID:** done

Investigator(s): Dylan Ayers **Transect ID:** T-17

Site Location: see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: ____



☒ Transect length 30
☒ OHWM width —
☒ Channel depth —
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☒ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	***Bank Species:***	***Emergent Species:***
-non-native grasses/forbs		

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- nearby roadway / residences

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☒ Aerial photography	☐ Vegetation maps	☒ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☒ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

V-3; updated 01/10/2021

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: NWW-03

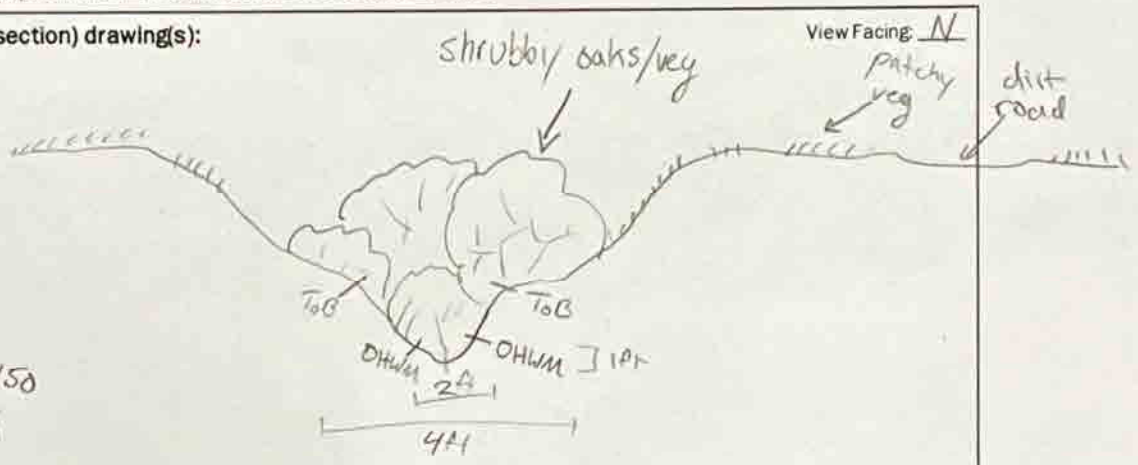
Investigator(s): Dylan Ayers Transect ID: T-18

Site Location: See T-01

Feature Type: ☒ Ephemeral ☐ Intermittent ☐ Perennial ☐ Other

Transect (cross-section) drawing(s):

View Facing: N



☒ Transect length 150
☒ OHWM width 2
☒ Channel depth 1
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☒ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☒ Change in plant community and/or cover*

☒ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM	X				
Below OHWM	X	X			

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM	100	80	20	70
Below OHWM	80	60	50	30

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-oak	-oak	-none

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- nearby road
- basin downstream has been artificially formed

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☑ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: none

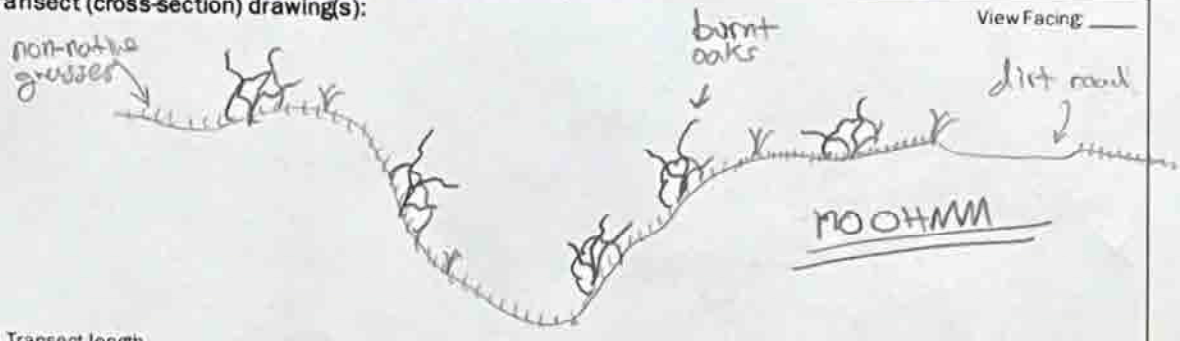
Investigator(s): Dallas Ayers Transect ID: T-19

Site Location:

See T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☑ Other

Transect (cross-section) drawing(s): View Facing ____



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
- oak - non-native grasses	- none	- none

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

-flow to this feature has been altered due to upstream berm

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☒ Dry		

Checklist of resources (if available):

☐ Aerial photography	☐ Vegetation maps	☐ GPS unit
☐ Remotely-sensed images	☒ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

V-3; updated 01/10/2021

OHWM DATA SHEET

Project: Wine Country Date: _____ Feature ID: _____

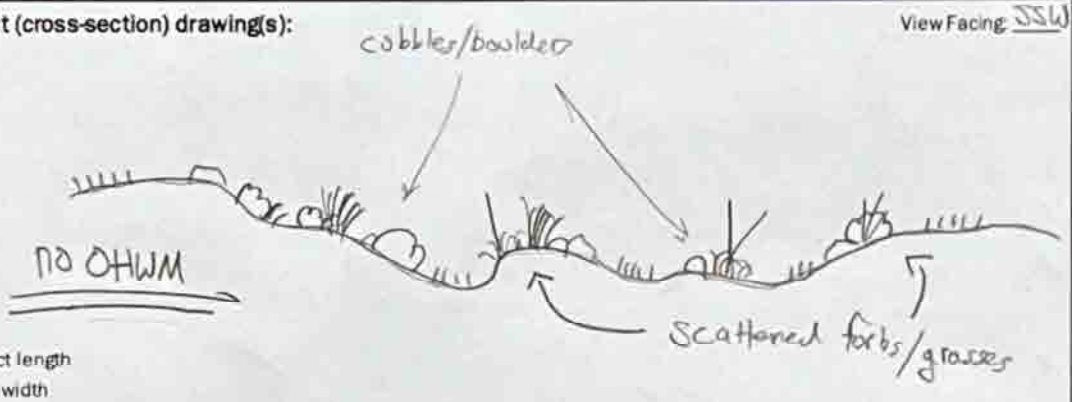
Investigator(s): Dylan Ayers Transect ID: T-20

Site Location:

see T-01

Feature Type: ☐ Ephemeral ☐ Intermittent ☐ Perennial ☒ Other

Transect (cross-section) drawing(s): View Facing: SSW



☐ Transect length
☐ OHWM width
☐ Channel depth
☐ Photo

OHWM Indicators (at OHWM; primary indicators indicated with *)

- ☐ Natural line impressed on the bank
- ☐ Shelving
- ☐ Changes in the character of soil (texture)*
- ☐ Destruction of terrestrial vegetation
- ☐ Presence of litter and debris
- ☐ Wracking
- ☐ Vegetation matted down, bent, or absent
- ☐ Sediment sorting
- ☐ Leaf litter disturbed or washed away
- ☐ Scour
- ☐ Deposition
- ☐ Bed and banks
- ☐ Water staining
- ☐ Change in plant community and/or cover*

☐ Break in Slope at OHWM*: ☐ Sharp (>60°) ☐ Moderate (30-60°) ☐ Gentle (<30°)

Soil Texture

	Clay/Silt	Sand	Gravel	Cobbles	Boulders
Above OHWM					
Below OHWM					

Total Vegetation Cover

	Tree (%)	Shrub (%)	Herb (%)	Bare (%)
Above OHWM				
Below OHWM				

Veg Stage: ☐ Early (herbs & seedlings) ☐ Mid (herbs, shrubs, saplings) ☐ Late (herbs, shrubs, mature trees)

Upland Species:	*Bank Species:*	*Emergent Species:*
-deer weed -yucca -forbs/grasses	-none	-none

V-3; updated 01/10/2021

OHWM DATA SHEET

Condition/Disturbances/Anthropogenic influences (e.g., erosion, grazing, culverts, etc.):

- this area was likely a historic stream feature

Hydrology

☐ Flowing water	Avg. depth:	Min. depth:
☐ Standing water	Temp:	Max. depth:
☐ Saturated		
☑ Dry		

Checklist of resources (if available):

☑ Aerial photography	☐ Vegetation maps	☑ GPS unit
☐ Remotely-sensed images	☑ Soil maps	☐ Stream gage data
☐ Topographic maps	☐ Rainfall/precipitation data	☐ Other studies:
☐ Geologic maps	☐ Existing delineation(s) for site	

Other drawings (aerial view), notes:

Other forms related to this feature: ☐ Yes ☐ No

☐ Terrace, fringe, or floodplain wetland (wetland datasheet)

☐ Low flow channel or other representative section (OHWM datasheet)

Appendix D
Review Area Photos

Photo Number 1. View of Transect (T)-01 collected at Non-Wetland Water (NWW)-04, facing west.

Photo Number 2. View of T-02 collected at NWW-01, facing east.

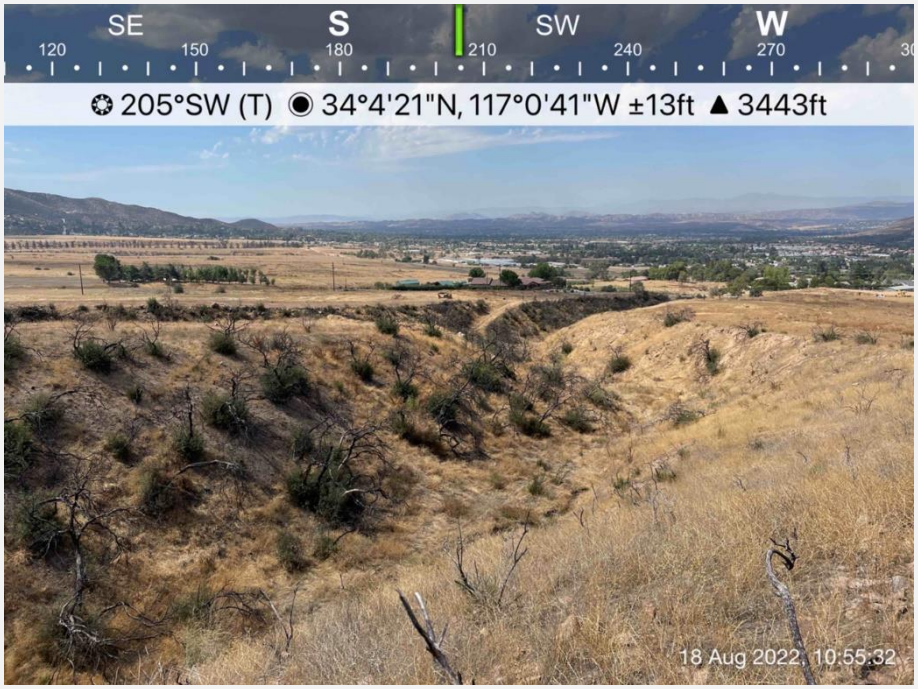


Photo Number 3. View of T-03 collected at NWW-06, facing south-southwest.

Photo Number 4. View of T-04 collected at a non-jurisdictional upland swale, facing north-northeast.

Photo Number 5. View of T-05 collected at a non-jurisdictional upland swale, facing east-southeast.

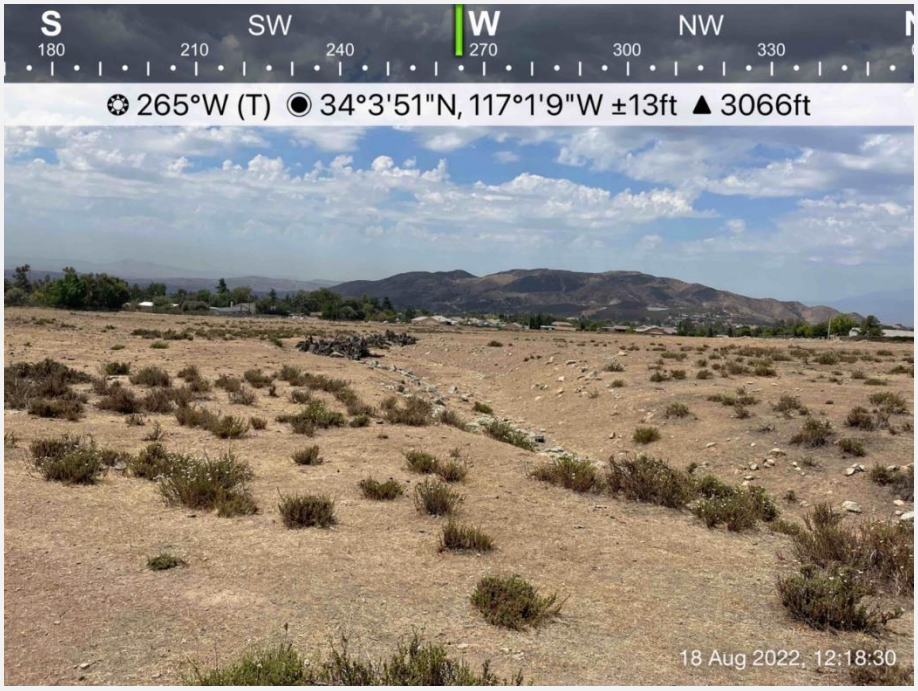


Photo Number 6. View of T-06 collected at a non-jurisdictional upland swale, facing west.

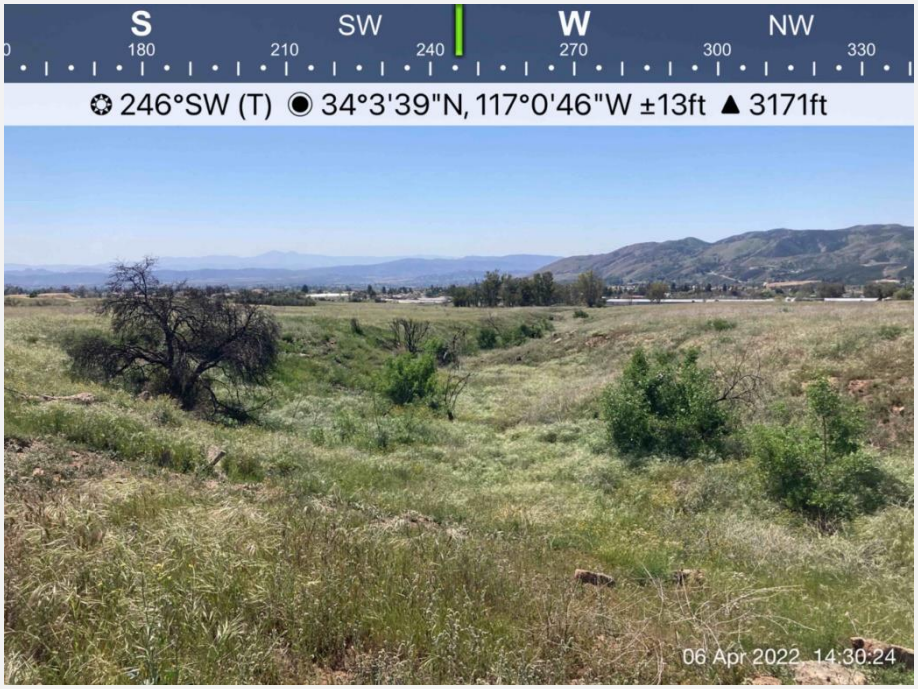


Photo Number 7. View of T-07 collected at a non-jurisdictional upland swale, facing west-southwest.

Photo Number 8. View of T-08 collected at a non-jurisdictional upland swale, facing west. Eastern edge of RIP-4 riparian habitat also shown.

Photo Number 9. View of T-09 collected at NWW-05, facing east.

Photo Number 10. View of T-10 collected at NWW-02, facing west-southwest.

Photo Number 11. View of T-11 collected at NWW-01, facing northeast.

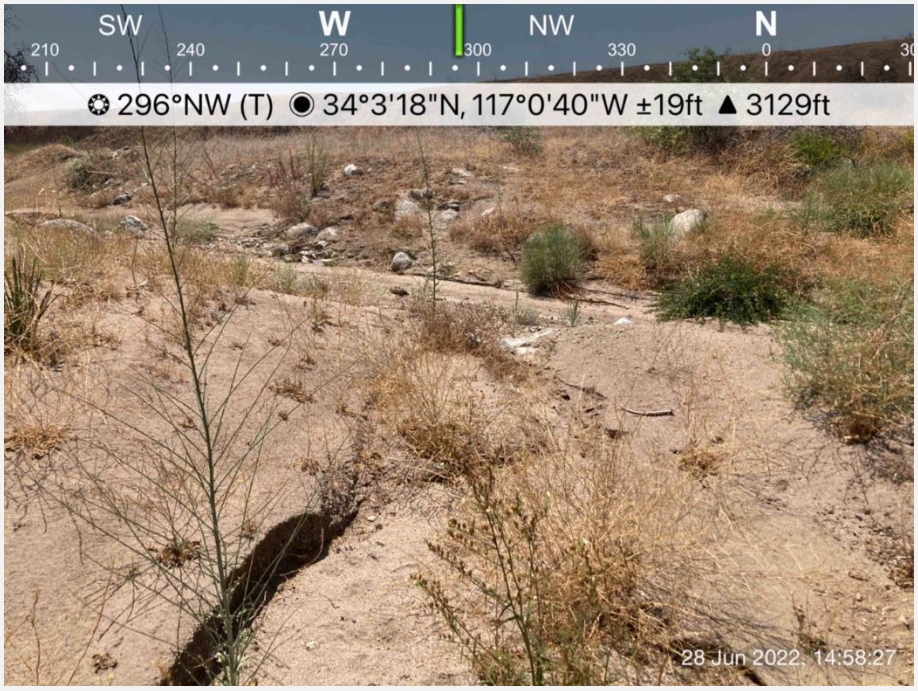


Photo Number 12. View of T-12 collected at a non-jurisdictional upland swale, facing west-northwest.

Photo Number 13. View of T-13 collected at a non-jurisdictional upland swale, facing east.

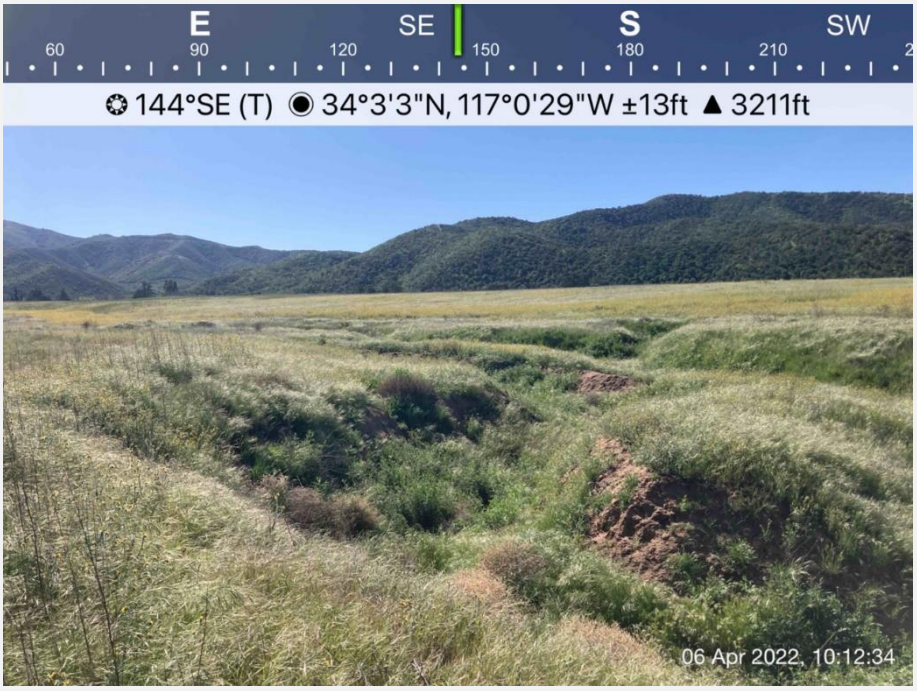


Photo Number 14. View of T-14 collected at a non-jurisdictional upland swale, facing southeast.

Photo Number 15. View from T-15 within NWW-4, facing east.

Photo Number 16. View of T-16 collected at a non-jurisdictional upland swale, facing west.

Photo Number 17. View of T-17 collected at a non-jurisdictional upland swale, facing southwest.

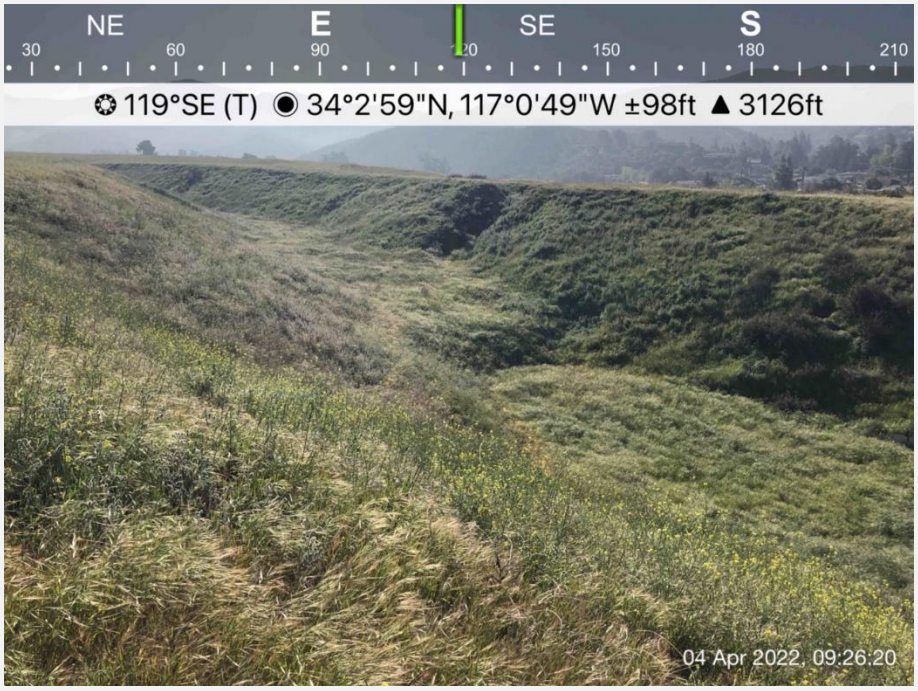


Photo Number 18. View looking towards south edge of review area, facing southeast. Sloped and terraced lands are remnant of historic agricultural uses.

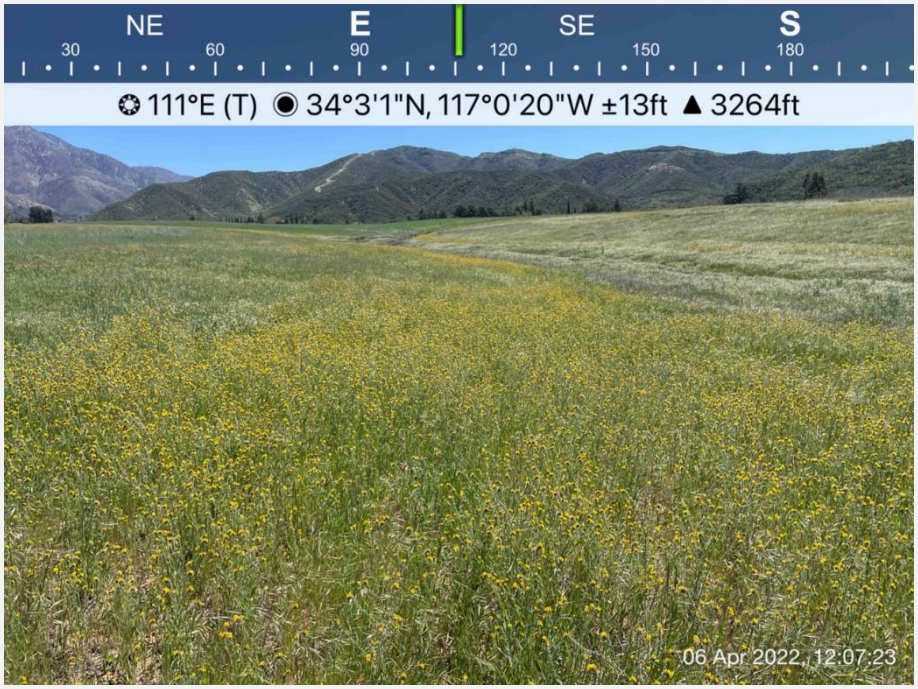


Photo Number 19. View of grassland habitat surrounding an upland swale feature near the southern edge of the review area, facing east-southeast.

Photo Number 20. View of Wilson Creek taken in wider section of NWW-01, facing southwest. Drift and sediment deposits shown.

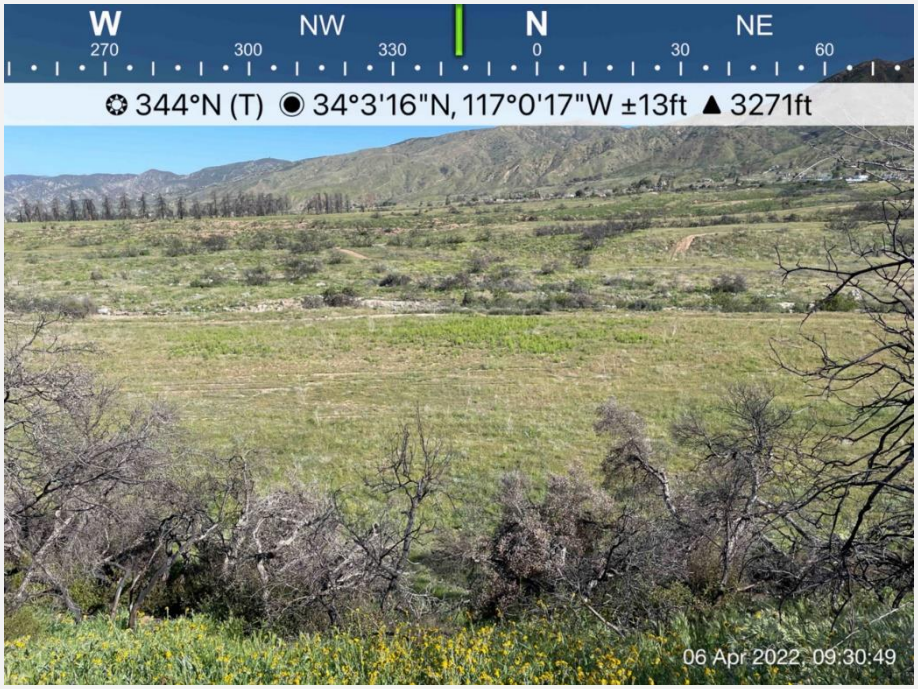


Photo Number 21. View of NWW-21, facing north, where no feature is present.

Photo Number 22. View of T-14 facing north, where no feature is present.

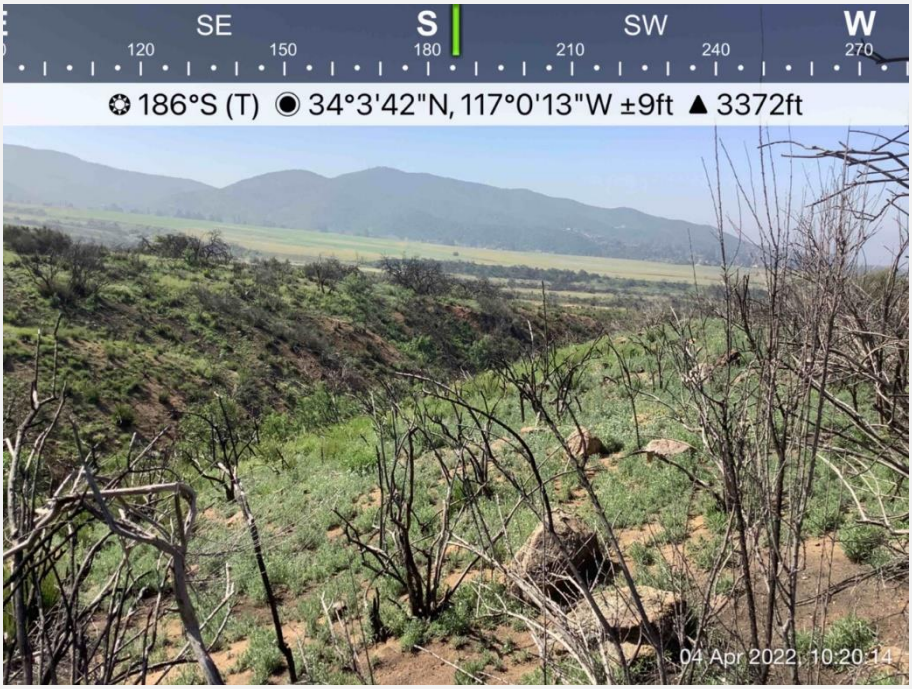


Photo Number 23. View facing south, where no feature is present.

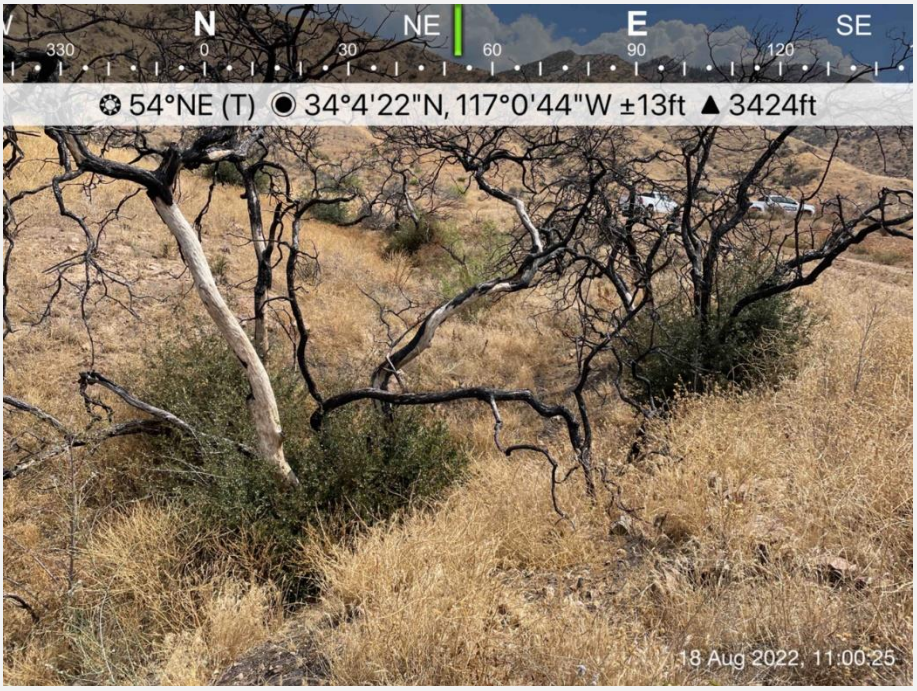


Photo Number 24. View of T-12 facing north–northeast towards NWW-07.

Photo Number 25. View of NWW-03 facing southwest. Berm shown at downstream end of feature, blocking and water from continuing southwest.

Photo Number 26. View of NWW-03 facing north. Vegetated portion of feature shown in this location.

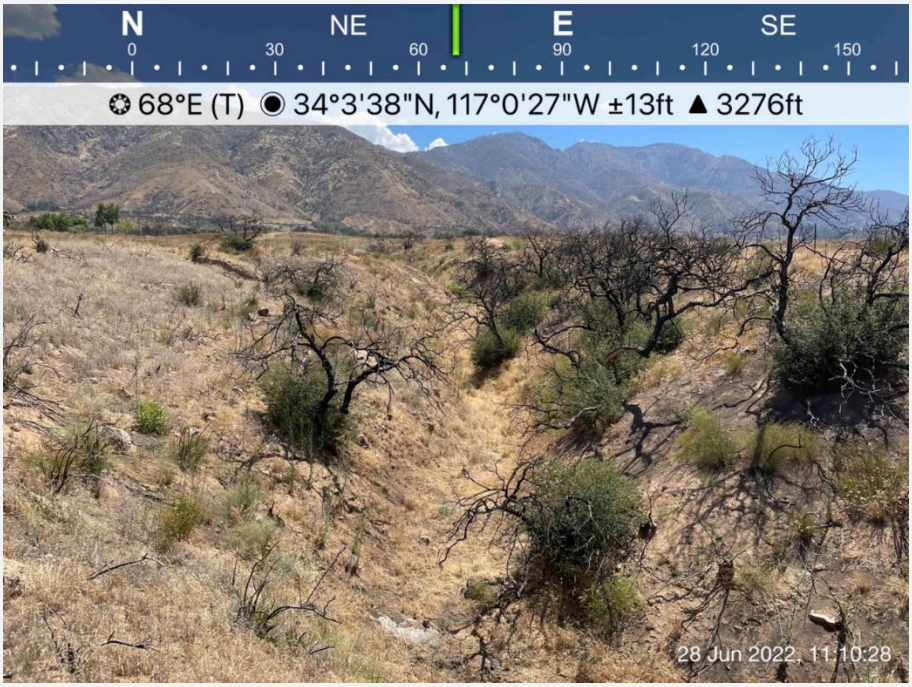


Photo Number 27. View of T-19 facing east-northeast. View shows swale feature that lacks OHWM.

Photo Number 28. View of RIP-2 feature showing low coverage of mulefat and elderberry shrubs.

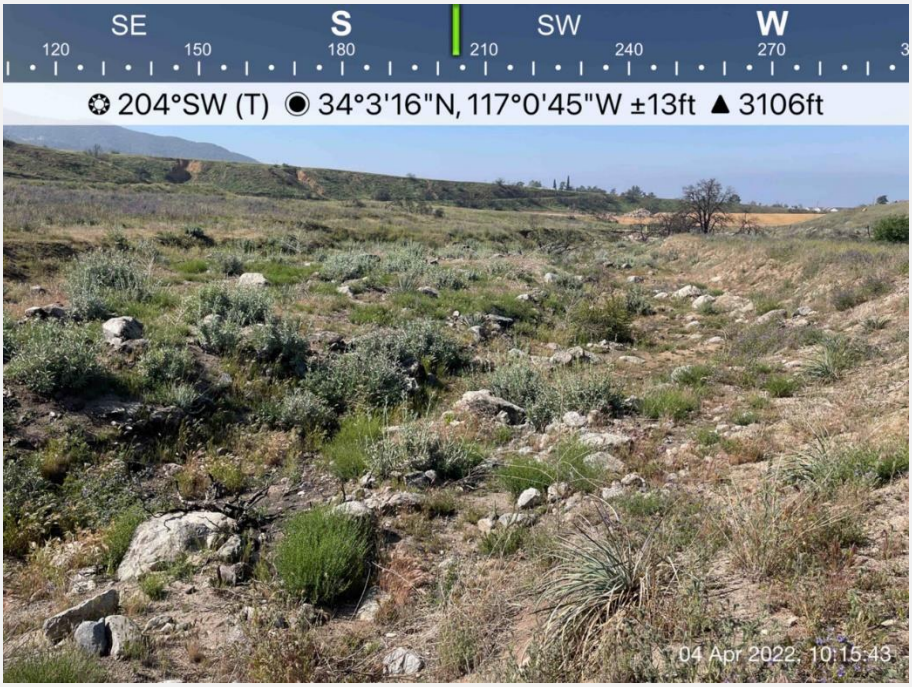


Photo Number 29. View of T-20 facing south-southwest. Inactive portion of streambed shown in this location, historically associated with NWW-01.

Photo Number 30. View of RIP-1 feature near NWW-1. Riparian habitat shown.

Photo Number 31. View of T-20 facing south-southwest. Inactive portion of streambed shown in this location, historically associated with NWW-01.

Appendix H
Additional Impact Tables

Table 1. Vegetation Impacts, Wilson Creek Estates

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[3]							
			Agro-Tourism	Fuel Modification Zone	Future Lake	Housing Development Footprint	Parking Lot	Roads	Water Quality Control Basin	Grand Total
Grass and Herb Dominated										
Post-fire Herbaceous	*Erodium cicutarium – Hirschfeldia incana – Bromus* spp. – *Amsinckia* spp.	N/A	71.2	19.5	3.6	50.2	2.2	18.5	<0.01	165.2
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	2.3	—	—	—	—	—	---	2.3
		Grass and Herb Dominated Subtotal	73.5	19.5	3.6	50.2	2.2	18.5	<0.01	167.5
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia - Adenostoma fasciculatum*	—	0.9	—	—	0.3	—	---	1.2
		Quercus berberidifolia	0.4	3.2	—	0.3	0.02	0.005	---	4.0
		Chaparral subtotal	0.4	4.0	—	0.3	0.3	0.0	—	5.1
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	2.5	0.1	—	0.3	—	0.05	---	3.0
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	—	1.2	—	—	—	—	1.0	2.2
White sage scrub*	*Salvia apiana* Alliance	*Salvia apiana*	—	<0.01	—	—	—	—	---	<0.01
		Scrub subtotal	2.5	1.2		0.3		0.05	1.0	5.2
Mulefat thickets	*Baccharis salicifolia* Alliance	*Baccharis salicifolia - Sambucus nigra*	—	0.1	—	0.3	—	0.03	---	0.4
California sycamore woodlands*	*Platanus racemosa - Quercus agrifolia* Alliance	*Platanus racemosa / Baccharis salicifolia*	0.2	—	—	—	—	—	---	0.2
Scale broom scrub*	*Lepidospartum squamatum* Alliance	*Lepidospartum squamatum / Amsinckia menziesii*	—	<0.01	—	—	—	—	---	<0.01
		Riparian subtotal	*0.2*	*0.1*	—	*0.3*	—	*0.0*	—	*0.6*
Unvegetated wash and river bottom	N/A	N/A	0.4	0.01	—	—	—	0.04	---	0.5
		Unvegetated subtotal	0.4	0.01	—	—	—	0.04	—	0.5
Ornamental plantings	N/A	N/A	7.3	—	—	—	—	—	---	7.3
Urban/Developed	N/A	N/A	0.8	—	—	—	—	0.05	---	0.8
Disturbed Habitat	N/A	N/A	0.6	0.3	—	0.4	0.1	0.1	---	1.5
		Disturbed and Developed subtotal	8.8	0.3	—	0.4	0.1	0.2	—	9.7
		Grand Total[2]	**85.7**	**25.3**	**3.6**	**51.5**	**2.7**	**18.8**	**1.0**	**188.5**

Table 2. Vegetation Impacts, Phases 1, 2 and 3 Outside of the Wilson Creek Estates

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[3]						
			Proposed Land Use Type, Agriculture	Residential (2 Dwelling Units/Acre)	Residential (4.6 Dwelling Units/Acre)	Right – Of - Way	Riparian Area	Water District	Grand Total
Grass and Herb Dominated									
Post-fire herbaceous	*Erodium cicutarium – Hirschfeldia incana – Bromus* spp. – *Amsinckia* spp.	N/A	101.8	6.5	80.7	1.1	5.4	2.1	197.8
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	1.9	–	21.5	0.3	<0.01	–	23.7
Non-native grassland	N/A	N/A	–	–	–	0.2	–	–	0.2
		Grass and Herb Dominated Subtotal	*103.7*	*6.5*	*102.2*	*1.6*	*5.4*	*2.1*	*221.4*
Chamise chaparral	*Adenostoma fasciculatum* Alliance	*Adenostoma fasciculatum*	14.3	–	27.7	–	0.9	–	42.9
		Adenostoma fasciculatum - Eriogonum fasciculatum	0.02	0.2	–	0.1	2.0	–	2.2
		Adenostoma fasciculatum - (Lotus scoparius - Eriodictyon spp.)	–	–	–	–	1.0	0.02	1.1
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia - Adenostoma fasciculatum*	5.3	–	3.3	–	–	–	8.6
		Quercus berberidifolia	9.8	–	28.0	–	6.7	0.1	44.6
		Chaparral subtotal	29.5	0.2	59.0	0.1	10.6	0.1	99.4
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	8.9	8.4	8.2	0.7	0.3	–	26.6
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	18.8	–	16.7	0.04	5.8	–	41.4
Bush mallow scrub	*Malacothamnus fasciculatus - Malacothamnus* spp. *Alliance*	*Malacothamnus fasciculatus*	0.1	–	1.3	–	–	–	1.4
Sand-aster and perennial buckwheat fields	*Corethrogyne filaginifolia - Eriogonum (elongatum, nudum)* Alliance	*Corethrogyne filaginifolia*	0.2	–	–	–	0.3	–	0.6
		Scrub subtotal	*28.1*	*8.4*	*26.2*	*0.8*	*6.5*	–	*70.0*
Scale broom scrub*	*Lepidospartum squamatum* Alliance	*Eriogonum fasciculatum - Lepidospartum squamatum* alluvial fan	–	–	–	–	1.2	–	1.2
		Lepidospartum squamatum / ephemeral annuals	–	–	–	–	0.01	–	0.0
		Riparian subtotal	–	–	–	–	1.2	–	1.2
Eucalyptus – tree of heaven – black locust groves	*Eucalyptus* spp. – *Ailanthus altissima – Robinia pseudoacacia Eucalyptus – tree of heaven – black locust groves* Alliance	*Ailanthus altissima*	–	–	–	–	<0.01	–	<0.01
		Eucalyptus (globulus, camaldulensis)	–	–	–	0.1	–	–	0.1
		Woodland subtotal	–	–	–	*0.1*	*<0.01*	–	*0.1*
Unvegetated wash and river bottom	N/A	N/A	1.3	–	1.8	0.1	2.3	0.03	5.4
		Unvegetated subtotal	*1.3*	–	*1.8*	*0.1*	*2.3*	*0.03*	*5.4*

Table 2. Vegetation Impacts, Phases 1, 2 and 3 Outside of the Wilson Creek Estates

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[3]						
			Proposed Land Use Type, Agriculture	Residential (2 Dwelling Units/Acre)	Residential (4.6 Dwelling Units/Acre)	Right – Of - Way	Riparian Area	Water District	Grand Total
Ornamental plantings	N/A	N/A	2.9	—	4.7	0.1	—	—	7.6
Urban/Developed	N/A	N/A	0.8	0.3	0.01	2.6	1.0	—	4.8
Disturbed Habitat	N/A	N/A	13.0	4.2	9.5	4.3	1.8	0.2	33.2
		Disturbed and Developed subtotal	*16.7*	*4.5*	*14.2*	*7.1*	*2.9*	*0.2*	*45.6*
		Grand Total[2]	**179.3**	**19.5**	**203.3**	**9.7**	**28.8**	**2.4**	**443.1**

Table 3. Vegetation Impacts, Phases 4 and 5

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[3]				
			Agriculture	Residential (2 Dwelling Units/Acre)	Right-Of-Way	Water District	Grand Total
Grass and Herb Dominated							
Post-fire herbaceous	*Erodium cicutarium – Hirschfeldia incana – Bromus* spp. *– Amsinckia* spp.	N/A	16.9	22.1	0.7	—	39.7
Upland mustards or star-thistle fields	*Hirschfeldia incana* Semi-Natural Alliance	*Hirschfeldia incana* (provisional)	32.3	19.0	2.0	—	53.3
Non-native grassland	N/A	N/A	28.5	3.0	0.2	—	31.7
		Grass and Herb Dominated Subtotal	*77.6*	*44.2*	*2.9*	—	*124.7*
Chamise chaparral	*Adenostoma fasciculatum* Alliance	*Adenostoma fasciculatum*	5.8	—	—	—	5.8
Scrub oak chaparral	*Quercus berberidifolia* Alliance	*Quercus berberidifolia - Adenostoma fasciculatum*	4.0	—	—	—	4.0
		Quercus berberidifolia	4.4	5.3	—	—	9.6
		Chaparral subtotal	14.2	5.3	—	—	19.5
California buckwheat scrub	*Eriogonum fasciculatum* Alliance	*Eriogonum fasciculatum*	10.4	15.8	—	—	26.2
Deer weed scrub	*Lotus scoparius* Alliance	*Lotus scoparius*	30.6	34.0	0.6	—	65.2
Palmer's goldenbush scrub*	*Ericameria palmeri* Alliance	*Ericameria palmeri*	0.3		—	—	0.3
		Scrub subtotal	*41.4*	*49.7*	*0.6*	—	*91.7*
Basket bush - river hawthorn – desert olive patches*	*Rhus trilobata - Crataegus rivularis - Forestiera pubescens Alliance*	*Sambucus nigra*	—	0.7	—	—	0.7

Table 3. Vegetation Impacts, Phases 4 and 5

Vegetation Community or Land Cover Type	Floristic Alliance	Association	Acreage[3]				
			Agriculture	Residential (2 Dwelling Units/Acre)	Right-Of-Way	Water District	Grand Total
		Riparian subtotal	—	*0.7*	—	—	*0.7*
Coast live oak woodland and forest	*Quercus agrifolia* Alliance	*Quercus agrifolia*	1.8	—	—	—	1.8
Eucalyptus - tree of heaven - black locust groves	*Eucalyptus spp. - Ailanthus altissima - Robinia pseudoacacia Eucalyptus - tree of heaven - black locust groves* Alliance	*Ailanthus altissima*	—	0.8	—	—	0.8
		Eucalyptus (globulus, camaldulensis)	1.4	0.5	0.01	—	1.9
		Woodland subtotal	*3.2*	*1.3*	*0.01*	—	*4.6*
Unvegetated wash and river bottom	N/A	N/A	1.8	2.2	0.01	—	4.0
		Unvegetated subtotal	*1.8*	*2.2*	*0.01*	—	*4.0*
Urban/Developed	N/A	N/A	41.3	52.5	5.3	4.5	103.6
Disturbed Habitat	N/A	N/A	28.7	54.4	1.1	0.2	84.5
		Disturbed and Developed subtotal	*70.0*	*106.9*	*6.4*	*4.7*	*188.1*
		Grand Total[2]	**208.3**	**210.4**	**10.0**	**4.7**	**433.3**