BIOLOGICAL RESOURCES ASSESSMENT

LEGACY RANCH PROJECT

CITY OF SAN JUAN CAPISTRANO

June 2026

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EXECUTIVE SUMMARY

This report describes the biological resources on the Legacy Ranch Project (project) site in San Juan Capistrano, Orange County, California. The proposed project would develop a mixed-use recreational and agricultural development to provide active and passive recreational opportunities. The project would conserve the historic Swanner House, Dr. Joe Cortese Dog Park, and Putuidem Village and would avoid and minimize impacts to Trabuco Creek.

The project is in the Orange County Central/Coastal Subregion of the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP). A stretch of Trabuco Creek within the project site is designated an "Existing Use" area by the NCCP/HCP.

The following vegetation types occur on the project site: sagebrush–buckwheat scrub, sagebrush scrub, coyote bush scrub, encelia scrub, sage scrub–grassland ecotone, ruderal grassland, willow riparian scrub, disturbed mule fat scrub, sycamore riparian woodland, coast live oak riparian forest, arroyo willow riparian woodland/black willow riparian woodland, coast live oak woodland, coast live oak woodland/ruderal, Mexican elderberry woodland, and irrigated agriculture. Other landcover types include flood control channel, rural development, ornamental landscaping, and cleared or graded. The project has been planned to focus the design to impact existing disturbed areas and would limit impacts on native habitat. The project would impact 14.59 acres of ruderal grassland, 5.82 acres of rural development, and 0.35 acre of ornamental landscaping. It would impact 0.28 acre of sage scrub communities, 0.09 acre of riparian communities, and 2.56 acres of woodland communities. It should be noted that the project would retain as many of the existing trees as possible within their development design. Mitigation measures require a tree inventory and a tree removal permit if any trees would be removed. Additionally, if trees would be removed during the wintering season, a pre-construction survey for overwintering monarch butterflies (*Danaus plexippus plexippus* pop. 1) would be needed, and any overwintering roosts that are observed would be protected until they are no longer active.

Jurisdictional resources on the project site occur along Trabuco Creek and two unnamed tributaries. The project has been designed to avoid and minimize impacts on Trabuco Creek. It includes a pedestrian bridge that would span Trabuco Creek and a vehicle bridge that would span Tributary 1. The footings/abutments for the bridges would have limited impacts on the banks of Trabuco Creek and Tributary 1. No waters of the United States under the regulatory authority of the U.S. Army Corps of Engineers (USACE) would be impacted to construct the project. No waters of the State under the regulatory authority of the Regional Water Quality Control Board (RWQCB) would be impacted to construct the project. A total of 0.093 acre of waters under the regulatory authority of the California Department of Fish and Wildlife (CDFW) would be impacted to construct the project. Regulatory permitting would be required prior to impacting jurisdictional resources, and compensatory mitigation will be required to mitigate for the loss of jurisdictional resources.

The following special-status plant species have been observed on the project site to date: San Diego sagewort (*Artemisia palmeri*), San Diego viguiera (*Bahiopsis laciniata*), paniculate tarplant (*Deinandra paniculata*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), fragrant pitcher sage (*Lepechinia fragrans*), and Coulter's matilija poppy (*Romneya coulteri*). Two species, Coulter's

matilija poppy and southwestern spiny rush, are planted in the Putuidem Village area; therefore, they are not considered to be naturally occurring. San Diego viguiera is considered introduced to Orange County; therefore, it is also not considered to be naturally occurring. Two species, San Diego sagewort and paniculate tarplant, were observed along the banks of Trabuco Creek and are considered naturally occurring. None of the species observed to date are within the project impact area. Focused surveys are in progress (spring/summer 2026) and interim results have been incorporated into the report where appropriate. However, focused surveys are not yet complete.

Suitable habitat is present for Crotch's bumble bee (*Bombus crotchii*) in coastal sage scrub and potentially other habitat areas on the project site. This species is proposed for State listing. Focused surveys for this species are in progress (spring/summer 2026) One Crotch's bumble bee has been observed to date; however, focused surveys are not yet complete. Mitigation measures require pre-construction focused surveys for Crotch's bumble bee, avoidance of active nest burrows during construction, and biological monitoring during vegetation removal. Additionally, consultation with CDFW to obtain an Incidental Take Permit for this species would be needed to determine compensatory mitigation needed for impacts on habitat for this species.

Southwestern pond turtles have potential to occur along Trabuco Creek on the project site and may use adjacent upland habitat within the project impact area for breeding. This species is proposed for federal listing as Threatened. Focused surveys for this species are in progress (spring/summer 2026). One southwestern pond turtle has been observed to date; however, focused surveys are not yet complete. Mitigation measures include pre-construction surveys, biological monitoring, and exclusion fencing to keep turtles out of the construction area. The project would avoid impacts on Trabuco Creek; thus, no compensatory mitigation would be needed. If any southwestern pond turtles are observed, a conference with the USFWS may be needed to review and approve the avoidance and minimization measures.

Suitable coastal sage scrub habitat for coastal California gnatcatcher (*Polioptila californica californica*) is present on the project site. This species is listed as federally Threatened and was incidentally observed foraging on the east side of Trabuco Creek during the general survey in July 2025. The project would impact 0.28 acre of coastal sage scrub and 3.35 acres of coastal California gnatcatcher Critical Habitat, which is also designated as an Existing Use area by the NCCP/HCP. Mitigation measures requiring implementation of standard avoidance and minimization measures from the NCCP/HCP would be required. Additionally, consultation with the USFWS is required to determine compensatory mitigation for the impacts on coastal sage scrub, Critical Habitat, and the NCCP/HCP Existing Use area.

Suitable riparian habitat for least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) is along Trabuco Creek. These species are both federally and State listed as Endangered. Focused surveys for these species are in progress (spring/summer 2026); no least Bell's vireos or southwestern willow flycatchers have been observed to date. However, a finding cannot be made until all protocol surveys have been completed. The project would impact 0.09 acre of riparian forest. Additionally, noise from construction and project operation could indirectly impact breeding listed bird species (if present). If present, mitigation measures require avoidance and minimization measures for these species, including removal of riparian habitat outside the nesting season, biological monitoring, and noise minimization measures. Additionally, consultation with the

USFWS and CDFW would be needed to determine the compensatory mitigation for impacts on 0.09 acre of riparian forest habitat.

Burrowing owls (*Athene cunicularia*) have potential to occur in grassland and ruderal areas on the project site. This species is proposed for State listing. Focused surveys for this species are in progress (spring/summer 2026); no burrowing owls have been observed to date. However, a finding cannot be made until all protocol surveys have been completed. If present, mitigation measures include pre-construction surveys and protection of active burrows (both breeding and overwintering). Additionally, consultation with the CDFW would be needed to determine the compensatory mitigation needed for impacts on 15.40 acres of habitat for this species (ruderal grassland and cleared and graded areas).

Mountain lions (*Puma concolor*) have potential to occur on the project site, primarily along Trabuco Creek. The mountain lion is a State threatened species due to fragmentation of habitat that isolates populations. The project would not create a new barrier to movement as the core habitat linkage (Trabuco Creek) would be avoided by the project. Additionally, mitigation measures require that lighting plans be designed to minimize spillover light into native habitat areas along Trabuco Creek.

Several special-status bat species have potential to roost in riparian trees along Trabuco Creek or in crevices of buildings and other structures (railroad bridge) on the project site. A pre-construction roosting bat survey (including both day and evening efforts) would be needed to determine if there are active day roosts that would be impacted. If roosting bats are observed, mitigation measures would require that the bats be excluded from the areas prior to the roosts being impacted and to follow tree removal/trimming methods that would minimize impacts on roosting bats. Additionally, mitigation measures require that lighting plans be designed to minimize spillover light that could affect bat roosts.

Recommended measures have been included describing best management practices by implementing a worker environmental awareness program training for all construction staff, conducting biological monitoring during vegetation clearing, identifying project limits, minimizing disturbance, limiting the speed limit, minimizing the spread of invasive species, controlling trash, protecting wildlife from entrapment, and discouraging the use of rodenticides.

With implementation of mitigation measures, impacts on biological resources would be reduced to less than significant.

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
APNs	Assessor's Parcel Numbers
CC	California Candidate as Threatened or Endangered
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	California Endangered
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFP	California Fully Protected Species
CFR	Code of Federal Regulations
City	City of Lake Forest
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranks
CT	California Threatened
CWA	Clean Water Act
dbh	diameter at breast height
DPS	Distinct Population Segment
ECOS	Environmental Conservation Online System
ESRI	Environmental Systems Research Institute
ESU	Evolutionarily Significant Unit
FC	Federal Candidate
FE	Federal Endangered
FESA	Federal Endangered Species Act

FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FR	*Federal Register*
FT	Federal Threatened
I-5	Interstate 5
IPAC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
MNWD	Moulton-Niguel Water District
mph	miles per hour
NCCP	Natural Community Conservation Plan
NCCP/HCP	Natural Community Conservation Plan/Habitat Conservation Plan
NMFS	National Marine Fisheries Service
NPPA	California's Native Plant Protection Act
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NWOS	Northwest Open Space
OCTA	Orange County Transportation Authority
PBFs	physical and biological features
project	Legacy Ranch Project
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCE	State Candidate as Endangered
SDG&E	San Diego Gas & Electric Company
SE	State Endangered
SMWD	Santa Margarita Water District
SSC	California Species of Special Concern

ST	State Threatened
Swanner House	Roger Y. Williams/Swanner House
TPZ	Tree Protection Zone
UCANR	University of California Agriculture and Natural Resources
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	California Watch List
WOTS	Waters of the States
WOTUS	Waters of the United States

INTRODUCTION

The City of San Juan Capistrano (City) retained LSA to conduct a Biological Resources Assessment to support California Environmental Quality Act (CEQA) documentation for the Legacy Ranch Project (project). It will also support regulatory permitting with the United States Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), and the RWQCB. This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the United States Fish and Wildlife Service (USFWS) and CDFW.

The proposed project would develop the Legacy Ranch, which would consist of equestrian facilities, a chapel, event space, agricultural uses, and active and passive recreational uses, within the Northwest Open Space (NWOS) Specific Plan Area in San Juan Capistrano, Orange County, California.

PROJECT LOCATION

The project site is at 30291 Camino Capistrano, within the NWOS Specific Plan Area in San Juan Capistrano. The approximately 65.5-acre project site consists of Assessor's Parcel Numbers (APNs) 121-050-03, -04, -14, -17 to -20, and -29. The project site is bound by single-family residential uses to the north, Camino Capistrano to the east, The Groves Apartments (multi-family residential) to the south, and an Orange County Transportation Authority (OCTA) rail line to the west used by Metrolink commuter rail and Amtrak's Pacific Surfliner route. Regional access is provided by Interstate 5 (I-5), east of the project site, with direct access via Camino Capistrano.

The project site is shown on the United States Geological Survey (USGS) *San Juan Capistrano, California* 7.5-minute quadrangle within Section 36, Township 7 South, Range 8 West (see **Figure 1: Project Location**; all figures are included in **Appendix A: Figures**). The project site is relatively flat with elevations ranging from approximately 155 to 205 feet above sea level. One blueline stream, Trabuco Creek (also known as the Arroyo Trabuco), is present on the project site.

Currently the project site is a mix of developed and undeveloped open space (see **Figure 2: Aerial Photograph of the Project Site and Surrounding Land Uses**). The historic Roger Y. Williams/Swanner House (Swanner House), Dr. Joe Cortese Dog Park, and Putuidem Village, a partial reproduction of a local Native American village, are located in the northeastern portion of project site. In addition, a barn and associated storage containers are located on the eastern portion of the project site. The railroad tracks are located along the western border of the project site. The remainder of the project site is undeveloped open space. Much of the central and southern portions of the project site (north of Trabuco Creek) appear to be routinely cleared of vegetation. The majority of native vegetation is present along Trabuco Creek and the associated Trabuco Creek Trail. Approximately 14 acres of the project site, encompassing Trabuco Creek and its banks, are designated with covenant easements.

Trabuco Creek flows generally north to south, is along the eastern boundary of the project site, and is parallel to Camino Capistrano; Trabuco Creek Trail is immediately adjacent to the west side of Trabuco Creek. The upstream portion of Trabuco Creek, where it crosses under Camino Capistrano, is channelized. The lower portion of Trabuco Creek, just downstream of the project site, is reinforced with grouted riprap where it flows down the slope under the railroad tracks; it becomes a natural

channel again before its confluence with Oso Creek (off-site to the west of the project site). Oso Creek also flows from north to south and is located offsite to the west of the project site (west of the railroad tracks); the confluence of Trabuco Creek and Oso Creek is just downstream of the project site (downstream of the railroad track undercrossing).

PROJECT DESCRIPTION

Project Objectives

The purpose of the proposed project is to transform un-utilized City-owned land into a multi-functional community hub that honors and enhances San Juan Capistrano's rich equestrian and agricultural heritage. By creating a welcoming space that includes event venues, equestrian facilities, farming, educational programming, and overnight stay units, the proposed project intends to foster a strong sense of community, provide opportunities for residents and visitors to engage with nature and the City's historical roots, and celebrate the unique character of the local equestrian culture. The proposed project would activate the property, offering inclusive spaces for special events, community gatherings, and hands-on learning experiences, thereby enriching the social, cultural, and recreational life of San Juan Capistrano.

The primary objectives of the proposed project are as follows:

1. Develop a mixed-use recreational and agricultural destination that enhances community access to active and passive recreational opportunities;

2. Preserve and integrate the historic Swanner House, Dr. Joe Cortese Dog Park, and Putuidem Village, respecting their cultural and historical significance;

3. Promote sustainable agricultural practices through orchards, row crops, and farm-related educational programs;

4. Provide diverse community amenities, including equestrian facilities, and event spaces, to attract residents and visitors;

5. Enhance connectivity through trails and pedestrian infrastructure, integrating with the existing Trabuco Creek Trail;

6. Support local economic growth by introducing retail farm stands and conditional event-based uses, such as weddings and live entertainment; and

7. Ensure compliance with environmental regulations, including preservation of the 14-acre Trabuco Creek covenant easement.

Overall Development Concept

The proposed project would develop the project site with the Legacy Ranch, which would consist of several cores: Equestrian Core, Chapel Core, Swanner House Core, Agricultural Core, Event Barn Core, Community Building Core, and Trails/Natural Core (see **Figure 3: Proposed Overall Site Plan**). Each core would incorporate community amenities. The proposed project also includes the

preservation of the existing uses on the project site, including the Swanner House, Dr. John Cortese Dog Park, and Putuidem Village, and would provide greater access to each of these existing uses. The proposed project would also include a pedestrian bridge over Trabuco Creek that would connect the Community Building Core to the rest of the Legacy Ranch, internal decomposed granite roads, pedestrian paths, and new trail connections to the Trabuco Creek Trail throughout the project site.

The City would continue to own the project site (i.e., NWOS area) and would lease the project site to the project Applicant, who would operate the project site as the Legacy Ranch. During operation, including during large events such as weddings, public access to the entire project site would be maintained and the project site would continue to be open to the public.

Landscaping and Open Space

The proposed project would include active and passive recreational facilities and extensive open space. Some existing trees and vegetation on the project site would be maintained and the proposed project would include new landscaping throughout the project site. If present on the project site, existing trees that meet the criteria for designation as a Heritage Tree[1] would be integrated into the landscape plan for the proposed project. In addition, the removal of any existing mature tree (i.e., a tree with a trunk diameter of 6 inches or more measured at 3 feet above grade) would require a Tree Removal Permit pursuant to Section 9-3.557 of the City's Municipal Code. Tree removal would meet the City's Tree Removal Permit requirements and conditions, including those related to the replacement of a mature tree.

In addition, the approximately 14-acre existing conservation covenant encompassing Trabuco Creek and both its banks would be untouched. Development of proposed structures would be set back from the covenant boundary by an approximately 100-foot buffer, consistent with the NWOS Specific Plan Development Standards. Although the proposed pedestrian bridge over Trabuco Creek itself would traverse the 100-foot buffer and the Trabuco Creek conservation covenant, the footings for the proposed bridge are planned to be outside of the jurisdictional boundary of the creek area.

Lighting

The proposed project would include on-site lighting for visibility and safety. All lighting would adhere to the City's Lighting Standards as provided in Chapter 9 of the City's Municipal Code and would be generally shielded to prevent light emissions from spilling onto adjacent properties and the adjacent conservation covenant area encompassing Trabuco Creek. In addition, the proposed project would comply with the requirements of the State Energy Code (Title 24, Part 6) and would include preparation of a photometric study as part of the conditions of approval.

Utilities and Infrastructure

The project site is currently served by existing utilities, including water, sanitary sewer, storm drainage, electricity, gas, and telecommunication infrastructure; however, it is expected that these

[1] In San Juan Capistrano, a tree is considered a heritage tree when the tree has a trunk diameter at breast height (dbh) of 36 inches or greater, and is a specimen of one of the following species: *Schinus molle* (California pepper), *Quercus* spp. (oak), *Cedar* spp. (cedar), *Eucalyptus globulus* (blue gum eucalyptus), *Juglans* spp. (walnut), *Olea europaea* (olive), *Platanus* spp. (sycamore), or *Populus* spp. (cottonwood).

utilities would need to be expanded and/or upgraded to accommodate the various land uses included in the proposed project.

Water service for the proposed project would be provided by Santa Margarita Water District (SMWD) via an existing water service line located in Camino Capistrano. Wastewater service would be provided by SMWD via an existing 8-inch sewer main that is connected to the Moulton Niguel Water District (MNWD) 12-inch trunk line adjacent to the OCTA owned rail line. The existing 8-inch sewer line was installed in 2015 to serve the Swanner House and restrooms at the project site when the City and MNWD entered into an agreement for the capacity discharge from the Swanner House and two future restrooms. As the SMWD annexed the City's water utility system into its service area in 2021, this agreement would require amendment to identify SMWD as the sole wastewater service provider. Electricity and natural gas would continue to be supplied by San Diego Gas & Electric Company (SDG&E) and the Southern California Gas Company (SoCalGas), respectively, via extensions from existing electrical and natural gas transmission lines in the vicinity of the project site. Solar panels would be included in the design of the proposed equestrian arena in the Equestrian Core. The City also maintains storm drainage collection and conveyance facilities in the vicinity of the project site and regional flood control facilities in the area are maintained both by the City and the Orange County Flood Control District. One creek is west (Oso Creek) of the project site and one creek (Trabuco Creek) traverses the project site. Natural drainage at the project site is generally toward the southeast, conforming to the natural topography.

As previously discussed, there are two wells in the northern portion of the project site. The northernmost well, located between the Equestrian Core and the Putuidem Village, would be integrated into the landscape plan as part of the proposed project. A future access easement would be incorporated into the circulation design for the proposed project to allow continued access to the northernmost well by the SMWD. The southernmost well, located in the Equestrian Core, would be abandoned and plugged as part of the proposed project.

Demolition and Construction

Construction of the proposed project would include the demolition of the existing 1,600 square-foot barn in the Community Building Core, site preparation, installation of utilities, paving, building construction, landscaping, and architectural coating activities. The proposed project would also abandon and plug the southernmost well on the project site in accordance with all applicable regulations. It is anticipated that the maximum depth of excavation for the proposed project would be approximately 8 feet. In addition, it is anticipated that the project site would be balanced, and no import or export of soil would be required.

Construction of all proposed project phases is anticipated to be completed over approximately 3 years, beginning within 3 years of the Certification of the EIR (i.e., 2029). Construction activities are anticipated between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and 8:30 a.m. and 4:30 p.m. on Saturday, consistent with the City's General Plan Noise Element and Section 9-3.531 of the City's Municipal Code (Noise Ordinance).

REGULATORY SETTING

Federal Laws and Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. FESA defines species as threatened or endangered and provides regulatory protection for listed species. FESA provides a program for the conservation and recovery of threatened and endangered species as well as the protection of designated critical habitat that the USFWS determines is required for the survival and recovery of listed species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, is the result of a series of treaties that the United State has with Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it shall be unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird" (United States Code Title 16 [USC], Section 703). The MBTA currently includes several hundred species and includes all birds native to the United States.

The MBTA traditionally prohibited both intentional and incidental take (i.e., unintentional harm during otherwise lawful activities) of migratory birds. In 2017, Solicitor's Opinion M-37050 was issued reinterpreting take to apply only to intentional acts (e.g., hunting, poaching) and specifically excluding incidental take (e.g., oil spills, wind turbines, and construction) from enforcement. This interpretation was codified into law as the "2020 Final Rule". However, the following administration issued Solicitor's Opinion M-37065, which revoked the 2020 Final Rule and restored the traditional interpretation of the MBTA prohibiting incidental take. The subsequent administration recently issued Solicitor's Opinion M-37085 reinstating Solicitor's Opinion M-37050 that take applies only to intentional acts and excludes incidental take.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 protects bald eagles (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species and established civil penalties for violation of this act. Take of bald and golden eagles includes to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." To disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially inferring with normal breeding, feeding, or sheltering behavior. (*Federal Register* [FR], volume 72, page 31132; 50 Code of Federal Regulations [CFR] 22.3).

Clean Water Act

The Federal Clean Water Act provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE) that regulates the discharge of the dredged or fill material into waters of the United States, including wetlands. The USACE implementing regulations are found in CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency (USEPA) 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.

Section 401 requires that a project applicant that is pursuing a federal license or permit allowing a discharge to waters of the United States to obtain State Certification of Water Quality, thereby ensuring that the discharge will comply with the provisions of the Clean Water Act. The State Water Resources Control Board administers the certification program in California, primarily through its regional boards. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States.

Rivers and Harbors Act

Under Section 10 of the River and Harbors Act, the USACE regulates the construction of any structure in or over any navigable water of the United States. Navigable waters are defined as "those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce."

State Laws and Regulations

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to all discretionary projects proposed to be conducted or approved by a State, County, or City agency, as well as private projects requiring discretionary government approval. The purpose of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project; avoid or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring; disclose to the public the agency decision making process to approve discretionary projects; enhance public participation in the environmental review process; and improve interagency coordination.

State CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species nonetheless may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals.

California Endangered Species Act

The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would result in take of a species listed under CESA, a project proponent would need to obtain a take permit under Section 2081(b). Alternatively, the California Department of Fish and Wildlife (CDFW) has the option of issuing a Consistency Determination (Section 2080.1) for projects that would affect a species listed under both CESA and FESA, as long as compliance with the FESA would satisfy the "fully mitigate" standard of CESA, and other applicable conditions.

Porter-Cologne Water Quality Control Act

"Waters of the state" are broadly defined by the Porter-Cologne Water Quality Control Act (Section 1305(e)) as "any surface water or groundwater, including saline waters, within the boundaries of the state." All waters of the United States, including those that meet the current and any historic definition, are also considered waters of the State (California Code of Regulations [CCR] 23 3831 (w)). However, the State's definition of a wetland deviates from the USACE procedures in that a lack of vegetation does not disqualify a feature from identification as a wetland waters of the state, otherwise referred to as non-federal waters of the State. Additionally, isolated wetlands that may not be subject to regulations under federal law are also considered waters of the State.

The State is further required comply with Executive Order W-59-93 published August 23, 1993, which states that the "Water Boards' regulation of dredge and fill activities must ensure 'no net loss' and long-term net gain in the quantity, quality, and permanence of wetlands acreages and values…"

California Fish and Game Code

Sections 1600 through 1616. The CDFW regulates all activities (e.g., construction, discharge, dredge, diversion) within rivers, streams, and lakes, and associated riparian vegetation, under California Fish and Game Code Section 1600 *et seq*. This includes all such features on public and private lands throughout California. The regulatory limits of their jurisdiction are generally considered to include all areas within the bed, bank, and channel of a river, stream, or lake, plus the outer extent of riparian vegetation immediately adjacent to these aquatic features. This also includes man-made and/or channelized streams located where natural streams historically occurred, or that are connected to natural streams. Isolated wetlands that are not located within the jurisdictional limits described above are not regulated by the CDFW.

Sections 3503, 3503.5, and 3513. These sections make it unlawful to take, possess, or destroy any bird's nest or any bird's eggs. Section 3503.5 specifically protects any birds in the orders *Falconiformes* or *Strigiformes* (i.e., birds of prey, such as hawks, eagles, and owls) and their nests and eggs. Section 3513 of the *California Fish and Game Code* prohibits the take and possession of any migratory nongame bird, as designated in the MBTA prior to January 1, 2025. California recently

passed legislation explicitly stating that California Fish and Game Code continues to regulate incidental take, filling gaps created by fluctuating federal interpretations.

Sections 3511, 4700, 5050, and 5515. These statutes prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species, except as allowed for in an approved Natural Communities Conservation Plan, or through direct legislative action. In July 2023, Senate Bill (SB) 147 was signed into law granting the CDFW the ability to issue a permit under CESA for the take of fully protected species for specific infrastructure projects including those related to the State Water Project, critical regional or local water agency infrastructure, transportation projects that do not increase highway or street capacity, and wind and solar projects within the state that provide electricity to a California-based balancing authority. Take permits may be issued under this law until December 31, 2033.

Sections 1900 through 1913 - Native Plant Protection Act. California's Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibits the taking of listed plants from the wild and requires notification of CDFW at least ten days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. A project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Local and Regional Laws, Regulations, and Policies

Central-Coastal Natural Communities Conservation Plan/Habitat Conservation Plan

The Orange County Central-Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) serves as a comprehensive, multijurisdictional habitat-based conservation program. It focuses on the conservation of multiple species and their associated habitats while allowing for economic uses that meet social and economic needs in central and coastal areas of the County. The NCCP/HCP was approved on April 16, 1996, and the Implementation Agreement was executed on July 17, 1996.

The Central/Coastal NCCP/HCP focuses on the conservation of coastal sage scrub and was designed around the needs of three target species: coastal California gnatcatcher (*Polioptila californica californica*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), and orange-throated whiptail (*Aspidoscelis hyperythra*). In the conservation of large areas of coastal sage scrub into Reserve areas for these three target species, habitat was also conserved for several other species, which were also provided coverage under the NCCP/HCP (i.e., "Covered Species"). A limited number of species were also determined to be "Conditionally Covered". The NCCP/HCP may be used to grant take of Conditionally Covered species through a streamlined consultation with the resource agencies, assuming the take would not jeopardize the continued existence of the species or elevation of the species' status, and that the impacts are minimized and mitigated to the greatest degree practicable.

The NCCP/HCP "Participating Landowners" contributed significant lands and/or funding to the Reserve System and adaptive management program. Participating Landowners include the County,

Southern California Edison, Metropolitan Water District, Irvine Ranch Water District, Serrano Water District, Transportation Corridor Agencies, M.H. Sherman Company/Chandis Securities Company/ Sherman Foundation, The Irvine Company, UC Irvine, California Department of Parks and Recreation, and CDFW. The NCCP/HCP allows Participating Landowners "take" of Covered Species for otherwise lawful actions (e.g., public and private development) in exchange for the assembly and ongoing adaptive management of the NCCP/HCP Reserve System. Participating Landowners are responsible for implementing the NCCP/HCP as described in the Implementation Agreement.

Jurisdictions and entities that own land within the overall NCCP/HCP Plan Area but that are not Participating Landowners are considered "Non-Participating Landowners". Non-Participating Landowners may elect to use the NCCP/HCP as mitigation for impacts to Covered Species. Non-participating landowners may satisfy the requirements of FESA and CESA by: (1) avoiding impacts on coastal sage scrub; (2) satisfying applicable FESA and CESA provisions as determined through consultation with the resource agencies; or (3) payment of a mitigation fee to the non-profit reserve management corporation as provided for in the NCCP/HCP and Implementation Agreement.

City of San Juan Capistrano General Plan

The Conservation and Open Space and Community Design Elements of the City's General Plan contain the following goals and implementing policies related to biological resources that would be applicable to the proposed project:

- **Conservation and Open Space Goal 2:** Protect and preserve important ecological and biological resources.
    - **Policy 2.1:** Use proper land use planning to reduce the impact of urban development on important ecological and biological resources.
    - **Policy 2.2:** Preserve important ecological and biological resources as open space.
    - **Policy 2.3:** Develop open space uses in an ecologically sensitive manner.
- **Conservation and Open Space Goal 4:** Prevent incompatible development in areas which should be preserved for scenic, historic, conservation, or public safety purposes.
    - **Policy 4.1:** Assure incompatible development is avoided in those areas which are designated to be preserved for scenic, historic, conservation, or public safety purposes.
- **Conservation and Open Space Goal 5:** Shape and guide development in order to achieve efficient growth and maintain community scale and identity.
    - **Policy 5.2:** Ensure that new development integrates and preserves areas designated for scenic, historic, conservation, or public safety reasons.

- **Community Design Goal 1:** Encourage and preserve a sense of place.
    - **Policy 1.1:** Preserve significant amounts of land and important natural features for open space.
- **Community Design Goal 3:** Preserve and enhance natural features.
    - **Policy 3.1:** Limit development of important natural characteristics such as ridgelines, unique hillside features and creeks.

City of San Juan Capistrano Municipal Code.

Building and construction in the City are subject to the regulations of the City's Municipal Code. The following provisions of the City's Municipal Code are related to biological resources:

- **Article 3, Development Review Procedures, Section 9-2.349, Tree Removal Permit.** Section 9-2.349 of the City's Municipal Code establishes procedures for tree removal in order to ensure that suitable trees are maintained throughout the City, heritage trees are preserved, and the use of native, drought resistant and California-friendly trees on public land private property is encouraged. In addition, Section 9-2.349 requires new tree planting where appropriate on public and private property.
- **Article 5, Supplemental District Regulations, Section 9-3.557, Tree Preservation.** Section 9-3.557 of the City's Municipal Code provides for the preservation and maintenance of existing trees within the City.

METHODS

This section summarizes methods used to conduct biological surveys for the project. The survey area for the biological analysis was limited to the project site.

LITERATURE REVIEW

Prior to the field surveys, LSA biologists conducted a literature review and records search to identify reported occurrences of sensitive or special-status[2] plants, wildlife, and habitats in the vicinity of the project site. In addition, LSA biologists reviewed federal and State lists of sensitive species to add other species with potential to occur in the project vicinity. The literature review included the following:

- **California Natural Diversity Database information (CNDDB – RareFind 5)**, which is administered by the CDFW. This database includes records of sensitive plant and wildlife species as well as sensitive natural communities that occur in California. The literature review included a review of records from four USGS quadrangles surrounding the project site (*Dana Point*, *San Juan Capistrano*, *San Clemente*, *Canada Gobernadora,* and *Laguna Beach*) (CDFW 2026a).

- **California Native Plant Society's (CNPS) Rare Plant Inventory** is administered by the CNPS in cooperation with the CDFW. This database includes records of sensitive plant species ranked into categories, or California Rare Plant Ranks (CRPR)[3] based on their conservation status and threat to remaining known populations. The literature review included a review of records from five USGS quadrangles surrounding the project site (*Dana Point*, *San Juan Capistrano*, *San Clemente*, *Canada Gobernadora,* and *Laguna Beach*) (CNPS 2026a).

- **United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) Online System**, which lists all proposed, candidate, threatened, and endangered species managed by the Endangered Species Program of the USFWS that have the potential to occur on or near a particular site. This database also lists critical habitats, national wildlife refuges, results of the National Wetlands Inventory (NWI), and a partial list of migratory birds that could occur near the project site. An IPaC Report was generated for the project site (USFWS 2026).

[2] For the purposes of this report, the term "special-status species" refers to those species that are listed or proposed for listing under the CESA and/or FESA, California Fully Protected Species, California Species of Special Concern, California Watch List species, and species Covered and Conditionally Covered under the County of Orange Central-Coastal NCCP/HCP. It should be noted that "Species of Special Concern" is an administrative designation made by the CDFW and carries no formal legal protection status. However, Section 15380 of the *State CEQA Guidelines* indicates that these species should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

[3] At the discretion of the CEQA Lead Agency, impacts to these species may be analyzed as such, pursuant to the *State CEQA Guidelines* Sections 15125(c) and 15380. CRPR 1B and 2B species are considered to meet the definition of rare, threatened, or endangered, and thus meet the criteria in Section 15380. Plants in CRPR 3 (limited information; review list), CRPR 4 (limited distribution; watch list), or that are considered Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential significant impacts.

In addition to the databases listed above, the literature review included (1) CDFW's *Special Animals List, Special Vascular Plants, Lichens, and Bryophytes List,* and their *List of Sensitive Natural Communities* (CDFW 2026b, 2026c, 2025); (2) historic and current aerial imagery of the project site; (3) applicable sections of the Central-Coastal NCCP/HCP; and (4) local land use policies related to biological resources.

GENERAL BIOLOGICAL FIELD SURVEY

A general biological survey of the project site was conducted by LSA Senior Biologist Amber Heredia and Biologists Samuel Bressler and Andy Maldonado on July 16, 2025, from 7:00 a.m. to 12:00 p.m. The field survey took place on a partly cloudy morning with weather conditions conducive to the detection of plant and wildlife species (i.e., 100 percent cloud cover, winds of 0–2 miles per hour, and temperature ranging from 62 to 73 degrees Fahrenheit (°F). The entire project site was surveyed on foot. LSA Biologists made notes on general site conditions, vegetation composition, plants and wildlife observed, and suitability of habitat for various special-status species. Representative photographs were taken to document existing biological conditions at the time of the survey (**Appendix B: Representative Site Photographs**). Plant and wildlife species observed during the field survey were recorded in field notes and are included in **Appendix C: Plant and Wildlife Species Observed**. The Biologists also recorded the location of any special-status species incidentally observed on the field map.

Vegetation was mapped on a 1 inch equals 160 feet (1"=160') scale aerial photograph provided by Nearmap (flown May 2025) and/or on Environmental Systems Research Institute (ESRI) Field Maps mobile application showing the project site. Vegetation/natural communities and land cover types existing within the project site were mapped and classified based on existing conditions at the time of the surveys using the habitat classes described in the *Methods Used to Survey the Vegetation of Orange County Parks and Open Space Areas and the Irvine Company Property*, developed for the County of Orange Environmental Management Agency and Environmental Planning Division (Jones & Stokes Associates, Inc. 1993), which was used for the NCCP/HCP and is the standard nomenclature for Orange County. These vegetation types were cross-walked to the more recent *A Manual of California Vegetation* (CNPS 2026b), which is used by CDFW as the nomenclature for their *List of Sensitive Natural Communities* (CDFW 2025).

JURISDICTIONAL DELINEATION

LSA Senior Biologist Heather Madera and Biologist Samuel Bressler conducted the fieldwork for the jurisdictional delineation on October 27, 2025. All features within the project site were evaluated according to the most current federal and/or State regulatory criteria and guidance. General conditions and characteristics associated with each drainage feature were noted on datasheets and photographed.

The project site was surveyed on foot, and areas of potential jurisdiction observed within the project site were mapped on a recent, high-resolution aerial photograph (scale 1 inch = approximately 200 feet) and/or on ESRI Field Maps mobile application showing the project site. The widths of the features mapped during the field investigation were determined by measurements taken in the field in accordance with guidelines set forth by the *National Ordinary High Water Mark Field Delineation*

Manual for Rivers and Streams (USACE 2008). Wetland delineation procedures described in the Regional Supplement and those recently enacted by the State Water Resources Control Board were implemented for areas that exhibited characteristics potentially indicative of wetlands. The jurisdictional delineation is included in **Appendix D (Jurisdictional Delineation)**.

FOCUSED SURVEYS FOR SPECIAL-STATUS PLANTS AND WILDLIFE

Focused surveys for special-status plants, Crotch's bumble bee, southwestern pond turtle, burrowing owl, southwestern willow flycatcher, and least Bell's vireo are in progress in spring/summer 2026. Protocol surveys are being conducted consistent with standardized survey protocols and guidelines from the USFWS, the CDFW, the CNPS and/or the USGS (depending on species). The results of these surveys to date are included in this report; however, for most species, findings cannot be made until all surveys are completed.

RESULTS

This section summarizes the existing conditions of the project site. Discussions regarding the existing project site conditions, soils, vegetation communities, potentially occurring special-status biological resources, and habitat connectivity are presented below.

PHYSICAL CONDITIONS

The project site is shown on the USGS *San Juan Capistrano, California* 7.5-minute quadrangle within Section 36, Township 7 South, Range 8 West (see **Figure 1**). The project site is relatively flat with elevations ranging from approximately 155 to 205 feet above sea level. One blueline stream, Trabuco Creek (also known as the Arroyo Trabuco), is present on the project site.

Trabuco Creek flows generally north to south and is located along the eastern boundary of the project site parallel to Camino Capistrano. The upstream portion of Trabuco Creek, where it crosses under Camino Capistrano, is channelized. Trabuco Creek is a soft-bottom channel through most of the project site. Just downstream of the project site, where Trabuco Creek flows down the slope under the railroad tracks, it is reinforced with grouted riprap. However, at the bottom of the slope (off-site), Trabuco Creek is a soft-bottom channel.

Soils within the project site were mapped using the National Resources Conservation Service (NRCS) Web Soil Survey classifications (USDA 2025). Eight soil types occur within the project site (see **Figure 4: Soils Map**). Soil types present on the project site include the following: Botella clay loam (2 percent to 9 percent slopes), Corralitos loamy sand (moderately fine substratum), Cropley clay (2 percent to 9 percent slopes), riverwash, Soboba gravelly loamy sand (0 percent to 5 percent slopes), Sorrento loam (0 percent to 2 percent slopes), Sorrento loam (2 percent to 9 percent slopes), and Sorrento clay loam (2 percent to 9 percent slopes). The only hydric soils on the project site (i.e., Riverwash) are mapped along Trabuco Creek.

The climate of the project site is Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The project region receives an average of 13.99 inches of rain per year. The August high temperature averages 92 °F and a January low temperature average of 39°F (U.S. Climate Data 2025).

VEGETATION TYPES AND OTHER LAND COVER TYPES

The majority of the project site is developed or disturbed with existing or past uses (e.g., Swanner House, Village of Putuidem, dog park, parking lot, agriculture, and farm structures). Much of the central and southern portions of the project site (north of Trabuco Creek) appear to be routinely cleared of vegetation and currently consist of ruderal (weedy) species with scattered native and nonnative trees. The majority of native vegetation types are present along Trabuco Creek and the associated Trabuco Creek Trail. Coastal sage scrub and coast live oak woodland vegetation types are present in upland areas along both sides of the Trabuco Creek Trail and on the upper banks of Trabuco Creek, while riparian vegetation types are located along Trabuco Creek. Vegetation types mapped on the project site are described below. The acreages of each vegetation and land cover type occurring on the project site are shown in **Table A**, below. **Figure 5: Vegetation Map** provides a map of the vegetation and land cover types on the project site.

Table A: Vegetation Communities and Land Cover Types Within the Project Area

Vegetation or Land Cover Type	Vegetation Code (Jones & Stokes 1993)	Total Vegetation on Project Site (Acres)	Sensitive Natural Community (Yes/No)
Scrub (2.0)			
Sagebrush–Buckwheat Scrub	2.3.1	3.81	No
Sagebrush Scrub	2.3.6	0.42	No
Coyote Brush Scrub	2.3.9	0.14	No
Encelia Scrub	2.3.13	1.13	Yes[1]
Sage Scrub–Grassland Ecotone	2.8	0.19	No
Subtotal Scrub		*5.69*	
Grassland (4.0)			
Ruderal	4.6	26.91	No
Subtotal Grassland		*26.91*	
Riparian (7.0)			
Willow Riparian Scrub	7.2	0.56	Yes
Disturbed Mule Fat Scrub	7.3	0.06	No
Sycamore Riparian Woodland	7.4	4.48	Yes
Coast Live Oak Riparian Forest	7.5	2.60	Yes
Arroyo Willow Riparian Forest/Black Willow Riparian Forest	7.6/7.7	1.38	Yes
Subtotal Riparian		*9.08*	
Woodland (8.0)			
Coast Live Oak Woodland	8.1	2.90	No
Coast Live Oak Woodland/Ruderal	8.1/4.6	2.40	No
Mexican Elderberry Woodland	8.4	0.13	Yes[2]
Subtotal Woodland		*5.43*	
Watercourses (13.0)			
Flood Control Channel	13.4	1.27	N/A
Subtotal Watercourses		1.27	
Agriculture (14.0)			
Irrigated Agriculture	14.2	1.18	N/A
Subtotal Agriculture		*1.18*	
Developed (15.0)			
Rural	15.2	12.01	N/A
Ornamental Landscaping	15.5	1.60	N/A
Subtotal Developed		*13.61*	
Disturbed (16.0)			
Cleared or Graded	16.1	2.30	N/A
Subtotal Disturbed		*2.30*	
TOTAL		**65.47**	

Source: Compiled by LSA (2026).

[1] On the project site, this vegetation type appears to be planted revegetation.

[2] Provisional: A vegetation type has been proposed based on limited data (few recorded occurrences), but requires further research to validate that the limited occurrences are based on its rarity rather than lack of data.

N/A = Not applicable; nonnative vegetation and developed land covers are not included on the List of Sensitive Natural Communities.

Scrub (2.0)

Sagebrush-Buckwheat Scrub (2.3.1)

This community is found along the Trabuco Creek Trail and along the upper slopes of Trabuco Creek and is dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), interspersed with other shrubs such as laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), and black sage (*Salvia mellifera*). Other species within this community include coast goldenbush (*Isocoma mensiezii*), tarragon (*Artemisia dracunculus*), and scalebroom (*Lepidospartum squamatum*).

Sagebrush-buckwheat scrub is consistent with the *Artemisia californica – Eriogonum fasciculatum* association in *A Manual of California Vegetation* (CNPS 2026b). This association is not considered a sensitive natural community by CDFW (2025). However, sagebrush-buckwheat scrub is protected by the NCCP/HCP.

Sagebrush Scrub (2.3.6)

This community is found within the Putuidem Village, and is dominated by California sagebrush. This area consists of a planted native garden; vegetation cover is relatively sparse compared to coastal sage scrub elsewhere on the project site and it includes some species not expected to occur naturally within the project site, such as Coulter's matilija poppy (*Romneya coulteri*) and manzanita (*Arctostaphylos* sp.).

Sagebrush scrub is consistent with the *Artemisia californica* association in *A Manual of California Vegetation* (CNPS 2026b). This association is not considered a sensitive natural community by CDFW (2025). However, sagebrush scrub is protected by the NCCP/HCP.

Coyote Bush Scrub (2.3.9)

This community is dominated by coyote brush (*Baccharis pilularis*) and is present in a few small polygons along the edges of ruderal habitat. Other species that also occur in this community include blue elderberry (*Sambucus mexicana*) and mule fat (*Baccharis salicifolia*).

Coyote brush scrub is consistent with the *Baccharis pilularis* association in *A Manual of California Vegetation* (CNPS 2026b). This association is not considered a sensitive natural community by CDFW (2025). However, coyote brush scrub is protected by the NCCP/HCP.

Encelia Scrub (2.3.13)

This community is found east of the dog park and is dominated by California bush sunflower (*Encelia californica*). Other species that occur include California sagebrush, mule fat, and giant wild rye (*Leymus condensatus*). Based on the location, density, and species composition, this community appears to have been planted.

Encelia scrub is consistent with the *Encelia californica – Artemisia californica* association in *A Manual of California Vegetation* (CNPS 2026b). This association is considered a sensitive natural community by CDFW (2025). However, based on the species composition and location, the area appears to have been planted, as confirmed in a review of Google Earth historic imagery; it was a disturbed/ruderal

area before 2014 and after this date, appears to be coastal sage scrub. Encelia scrub is protected by the NCCP/HCP.

Sage Scrub–Grassland Ecotone (2.8)

This community is found in a small area east of Trabuco Creek and also in the southern portion of the project site on the western banks of Trabuco Creek. The area east of Trabuco Creek consists of a low cover of coast goldenbush and coyote brush mixed with ruderal species. The southern area consists of a low cover of California sagebrush and California buckwheat in an opening at the edge of the sycamore riparian woodland.

Sage scrub–grassland ecotone is consistent with the *Artemisia californica* association mixed with the *Avena* spp. – *Bromus* spp. semi-natural alliance in *A Manual of California Vegetation* (CNPS 2026b). These alliances and associations are not considered sensitive natural communities by CDFW (2025). However, sage scrub–grassland is protected by the NCCP/HCP.

Grassland (4.0)

Ruderal Grassland (4.6)

Ruderal grassland is the most common vegetation community on the project site, comprising much of the central and western portion of the project site. Ruderal grassland consists of regularly disturbed (e.g., disced or mowed) areas dominated by weedy, pioneering, and often nonnative plant species such as garland chrysanthemum (*Glebionis coronata*), shortpod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), and artichoke thistle (*Cynara cardunculus*). Isolated larger shrubs are scattered throughout this area, including both native species such as coast live oak (*Quercus agrifolia*) and blue elderberry, and nonnative, fruit-producing species such as citrus (*Citrus sinensis*) and avocado (*Persea americana*). However, these species did not warrant mapping as a separate community because they do not form a closed canopy.

Ruderal grassland is consistent with the *Brassica nigra* – *Centaurea melitensis* semi-natural alliance in *A Manual of California Vegetation* (CNPS 2026b). This alliance is not considered a sensitive natural community by CDFW (2025).

Riparian (7.0)

Willow Riparian Scrub (7.2)

This community is found along the northern portion of Trabuco Creek within the flood control channel. Dominant species in this community include small-stature arroyo willow (*Salix lasiolepis*) and mule fat. Other species that also occur include Spanish false fleabane (*Pulicaria paludosa*), tall flatsedge (*Cyperus eragrostis*), and broadleaf cattail (*Typha latifolia*).

Willow riparian scrub is consistent with the *Salix lasiolepis* association in *A Manual of California Vegetation* (CNPS 2026b). This association is considered a sensitive natural community by CDFW (2025). Additionally, this area is along Trabuco Creek, which is under the jurisdiction of the resource agencies (discussed further below under Jurisdictional Aquatic Resources).

Disturbed Mule Fat Scrub (7.3)

A small patch of mule fat is present in an upland area at the eastern edge of the project site, adjacent to Camino Capistrano. Spanish false fleabane occurs in the understory.

Disturbed mule fat scrub is consistent with the *Baccharis salicifolia* association in *A Manual of California Vegetation* (CNPS 2026b). This association is not considered a sensitive natural community by CDFW (2025).

Sycamore Riparian Woodland (7.4)

This community is found along the southern portion of Trabuco Creek, upstream of the railroad overcrossing. The canopy within this habitat is dominated by mature western sycamore (*Platanus racemosa*), with other riparian tree species largely confined to the lower canopy. Other dominant species include arroyo willow, Goodding's black willow (*Salix gooddingii*), and coast live oak. Western white clematis (*Clematis ligusticifolia*) was noted in the understory.

Sycamore riparian woodland is consistent with the *Platanus racemosa – Salix laevigata / Salix lasiolepis – Baccharis salicifolia* association in *A Manual of California Vegetation* (CNPS 2026b). This association is considered a sensitive natural community by CDFW (2025). Additionally, this area is along Trabuco Creek and Tributary 2, which are under the jurisdiction of the resource agencies (discussed further below under Jurisdictional Aquatic Resources).

Coast Live Oak Riparian Forest (7.5)

This community is found immediately downstream of the channelized portion of Trabuco Creek and also occurs along a tributary that flows from under Camino Capistrano to Trabuco Creek. This community is dominated by coast live oak and western sycamore as codominant tree species, with both arroyo and black willow in the lower canopy. Understory species include poison hemlock (*Conium maculatum*), Spanish false fleabane, pale spikerush (*Eleocharis macrostachya*), and rabbitsfoot grass (*Polypogon monspeliensis*), western ragweed (*Ambrosia psilostachya*), California mugwort (*Artemisia douglasiana),* and mule fat.

Coast live oak riparian forest is consistent with the *Platanus racemosa – Quercus agrifolia* association in *A Manual of California Vegetation* (CNPS 2026b). This association is considered a sensitive natural community by CDFW (2025). Additionally, this area is along Trabuco Creek and Tributary 1, which are under the jurisdiction of the resource agencies (discussed further below under Jurisdictional Aquatic Resources).

Arroyo Willow Riparian Woodland/Black Willow Riparian Woodland (7.6/7.7)

This community is found along the central stretch of Trabuco Creek where the canopy is dominated by arroyo willow and black willow. The understory species are similar to those described under coast live oak riparian forest.

Arroyo willow riparian woodland/black willow riparian woodland is consistent with the *Salix lasiolepis* and *Salix gooddingii* associations in *A Manual of California Vegetation* (CNPS 2026b). Both of these associations are considered sensitive natural communities by CDFW (2025). Additionally,

this area is along Trabuco Creek and Tributary 2, which are under the jurisdiction of the resource agencies (discussed further below under Jurisdictional Aquatic Resources).

Woodland (8.0)

Coast Live Oak Woodland (8.1)

This community is along the upper banks of Trabuco Creek and along the Trabuco Creek Trail. It is dominated by coast live oak. Woodland located nearer to the creek has an understory dominated by California sagebrush, blue elderberry, California buckwheat, and mule fat.

Coast live oak woodland is consistent with the *Quercus agrifolia* association in *A Manual of California Vegetation* (CNPS 2026b). This association is not considered a sensitive natural community by CDFW (2025).

Coast Live Oak Woodland/Ruderal (8.1/4.6)

This community is located west of the Trabuco Creek Trail and consists of scattered coast live oak trees with ruderal or bare understory.

Coast live oak woodland/ruderal is consistent with the *Quercus agrifolia* association mixed with the *Brassica nigra – Centaurea melitensis* semi-natural alliance in *A Manual of California Vegetation* (CNPS 2026b). These associations and alliances are not considered sensitive natural communities by CDFW (2025).

Mexican Elderberry Woodland (8.4)

This community is found in small patches in the ruderal grassland, where several blue elderberry grow in loose or tight stands. In some stands, citrus trees are mixed with the blue elderberry.

Mexican elderberry woodland is consistent with the *Sambucus nigra* Upland association in *A Manual of California Vegetation* (CNPS 2026b). This association is considered a provisional sensitive natural community by CDFW (2025). Provisional associations have been proposed based on the current limited amount data (i.e., few recorded occurrences) but require further research to validate that the limited amount of occurrence is based on its rarity and not lack of data.

Watercourses (13.0)

Flood Control Channel (13.4)

The portion of Trabuco Creek south of Camino Capistrano is channelized within a concrete and rip-rap along the channel.

Because flood control channels are unvegetated, there is no corresponding vegetation association in *A Manual of California Vegetation* (CNPS 2026b). However, this area is along Trabuco Creek, which is under the jurisdiction of the resource agencies (discussed further below under Jurisdictional Aquatic Resources).

Agriculture (14.0)

Irrigated Agriculture (14.2)

Irrigated agriculture is present north and west of the Swanner House where small fields of flowers and row crops are actively being irrigated and maintained.

Because agriculture is not a natural or semi-natural community, there is no corresponding vegetation association in *A Manual of California Vegetation* (CNPS 2025)

Developed (15.0)

Rural Development (15.2)

Areas mapped as rural development consist of the Swanner House, Dr. Joe Cortese Dog Park, the Village of Putuidem, and other abandoned buildings scattered on the project site. Developed areas on the project site include some associated ornamental vegetation, including planted citrus (*Citrus* spp.), eucalyptus (*Eucalyptus* sp.), and individual coast live oak trees.

Ornamental vegetation associated with developed areas is consistent with the *Eucalyptus* (*globulus*, *camaldulensis*) association and the *Quercus agrifolia* association in *A Manual of California Vegetation* (CNPS 2026b). It is not considered a sensitive natural community by CDFW (2025).

Ornamental Landscaping (15.5)

This vegetation community is comprised of nonnative, generally planted in the vicinity of the developed areas. There is also a portion of the eastern bank of Trabuco Creek where ornamental tree species have washed down. Characteristic species within this community include eucalyptus, bougainvillea (*Bougainvillea* sp.), and acacia (*Acacia* sp.).

Ornamental vegetation is consistent with the *Eucalyptus* (*globulus*, *camaldulensis*) association in *A Manual of California Vegetation* (CNPS 2026b). It is not considered a sensitive natural community by CDFW (2025).

Disturbed (16.0)

Cleared or Graded (16.1)

Cleared or graded areas consist of dirt roads and trails such as the Trabuco Creek Trail.

Because disturbed areas are unvegetated, there is no corresponding vegetation association in *A Manual of California Vegetation* (CNPS 2026b).

WILDLIFE

Fish

Suitable habitat for fish is limited to Trabuco Creek and its tributary. No fish were observed during the field visit but adaptable freshwater species such as western mosquitofish (*Gambusia affinis*) are likely present within the site.

Amphibians

Within the project site, amphibians are expected to occur within Trabuco Creek as well as adjacent uplands. The only amphibian observed on the project site was the Baja California tree frog (*Pseudacris hypochondriaca*), a small species common in creeks and other waterways. The nonnative American bullfrog (*Lithobates catesbianus*) was heard from Trabuco Creek downstream of the project site. Other amphibians with potential to occur within the project site include California tree frog (*Pseudacris cadaverine*), western toad (*Anaxyrus boreas*), garden slender salamander (*Batrachoseps major*), and black-bellied slender salamander (*Batrachoseps nigriventris*).

Reptiles

Both the riparian and upland portions of the project site contain suitable habitat for a variety of reptile species, though the only species observed within the project site was the western fence lizard (*Sceloporus occidentalis*). Other species that can be expected within the project site include common side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), gopher snake (*Pituophis catenifer*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

Birds

Bird species associated with riparian forest, oak woodlands, coastal sage scrub, ruderal grasslands, and developed areas are common within the project site, reflecting the diverse matrix of habitats within the project site.

Bird species characteristic of riparian forest observed within the project site include Cassin's kingbird (*Tyrannus vociferans*), common yellowthroat (*Geothlypis trichas*), and northern house wren (*Troglodytes aedon*). Other riparian species expected to occur within the project site include downy woodpecker (*Dryobates pubescens*), Bullock's oriole (*Icterus bullockii*), and song sparrow (*Melospiza melodia*).

Bird species characteristic of oak woodlands observed within the project site include oak titmouse (*Baeolophus inornatus*), Nuttall's woodpecker (*Dryobates nuttalli*), Hutton's vireo (*Vireo huttonii*), and California scrub-jay (*Aphelocoma californica*). Other oak woodland species expected to occur within the project site include acorn woodpecker (*Melanerpes formicivorus*) and white-breasted nuthatch (*Sitta carolinensis*).

Bird species characteristic of coastal sage scrub present within the project site include wrentit (*Chamaea fasciata*) and spotted towhee (*Pipilo maculatus*). Other coastal sage scrub species expected to occur within the project site include California thrasher (*Toxostoma redivivum*) and Bewick's wren (*Thryomanes bewickii*).

Bird species characteristic of ruderal grasslands present within the project site include ash-throated flycatcher (*Myiarchus cinerascens*) and western kingbird (*Tyrannus verticalis*). Other species of this vegetation community expected to occur within the project site include Say's phoebe (*Sayornis saya*), American pipit (*Anthus rubescens*), and Savannah sparrow (*Passerculus sandwichensis*).

Bird species characteristic of developed areas present within the project site include black phoebe (*Sayornis nigricans*), northern mockingbird (*Mimus polyglottos*), and house finch (*Haemorhous mexicanus*). Other species of developed areas expected to occur within the project site include European starling (*Sturnus vulgaris*) and rock pigeon (*Columba livia*).

Mammals

The ruderal, woodland, and riparian habitats within the project site are expected to host a variety of mammal species, including both those resident within the project site and those using the site as a corridor between undeveloped areas to the east and west. The only mammal species observed within the project site included desert cottontail (*Sylvilagus audubonii*) and California ground squirrel (*Otospermophilus beecheyi*). Other mammals expected to occur on the project site include raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), Botta's pocket gopher (*Megascapheus bottae*), and bobcat (*Lynx rufus*).

WILDLIFE MOVEMENT AND HABITAT CONNECTIVITY

The project site is bounded by existing developments to the north and east; Camino Capistrano and I-5 to the east; the railroad tracks to the west; and additional development approximately 0.5 mile to the west of the railroad tracks. Although the project site is bounded by adjacent development, and native upland habitat is limited on the project site, habitat on the project site is contiguous with open space to the west of the railroad tracks along Oso Creek, which is higher quality habitat. Additionally, Trabuco Creek provides high quality riparian habitat and connects with other larger areas of open space. Trabuco Creek functions as a regionally significant movement corridor. Upstream of the project site (north of I-5), Trabuco Creek connects with O'Neill Regional Park, open space within Rancho Mission Viejo, and the Cleveland National Forest. Downstream of the project site, Trabuco Creek connects with Oso Creek and San Juan Creek, which in turn connect with other areas of open space such as the Salt Creek Corridor, Aliso Canyon, and the San Juan Hills.

Although Trabuco Creek is a perennial creek on the project site, portions of it have been channelized, which limits its potential to be used by aquatic species. Downstream of the project site, Trabuco Creek has been reinforced with grouted riprap on the slope under the railroad bridge. While herpetofauna could traverse this barrier, fish species would not be expected to be able to move upstream past this barrier. Secondly, the creek is channelized and includes a drop structure just downstream of Camino Capistrano, which presents another barrier to fish movement upstream of the project site. Native aquatic species are known to occur upstream of the project site and could be washed downstream into the project site; however, because of the barriers to upstream movement and the lack of vegetation cover in the channelized portion, movement of aquatic species in the upstream direction would be expected to be limited.

REGIONAL HABITAT CONSERVATION PLAN

The project site is within the Coastal Subarea of the Central-Coastal NCCP/HCP. A portion of the project site along Trabuco Creek (21.578 acres) is designated an "Existing Use" area under the NCCP/HCP (see **Figure 6: California Gnatcatcher Critical Habitat**). Per Section 6.1 of the Implementation Agreement of the NCCP/HCP, "The NCCP/HCP does not establish permanent commitments for the Existing Use Areas…however, because significant portions of these contain

Identified Species, including the [California] gnatcatcher, and these areas are may also serve to provide habitat for source populations in the event of declines of Identified Species within the Reserve System due to natural or other factors, Take in these areas is not authorized under this Agreement… Any activity that would result in Take in such areas shall require the approval of applicable regulatory agencies pursuant to FESA and CESA."

COVENANT EASEMENT

In 2002, the City executed a covenant protecting and enhancing 9.6 acres along Trabuco Creek and Tributary 1 within the project site (see **Figure 7: Trabuco Creek Covenant Easement**), as mitigation for the filling of 1.9 acres of waters of the United States at the nearby Lower Rosan Ranch. Per the covenant, "[The City] shall in perpetuity maintain the mitigation site consisting of approximately 9.6 acres… in accordance with the Habitat Mitigation and Monitoring Plan for conservation purposes."

SPECIAL-STATUS BIOLOGICAL RESOURCES

San Juan Capistrano supports various special-status natural communities, plants, and animals. **Appendix E (Special-Status Species Identified as Potentially Occurring in the Project Vicinity)** provides a table that identifies special-status plant and wildlife species reported from the vicinity of the project site or with potential to occur (based on the literature review and the LSA Biologists' experience in the region) and includes detailed information about each species' habitat and distribution, State and Federal status designations, and their potential for occurrence within the project site. As stated in the methodology section above, the literature review included occurrence records from five USGS topographic quadrangles surrounding the project site; this is a large, variable geographic and topographic area containing numerous habitat types not found on the project site (e.g., coastal bluff habitats and beaches). As such, many of the species listed in **Appendix E** are not anticipated to occur on the project site due to historic and ongoing anthropogenic disturbances and/or the lack of suitable habitat.

The following subsections provide specific discussions for special-status natural communities (including jurisdictional aquatic resources), plants, and wildlife species.

Special-Status Natural Communities

The CNDDB search identified occurrences of eight special-status natural communities within the five-quadrangle search area. Of these, two occur on the project site along Trabuco Creek: southern coast live oak riparian forest and southern mixed riparian forest.

Six natural communities considered sensitive by CDFW (2025) were mapped on the project site, including two upland communities and four riparian communities (inclusive of the two reported by the CNDDB). Each of these sensitive natural communities are discussed below.

Encelia scrub is located adjacent to the dog park and appears to have been planted in approximately 2014 based on a review of historic aerial imagery available on Google Earth. Although it is not naturally occurring, Encelia scrub is a coastal sage scrub community that provides habitat for native wildlife species, including the California gnatcatcher. Encelia scrub is one of several coastal sage scrub communities on the project site and is protected by the NCCP/HCP.

Mexican elderberry scrub is present in a few patches around the edges of the ruderal field areas. This sensitive natural community is provisional until it is determined whether the limited number of occurrences is due to its limited distribution or a lack of data. Mexican elderberry scrub occurs in small patches on the project site but provides habitat for wildlife species.

Four sensitive natural communities occur along Trabuco Creek and its associated tributaries: willow riparian scrub, sycamore riparian woodland, coast live oak riparian forest (i.e., southern coast live oak riparian forest), and arroyo willow riparian forest/black willow riparian forest (i.e., southern mixed riparian forest). Riparian areas are naturally limited in distribution within Southern California and provide high-quality habitat for wildlife. Riparian habitat, including these and other riparian vegetation types, is within the jurisdiction of the resource agencies as discussed below.

Jurisdictional Aquatic Resources

The USACE, under Section 404 of the federal CWA, regulates discharges of dredged or fill material into "waters of the United States." These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a connection to interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or it may be indirect (through a connection identified in USACE regulations). The USACE typically regulates any body of water displaying an "ordinary high-water mark" as non-wetland waters of the United States. To be considered a "jurisdictional wetland" under Section 404, an area must possess hydrophytic vegetation, hydric soils, and wetland hydrology.

The CDFW, under Sections 1600 et seq. of the California Fish and Game Code, regulates alteration to lakes, rivers, and streams. A stream is defined by the presence of a channel bed and banks and at least an occasional flow of water.

The RWQCB is responsible for the administration of Section 401 of the CWA through water quality certification of any activity that may result in a discharge to jurisdictional waters of the United States. The RWQCB may also regulate discharges to "waters of the State," including wetlands, under the California Porter-Cologne Water Quality Control Act.

Trabuco Creek runs along the eastern and southern sides of the project site. This perennial waterway originates in the Santa Ana Mountains and flows generally southwest. Trabuco Creek enters the project site through a box culvert that flows under Camino Capistrano. The upper portion of the creek within the project site is concrete-lined. After approximately 500 feet, the creek becomes an unlined, natural streambed that is densely vegetated by western sycamore, arroyo and black willow, and coast live oak. The banks of the stream are vegetated by a mix of riparian woodland and coastal sage scrub. Trabuco Creek flows over grouted riprap under the railroad bridge at the southwestern project boundary. Portions of Trabuco Creek within the project site meet the three-parameter criteria (i.e., hydrology, hydric soils, and hydrophytic vegetation) to be considered wetlands. The extent of each agency's jurisdiction along Trabuco Creek is shown below in **Table B**.

Additionally, two small, unnamed tributaries enter the project site from culverts underneath Camino Capistrano on the east side of the project site and flow into Trabuco Creek. The northern tributary (Tributary 1) is unlined, and vegetation composition is similar to Trabuco Creek, though with a

greater density of nonnative, ornamental trees. The southern tributary (Tributary 2) is concrete-lined. Portions of Tributary 1 within the project site meet the three-parameter criteria (i.e., hydrology, hydric soils, and hydrophytic vegetation) to be considered wetlands. However, there are no wetlands along Tributary 2 since it is concrete lined. The extent of each agency's jurisdiction along Tributary 1 and Tributary 2 is shown below in **Table B**.

Table B: Jurisdictional Resources on the Project Site

Feature	USACE		RWQCB		CDFW	Linear Feet
	Non-Wetland WOTUS (acres)	Wetland WOTUS (acres)	Non-Wetland WOTS (acres)	Wetland WOTS (acres)	CDFW Streambed/ Riparian (acres)	
Trabuco Creek	0.430	2.549	0.430	2.549	11.022	3,100
Tributary 1	0.000	0.121	0.000	0.121	0.514	374
Tributary 2	0.000	0.000	0.013	0.000	0.015	106
Total	**0.430**	**2.670**	**0.443**	**2.670**	**11.551**	**3,580**

Source: Compiled by LSA (2026).
CDFW = California Department of Fish and Wildlife
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers
WOTS = waters of the State
WOTUS = waters of the United States

Further details can be found in the Jurisdictional Delineation (**Appendix D: Jurisdictional Delineation**).

Special-Status Plants

The literature review identified 68 special-status plant species that have been reported from the project region (i.e., *Dana Point*, *San Juan Capistrano*, *San Clemente*, *Canada Gobernadora,* and *Laguna Beach* USGS quadrangles). Details on habitat requirements, range, and potential for occurrence are described for each species in **Appendix E (**see **Table E-1: Special-Status Plant Species Known to Occur in the Project Region)**. Of these, 62 species are not expected to occur due to lack of suitable habitat, because the project site is outside the species range, or because they were not observed during focused surveys conducted to date (June 2026). Species that were observed or have potential to occur on the project site are listed below and shown on **Figure 8: Special Status Species Locations**.

The following species were incidentally observed during the July 2025 general survey and/or during special status plant surveys to date (June 2026):

- San Diego sagewort (*Artemisia palmeri*, CRPR 4.2)
- San Diego viguiera (*Bahiopsis laciniata*, CRPR 4.3) [introduced]
- Paniculate tarplant (*Deinandra paniculata,* CRPR 4.2)
- Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*, CRPR 4.2) [planted]
- Coulter's matilija poppy (*Romneya coulteri*, CRPR 4.2) [planted]

Locations of these species are being tracked by the CNPS and the CDFW; however, they are on a watch list but are not yet considered threatened or endangered in the project region. Two CRPR 4 species, San Diego sagewort and paniculate tarplant, were observed along Trabuco Creek. Southwestern spiny rush and Coulter's matilija poppy are planted in the native garden in Putuidem Village; no naturally occurring individuals were observed in habitat along Trabuco Creek (their expected habitat). San Diego County viguiera was observed in coastal sage scrub on the east side of Trabuco Creek, adjacent to Camino Capistrano. Although this species is native to nearby San Diego County, populations in Orange County are believed to be introduced.

The following species has potential to occur on the project site (focused surveys are in progress; however, this species blooms later in the season so the survey has not yet been conducted [June 2026]):

- White rabbit-tobacco (*Pseudognaphalium leucocephalum*, CRPR 2B.2)

Although potentially suitable habitat is present for these species, the following species are not expected to occur on the project site because they have not been observed during focused surveys to date (June 2026):

- Coulter's saltbush (*Atriplex coulteri,* CRPR 1B.2)
- Thread-leaved brodiaea (*Brodiaea filifolia*, FT, CRPR 1.1)
- Intermediate mariposa-lily (*Calochortus weedii* ssp. *intermedia*, CRPR 1B.2)
- Southern tarplant (*Centromadia parryi* ssp. *australis*, CRPR 1B.1)
- Lewis's evening primrose (*Camissoniopsis lewisii*, CRPR 3)
- Seaside cistanthe (*Cistanthe maritima,* CRPR 4.2)
- Small-flowered morning-glory (*Convolvulus simulans*, CRPR 4.2)
- Western dichondra (*Dichondra occidentalis*, CRPR 4.2)
- Many-stemmed dudleya (*Dudleya multicaulis*, CRPR 1B.2)
- Palmer's grapplinghook (*Harpagonella palmeri*, CRPR 4.2)
- Vernal barley (*Hordeum intercedens,* CRPR 3.2)
- Mesa horkelia (*Horkelia cuneata* var. *puberula,* CRPR 1B.1)
- California satintail (*Imperata brevifolia*, CRPR 2.1)
- Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*, CRPR 1B.2)
- Robinson's pepper-grass (*Lepidium virginicum* ssp. *robinsonii*, CRPR 4.3)
- Oscellated Humboldt lily (*Lilium humboldtii* var. *oscellatum*, CRPR 4.2)
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei,* CRPR 3.1)
- California box-thorn (*Lycium californicum,* CRPR 4.2)
- Cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis,* CRPR 4.2)
- Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*, CRPR 4.2)
- Mud nama (*Nama stenocarpa*, CRPR 2B.2)
- Allen's pentachaeta (*Pentachaeta aurea* ssp. *allenii*, CRPR 1B.1)
- South Coast branching phacelia (*Phacelia ramosissima* var. *austrolittoralis*, CRPR 3.2)
- Chaparral rein orchid (*Piperia cooperi,* CRPR 4.2)

- Ashy spike-moss (*Selaginella cinerascens*, CRPR 4.1)

Special-Status Wildlife Species

Based on the review of the current biological database records, 50 special-status wildlife species have been reported from the project region (i.e., *Dana Point*, *San Juan Capistrano*, *San Clemente*, *Canada Gobernadora,* and *Laguna Beach* USGS quadrangles). Details on habitat requirements, range, and potential for occurrence are described for each species in **Appendix E (**see **Table E-2: Special-Status Wildlife Species Known to Occur in the Project Region)**. Of the species reported from the region, 17 are not expected to occur due to lack of suitable habitat, or because the project site is outside of the range of the species. Species that were observed or have potential to occur on the project site are listed below and are shown on **Figure 8: Special Status Species Locations**. Those that have potential to occur and are federally or State listed, or candidates or proposed for listing, are discussed further below.

The following species have been observed during the July 2025 general survey or subsequent focused survey visits in 2026:

- Crotch's bumble bee (*Bombus crotchii*, State Candidate Endangered [SCE])
- Southwestern pond turtle (*Actinemys pallida,* Federally Proposed Threatened [FPT], Species of Special Concern [SSC])
- Coastal California gnatcatcher (*Polioptila californica californica,* Federally Threatened, SSC)
- Yellow warbler (*Setophaga petechia*, SSC)
- Yellow-breasted chat (*Icteria virens*, SSC)

The following species have a moderate to high potential to occur on the project site:

- Orange-throated whiptail (*Aspidoscelis hyperthyra*, Special Animal [SA])
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*, SSC)
- Coast horned lizard (*Phrynosoma blainvillii*, SSC)
- California glossy snake (*Arizona elegans*, SSC)
- Two-striped garter snake (*Thamnophis hammondii*, SSC)
- Red diamond rattlesnake (*Crotalus ruber*, SSC)
- Cooper's hawk (*Astur cooperii*, Watch List [WL])
- White-tailed kite (*Elanus leucurus*, California Fully Protected)
- Least Bell's vireo (*Vireo bellii pusillus*, Federally Endangered [FE], State Endangered {SE])
- Pallid bat (*Antrozous pallidus;* foraging only*,* SSC)
- Western red bat (*Lasiurus blossevillii*, SSC)
- Western mastiff bat (*Eumops perotis californicus;* foraging only, SSC)
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*, SSC)
- Big free-tailed bat (*Nyctinomops macrotis*, SSC)
- San Diego desert woodrat (*Neotoma lepida intermedia*, SSC)

The following species have a low potential to occur on the project site:

- Monarch (overwintering California population; *Danaus plexippus plexippus* pop. 1, FPT)
- Arroyo chub (*Gila orcutti*, SSC)
- Western spadefoot (*Spea hammondii*, FPT, SSC)
- Southern California legless lizard (*Anniella stebbinsi*, SSC)
- South Coast garter snake (*Thamnophis sirtalis* pop. 1*,* SSC)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*, SSC)
- Long-eared owl (*Asio otus,* SSC)
- Burrowing owl (*Athene cunicularia*, SCE)
- Southwestern willow flycatcher (*Empidonax traillii extimus*, FE, SE)
- Loggerhead shrike (*Lanius ludovicianus,* SSC)
- California horned lark (*Eremophila alpestris actia*, WL)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens,* WL)
- Mountain lion (*Puma concolor,* State Threatened)

Crotch's bumble bee is a Candidate for State listing as Endangered. It is a large-winged insect found in grasslands and coastal sage scrub in southern and central California. Favored nectar plants include black sage (*Salvia mellifera*), milkweeds (*Asclepias* spp.), and lupines (*Lupinus* spp.). Crotch's bumble bee has declined due to habitat loss, climate change, and the use of pesticides. This species has been reported from Riley Wilderness Park, Laguna Beach, Laguna Niguel, and near Camino del Avion in San Juan Capistrano (CDFW 2026a). Suitable coastal sage scrub with black sage is present within the project site. Focused surveys for this species are in progress in spring/summer 2026. To date, one Crotch's bumble bee has been observed in the Putuidem Village area; focused surveys are not yet complete.

Overwintering monarch sites have been proposed for federal listing as Threatened. The monarch is a large butterfly found throughout much of North America; in California, it is found across a variety of forest, scrub, and grassland communities, and uses milkweed as a host plant. Populations in California carry out a complex, multi-stage migration, with many individuals spending the winter months at coastal overwintering sites in Southern and Central California. The majority of overwintering sites are within a few miles of the immediate coast. This species has declined due to habitat loss, milkweed declines, and the use of pesticides. Overwintering populations have declined by more than 95 percent in the last 40 years. Potentially suitable overwintering habitat is present on the project site; however, no monarch overwintering sites are known from the project site. While the project site is more inland than the typical overwintering sites, historical overwintering sites are known from elsewhere in San Juan Capistrano (Rollingwood Lane at I-5/Ortega Highway; CDFW 2026a).

The Southern California steelhead Distinct Population Segment (DPS) is federally and State Endangered. The DPS encompasses steelhead (*Oncorhynchus mykiss irideus*) populations occurring in Southern California from Santa Maria to Tijuana Rivers. Historically this species was commonly found in freshwater creeks and rivers throughout Orange County where adults would spawn and young would develop before migrating downstream to the ocean. Steelhead have been extirpated from much of their local range due to stream channelization and damming of waterways. Steelhead have been detected from Trabuco Creek immediately downstream of the project site at the confluence with Oso Creek; however, fish passage is prevented by the Metrolink and I-5 bridges at

the southern and northeast borders of the project site, respectively. An independent project to build a fish ladder to allow fish to move between the Pacific Ocean upstream along Trabuco Creek is currently in the design phase. If this project is constructed, the portion of Trabuco Creek within the project site would allow for movement of steelhead through the project site, along with Pacific lamprey (*Lampetra tridentata*).

The western spadefoot is a federally proposed Threatened species and a California Species of Special Concern. It is a small toad that occurs in coastal sage scrub, grasslands, and hardwood woodlands. While it is largely terrestrial, western spadefoot requires temporary pools for breeding. It spends the dry season aestivating underground. This species has been reported from several locations in the vicinity including Caspers Regional Park (Bell Canyon), Horno Creek, Cristianitos Creek, San Juan Creek, Prima Deshecha Landfill, and Riley Wilderness Park (CDFW 2026a). Suitable foraging habitat, but no suitable breeding habitat, is present on the project site.

The southwestern pond turtle is a federally proposed Threatened species and a California Species of Special Concern. It is a small turtle native to the southwestern United States. It occurs along perennial and intermittent freshwater streams with basking sites such as mud banks, logs, and rocks. It has declined due to channelization and development of waterways, and competition from introduced species. This species has been reported from several nearby locations including Trabuco Creek, Oso Creek, Aliso Canyon, Cristianitos Canyon, Salt Creek, Sulphur Creek (Niguel Lake), and San Mateo Creek (CDFW 2026a). Suitable habitat is present on the project site. Focused surveys for this species are in progress in spring/summer 2026. To date, one southwestern pond turtle has been observed along Trabuco Creek; focused surveys are not yet complete.

The coastal California gnatcatcher is a federally Threatened species and a California Species of Special Concern. This species occurs in coastal sage scrub habitat in low-lying foothills and valleys up to about 2,500 feet in elevation in cismontane southwestern California and Baja California. One individual was heard calling repeatedly in the coastal sage scrub on the eastern terrace between Trabuco Creek and Camino Capistrano (see **Figure 5: Vegetation Map**) during the general survey visit in July 2025. The portion of the project site where it was observed is within the federally-designated critical habitat for this species (see **Figure 6: California Gnatcatcher Critical Habitat**). This species has been reported from several locations near the project site including locations in Mission Viejo (along Trabuco Creek), Rancho Mission Viejo, San Juan Capistrano, Dana Point, Salt Creek, Prima Deshecha, Riley Wilderness Park, and Caspers Regional Park (CDFW 2026a). Suitable habitat is present on the project site.

The burrowing owl is a Candidate for State listing as Endangered. It is a small owl historically found in grasslands, desert, and scrub habitats throughout California, including much of Orange County. Loss of open space to intensive agriculture and urbanization, coupled with prey loss, have led to declines throughout much of its range. This species has been reported from Prima Deshecha Landfill, San Onofre State Beach, and Camp Pendleton (CDFW 2026a). The project site's ruderal upland areas provide suitable foraging, nesting, and wintering habitat for this species. Focused surveys for this species are in progress in spring/summer 2026. To date, no burrowing owls have been observed; however, a finding cannot be made until all protocol surveys have been completed.

The southwestern willow flycatcher and least Bell's vireo are both federally and State Endangered species. These small songbirds were historically found in riparian habitat throughout Southern and Central California. Various factors, including habitat destruction, drought, cowbird parasitism, and potentially loss of wintering and migratory stopover habitat led to population declines in both species. The last known breeding site for the flycatcher in Orange County was in Cañada Gobernadora, within 5 miles of the project site; however, this population was last recorded in 2009. Least Bell's vireo has been reported from many locations near the project site including along Trabuco Creek, Oso Creek, San Juan Creek, Prima Deshecha Landfill, Rancho Mission Viejo, Aliso Creek, and Cristianitos Creek (CDFW 2026a). Suitable riparian habitat is present along Trabuco Creek for both of these species. Focused surveys for these species are in progress in spring/summer 2026. To date, no least Bell's vireos or southwestern willow flycatchers have been observed; however, a finding cannot be made until all protocol surveys have been completed.

The Southern California/Central Coast Evolutionarily Significant Unit (ESU) of mountain lion was recently listed as a State Threatened species. It is a large, long-tailed cat native to much of western North America. The ESU consists of six populations located in the Santa Ana Mountains, Eastern Peninsular Range, San Gabriel / San Bernardino Mountains, Santa Monica Mountains (Central Coast South), Central Coast Central, and Central Coast North (Santa Cruz Mountains). Mountain lions require territories of up to several hundred square miles and have declined due to habitat fragmentation. This species is known from both the Santa Ana Mountains and the San Joaquin Hills, and individuals may use the project site as a corridor between these two regions. This species is known to occur along Trabuco Creek (upstream of the project site), along San Juan Creek in Rancho Mission Viejo, at Prima Deshecha Landfill, Riley Wilderness Park, and Caspers Regional Park. The mountain lion may use Trabuco Creek and Oso Creek for wildlife movement.

Critical Habitat

Critical habitat areas are designated by the USFWS for federally listed species. These areas are considered to be essential to the conservation of such species and may need special management or protection (USFWS 2017). Critical habitat is designed to protect the essential physical and biological features (PBFs) of a landscape and essential areas in the appropriate quantity and spatial arrangement that a species needs to survive and reproduce and ultimately be conserved. However, designated critical habitat polygons sometimes include areas that do not include PBFs (such as developed or highly disturbed lands). Critical habitat designations affect only federal agency actions or federally funded or permitted activities (e.g., Section 7 Consultation under the Endangered Species Act). Critical habitat designations do not affect activities by private landowners if there is no federal nexus (e.g., no federal funding or authorization). Federal agencies are required to avoid "destruction" or "adverse modification" of designated critical habitat. FESA requires the designation of "critical habitat" for listed species when "prudent and determinable." Projects that require a USACE permit include a Section 7 Consultation that would provide a federal nexus and would be subject to regulations pertaining to critical habitat designations.

As shown on **Figure 6**, 21.58 acres of the project site are within Revised Final Designated Critical Habitat for the coastal California gnatcatcher. No other designated or proposed critical habitat occurs within the project site.

The PBFs of coastal California gnatcatcher critical habitat include (1) dynamic and successional sage scrub habitats that provide space for individual and population growth; normal behavior, breeding, reproduction, nesting, dispersal and foraging; and (2): non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats that provide space for dispersal, foraging, and nesting (USFWS 2008). The area mapped as California gnatcatcher critical habitat contains the PBFs needed by the California gnatcatcher. This area overlaps with the area designated as Existing Use under the Central–Coastal NCCP/HCP.

IMPACT FINDINGS AND RECOMMENDED MITIGATION MEASURES

This impact assessment assumes that the project would directly impact areas shown in **Figure 9: Project Impacts**. All permanent, temporary, fuel modification, drainage improvements, connections to infrastructure, and construction staging areas are assumed to occur within the boundaries of the project site and/or within adjacent existing developed areas (e.g., roadways, parking areas). The project would avoid direct impacts on Trabuco Creek and the associated covenant easement with the exception of the footings for the pedestrian bridge and the vehicle bridge over Tributary 1. The project also would not impact the existing Swanner House, Putuidem Village, and Dr. Cortese Dog Park.

The following impact assessment and recommended mitigation measures are intended to support the CEQA review process. The project, as currently proposed by the Applicant, coupled with LSA's survey results, experience in the region, and review of biological literature, provided the basis for this analysis. The impact discussion below addresses the range of impacts that may result from the proposed project, as well as recommended mitigation measures to avoid, reduce, or compensate for project impacts.

VEGETATION AND HABITAT IMPACTS

Project impacts on these vegetation communities that would occur during project implementation are shown below in **Table C** and are shown in **Figure 9**.

Scrub

The project would impact 0.28 acre of sage scrub communities (0.17 acre of sagebrush-buckwheat scrub, 0.10 acre of coyote bush scrub, and 0.01 acre of encelia scrub). These impacts are related to the realignment of the trail and along the edges of the development. These vegetation communities are not considered sensitive by CDFW; however, coastal sage scrub is considered locally significant as habitat for NCCP/HCP Covered Species, including the coastal California gnatcatcher. Therefore, the loss of 0.28 acre of sage scrub communities would be considered significant. Implementation of **Measure BIO-1** would reduce this impact to a less than significant level.

Grassland

The project would impact 14.59 acres of ruderal areas. These areas are routinely disced and are considered low value to most wildlife species. They are not considered sensitive vegetation communities. Therefore, the loss of 14.59 acres of ruderal areas are considered less than significant, and no mitigation would be required.

Table C: Project Impacts on Vegetation Communities and Land Cover Types

Vegetation or Land Cover Type	Vegetation Code (Jones & Stokes 1993)	Existing Vegetation on Project Site (Acres)	Project Impacts (Acres)	Sensitive Natural Community (Yes/No)
Scrub (2.0)				
Sagebrush–Buckwheat Scrub	2.3.1	3.81	0.17	No
Sagebrush Scrub	2.3.6	0.42	0	No
Coyote Bush Scrub	2.3.9	0.14	0.10	No
Encelia Scrub	2.3.13	1.13	0.01	Yes[1]
Sage Scrub–Grassland Ecotone	2.8	0.19	0	No
Subtotal Scrub		*5.69*	*0.28*	
Grassland (4.0)				
Ruderal	4.6	26.91	14.59	No
Subtotal Grassland		*26.91*	*14.59*	
Riparian (7.0)				
Willow Riparian Scrub	7.2	0.56	0	Yes
Disturbed Mule Fat Scrub	7.3	0.06	0	No
Sycamore Riparian Woodland	7.4	4.48	0.01	Yes
Coast Live Oak Riparian Forest	7.5	2.60	0.08	Yes
Arroyo Willow Riparian Forest/Black Willow Riparian Forest	7.6/7.7	1.38	0	Yes
Subtotal Riparian		*9.08*	*0.09*	
Woodland (8.0)				
Coast Live Oak Woodland	8.1	2.90	0.93	No
Coast Live Oak Woodland/Ruderal	8.1/4.6	2.40	1.57	No
Mexican Elderberry Woodland	8.4	0.13	0.06	Yes[2]
Subtotal Woodland		*5.43*	*2.56*	
Watercourses (13.0)				
Flood Control Channel	13.4	1.27	0	N/A
Subtotal Watercourses		1.27	*0*	
Agriculture (14.0)				
Irrigated Agriculture	14.2	1.18	0	N/A
Subtotal Agriculture		*1.18*	*0*	
Developed (15.0)				
Rural	15.2	12.01	5.82	N/A
Ornamental Landscaping	15.5	1.60	0.35	N/A
Subtotal Developed		*13.61*	*6.17*	

Table C: Project Impacts on Vegetation Communities and Land Cover Types

Vegetation or Land Cover Type	Vegetation Code (Jones & Stokes 1993)	Existing Vegetation on Project Site (Acres)	Project Impacts (Acres)	Sensitive Natural Community (Yes/No)
Disturbed (16.0)				
Cleared or Graded	16.1	2.30	0.81	N/A
Subtotal Disturbed		*2.30*	*0.81*	
TOTAL		**65.47**	**24.50**	

Source: Compiled by LSA (2026)

[1] On the project site, this vegetation type appears to be planted revegetation.

[2] Provisional: A vegetation type has been proposed based on limited data (few recorded occurrences) but requires further research to validate that the limited occurrences are based on its rarity rather than lack of data.

N/A = Not applicable; nonnative vegetation and developed land covers are not included on the List of Sensitive Natural Communities.

Riparian

The project would impact 0.09 acre of riparian communities (less than 0.01 acre of sycamore riparian woodland, and 0.08 acre of coast live oak riparian forest). These impacts are related to the realignment of the trail and construction of the bridge over Trabuco Creek. Although the project impact boundary shows that these areas would be impacted, the project Applicant intends to retain many of the existing coast live oak trees. The sycamore riparian woodland and coast live oak riparian forest are considered sensitive natural communities by the CDFW. These areas are also jurisdictional areas, which are discussed further below. Therefore, the loss of 0.09 acre of riparian woodland communities would be considered significant. Implementation of **Measure BIO-2** would reduce this impact to less than significant.

Woodland

The project would impact 2.56 acres of (upland) woodland communities (0.93 acre coast live oak woodland, 1.57 acre coast live oak woodland/ruderal, and 0.06 acre Mexican elderberry woodland). Although the project impact boundary shows that these areas would be impacted, the project Applicant intends to retain many of the existing coast live oak trees. The areas mapped as coast live oak/ruderal have limited understory as it is routinely disced. However, the coast live oak woodland areas have a well-developed understory of coastal sage scrub species. Coast live oak woodland is not considered a sensitive natural community by the CDFW; however, coast live oak trees are protected by the City's tree protection ordinance (discussed further below under Local Policies). Mexican elderberry woodland is considered a sensitive vegetation community by the CDFW. On the project site, Mexican elderberry occurs as a few isolated patches surrounded by ruderal habitat. While it provides nesting habitat and cover for small mammals, its value is limited by the small patch sizes. Therefore, the loss of 2.56 acres of woodland communities would be considered significant. Implementation of **Measure BIO-3** would reduce this impact to less than significant.

Watercourses

The project would not impact areas mapped as flood control channel. Therefore, no mitigation would be required.

Agriculture

The project would not impact areas mapped as irrigated agriculture. Therefore, no mitigation would be required.

Developed/Disturbed

The project would impact 5.82 acres of rural development, 0.35 acre of ornamental plantings, and 0.81 acre of cleared or graded. These land covers are considered of low value to wildlife. They are not considered sensitive natural communities. Therefore, these impacts would be considered less than significant, and no mitigation would be required.

WILDLIFE HABITAT

Native and non-native vegetation provides a variety of foraging, roosting, denning, and nesting opportunities for a variety of wildlife species. The project would result in the loss of 24.50 acres of

native and non-native habitat for wildlife species. The majority of the project impacts (21.57 acres) would occur in developed or highly disturbed areas that are of lower value to wildlife due to the disturbance associated with these areas (ruderal, rural development, cleared/graded, and ornamental). The remaining 2.93 acres would impact small areas of scrub, riparian, and woodland habitat that provide high quality habitat for wildlife. As described above, the oak trees would be retained to the extent possible, which would allow wildlife to continue to use the trees, assuming they are tolerant of the human activity that would be present during operation of the project. The loss of 24.50 acres of habitat is considered adverse; however, considering the highest quality habitat on the project site located along Trabuco Creek would be avoided, coupled with the amount of open space habitat available in the region, project impacts on wildlife habitat would be considered less than significant, and no mitigation would be required.

SPECIAL-STATUS SPECIES

Special-Status Plant Species

A total of five special-status plant species have been observed and one additional species has potential to occur on the project site (focused surveys are not yet completed) (see **Appendix E, Table E-1**). Project impacts on these species are discussed below.

One CRPR 1B and 2B species has potential to occur on the project site:

- White rabbit-tobacco (CRPR 2B.2)

This species is considered threatened or endangered in California. Because focused surveys have not yet been completed, the presence or absence of this late-blooming species is currently unknown. Project impacts on this species would be considered significant. Implementation of **Measure BIO-4** would reduce this impact to less than significant.

Of the special-status plant species that have potential to occur within the project site, five CRPR 4 species have been observed on the project site during focused surveys to date:

- San Diego sagewort (CRPR 4.2)
- San Diego viguiera (CRPR 4.3) [introduced[
- Southwestern spiny rush (CRPR 4.2) [planted]
- Paniculate tarplant (CRPR 4.2)
- Coulter's matilija poppy (CRPR 4.2) [planted]

Locations of these species are being tracked by the CNPS and the CDFW; however, they are on a watch list but are not yet considered threatened or endangered in the project region. Two CRPR 4 species, San Diego sagewort and paniculate tarplant, were incidentally observed during the July 2025 general biological survey and confirmed during the focused surveys. The paniculate tarplant population is on the east side of Trabuco Creek, south of Tributary 1. The San Diego sagewort was found along both banks of Trabuco Creek. As shown on **Figure 10: Impacts on Special Status Species**, both species' locations are outside the project footprint; therefore, neither would be impacted by the project. Additional populations of these species may be observed during the remaining focused

plant surveys. Project impacts on these species would be considered less than significant, and no mitigation would be required.

Coulter's matilija poppy and southwestern spiny rush, CRPR 4 species, are planted in the native garden in Putuidem Village. No naturally occurring individuals were observed in habitat along Trabuco Creek (their expected habitat). The project would not impact Putuidem Village as shown on **Figure 10: Impacts on Special Status Species**; therefore, there would be no impact on this species and no mitigation would be required.

San Diego viguiera, a CRPR 4 species, was also observed during focused surveys. The San Diego viguiera was observed in coastal sage scrub on the east side of Trabuco Creek, adjacent to Camino Capistrano. Although this species is native to nearby San Diego County, populations in Orange County are believed to be introduced. Additionally, the project would not impact the species location on the project site as shown on **Figure 10: Impacts on Special Status Species**. Therefore, project impacts on this species would be considered less than significant, and no mitigation would be required.

Special-Status Wildlife Species

A total of 34 special-status wildlife species have potential to occur on the project site (see **Appendix E, Table E-2**). Project impacts on these species are discussed below.

Invertebrates

Crotch's bumble bee was observed on the project site as shown on **Figure 10: Impacts on Special Status Species**. The immediate area where the Crotch's bumble bee was observed in Putuidem Village would not be impacted. However. the project site would impact 3.28 acres of suitable habitat (scrub, woodland, and ornamental) for this species. Any impact on this species would be considered significant. **Measure BIO-5** would reduce this impact to less than significant.

Monarch butterflies may overwinter on the project site. If removal of mature trees would occur during the overwinter season (October–March), the project could impact this species if it were overwintering on the project site. Any impact on an overwintering roost for this species would be considered significant. **Measure BIO-6** would reduce this impact to less than significant.

Fish

Trabuco Creek provides suitable habitat for arroyo chub, a California Species of Special Concern. If the fish ladder project is constructed, the future removal of barriers at the upper and lower ends of the project site would allow Southern California steelhead, a federally and State Endangered species, and potentially Pacific lamprey, a California Species of Special Concern. The project has been designed to avoid impacts on Trabuco Creek; only minor impacts would occur along the upper banks for placement of footings for the bridge over Trabuco Creek. Project activities have the potential to affect water quality along the creek, including runoff from agricultural and equestrian uses. Implementation of **Measure BIO-7** will reduce this impact to less than significant.

Amphibians

The western spadefoot, a species proposed for federal listing as Threatened, has potential to occur in scrub habitats for foraging but would not be expected to breed on the project site due to lack of suitable temporary breeding pools. The project would impact a limited amount of foraging habitat (0.28 acre of scrub habitat) for this species, but it would not impact a breeding location for the species. However, the western spadefoot could occur in the upland habitats adjacent to the creek and could be directly impacted by construction activities. Western spadefoot is a Covered species in the Coastal Subregion of the NCCP/HCP; therefore, no mitigation would be required.

Reptiles

The southwestern pond turtle, a species proposed for federal listing as Threatened, was observed along Trabuco Creek. The project has been designed to avoid impacts on Trabuco Creek as shown on **Figure 10: Impacts on Special Status Species**; only minor impacts would occur along the upper banks for placement of footings for the bridge over Trabuco Creek. However, the southwestern pond turtle could occur in the upland habitats adjacent to the creek and could be directly impacted by construction activities. Additionally, project activities have the potential to affect water quality along the creek, including runoff from agricultural and equestrian uses. Implementation of **Measures BIO-7** and **BIO-8** would reduce this impact to less than significant.

In addition, the following special-status reptile species have potential to occur on the project site:

- Coast horned lizard (SSC)
- Orange-throated whiptail (WL)
- Coastal whiptail (SSC)
- Southern California legless lizard (SSC)
- California glossy snake (SSC)
- Two-striped gartersnake (SSC)
- South coast gartersnake (SSC)
- Red diamond rattlesnake (SSC)

The project would impact 2.93 acres and would impact small areas of scrub, riparian, and woodland habitat that would be suitable for these species. Coast horned lizard, orange-throated whiptail, coastal whiptail, and red-diamond rattlesnake are Covered species in the Coastal Subregion of the NCCP/HCP; therefore, no mitigation would be required. Southern California legless lizard and California glossy snake are not covered by the NCCP/HCP, but they benefit from the habitat conserved in the reserves under this plan. Therefore, the impact on these species would be considered adverse but less than significant because the amount of habitat loss would be limited compared to the amount remaining in the project region. Therefore, no mitigation would be required for the loss of habitat for these species.

Two-striped gartersnake and south coast gartersnake have potential to occur along Trabuco Creek. As described above, the project has been designed to avoid impacts on Trabuco Creek; only minor impacts would occur along the upper banks for placement of footings for the bridge over Trabuco Creek. The project would impact 0.09 acre of riparian habitat for these species. The impact on these

species would be considered adverse but less than significant because the amount of habitat loss would be limited compared to the amount remaining in the project region. Therefore, no mitigation would be required for the loss of habitat for these species. Project activities have the potential to affect water quality along the creek, including runoff from agricultural and equestrian uses. Implementation of **Measure BIO-7** would reduce this impact to less than significant.

Birds

Coastal California gnatcatcher, a federally Threatened species, was incidentally observed in coastal sage scrub east of Trabuco Creek within the project site during the July 2025 general biological survey. The project would impact 0.28 acre of coastal sage scrub habitat for this species; 3.35 acres of critical habitat for this species (including areas that would not be suitable habitat for this species); and 3.35 acres of Existing Use areas under the NCCP/HCP (discussed further below under Local Policies). Additionally, noise generated by construction activities and project development during project operation could indirectly impact this species by deterring nesting adjacent to the project site and/or could interfere with the communication between nesting pairs of gnatcatchers, resulting in reduced nest success. Any impact on this species would be considered significant. Coastal California gnatcatcher is a Covered species under the NCCP/HCP; however, take of coastal California gnatcatcher is not covered in Existing Use areas. Implementation of **Measure BIO-1** would require compliance with NCCP/HCP measures and would reduce this impact to less than significant.

Least Bell's vireo and southwestern willow flycatcher, federally and State Endangered species, have potential to occur along Trabuco Creek on the project site. The project would impact 0.09 acre of riparian habitat suitable for these species. Additionally, noise generated by construction activities and project development during project operation could indirectly impact this species by deterring nesting adjacent to the project site and/or could interfere with the communication between nesting pairs of vireos/flycatchers, resulting in reduced nest success. If present, any impact on these species would be considered significant. Least Bell's vireo and southwestern willow flycatcher are Conditionally Covered species under the NCCP/HCP. Implementation of **Measure BIO-2** would reduce this impact to less than significant.

Burrowing owl, a state Candidate for listing as Endangered, has potential to occur on the project site. The project would impact 15.4 acres of suitable foraging, nesting, and wintering habitat for this species (ruderal, cleared and graded). If present, any impact on this species would be considered significant. Additionally, noise generated by construction activities and project development during project operation could indirectly impact this species by deterring nesting adjacent to the project site and/or could interfere with the communication between nesting pairs of burrowing owl, resulting in reduced nest success. Implementation of **Measure BIO-9** would reduce this impact to less than significant.

Cooper's hawk, white-tailed kite, and long-eared owl are special-status raptor species that have potential to occur on the project site for foraging and nesting. The project would impact 24.5 acres of suitable foraging and nesting habitat for this species. Nests of native bird/raptor species are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code; nests of white-tailed kite are also fully protected by the CDFW. Removal of vegetation, construction noise and activity adjacent to a nest, and dust from construction activities could impact active nests on or

adjacent to the project site. Any impact on an active nest of these species would be considered significant. Implementation of **Measure BIO-10** would reduce this impact to less than significant.

Loggerhead shrike, California horned lark, and Southern California rufous-crowned sparrow are special-status birds that have potential to occur in upland areas of the project site, while yellow-breasted chat and yellow warbler have been observed in riparian areas on the project site (as shown on **Figure 10: Impacts on Special Status Species**). The project would avoid Trabuco Creek; however, it would impact a total of 18.33 acres of potentially suitable habitat for these species (scrub, grassland, riparian, woodland, and cleared or graded). This impact would be considered adverse but less than significant because the amount of habitat loss would be limited compared to the amount available in the project region. However, nests of native bird species are protected by the MBTA and California Fish and Game Code. Removal of vegetation, construction noise and activity adjacent to a nest, and dust from construction activities could impact active nests on or adjacent to the project site. Any impact on an active nest of these species would be considered significant. Implementation of **Measure BIO-10** would reduce this impact to less than significant.

Nest Parasitism

The brown-headed cowbird (*Molothrus ater*) is a small blackbird. This species is a brood parasite, which means that it lays its eggs in the nests of similar-sized or smaller birds, and the other birds raise their young (Lowther 2020). This species is not native to coastal Southern California; this species was able to move across the deserts to reach the West Coast with the planting of windrows along the railroads, the growth of ranching and agriculture, and the increase in development (Rothstein 1994). Brown-headed cowbird brood parasitism has contributed to the decline of species listed as Threatened and Endangered, including the least Bell's vireo, southwestern willow flycatcher (Peer et al. 2020), and coastal California gnatcatcher (Braden et al. 1997), as well as other more common songbirds. Recovery efforts for these special-status species include trapping brown-headed cowbirds to remove them from native habitat areas across the region to increase nest productivity of the special status species.

Brown-headed cowbirds have been reported from open spaces near the project site, including Oso Creek and the Arroyo Trabuco Golf Course (eBird 2026), and were incidentally observed on the project site during focused surveys in spring/summer 2026. As this species is frequently associated with cattle and equestrian land uses, the establishment of equestrian stables on the project site may lead to an increase of brown-headed cowbirds on the project site. However, it should be noted that cowbirds frequently commute long distances between foraging and breeding sites each day, with commutes of more than 10 miles being recorded (Curson et al., 2000). As such, brown-headed cowbird abundance and distribution depends on regional landscape use. The vicinity of the project site already contains many features that support the presence of brown-headed cowbirds in the area, including the San Juan Capistrano Equestrian Center, which is only 0.5 mile south of the project site. The dominant land use type surrounding the project site, urban and suburban development, is also positively correlated with cowbird occupancy (Borgmann and Morrison 2010). The northern portion of the project site contains several existing actively managed agricultural fields that currently provide suitable habitat for foraging brown-headed cowbirds. Given the existing foraging habitat already present within and surrounding the project site, the establishment of additional equestrian facilities as part of the project may incrementally increase local brown-headed cowbird populations,

but the increase is not expected to be substantially more than the existing occurrence of this species in the project vicinity. Therefore, although an incremental increase in brown-headed cowbirds would be considered adverse, it would not be considered significant when considering the amount already present in the project vicinity. Therefore, no mitigation would be required.

Mammals

The mountain lion, a state Threatened species, has potential to occur on the project site, primarily along Trabuco Creek. As described above, the project site is located within a wildlife movement corridor connecting the Santa Ana Mountains with the San Joaquin Hills; mountain lion would be expected to move along Trabuco Creek for movement within the region. The project has been designed to avoid impacts on Trabuco Creek; only minor impacts would occur along the upper banks for placement of footings for the bridge over Trabuco Creek. Therefore, Trabuco Creek would remain open and available for wildlife movement. However, noise and night lighting from construction activity and/or the project development during operation could deter wildlife activity along Trabuco Creek, making it less suitable for wildlife movement. The potential effect of night lighting on wildlife movement is considered potentially significant. Implementation of **Measure BIO-11** would reduce this impact to less than significant.

San Diego desert woodrat, a California Species of Special Concern, has potential to occur on the project site. The project would impact 2.93 acres of suitable habitat (scrub, riparian, woodland) for this species. San Diego desert woodrat is a Covered species in the NCCP/HCP; therefore, no mitigation would be required.

The project site provides potential foraging habitat for several special-status bat species and potential roosting habitat within the riparian forest, oak woodland, and various abandoned structures and bridges. Bat species with potential to occur on the project site include: pallid bat, western red bat, western mastiff bat, pocketed free-tailed bat, and big free-tailed bat, as well as common species of bat. Roosting bats are protected by the California Fish and Game Code. Removal of roosting habitat, construction noise and adjacent activity adjacent to a maternity roost, and night lighting from construction activities or the project development during operation could impact active roosts on or adjacent to the project site. Project impacts on an active roosting location would be considered potentially significant. Implementation of **Measure BIO-12** would reduce this impact to less than significant.

CRITICAL HABITAT

The project would result in permanent impacts to 3.35 acres of designated critical habitat for coastal California gnatcatcher; the same area is also designated as Existing Use under the NCCP/HCP (described below under Local Policies). Of the area that would be impacted, only a portion of it is considered suitable habitat for coastal California gnatcatcher (0.18 acre[4]). Implementation of **Measure BIO-1** would reduce this impact to a less than significant level.

[4] The other 0.10 acre that would be impacted consists of fragments of habitat west of Trabuco Creek that are outside the critical habitat designation.

SPECIAL-STATUS NATURAL COMMUNITIES

The project would impact 0.09 acre of special-status riparian communities (0.01 acre of sycamore riparian woodland and 0.08 acre of coast live oak riparian forest). These impacts are related to the realignment of the trail and construction of the bridges over Trabuco Creek. The sycamore riparian woodland and coast live oak riparian forest are considered sensitive natural communities by the CDFW. These areas are also jurisdictional areas, which are discussed below. The loss of 0.09 acre of riparian woodland communities would be considered significant. Implementation of **Measure BIO-2** would reduce this impact to less than significant.

The project would impact 0.06 acre of Mexican elderberry woodland. This community is considered a sensitive vegetation community by the CDFW. However, on the project site, Mexican elderberry occurs as a few isolated patches surrounded by ruderal habitat. While it provides nesting habitat and cover for small mammals, its value is limited by the small patch sizes. Therefore, the loss of 0.06 acre of Mexican elderberry woodland would be considered adverse but less than significant, and no mitigation would be required.

JURISDICTIONAL WATERS

Trabuco Creek and two unnamed tributaries (Tributary 1 and Tributary 2) occur in the southern portion of the project site. A total of 3.100 acres of waters under the jurisdiction of the USACE occur on the project site (2.670 wetland WOTUS and 0.430 non-wetland WOTUS). A total of 3.113 acres of waters under the jurisdiction of the RWQCB occur on the project site (2.670 acres of wetland WOTS and 0.443 acre of non-wetland WOTS). A total of 11.551 acres of streambed under the jurisdiction of the CDFW occurs on the project site.

Impacts to jurisdictional waters are summarized in **Table D** below and shown in **Figure 11: Impacts to USACE/RWQCB Jurisdiction** and **Figure 12: Impacts to CDFW Jurisdiction**. The project would not impact any USACE or RWQCB jurisdictional waters along Trabuco Creek. The project would impact 0.093 acre of streambed riparian under the jurisdiction of CDFW (0.010 acre along Trabuco Creek and 0.083 acre along Tributary 1). These impacts would be considered significant; however, implementation of **Measure BIO-2** would reduce these impacts to less than significant.

Table D: Project Impacts on Jurisdictional Resources

Feature	USACE				RWQCB				CDFW			
	Non-Wetland WOTUS		Wetland WOTUS (acres)		Non-Wetland WOTS		Wetland WOTS (acres)		Streambed/ Riparian (acres)		Linear Feet	
	Existing (acres)	Impacted (acres)	Existing (acres)	Impacted (acres)	Existing (acres)	Impacted (acres)	Existing (acres)	Impacted (acres)	Existing (acres)	Impacted (acres)	Existing	Impacted
Trabuco Creek	0.430	0.000	2.549	0.000	0.430	0.000	2.549	0.000	11.022	0.01	3,100	137.3
Tributary 1	0.000	0.000	0.121	0.000	0.000	0.000	0.121	0.000	0.514	0.083	374	123.7
Tributary 2	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.015	0.000	106	0.0
Total	**0.430**	**0.000**	**2.670**	**0.000**	**0.443**	**0.000**	**2.670**	**0.000**	**11.551**	**0.093**	**3,580**	**261.0**

Source: Compiled by LSA (2026).
CDFW = California Department of Fish and Wildlife
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers
WOTS = waters of the State
WOTUS = waters of the United States

WILDLIFE MOVEMENT AND HABITAT CONNECTIVITY

As described above, Trabuco Creek supports both terrestrial and aquatic connectivity both locally and at the regional scale, linking the Santa Ana Mountains with the San Joaquin Hills, and as an aquatic linkage between the Santa Ana Mountains and the Pacific Ocean. The core of this wildlife linkage occurs along the aquatic (open water), riparian woodland, and coastal sage scrub habitat along Trabuco Creek.

The project has been designed to avoid impacts on Trabuco Creek; only minor impacts would occur along the upper banks for placement of footings for the bridge over Trabuco Creek. There would also be an event barn and community building on the east bank along Camino Capistrano. Noise, vibration, night lighting, and dust from construction activity and/or noise and night lighting of the project development during operation could deter wildlife activity along Trabuco Creek, making it less suitable for wildlife movement. Many of the wildlife species currently using this stretch of Trabuco Creek are likely somewhat acclimated to the urban-wildland interface since the project site is adjacent to I-5, Camino Capistrano, a school, the railroad bridge, and existing uses of the northern portion of the project site (i.e., Swanner House, Putuidem Village, and Dr. Cortese Dog Park). Construction impacts would be temporary in the immediate vicinity of construction activities. These indirect effects could temporarily alter migration behaviors, territories, or foraging habitats in select areas. However, because these are temporary effects, it is likely that wildlife already living and moving in close proximity to urban development would alter their normal functions for the duration of the project construction and then re-establish these functions once all temporary construction effects have been removed (Bowles 1995).

Following construction, there is potential for increased long-term indirect effects to wildlife movement within San Juan Creek due to increased noise, lighting, and other anthropogenic disturbance originating from the project. However, such affects are not expected to substantially change the level of wildlife movement along Trabuco Creek for the following reasons: (1) there is spatial separation between proposed structures and existing riparian and coastal sage scrub habitat; (2) the project is sited in close proximity to existing developments; (3) the project lighting plan is designed to have minimal spill into adjacent habitats; and (4) areas adjacent to San Juan Creek in the project vicinity already experience a high degree of human visitation and associated disturbance. Furthermore, the proposed project would not place any permanent barriers within any known wildlife movement corridors. Therefore, with implementation of **Measure BIO-11** described below for roosting bats, no additional mitigation would be required.

REGIONAL HABITAT CONSERVATION PLANS AND LOCAL POLICIES

The project is within the Coastal Subregion of the Orange County Central-Coastal NCCP/HCP. The project is generally compatible with the NCCP/HCP. Implementation of **Measure BIO-1** would require conservation measures to avoid and minimize impacts on coastal California gnatcatcher. However, as shown on **Figure 6 (California Gnatcatcher Critical Habitat)**, portions of Trabuco Creek are designated as an "Existing Use" area under the NCCP/HCP Planning Area, which indicates that the

City should make its best effort to obtain covenant easements[5] over privately-owned lands to assure that natural vegetation along these linkages is retained. Impacts to Existing Use Areas are not covered under the NCCP/HCP and would be require a full Section 7 Consultation prior to approval. The project would impact 3.35 acres of Existing Use areas under the NCCP/HCP. These areas are also designated as Critical Habitat for the coastal California gnatcatcher. However, much of these areas consists of habitat that is not considered suitable for the coastal California gnatcatcher. The project would impact a total of 0.18 acre of coastal sage scrub habitat within the critical habitat/Existing Use area that is suitable for the coastal California gnatcatcher. Implementation of **Measure BIO-1** would reduce the impact on Existing Use areas to less than significant.

Additionally, there is an existing covenant easement along Trabuco Creek that was established as mitigation for a previous project. The project has been designed to avoid impacts on the covenant easement; only minor impacts would occur along the upper banks of Trabuco Creek for placement of footings for a bridge spanning the waterway. The project would impact 0.65 acre of the covenant easement. Implementation of **Measures BIO-1** and **BIO-2** would reduce the impact on the covenant easement to less than significant.

The project is consistent with the City of San Juan Capistrano General Plan policies to protect and preserve important ecological and biological resources, and natural features (ridgelines, unique hillside features, and creeks). As described above, the project design avoids and minimizes impacts on Trabuco Creek and the majority of the Existing Use area (overlaps with Critical Habitat for coastal California gnatcatcher). The primary development area is within the ruderal area that is routinely disced and provides lower habitat value for wildlife species.

The City's Municipal Code requires tree preservation (Section 9-3.557) of existing trees, and requires a tree removal permit (Section 9-2.349) for any trees that would be removed that are greater than 6 inches diameter at breast height. The Municipal Code also requires that heritage trees are preserved, and encourages the use of native, drought resistant, and California-friendly trees. The project design maps the existing trees on the project site and indicates that they will be retained. It also includes the planting of additional trees. The potential use of non-native, invasive plant species in the planting palette could degrade the habitat along Trabuco Creek and downstream areas. Implementation of **Measure BIO-14** would reduce this potential impact to less than significant.

[5] The NCCP/HCP text specifically states that "the failure or inability to obtain a covenant easements over private lands located within Existing Use areas shall not be deemed a breach of the NCCP/HCP...".

MITIGATION MEASURES

The following measures are recommended to avoid, minimize, and compensate for potentially significant impacts identified for the project.

BIO-1A **Coastal Sage Scrub/ Coastal California Gnatcatcher Habitat.** Prior to issuance of a grading permit, the project Applicant will consult with the United States Fish and Wildlife Service (USFWS) to obtain a Biological Opinion/Incidental Take Permit for the loss of coastal sage scrub habitat occupied by coastal California gnatcatcher. The consultation will determine the appropriate compensatory mitigation for the loss of coastal sage scrub and other habitat within the Existing Use area; impacts on Critical Habitat; and impacts on the existing covenant easement. Project impacts will be compensated at no less than a 1:1 ratio (i.e., 1 acre of mitigation for each acre of habitat impacted). The mitigation strategy may include: preservation, enhancement, or restoration of on-site habitat; preservation, enhancement, or restoration of off-site habitat; purchase of credits at an approved mitigation bank; or a combination of these approaches, as approved by USFWS. If preservation, enhancement, or restoration would be used, a Habitat Mitigation and Monitoring Plan will be prepared and will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to vegetation structure and diversity
c. Mitigation site selection with appropriate hydrology
d. Seed mix and planting palette
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection.

BIO-1B **Standard Avoidance and Minimization Measures for Coastal California Gnatcatcher.** During vegetation clearing, the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) requires the following construction-related minimization mitigation measures:

a. To the maximum extent practicable, no grading of coastal sage scrub habitat that is occupied by nesting gnatcatchers shall occur during the breeding season (i.e., February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, the Property Owner/Developer [Applicant] shall provide USFWS/California Department of Fish and Wildlife (CDFW) with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens, and any other coastal sage scrub Covered

Species that are not otherwise flushed and shall carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.

b. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of coastal sage scrub habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of coastal sage scrub, a survey shall be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.

c. A monitoring biologist, acceptable to USFWS/CDFW shall be onsite during any clearing of coastal sage scrub. The Property Owner/Developer shall advise USFWS/CDFW at least 7 calendar days prior to the clearing of any habitat occupied by Covered Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing capture activities. The monitoring biologist shall flush Covered Species (avian or other mobile Covered Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they shall be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It shall be the responsibility of the monitoring biologist to assure that Covered Bird Species shall not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.

d. Following the completion of initial grading/earth movement activities, all areas of coastal sage scrub habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment shall be permitted within such marked areas.

e. In areas bordering the NCCP Reserve System containing significant coastal sage scrub identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations shall be restricted to a minimum number during construction consistent with Project construction requirements. Waste dirt or rubble shall not be deposited on adjacent coastal sage scrub identified in the NCCP/HCP for protection. Pre-construction meetings involving the monitoring biologist, construction supervisors, and equipment operators shall be conducted and documented to ensure maximum practicable adherence to these measures.

f. Coastal sage scrub identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed

with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.

BIO-2A **Riparian Habitat/Jurisdictional Permitting.** Prior to issuance of a grading permit, the project Applicant will obtain the appropriate permits to impact areas within the jurisdiction for Trabuco Creek and Tributary 1, including a Section 404 permit from the USACE, a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB), and a Section 1602 Streambed Alteration Agreement from CDFW. As currently designed, only a Streambed Alteration Agreement from CDFW would be needed. The project Applicant will consult with each agency to determine the appropriate compensatory mitigation for the loss of jurisdictional resources and impacts on the existing covenant easement. Project impacts will be compensated at no less than a 1:1 ratio (i.e., 1 acre of mitigation for each acre of jurisdiction impacted). The mitigation strategy may include preservation, enhancement, or restoration of on-site habitat; preservation, enhancement, or restoration of off-site habitat; purchase of credits at an approved mitigation bank; or a combination of these approaches, as approved by the permitting agency. If preservation, enhancement, or restoration would be used, a Habitat Mitigation and Monitoring Plan will be prepared and will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to vegetation structure and diversity
c. Mitigation site selection with appropriate hydrology
d. Seed mix and planting palette
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection

BIO-2B **Focused Riparian Birds Survey.** Prior to commencing construction activities, the project Applicant will retain a qualified biologist to conduct a protocol focused survey for least Bell's vireo and southwestern willow flycatcher. The surveys will be conducted in accordance with the latest USFWS survey protocol for each species. Focused surveys for least Bell's vireo will occur between April 10 and July 31 (USFWS 2001). Focused surveys for southwestern willow flycatcher will occur between May 15 and July 17 (USFWS 2010). These focused surveys are in progress in spring/summer 2026.

If least Bell's vireo and/or southwestern willow flycatcher are observed on or adjacent to the project site, the project Applicant will consult with the USFWS and CDFW to obtain a Biological Opinion/Incidental Take Permit. The consultation will also determine the appropriate compensatory mitigation for the loss of riparian habitat and appropriate avoidance and minimization measures for these species. Avoidance and minimization measures may include, but would not be limited to, restriction on removal of riparian vegetation during the breeding season (March 15

to September 15), pre-construction surveys (if work occurs within 500 feet of Trabuco Creek during the breeding season), protective buffers (if an active nest is observed), biological monitoring, and/or noise monitoring/noise abatement measures (if needed). These measures will be incorporated into the regulatory permits described above under **Measure BIO-2A**.

If neither least Bell's vireo or southwestern willow flycatchers are observed, the project Applicant will not need to obtain a Biological Opinion/Incidental Take Permit for these species. However, jurisdictional permitting described under **Measure BIO-2A** would still be required.

BIO-3A **Tree Survey/Tree Removal Permit.** Prior to issuance of a grading permit, the project Applicant will retain a Certified Arborist to conduct a tree survey of all trees subject to the City of San Juan Capistrano's (City) Municipal Code. This includes trees greater than 6 inches in diameter at breast height. Any trees that are 36 inches or greater in diameter at breast height will be considered "heritage trees". The tree survey will include the following species: California pepper (*Schinus molle*), oak (*Quercus* spp.), cedar (*Cedrus* spp.), blue gum eucalyptus (*Eucalyptus* spp.), walnut (*Juglans* spp.), olive (*Olea* spp.), sycamore (*Platanus* spp.), and cottonwood (*Populus* spp.). The project Applicant will work with the City to determine which trees will be retained and will prioritize retaining as many existing trees as possible, including heritage trees. If any trees will be removed, the project Applicant will apply for a Tree Removal Permit and will replace native trees removed at a minimum 1:1 ratio.

BIO-3B **Tree Protection.** Prior to the initiation of vegetation clearing or other construction activities, a Certified Arborist will identify and flag the appropriate Tree Protection Zone (TPZ) around each existing tree that will be retained on site. The TPZ will be fences with orange snow fencing or chain link fencing and signage posted to identify that there will be no entry, materials storage, or trenching within this area. The fencing/signage will be periodically checked by the biological monitor. If the fencing/signage requires repair, the Construction Contractor will fix the fencing/signage within one working day. The fencing/signage can be removed once construction activities are complete.

BIO-4 **Special-Status Plant Species.** Prior to the initiation of vegetation clearing or other construction activities, a focused survey will be conducted at the appropriate peak flowering season of white rabbit-tobacco. If this species is observed within the project site, the impact will be evaluated based on the size and status of the species observed. If no special-status plant species are observed, then no further mitigation will be required. This focused survey is in progress in summer/fall 2026.

California Rare Plant Ranks (CRPR) 1B and 2B Species. If any CRPR 1B or 2B species are present, impacts would be considered significant and mitigation will be required by the Lead Agency. If these species would not be impacted, then no further mitigation would be required.

If individuals of this species would be impacted, the project Applicant will consider whether the design could be revised to avoid or minimize impacts on the species location(s). If the species cannot be avoided, then the project Applicant will coordinate with the Lead Agency to determine the mitigation strategy. The mitigation strategy may include: (1) on-site preservation or enhancement; (2) purchase of credits from an approved mitigation bank; (3) translocation of this species to an off-site mitigation site. If translocation is selected, the project Applicant will prepare a Rare Plant Mitigation Plan for review and approval by the USFWS and CDFW. The Rare Plant Mitigation Plan will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to number of individuals
c. Mitigation site selection with appropriate microclimate
d. Methodology for collecting seed and translocating corms (including storage)
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection

BIO-5A **Crotch's Bumble Bee.** Prior to the initiation of vegetation removal or other construction activities, a qualified biologist with expertise in surveying for native bumble bees will conduct a focused survey for Crotch's bumble bee in accordance with the most recent CDFW guidelines (CDFW 2023). The focused survey will consist of three site visits during the colony active period (April through August). This focused survey is in progress in spring/summer 2026.

If Crotch's bumble bee is observed, the project Applicant will obtain an Incidental Take Permit from CDFW prior to removal of habitat for this species. The project Applicant will consult with CDFW to determine the appropriate compensatory mitigation for the loss of habitat for this species. Project impacts will be compensated at no less than a 1:1 ratio (i.e., 1 acre of mitigation for each acre of habitat impacted). The mitigation strategy may include: preservation, enhancement, or restoration of on-site habitat; preservation, enhancement, or restoration of off-site habitat; purchase of credits at a CDFW-approved mitigation bank; or a combination of these approaches, as approved by CDFW. If preservation, enhancement, or restoration would be used, a Habitat Mitigation and Monitoring Plan will be prepared and will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to vegetation structure and diversity
c. Mitigation site selection with appropriate microclimate
d. Seed mix and planting palette
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection

If no Crotch's bumble bees are observed, the project Applicant will not need to obtain an Incidental Take Permit, and no compensatory mitigation will be required.

BIO-5B **Crotch's Bumble Bee Biological Monitoring.** Regardless of the results of the focused survey conducted for **Measure BIO-5A**, CDFW (2023) survey guidelines require biological monitoring during vegetation removal. A qualified biological monitor will be present during the clearing of vegetation when Crotch's bumble bees are active (i.e., February 1 through October 31). The biological monitor will confirm that the project limits are clearly marked and that vegetation removal and construction staging occur only within the project limits. No biological monitoring would be needed from November 1 through January 31.

If Crotch's bumble bee is observed during the biological monitoring, the project Applicant will contact CDFW, and an Incidental Take Permit will be obtained as described above under **Measure BIO-5A**.

BIO-6 **Overwintering Monarch Butterflies.** Prior to the removal of any mature trees during the monarch overwintering season (October 1–March 31), the project Applicant will retain a qualified biologist to survey the tree(s) to be removed, as well as any trees located within 100 feet, for presence of overwintering monarch butterflies. The survey will be conducted during the overwintering season, during appropriate conditions. Surveys must be conducted before 10:00 a.m., at a temperature not to exceed 55 degrees Fahrenheit, with no rain or strong winds.

If overwintering monarchs are observed within the project site, the host tree(s) will be protected for the duration of the overwintering season. To prevent any impacts to the microclimate of the roost, a protective buffer of at least 100 feet will be implemented, within which mature trees will not be removed during the overwintering season.

BIO-7 **Water Quality.** Grading and construction resulting in ground disturbance should occur within the typical dry season (April 15 through October 15), as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Director of the City of San Juan Capistrano Development Services Department, or designee, will verify that project plans require the Construction Contractor to install adequate erosion and sedimentation barriers (e.g., silt fencing) prior to ground disturbance to prevent any sediment-laden runoff or debris from entering on-site waterways during the wet season or periods of rain.

This silt fencing will also serve as a temporary barrier to wildlife entering work areas during construction. The barriers will consist of 3-foot-tall silt fencing buried to a depth of at least 6 inches below the soil surface along the outer limits of all work areas (or as otherwise required by the storm water pollution and prevention plan). These barriers will be inspected daily by construction personnel and maintained and repaired as necessary for the duration of construction to ensure that they are

functional and are not a hazard to wildlife on the outer side of the fence. All barriers will be removed following completion of construction.

BIO-8A **Southwestern Pond Turtle.** Prior to the initiation of vegetation removal or other construction activities, a qualified biologist will conduct a focused survey for southwestern pond turtle in accordance with the most recent guidelines (USGS 2006). The focused survey will consist of multiple site visits during the active period (April through August). This focused survey is in progress in spring/summer 2026.

If southwestern pond turtle is observed, the project Applicant will conduct a Section 7 Conference with the USFWS and will also consult with the CDFW associated with jurisdictional permitting described under **Measure BIO-2A**. The project Applicant will consult with the USFWS/CDFW to determine the appropriate avoidance and minimization measures (e.g., pre-construction surveys, biological monitoring, exclusion fencing) to avoid direct mortality of this species. The consultation will also determine the appropriate compensatory mitigation for the loss of habitat for this species. Project impacts will be compensated at no less than a 1:1 ratio (i.e., 1 acre of mitigation for each acre of habitat impacted). The mitigation strategy may include: preservation, enhancement, or restoration of on-site habitat; preservation, enhancement, or restoration of off-site habitat; purchase of credits at a CDFW-approved mitigation bank; or a combination of these approaches, as approved by CDFW. If preservation, enhancement, or restoration would be used, a Habitat Mitigation and Monitoring Plan will be prepared and will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to vegetation structure and diversity
c. Mitigation site selection with appropriate hydrology
d. Seed mix and planting palette
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection

If no southwestern pond turtles are observed, the project Applicant will not need to consult with the USFWS/CDFW, and no compensatory mitigation will be required.

BIO-9A **Burrowing Owl.** Prior to the initiation of vegetation removal or other construction activities, a qualified biologist will conduct a focused survey for burrowing owl in accordance with the most recent guidelines (CDFW 2012). The focused survey will consist of multiple site visits during the breeding season (February 1 to August 31). This focused survey is in progress in spring/summer 2026.

If burrowing owls are observed, the project Applicant will consult with the CDFW to obtain an Incidental Take Permit. The consultation will determine the appropriate compensatory mitigation for the loss of habitat for this species. Project impacts will be compensated at no less than a 1:1 ratio (i.e., 1 acre of mitigation for each acre of

habitat impacted). The mitigation strategy may include: preservation, enhancement, or restoration of on-site habitat; preservation, enhancement, or restoration of off-site habitat; purchase of credits at a CDFW-approved mitigation bank; or a combination of these approaches, as approved by CDFW. If preservation, enhancement, or restoration would be used, a Habitat Mitigation and Monitoring Plan will be prepared and will include the following:

a. Responsibilities of the parties implementing the plan
b. Performance criteria related to vegetation structure and diversity
c. Mitigation site selection with appropriate microclimate
d. Seed mix and planting palette
e. Site preparation and installation methodology
f. Maintenance and monitoring schedule
g. Contingency plan
h. Long-term site protection

If no burrowing owls are observed, the project Applicant will not need to consult with the CDFW and no compensatory mitigation will be required.

BIO-9B **Pre-construction Burrowing Owl Survey.** Prior to the start of construction, two burrowing owl take avoidance surveys will be conducted by a qualified biologist; the first survey will be conducted at least 14 days prior to any site disturbance (grubbing, grading, and construction) and the second will be conducted within 24 hours of disturbance in accordance with CDFW (2012) guidelines.

If no burrowing owls are observed during the take avoidance surveys, no further measures would be required.

If a burrowing owl or occupied burrow (as indicated by recent burrowing owl sign) is observed, a protective buffer will be established around the burrow in accordance with CDFW (2012) guidance. The biologist will stake and flag the protective buffer, and no construction activities will be allowed within the protective buffer during the breeding season (February 1 through August 31), or until a qualified biologist determines that the burrow is no longer active.

If the burrow is within the project disturbance area, the project Applicant will consult with CDFW to coordinate relocation of the owl outside of the breeding season (September 1 through January 31) in accordance with accepted protocols. The appropriate method of relocation, such as eviction/passive relocation or active relocation, will be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the CDFW. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the CDFW.

BIO-10 **Nesting Birds/Raptors.** To the extent feasible, the project Applicant will plan for the initiation of construction activities and vegetation removal to occur outside the nesting bird season (February 1 to September 15). If vegetation removal, construction, or grading activities are planned to take place within the active nesting bird season (February 1 through September 15), a qualified biologist will conduct a pre-construction nesting bird survey no more than 3 days prior to the start of such activities. The nesting bird survey will include the project site and areas within 300 feet of the project site. The qualified biologist will document the results of the survey in a brief memorandum describing the methods and results of the survey, and describing any protective measures or required follow-up monitoring.

If any active bird nests are found on the project site or within 300 feet of the project site, the qualified biologist will establish a protective buffer zone around each active nest. The qualified biologist will determine the size of the protective buffer based on species, the nest location with respect to construction activities, and the nature of the proposed construction activities. In general, the protective buffer will be a minimum of 50 feet for passerines and 300 feet for raptors. The biologist will stake and flag the protective buffer, and no construction activities will be allowed within the protective buffer during the breeding season (February 1 through August 31), or until a qualified biologist determines that the nest is no longer active. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, the protective buffer can be removed and construction activities can proceed within this area.

BIO-11A **Night Lighting During Construction.** During construction activities, if night work (i.e., between dusk and dawn) is anticipated, night lighting will be used only in areas of active work and will be focused on the direct area(s) of work and away from areas of open space, including areas that provide for wildlife movement and potential bat roosts. If night work is needed, the project Applicant will retain a qualified biologist to conduct a Worker's Environmental Awareness Program training for the night crew to educate them on the sensitive resources present surrounding the project site that could be affected by night lighting.

BIO-11B **Night Lighting of the Project.** Prior to the issuance of a grading permit, the City will review the lighting plans for the project to confirm that night lighting is focused on the developed areas and away from Trabuco Creek and areas of open space, including areas that provide for wildlife movement and potential bat roosts.

BIO-12A **Roosting Bats.** Within 30 days prior to the initiation of construction activities, the project Applicant will retain a qualified bat biologist to survey all suitable structures (e.g., barn, bridges) and trees/vegetation within the project site for bat roosts. If bat roosts are found within the project site, the qualified bat biologist will conduct a nighttime emergence survey to identify the bats to the species level to determine if they are common or special-status species. The bat biologist will prepare a memorandum describing the methodology for tree trimming and removal that

would avoid or minimize impacts on bat roosts by excluding bats or timing the disturbance to allow them to safely escape.

BIO-12B **Tree Trimming and Removal of Trees Used by Roosting Bats.** To the extent feasible, the project Applicant will plan for the initiation of construction activities, tree trimming, and vegetation removal to occur outside the bat maternity season (April 1 to August 31) to avoid direct impacts to non-volant (flightless) young that may roost in oak trees. If trimming or removal of trees during the bat maternity season cannot be avoided, the project Applicant will retain a qualified bat biologist to conduct a pre-construction survey for roosting bats as described in **Measure BIO-12A**. The project Applicant will retain a qualified bat biologist to monitor tree trimming and tree removal activities. This can include supervising the two-step tree removal method and checking downed limbs for bats.

RECOMMENDED MITIGATION MEASURES

The following measures are not required to reduce impacts to less than significant. However, they are considered Best Management Practices that would reinforce the City's commitment to protecting biological resources as described in the City's General Plan.

BIO-13 **Worker Environmental Awareness Training.** Prior to initial groundbreaking, the Director of the City of San Juan Capistrano Development Services Department, or designee, will confirm that a Worker Environmental Awareness Training will be conducted by a qualified biologist to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with Trabuco Creek. The training session will include training on identification of species that may be found on or adjacent to the project site, the status of those species, and legal protection afforded to those species. Measures that are being implemented to protect those species will be explained. Personnel will be advised to report any special-status species promptly to the construction manager.

BIO-14 **Construction Site Housekeeping.** Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities will be minimized by adhering to the following measures:

a. The project disturbance limits will be clearly marked with construction fencing (or other highly visible material), and construction/materials staging and vehicle/equipment maintenance and fueling areas will be located at least 200 feet away from riparian habitat associated with Trabuco Creek, where feasible.

b. To minimize temporary disturbances, all project-related vehicle traffic will be restricted to established roads, construction areas, and other designated areas.

c. Project-related vehicles will observe a daytime speed limit of 20 miles per hour (mph) throughout the site in all project sites, except on county roads and State

and federal highways. Night-time construction will be minimized to the extent possible. However, if it does occur, then the speed limit will be reduced to 10 mph. Off-road traffic outside of designated project sites will be prohibited.

d. All construction vehicles will be washed prior to arriving at the construction site to remove mud that may be carrying the seeds of non-native weed species. Track-clean or other methods of vehicle cleaning will be used by the construction contractor to prevent weed seeds from entering/exiting the Project site on vehicles.

e. Wattles used for erosion control will be biodegradable and certified as weed-free.

f. Seed mixes and/or hydroseed applied to temporarily disturbed areas will consist of native species local to the project vicinity, as verified by review by a qualified Biologist prior to purchase and application of the seed mix.

g. To prevent inadvertent entrapment of animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks will be installed. Before such holes or trenches are filled, they will be inspected for trapped animals. In the case of trapped animals, escape ramps or structures will be installed immediately to allow the animal(s) to escape.

h. For the duration of construction activities, all food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in securely closed containers and removed at least daily from the construction site.

i. Pets, such as dogs or cats, will not be permitted on the project site during construction to prevent harassment, injury, or death of wildlife in the project vicinity.

j. Use of rodenticides and herbicides in project sites will be restricted. This is necessary to prevent primary or secondary poisoning of predators and the depletion of prey populations on which they depend. All uses of such compounds will observe label and other restrictions mandated by the U.S. Environmental Protection Agency, the California Department of Food and Agriculture, and other State and federal legislation.

BIO-15 **Trabuco Creek Fencing.** During the construction period, the Director of the City of San Juan Capistrano Development Services Department, or designee, will confirm that construction plans require that temporary fencing be installed along Trabuco Creek that restricts access into the creek and adjacent habitats.

Prior to issuance of occupancy permits, the Director of the City's Development Services Department, or designee, will confirm that permanent signage has been installed that includes references to the environmentally sensitive nature of the creek and adjacent habitats. The project Applicant will fund annual signage monitoring and repairs, as needed.

CONCLUSION

With the implementation of the measures described herein, the proposed project impacts from the project on special-status wildlife species, special-status plant species, sensitive natural communities, or other habitats of concern are expected to be less than significant. The implementation of the recommended mitigation measures would further reduce effects on biological resources, reinforcing consistency with the City's General Plan.

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APPENDIX A

FIGURES

Figure 1: Project Location
Figure 2: Aerial Photograph of the Project Site and Surround Land Uses
Figure 3: Conceptual Site Plan
Figure 4: Soils Map
Figure 5: Vegetation Map
Figure 6: California Gnatcatcher Critical Habitat
Figure 7: Trabuco Creek Covenant Easement
Figure 8: Special Status Species Locations
Figure 9: Project Impacts
Figure 10: Impacts to Special Status Species Locations
Figure 11: Impacts to USACE/RWQCB Jurisdiction
Figure 12: Impacts to CDFW Jurisdiction

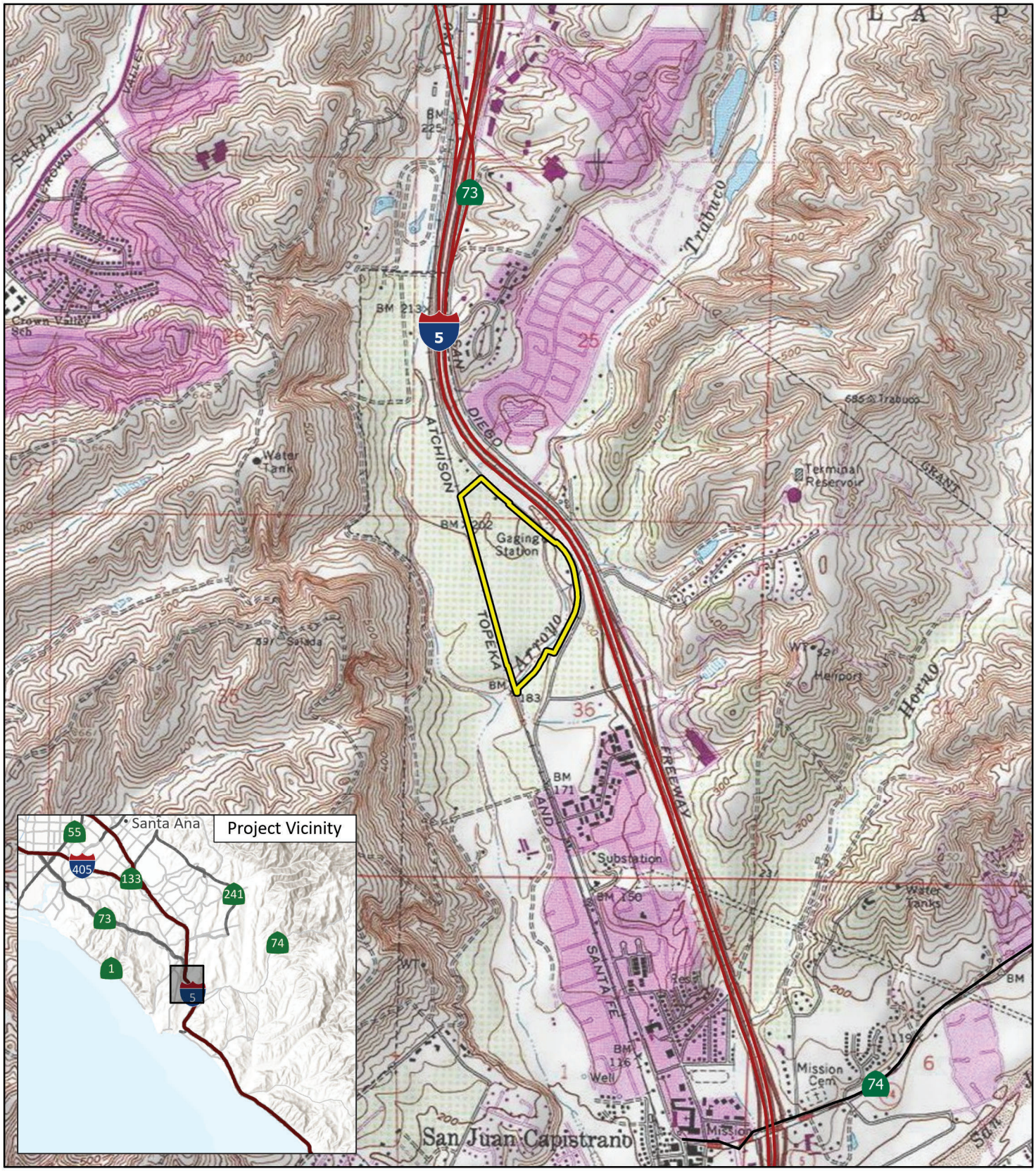


FIGURE 1

0 1000 2000
FEET

Legacy Ranch Project

Project Location

SOURCE: USGS 7.5' Quad - *San Juan Capistrano (1981)*, CA

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LSA

Project Site

FIGURE 2

N

0 250 500
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SOURCE: Google Imagery (2025)

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Legacy Ranch Project

Aerial Photograph of the Project Site and Surrounding Land Uses



LSA

FIGURE 4

Project Site

Soils

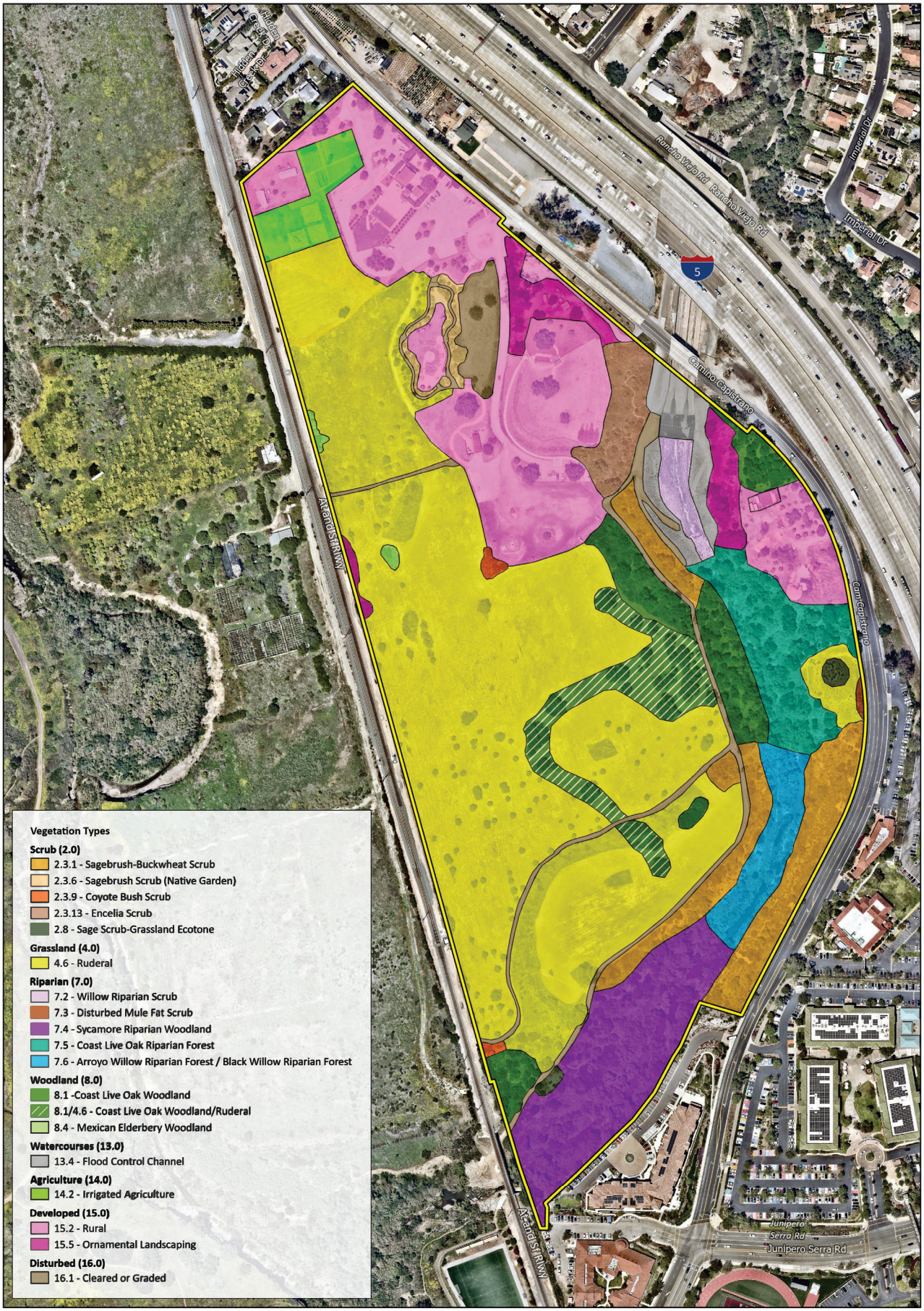
- 132 - Botella Clay Loam, 2 to 9 Percent Slopes, Warm MAAT, MRLA 19
- 147 - Corralitos Loamy Sand, Moderately Fine Substratum
- 149 - Cropley Clay, 2 to 9 Percent Slopes, Warm MAAT MLRA 19
- 191 - Riverwash
- 197 - Soboba Gravelly Loamy Sand, 0 to 5 Percent Slopes
- 206 - Sorrento Loam, 0 to 2 Percent Slopes
- 207 - Sorrento Loam, 2 to 9 Percent Slopes, Warm MAAT, MRLA 19
- 209 - Sorrento Clay Loam, 2 to 9 Percent Slopes, Warm MAAT, MLRA 19

0 125 250
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Legacy Ranch Project
Soils Map

SOURCE: Nearmap Aerial Imagery (5/7/2025), USDA NRCS SSURGO Database (12/2024)

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LSA

Project Site

FIGURE 5

N

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SOURCE: Nearmap Aerial Imagery (5/7/2025)

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Legacy Ranch Project

Vegetation Map

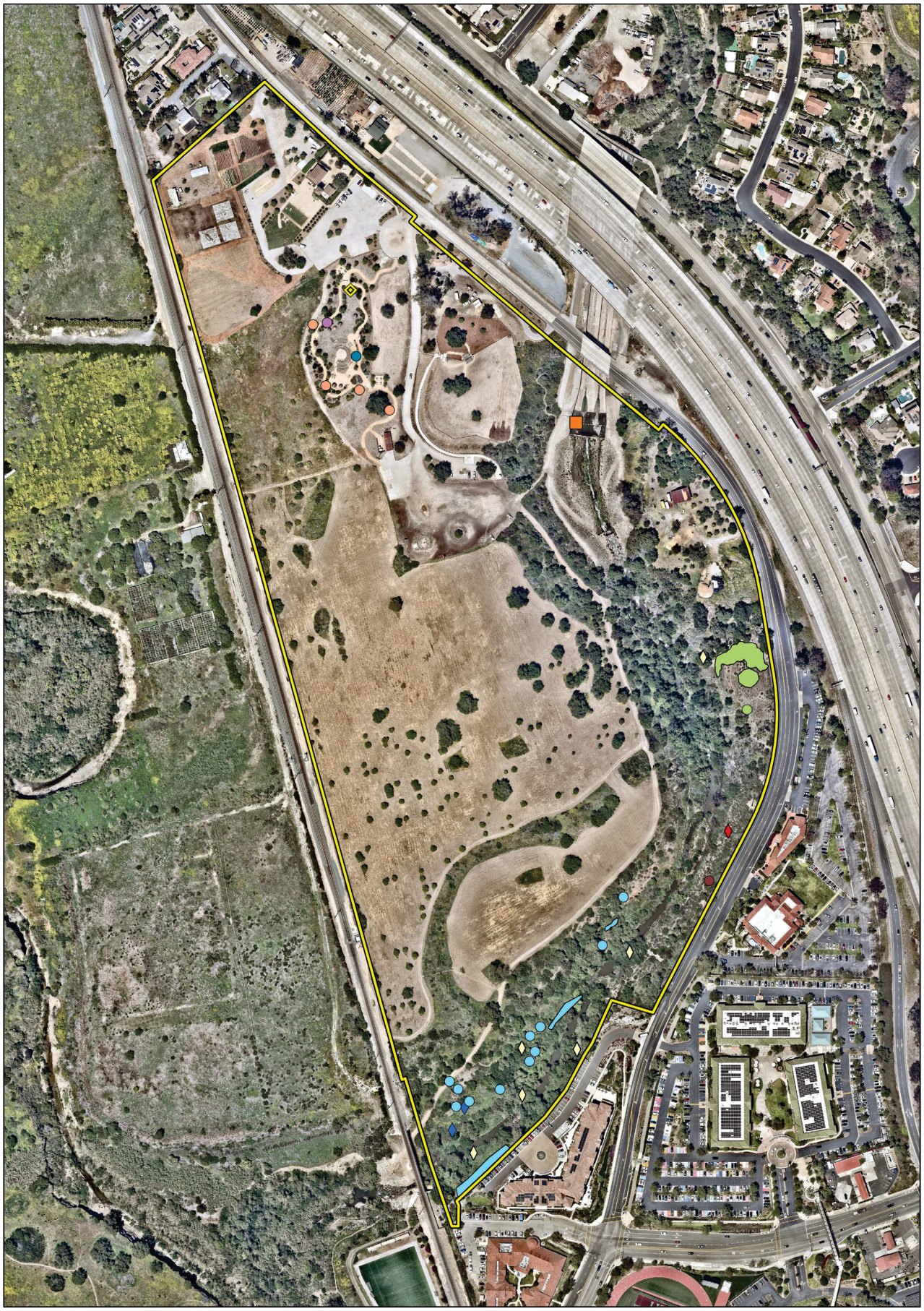


FIGURE 6

Legacy Ranch Project

Special Status Species Locations



LSA

Project Site
NCCP/HCP Existing Use Area
Coastal California Gnatcatcher Critical Habitat
Orange County NCCP 20100806
OC NCCP Existing Use Areas (USFWS) OC NCCP Existing Use Areas (USFWS)

0 125 250
FEET

SOURCE: Nearmap (5/7/2025)

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FIGURE 7

Legacy Ranch Project
California Gnatcatcher Critical Habitat



LSA

Project Site
Combined Easement
100' Buffer of Easement

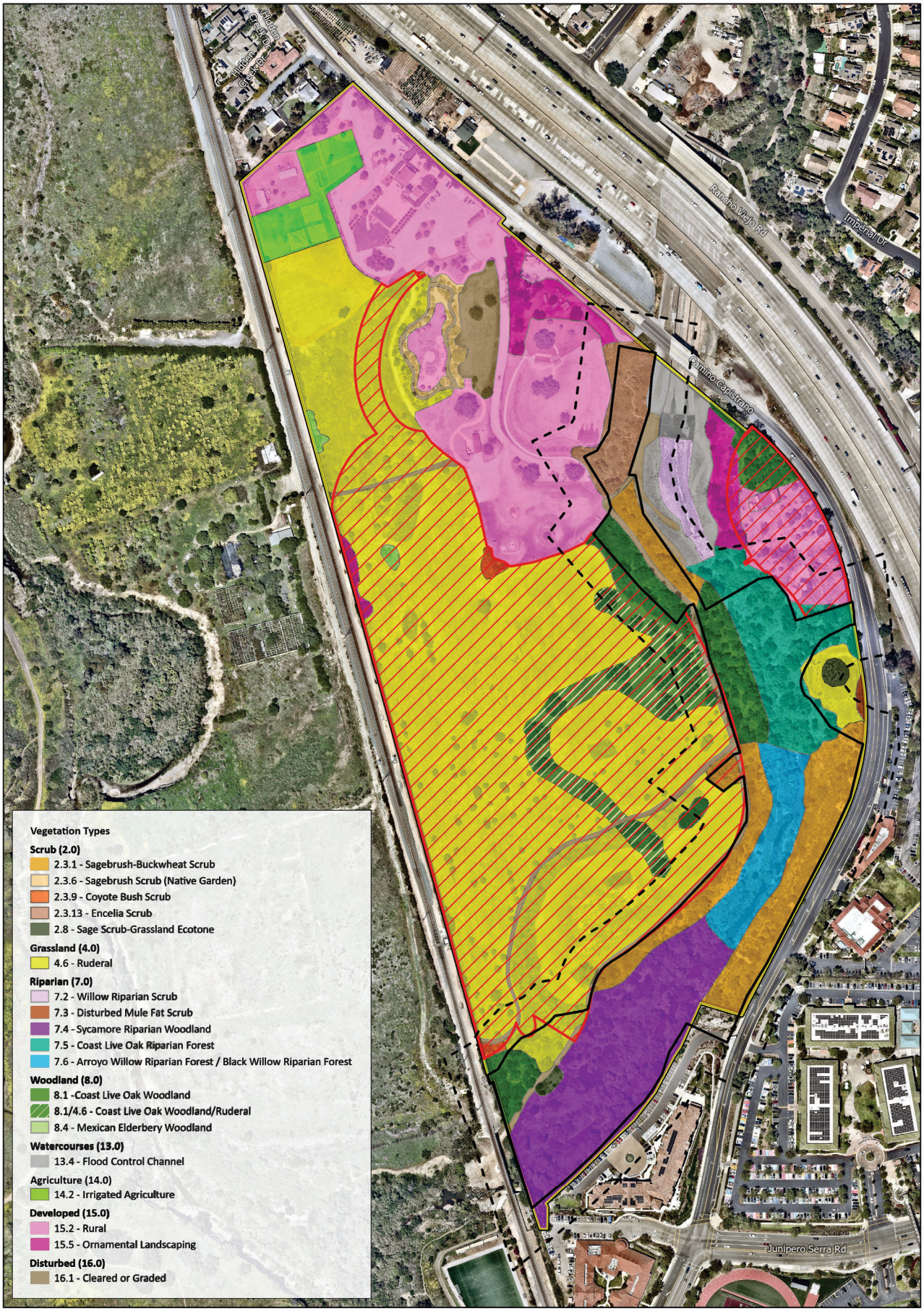
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SOURCE: Nearmap (5/7/2025), USFWS (2008)

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FIGURE 8

Trabuco Creek Easement
Trabuco Creek Covenant Easement



LSA

FIGURE 9

Project Site
Impacts
Combined Easement
100' Buffer of Easement†

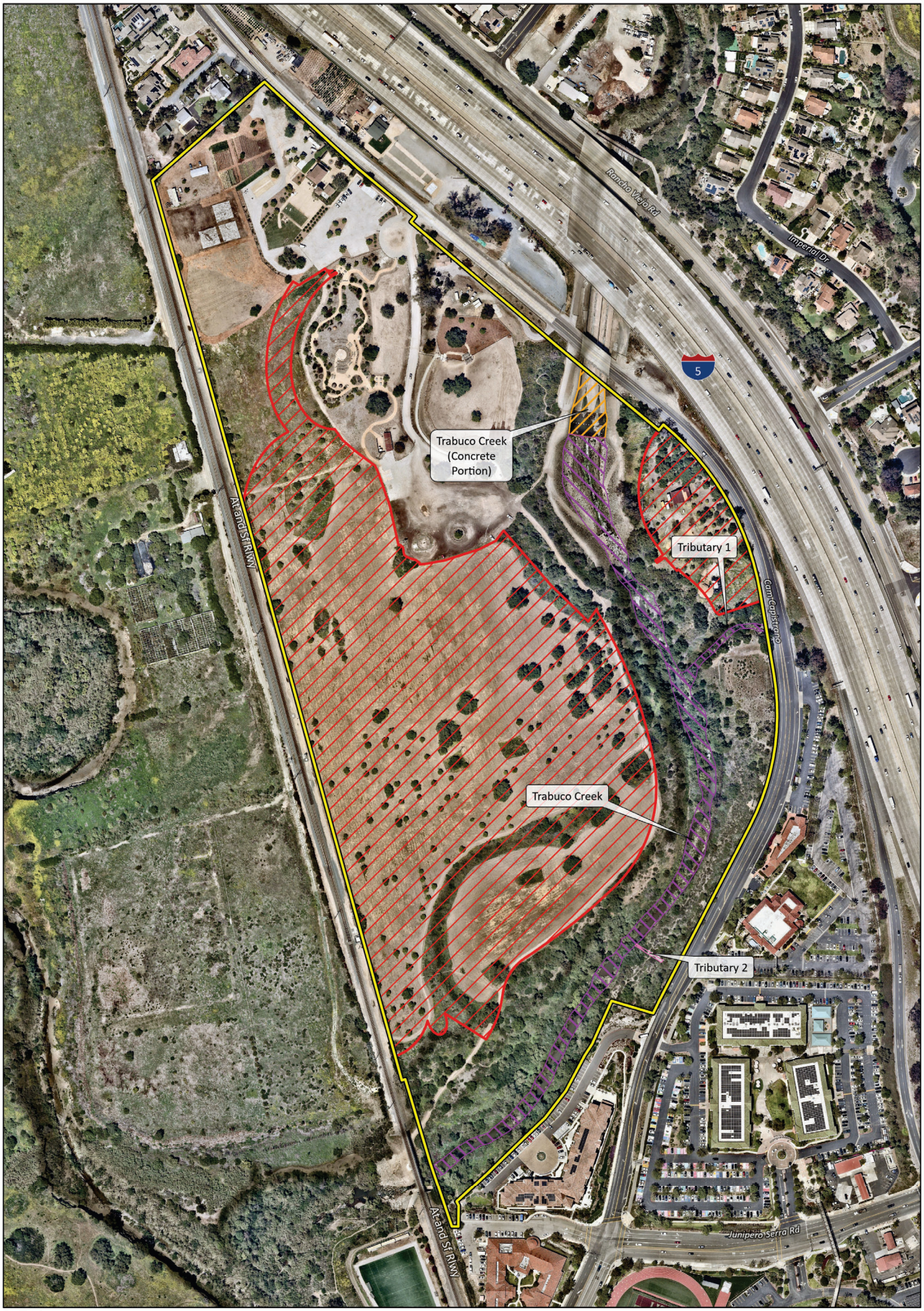
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SOURCE: Nearmap (5/7/2025)

†Development of structures would be set back from the easement boundary by an approximately 100-foot buffer, consistent with the NWOS Specific Plan Development Standards.

Legacy Ranch Project
Project Impacts

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LSA

Project Site
Impacts
RWQCB Non-wetland Waters
USACE/RWQCB - Wetland Waters
USACE/RWQCB - Non-Wetland Waters

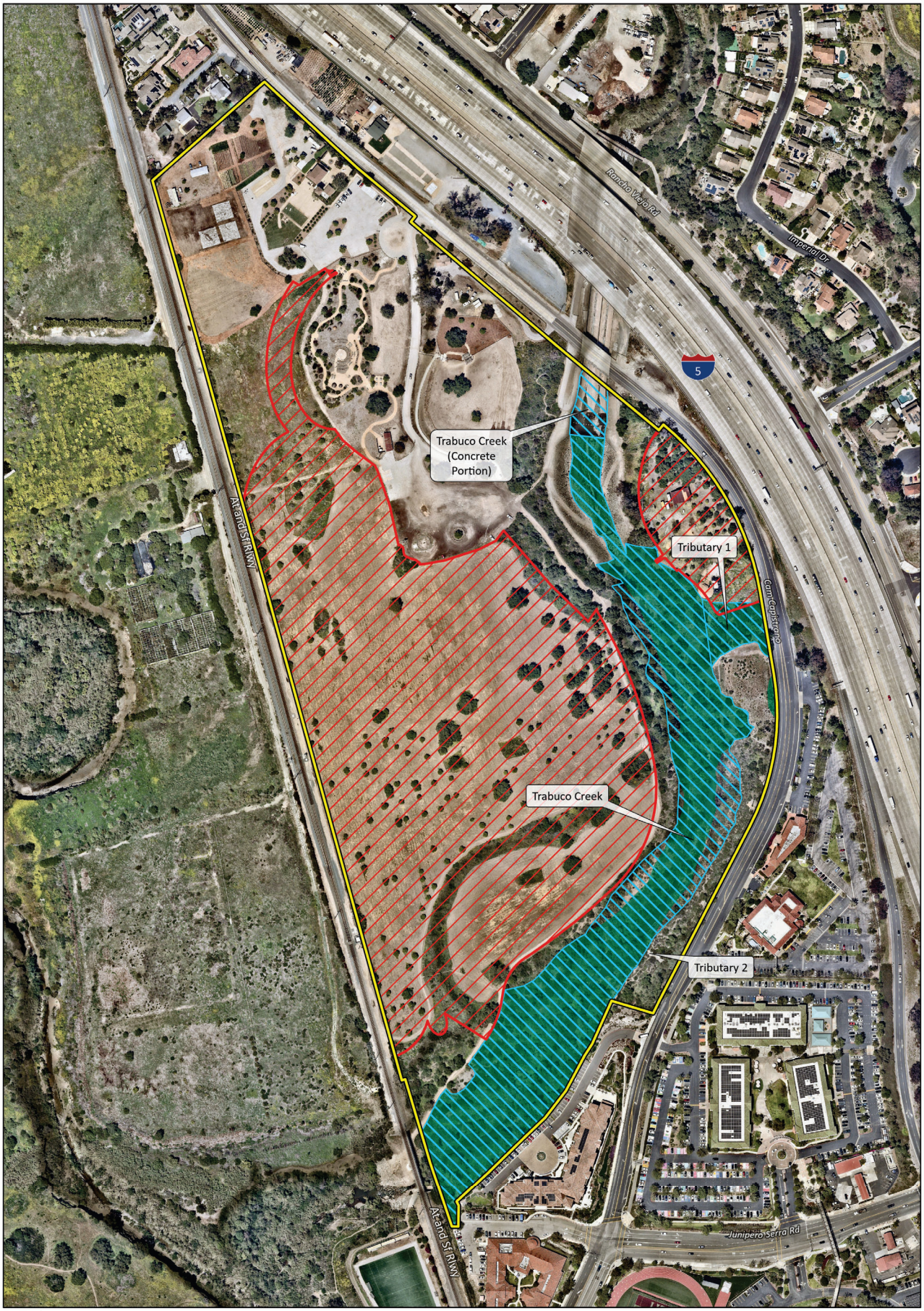
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SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 10

Legacy Ranch Development Project
Impacts to USACE/RWQCB Jurisdiction



LSA

Project Site
Impacts
Riparian Habitat
CDFW Jurisdiction

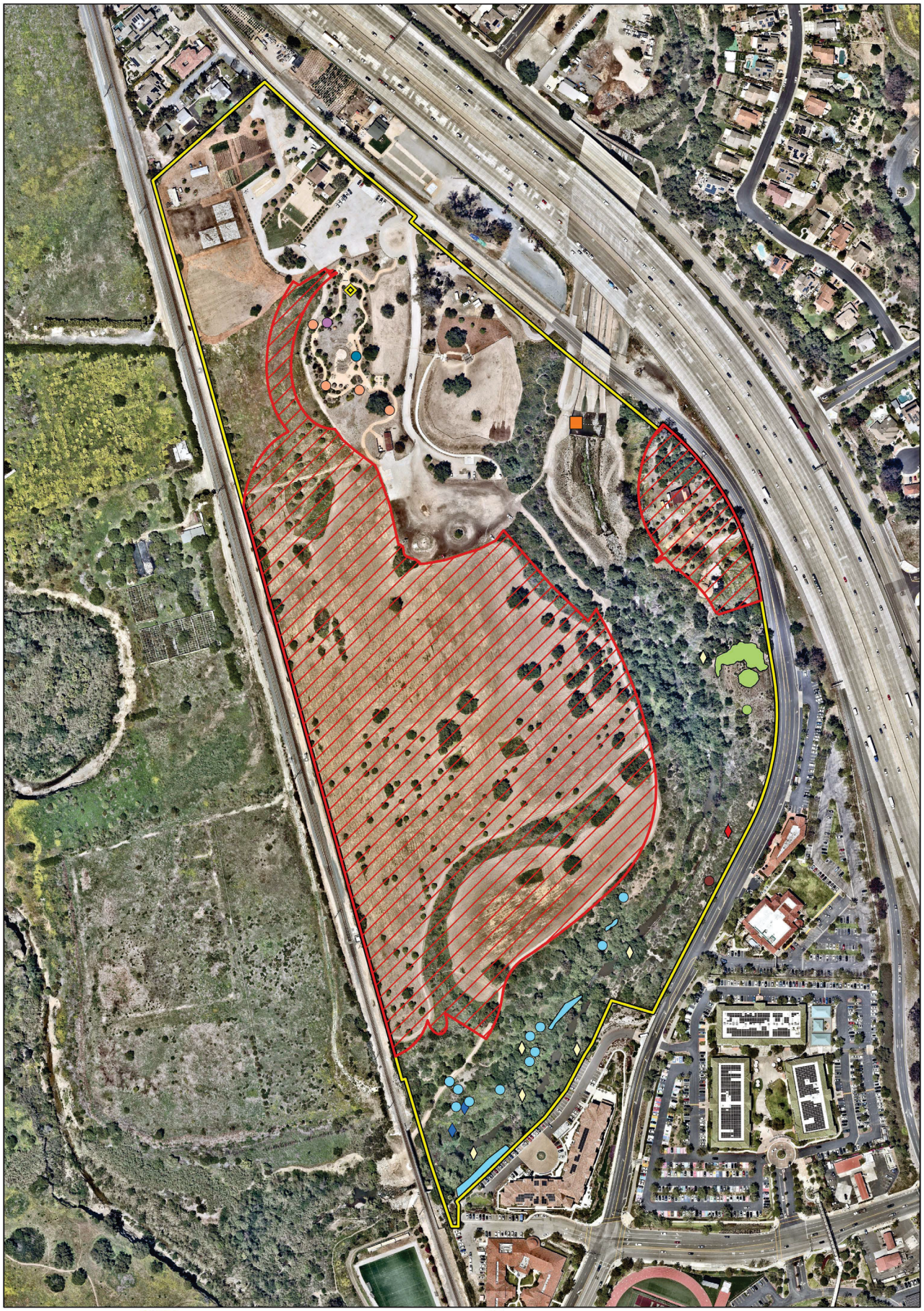
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SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 11

Legacy Ranch Development Project
Impacts to CDFW Jurisdiction



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FIGURE 12

Legacy Ranch Project

Special Status Species and Impacts

APPENDIX B

REPRESENTATIVE SITE PHOTOGRAPHS



Photo 1: View of elderberry scrub patch, surrounded by ruderal field, facing northwest.



Photo 2: View of ruderal field, facing west.



Photo 3: View of upstream end of Trabuco Creek within the project site, including the concrete spillway underneath the 5 freeway and emergent willow riparian scrub immediately downstream, facing north.



Photo 4: View of sycamore-riparian woodland within Trabuco Creek, facing east.

LSA

FIGURE 1

Legacy Ranch BRA
Representative Site Photographs

I:\2025\20252445\G\BRA_Photo_Page.cdr (12/31/2025)



Photo 5: View of arroyo willow riparian forest/black willow riparian forest within Trabuco Creek, facing southeast.



Photo 6: View of Trabuco Creek from concrete spillway underneath metrolink bridge, immediately downstream of project site, facing south.



Photo 7: View of sagebrush-buckwheat coastal sage scrub adjacent to Trabuco Creek, facing south.



Photo 8: View of Tributary 1, an intermittent waterway that empties into Trabuco Creek within the project site, facing east.

Legacy Ranch BRA
Representative Site Photographs



Photo 9: View of debris scattered across northeast side of project site, facing northwest.



Photo 10: View of disused shed and other structures at northeast side of project site, facing north.



Photo 11: View of ornamental sagebrush scrub planted within and surrounding Putuidem Village, facing north.



Photo 12: View of the Swanner House, facing north.

LSA

FIGURE 1
Page 3 of 4

Legacy Ranch BRA
Representative Site Photographs

I:\2025\20252445\G\BRA_Photo_Page.cdr (12/31/2025)



Photo 13: View of the Joe Cortese Dog Park from behind Encelia coastal sage scrub, facing north.

LSA

FIGURE 1
Page 4 of 4

Legacy Ranch BRA
Representative Site Photographs

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APPENDIX C

PLANT AND WILDLIFE SPECIES OBSERVED

The following plant species were observed within the project site during the July 2025 general survey and the 2026 special status plant surveys to date (June 2026).

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
MAGNOLID FLOWERING PLANTS	
Lauraceae	**Laurel family**
*Persea americana**	Avocado
EUDICOT FLOWERING PLANTS	
Adoxaceae	**Muskroot family**
Sambucus mexicana	Blue elderberry
Aizoaceae	**Carpet weed family**
*Carpobrotus edulis**	Freeway iceplant
Amaranthaceae	**Amaranth family**
*Amaranthus albus**	Tumbleweed
Anacardiaceae	**Sumac family**
Malosma laurina	Laurel sumac
Rhus integrifolia	Lemonade berry
*Schinus molle**	Peruvian pepper tree
*Schinus terebinthifolia**	Brazilian pepper tree
Apiaceae	**Carrot family**
*Apium graveolens**	Celery
*Conium maculatum**	Poison hemlock
*Foeniculum vulgare**	Fennel
*Torilis arvensis**	Spreading hedgeparsley
Apocynacecae	**Dogbane family**
*Asclepias curassavica**	Blood flower
Asclepias fascicularis	Narrow-leaf milkweed
*Vinca major**	Greater periwinkle
Asteraceae	**Sunflower family**
*Ageratina adenophora**	Crofton weed
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Artemisia douglasiana	Mugwort
Artemisia dracunculus	Tarragon
Artemisia palmeri	San Diego sagewort
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Baccharis sarothroides	Broom baccharis
Bahiopsis laciniata	San Diego viguiera
Brickellia californica	California brickellbush
*Carduus pycnocephalus**	Italian plumeless thistle
*Centaurea melitensis**	Tocalote/Maltese star-thistle
*Cynara cardunculus**	Artichoke thistle/cardoon
Deinandra paniculata	Paniculate tarplant
Deinandra sp.	Tarweed
Encelia californica	California brittlebush
*Erigeron bonariensis**	Flax-leaved horseweed
Erigeron canadensis	Canadian horseweed
Eriophyllum confertiflorum	Golden-yarrow

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
*Glebionis coronaria**	Garland or crown daisy
*Helminthotheca echioides**	Bristly ox-tongue
Heterotheca grandiflora	Telegraph weed
Isocoma menziesii var. *menziesii*	Menzies' goldenbush
Lepidospartum squamatum	California scalebroom
*Oncosiphon pilulifer**	Stinknet
Pseudognaphalium biolettii	Two-color rabbit-tobacco
Pseudognaphalium californicum	Ladies' tobacco
*Pseudognaphalium luteoalbum**	Jersey cudweed
Pseudognaphalium microcephalum	San Diego rabbit-tobacco
Pseudognaphalium stramineum	Cottonbatting plant
*Pulicaria paludosa**	Spanish false fleabane
Solidago velutina ssp. *californica*	California goldenrod
*Sonchus asper**	Spiny sowthistle
*Sonchus oleraceus**	Common sow thistle
*Tagetes lemmonii**	Bush marigold
Xanthium orientale	Common cocklebur
*Borago officinalis**	Common borage
Brassicaceae	**Mustard family**
*Brassica nigra** *(Rhamphospermum nigrum)*	Black mustard
*Brassica rapa**	Turnip/field mustard
*Hirschfeldia incana**	Shortpod mustard
Lepidium oblongum	Veiny peppergrass
Lepidium strictum	Upright pepperweed
Nasturtium officinale	Water cress
*Raphanus sativus**	Radish
*Sisymbrium irio**	London rocket
Cactaceae	**Cactus family**
Cylindropuntia californica var. californica	Snake cholla
*Opuntia ficus-indica**	Barbary fig
Opuntia X-occidentalis	coastal prickly-pear (hybrid)
Caryophyllaceae	**Pink family**
*Polycarpon tetraphyllum**	Fourleaf manyseed
Chenopodiaceae	**Saltbush family**
*Chenopodium murale**	Nettleleaf goosefoot
Salsola sp.*	Russian thistle
Cistaceae	**Rock rose family**
Cistus sp.	Rockrose
Crassulaceae	**Stonecrop family**
*Crassula ovata**	Jade plant
Crassula sp.	Stonecrop
Cucurbitaceae	**Gourd family**
Marah macrocarpa	Chilicothe
Ebenaceae	**Ebony family**
*Diospyros kaki**	Japanese persimmon
Euphorbiaceae	**Spurge family**
*Euphorbia lathyris**	Caper spurge
*Euphorbia maculata**	Spotted spurge

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
*Euphorbia peplus**	Petty spurge
*Ricinus communis**	Castorbean
Fabaceae	**Pea family**
*Acacia cyclops**	Coastal wattle
Acacia sp.*	Acacia
Acmispon americanus	Spanish clover
Acmispon glaber	Deerweed
*Melilotus albus**	White sweetclover
*Vicia villosa**	Winter vetch, hairy vetch
Fagaceae	**Beech family**
Quercus agrifolia	Coast live oak
Geraniaceae	**Geranium family**
*Erodium cicutarium**	Redstem stork's bill
Grossulariaceae	**Gooseberry family**
Ribes aureum	Golden currant
Hydrangeaceae	**Hydrangea family**
Philadelphus sp.	mock orange
Hydrophyllaceae	**Waterleaf family**
Phacelia ramosissima	Branching phacelia
Juglandaceae	**Walnut family**
Juglans californica	Southern California black walnut
*Juglans regia**	Persian or English walnut
Lamiaceae	**Mint family**
Lavandula sp.*	Lavender
*Lavandula stoechas**	French lavender
Lepechinia fragrans	Fragrant pitcher sage
*Marrubium vulgare**	Horehound
*Salvia coccinea**	Scarlet sage
*Salvia leucantha**	Mexican bush sage
Salvia leucophylla	Purple sage
Salvia mellifera	Black sage
Salvia sp.	Sage
Salvia spathacea	California hummingbird sage
Malvaceae	**Mallow family**
Fremontodendron californicum	California flannelbush
*Malva parviflora**	Cheeseweed mallow
Meliaceae	**Mahogany family**
*Melia azedarach**	Persian lilac, china berry
Moraceae	**Mulberry family**
*Ficus carica**	Common fig
Morus sp.*	Mulberry
Myrsinaceae	**Myrsine family**
*Lysimachia arvensis**	Scarlet pimpernel
Myrtaceae	**Myrtle family**
*Callistemon citrinus**	Crimson bottlebrush
Eucalyptus sp.*	Eucalyptus
Nyctaginaceae	**Four-o'clock family**
*Mirabilis jalapa**	Four o'clock flower

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
Oleaceae	**Olive family**
*Fraxinus uhdei**	Shamel ash
Onagraceae	**Evening primrose family**
Camissoniopsis hirtella	Santa Cruz Island suncup
Epilobium ciliatum	Fringed willowherb
Oenothera elata ssp. *hookeri*	Hooker's evening primrose
*Oenothera lindheimeri**	White gaura
*Oenothera speciosa**	Pinkladies
Oxalidaceae	**Oxalis family**
*Oxalis pes-caprae**	Bermuda buttercup
Papaveraceae	**Poppy family**
Eschscholzia californica	California poppy
Romneya coulteri	Coulter's matilija poppy
Passifloraceae	**Passionflower family**
*Passiflora edulis**	Passion fruit vine
Phrymaceae	**Monkeyflower family**
Diplacus aurantiacus	Orange bush monkeyflower
Pittosporaceae	**Pittosporum family**
*Pittosporum tenuifolium**	Tawhiwhi
Plantaginaceae	**Plantain family**
*Kickxia elatine**	Sharpleaf cancerwort
*Plantago coronopus**	Buckhorn plantain
*Plantago major**	Common plantain
*Veronica anagallis-aquatica**	Water speedwell
Platanaceae	**Sycamore family**
*Platanus × hispanica**	London planetree
Platanus racemosa	California sycamore
Polygalaceae	
Polygala myrtifolia	Myrtle leaf milkwort
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Persicaria lapathifolia	Willow weed
Persicaria sp.	Smartweed
*Polygonum aviculare**	Knotweed, knotgrass
*Rumex crispus**	Curly dock
Portulacaeae	**Purslane family**
*Portulaca oleracea**	Purslane
Primulaceace	**Primrose family**
Samolus parviflorus	Water pimpernel
Ranunculaceae	**Buttercup family**
Clematis ligusticifolia	Western virgin's bower
Rosaceae	**Rose family**
Cercocarpus betuloides var. *betuloides*	Birch-leaf mountain mahogany
Heteromeles arbutifolia	Toyon
Prunus ilicifolia ssp. *lyonii*	Catalina cherry
*Rhaphiolepis indica**	Indian hawthorn
Rutaceae	**Citrus family**
*Casimiroa edulis**	White sapote

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
*Citrus sinensis**	Sweet orange, navel orange
Salicaceae	**Willow family**
Salix gooddingii	Goodding's black willow
Salix laevigata	Red willow
Salix lasiolepis	Arroyo willow
Sapindaceae	**Soapberry family**
*Cupaniopsis anacardioides**	Carrotwood
Saxifragaceae	**Saxifrage family**
Heuchera sp.	Alumroot
Scrophulariaceae	**Figwort family**
*Myoporum laetum**	Myoporum, Ngaio tre
Solanaceae	**Nightshade family**
Datura wrightii	Sacred datura, Angel's trumpet
*Nicotiana glauca**	Tree tobacco
*Solanum lycopersicum**	Tomato
Tamaricaceae	**Tamarisk family**
*Tamarix ramosissima**	Saltcedar
Tropaeolaceae	**Nasturtium family**
*Tropaeolum majus**	Garden nasturtium
Ulmaceae	**Elm family**
*Ulmus pumila**	Siberian elm
Urticaceae	**Nettle Family**
Urtica dioica	Stinging nettle
*Urtica urens**	Dwarf nettle
Verbenaceae	**Vervain family**
*Aloysia citrodora**	Lemon beebrush
Phyla nodiflora	Turkey tangle fogfruit
Violaceae	**Violet family**
Viola sp.	Violet
MONOCOT FLOWERING PLANTS	
Agavaceae	**Agave family**
*Agave americana**	American century plant
*Yucca gigantea**	Spineless yucca
Araceae	**Arum family**
*Philodendron bipinnatifidum**	Philodendron
*Zantedeschia aethiopica**	Calla-lily
Arecaceae	**Palm family**
*Phoenix canariensis**	Canary Island palm
*Washingtonia robusta**	Mexican fan palm
Cyperaceae	**Sedge family**
Cyperus eragrostis	Tall flatsedge
Iridaceae	**Iris family**
*Dietes bicolor**	African iris
Iris sp.	Iris
Juncaceae	**Rush family**
Juncus acutus ssp. *leopoldii*	Southwestern spiny rush
Juncus patens	Spreading rush

Table C.1: Plant Species Observed During the Field Survey

July 11, 2025	
Scientific Name	**Common Name**
Poaceae	**Grass family**
*Arundo donax**	Giant reed
*Avena barbata**	Slender wild oat
*Bromus diandrus**	Ripgut grass
*Bromus hordeaceus**	Soft chess
*Bromus rubens**	Red brome
Cortaderia sp.*	Pampas grass
*Cynodon dactylon**	Bermuda grass
*Echinochloa crus-galli**	Barnyard grass
Elymus condensatus	Giant wild-rye
*Festuca arundinacea**	Tall fescue
*Festuca myuros**	Rattail sixweeks grass
*Hordeum murinum**	Foxtail barley
Leptochloa fusca	Bearded sprangletop
Nassella tenuissima	Finestem needlegrass
*Phalaris minor**	Little-seed canary grass
*Polypogon monspeliensis**	Annual beard grass, rabbitsfoot grass
*Stipa miliacea**	Smilo grass
Typhaceae	**Cattail family**
Typha sp.	Cattail

* = Nonnative Species

The following wildlife species were observed or detected (via tracks, scat, calls, etc.) within and adjacent to the project site during the July 2025 general biological field survey and during 2026 focused surveys to date (June 2026).

Table C.2: Wildlife Species Observed

HYMENOPTERA	**SAWFLIES, WASPS, BEES, & ANTS**
Apidae	**Cuckoo, Carpenter, Digger, Bumble, and Honey Bees**
*Apis mellifera**	European honey bee
Bombus crotchii	Crotch's bumble bee
Bombus vosnesenskii	Yellow-faced bumble bee
LEPIDOPTERA	**BUTTERFLIES**
Pieridae	**Whites and Sulphurs**
*Pieris rapae**	Cabbage White
AMPHIBIA	**AMPHIBIANS**
Hylidae	**Chorus Frogs**
Pseudacris hypochondriaca	Baja California treefrog
REPTILIA	**REPTILES**
Emydidae	**Pond Turtles**
Trachemy scripta elegans	Red-eared slider
Actinemys pallida	Southwestern pond turtle
Phrynosomatidae	**Phrynosomatid Lizards**
Sceloporus occidentalis	Western fence lizard

Table C.2: Wildlife Species Observed

AVES	BIRDS
Anatidae	**Ducks, Geese, and Swans**
Branta canadensis	Canada goose
Anas platyrhynchos	Mallard
Odontophoridae	**New World Quail**
Callipepla californica	California quail
Columbidae	**Pigeons and Doves**
*Columba livia**	Rock pigeon
Streptopelia decaocto	Eurasian collared-dove
Zenaida macroura	Mourning dove
Apodidae	**Swifts**
Chaetura vauxi	Vaux's swift
Aeronautes saxatilis	White-throated swift
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Phalacrocoridae	**Cormorants**
Nannopterum auritum	Double-crested cormorant
Charadriidae	**Plovers**
Charadrius vociferus	Killdeer
Scolopacidae	**Sandpipers**
Actitis macularius	Spotted sandpiper
Threskiornithidae	**Ibises and Spoonbills**
Plegadis chihi	White-faced ibis
Ardeidae	**Herons, Bitterns, and Allies**
Nycticorax nycticorax	Black-crowned night heron
Egretta thula	Snowy egret
Butorides virescens	Green heron
Ardea herodias	Great blue heron
Cathartidae	**New World Vultures**
Cathartes aura	Turkey vulture
Accipitridae	**Hawks, Kites, Eagles, and Allies**
Astur cooperii	Cooper's hawk
Circus hudsonius	Northern harrier
Astur cooperii	Cooper's hawk
Buteo lineatus	Red-shouldered hawk
Buteo jamaicensis	Red-tailed hawk
Picidae	**Woodpeckers and Allies**
Melanerpes formicivorus	Acorn woodpecker
Dryobates pubescens	Downy woodpecker
Dryobates nuttallii	Nuttall's woodpecker
Psittacidae	**New World Parrots**
Amazona finschi	Lilac-crowned parrot
Tyrannidae	**Tyrant Flycatchers**
Empidonax difficilis	Western flycatcher
Sayornis nigricans	Black phoebe
Myiarchus cinerascens	Ash-throated flycatcher
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	Western kingbird

Table C.2: Wildlife Species Observed

Vireonidae	**Vireos**
Vireo huttoni	Hutton's vireo
Vireo swainsoni	Western warbling vireo
Corvidae	**Crows and Jays**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Paridae	**Chickadees and Titmice**
Baeolophus inornatus	Oak titmouse
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	Northern rough-winged swallow
Petrochelidon pyrrhonota	Cliff swallow
Sylviidae	**Sylviid Warblers**
Chamaea fasciata	Wrentit
Aegithalidae	**Long-Tailed Tits and Bushtits**
Psaltriparus minimus	Bushtit
Zosteropidae	**White-eyes**
*Zosterops simplex**	Swinhoe's white-eye
Polioptilidae	**Gnatcatchers**
Polioptila californica californica	Coastal California gnatcatcher
Polioptila caerulea	Blue-gray gnatcatcher
Troglodytidae	**Wrens**
Troglodytes aedon	Northern house wren
Thryomanes bewickii	Bewick's wren
Sylviidae	**Sylviid Warblers**
Chamaea fasciata	Wrentit
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	Northern mockingbird
Toxostoma redivivum	California thrasher
Ptilognatidae	**Silky-flycatchers**
Phainopepla nitens	Phainopepla
Estrildidae	**Estrildid Finches**
Lonchura punctulata	Scaly-breasted munia
Sturnidae	**Starlings**
*Sturnus vulgaris**	European starling
Passeridae	**Old World Sparrows**
Passer domesticus	House sparrow
Fringillidae	**Finches**
Haemorhous mexicanus	House finch
Spinus psaltria	Lesser goldfinch
Spinus tristis	American goldfinch
Icteriidae	**Yellow-breasted Chat**
*Icteria virens**	Yellow breasted chat
Icteridae	**Blackbirds, Orioles and Meadowlarks**
Icterus cucullatus	Hooded oriole
Icterus bullockii	Bullock's oriole
Molothrus ater	Brown-headed cowbird
Parulidae	**Wood Warblers**
Leiothlypis celata	Orange-crowned warbler
Leiothlypis ruficapilla	Nashville warbler

Table C.2: Wildlife Species Observed

Geothlypis trichas	Common yellowthroat
Setophaga petechia	Northern yellow warbler
Cardellina pusilla	Wilson's warbler
Emberizidae	**Emberizids**
Melozone crissalis	California towhee
Pipilo maculatus	Spotted towhee
Melospiza melodia	Song sparrow
Cardinalidae	**Cardinals and Allies**
Piranga ludoviciana	Western tanager
Pheucticus melanocephalus	Black-headed grosbeak
MAMMALIA	**MAMMALS**
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Audubon's cottontail
Canidae	**Foxes, Wolves, and Allies**
Canis latrans	Coyote

* = Nonnative Species

APPENDIX D

JURISDICTIONAL DELINEATION

JURISDICTIONAL DELINEATION REPORT

LEGACY RANCH PROJECT

SAN JUAN CAPISTRANO, CALIFORNIA

LSA

February 2026

JURISDICTIONAL DELINEATION REPORT

LEGACY RANCH PROJECT

SAN JUAN CAPISTRANO, CALIFORNIA

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
1987 Manual	1987 *Wetland Delineation Manual*
2015 Rule	2015 Clean Water Rule: Definition of "Waters of the United States"
APN	Assessor's Parcel Number
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of San Juan Capistrano
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FAC	Facultative
FACW	Facultative Wetland
NETRonline	Nationwide Environmental Title Research Online
NHD	National Hydrography Dataset
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OCTA	Orange County Transportation Authority
OHWM	ordinary high water mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Procedures	*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*

project	Legacy Ranch Project
Rapanos	consolidated cases *Rapanos v. United States* and *Carabell v. United States*
Regional Supplement	*Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0)
RWQCB	Regional Water Quality Control Board
Sackett	*Sackett v. Environmental Protection Agency*
Swanner House	Roger Y. Williams/Swanner House
SWRCB	State Water Resources Control Board
TNW	traditional navigable water of the United States
UPL	Obligate Upland
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	waters of the State
WOTUS	waters of the United States

INTRODUCTION

LSA was retained by the City of San Juan Capistrano (City) to conduct a jurisdictional delineation in support of the Legacy Ranch Project (project) located at 30291 Camino Capistrano in San Juan Capistrano, Orange County, California. The approximately 65.5-acre project site consists of Assessor's Parcel Numbers (APNs) 121-050-03, -04, -14, -17 to -20, and -29. The project site is shown on the United States Geological Survey (USGS) *San Juan Capistrano, California* 7.5-minute quadrangle within Section 36, Township 7 South, Range 8 West (Figure 1) (all figures are provided in Appendix A).

This report presents the results of the delineation of potential wetland and non-wetland waters of the United States (WOTUS) subject to jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the federal Clean Water Act (CWA); wetlands and waters of the state (WOTS) subject to the jurisdiction of the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA; and streambeds and associated riparian habitat subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) under Section 1600 et seq. of the California Fish and Game Code. The jurisdictional delineation provides information needed for permitting with each of these resource agencies (if needed). Additionally, it provides information needed to evaluate potential impacts under the California Environmental Quality Act (CEQA).

The findings and conclusions presented in this report include the potential jurisdiction of the USACE under Section 404 of the CWA; the RWQCB under Section 401 of the CWA and/or the Porter-Cologne Water Quality Control Act (Porter-Cologne Act); and the CDFW under Section 1602 of the California Fish and Game Code. These findings and conclusions should be considered preliminary until verified by the USACE, CDFW, and RWQCB.

PROJECT SITE DESCRIPTION

The project site is within the San Juan Capistrano Northwest Open Space (NWOS) Specific Plan Area. It is bound by single-family residential uses to the north, Camino Capistrano to the east, The Groves Apartments (multifamily residential) to the south, and an Orange County Transportation Authority (OCTA) rail line to the west, which is utilized by Metrolink commuter rail and Amtrak's Pacific Surfliner route. The project site is relatively flat with elevations ranging from approximately 155 to 205 feet above mean sea level (Figure 1). Trabuco Creek and two small tributaries occur within the project site.

Currently the project site is a mix of developed and undeveloped open space. The historic Roger Y. Williams/Swanner House (Swanner House), Dr. Joe Cortese Dog Park, and Putuidem Village (a partial reproduction of a local Native American village) occur in the northeastern portion of project site. The remainder of the project site is undeveloped open space.

Trabuco Creek flows generally north to south and is located along the eastern boundary of the project site, parallel to Camino Capistrano; Trabuco Creek Trail is immediately adjacent to the west side of Trabuco Creek. The railroad tracks are located along the western border of the project site. Oso Creek also flows from north to south and is located just west of the project site (west of the

railroad tracks); the confluence of Trabuco Creek and Oso Creek is just downstream of the project site (downstream of the railroad track undercrossing).

The majority of the project site is developed or disturbed with existing or past uses (e.g., Swanner House, Village of Putuidem, dog park, parking lot, agriculture, and farm structures) (Figure 2). Ornamental areas are present around existing developed areas and consist of planted trees and landscaping, including eucalyptus (*Eucalyptus* sp.), bougainvillea (*Bougainvillea* sp.), and acacia (*Acacia* sp.). Much of the central and southern portion of the project site (north of Trabuco Creek) appears to be routinely cleared of vegetation and currently consists of bare ground with a low cover of ruderal species dominated by scattered garland chrysanthemum (*Glebionis coronata*), shortpod mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), and artichoke thistle (*Cynara cardunculus*). There are also some small areas of Mexican elderberry woodland dominated by blue elderberry (*Sambucus mexicana*). The majority of native vegetation types are present along Trabuco Creek and the associated Trabuco Creek Trail. Coastal sage scrub vegetative types include sagebrush-buckwheat scrub dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*); coyote brush scrub dominated by coyote brush (*Baccharis pilularis*); and Encilia scrub dominated by California bush sunflower (*Encelia californica*). The upland areas also include areas of coast live oak woodland dominated by coast live oak trees (*Quercus agrifolia*) with varying understory; some woodland areas have coastal sage scrub in the understory and others have a ruderal understory. The upstream portion of Trabuco Creek, where it crosses under Camino Capistrano, is channelized and is mapped as flood control channel. Riparian vegetation types present along Trabuco Creek within the project site include willow riparian scrub dominated by arroyo willow (*Salix lasiolepis*) and mule fat (*Baccharis salicifolia*); sycamore riparian woodland dominated by mature California sycamore (*Platanus racemosa*); coast live oak riparian forest co-dominated by coast live oak and California sycamore; and arroyo willow riparian woodland/black willow riparian woodland dominated by arroyo willow and black willow (*Salix gooddingii*). The lower portion of Trabuco Creek, just downstream of the project site, is reinforced with grouted riprap where it flows down the slope under the railroad tracks; it becomes a natural channel again before its confluence with Oso Creek.

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The CWA provides the primary means for the protection of WOTUS, including wetlands. Under Section 404 of the CWA, the USACE, under the United States Environmental Protection Agency (EPA), regulates the discharge of dredged and fill material into "waters of the U.S., including wetlands."

The CWA addresses "navigable waters" as defined in the statute as WOTUS. The USACE has further refined the definition through various Clean Water Rules, including wetlands as a subset of WOTUS. Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions (i.e., hydrophytic vegetation). Wetlands generally include swamps, marshes, bogs, and similar areas (33 Code of Federal Regulations [CFR] 328.3[b] and 40 CFR 230.3[t]). To be considered a wetland, an area must meet three distinct parameters: hydrophytic vegetation, hydric soils, and wetland hydrology.

WOTUS that are generally not considered to be jurisdictional include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds excavated on dry land used for irrigation or stock watering, small artificial waterbodies such as swimming pools, and water-filled depressions (88 *Federal Register* 3004 2023). In addition, a 2001 Supreme Court ruling (*South Waste Agency of North Cook County v. USACE*) determined that waters that are isolated, intrastate, and not navigable are not jurisdictional. In this case, the USACE exceeded its statutory authority by asserting CWA jurisdiction over "an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds" based solely on the use of such waters by migratory birds.

The Supreme Court further addressed the extent of the USACE's jurisdiction in the consolidated cases *Rapanos v. United States* (No. 04-1034) and *Carabell v. United States* (No. 04-1384) (USACE and EPA 2007), collectively referred to as *Rapanos*. In the *Rapanos* case, a sharply divided court issued multiple opinions; none of which garnered the support of a majority of justices. This created substantial uncertainty as to which jurisdictional test should be used in routine jurisdictional determinations. The Ninth Circuit Court of Appeal, which encompasses California, answered this in *Northern California River Watch v. City of Healdsburg* (August 11, 2007). This case supported Justice Kennedy's opinion in *Rapanos*, which found that wetlands or other waters that are not navigable are subject to USACE jurisdiction if they have "a significant nexus to waters that are navigable in fact." As Justice Kennedy explained, whether a "significant nexus" exists in any given situation will need to be decided on a case-by-case basis, depending on site-specific circumstances. The EPA and the USACE subsequently developed an instructional guidebook on how to apply these rulings for all future jurisdictional determinations (USACE and EPA 2007) as well as a memorandum providing guidance to implement the United States Supreme Court's decision in *Rapanos* (Grumbles and Woodley 2007).

On September 12, 2019, the EPA and USACE signed a final rule to repeal the 2015 Clean Water Rule: Definition of "Waters of the United States" (2015 Rule) and re-codify the regulatory text defining WOTUS that existed prior to the 2015 Rule. The new regulations went into effect on December 23,

2019. One of the proposed changes states that ephemeral features that contain water only during or in response to rainfall would no longer be considered WOTUS under the jurisdiction of the USACE. On August 28, 2019, the Office of Administrative Law approved the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to WOTS. The procedures went into effect on May 28, 2020. Under these new regulations, the State Water Resources Control Board (SWRCB) and its nine RWQCBs will assert jurisdiction over all existing WOTUS and all waters that would have been considered WOTUS under the 2015 Rule. Thus, the WOTUS that would no longer be under USACE jurisdiction would be under RWQCB jurisdiction.

The EPA and USACE are in receipt of the United States District Court for the District of Arizona's 2021 order vacating and remanding the Navigable Waters Protection Rule in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*. On October 22, 2019, the EPA and USACE published a final rule to repeal the 2015 Rule, which amended portions of the CFR, and to restore the regulatory text that existed prior to the 2015 Rule.

On January 18, 2023, the USACE published the Final Revised Definition of Waters of the United States (88 *Federal Register* 61964 2023). However, this definition was subsequently changed on March 25, 2023, with the United States Supreme Court ruling in *Sackett v. Environmental Protection Agency* (598 U.S. 651-728 2023), hereafter referred to as *Sackett*. Specifically, the Supreme Court modified the definition of WOTUS by considering the "significant nexus" standard established under *Rapanos* to be inconsistent with the CWA. The court upheld the plurality standard that the USACE jurisdiction is limited to WOTUS that are "relatively permanent, standing or continuously flowing bodies of water" that can be described in ordinary parlance as "streams, oceans, rivers, and lakes." The Supreme Court further affirmed that wetlands can be considered WOTUS when a continuous surface connection to bodies that are WOTUS is present and that no clear boundary exists between WOTUS and wetlands.

On September 8, 2023, the USACE published a final rule conforming the January 2023 rule with the *Sackett* decision by removing the "significant nexus" standard. The amended rule is operative in California.

Features currently included in the definition of WOTUS per 33 CFR 328.3(b) include:

(1) Waters which are:

  (i) 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;

  (ii) The territorial seas; or

  (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

(i) Waters identified in paragraph (a)(1) of this section, or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Features currently excluded from identification as WOTUS include:

- Interstate wetlands.
- Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the CWA.
- Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.
- Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water.
- Artificially irrigated areas that would revert to dry land if the irrigation ceased.
- Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons.
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS.
- Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

Additionally, on July 24, 2020, the USACE and the EPA issued a joint memorandum clarifying that the construction and maintenance of irrigation ditches and the maintenance of drainage ditches are excluded from regulation under CWA Section 404.

Furthermore, on November 17, 2025, the EPA and USACE proposed a new rule updating and further narrowing the definition of WOTUS. The proposed rule would re-define "relatively permanent" as bodies of water that are standing or flowing year-round "or at least during the wet season" and "abutting (i.e., touching) a jurisdictional water."

Given the substantial changes in operable definitions that have occurred and that are likely to continue considering recent regulatory revisions and court actions, it is not possible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the USACE. This jurisdictional delineation focuses on identifying the boundaries of potentially jurisdictional waterbodies, using the USACE's current methods for determining the locations of the ordinary high water mark (OHWM) and wetland boundaries. In general, the field methods for determining the features that define the boundaries of waters have not substantially changed; however, the interpretation of which areas are within USACE jurisdiction may change as regulatory context changes. This field delineation can be used in combination with current regulatory context to determine the extent of USACE jurisdiction, based on the definition that is in effect at the time of a jurisdictional determination by the USACE (i.e., when the USACE field verifies a delineation). A jurisdictional determination can be completed immediately following the jurisdictional delineation or can be done during the permit application process. The advantage of obtaining the jurisdictional determination prior to the permit application is to confirm the interpretation that is in place at the time of the jurisdictional delineation; otherwise, the interpretation of the jurisdiction could be subject to changes between the time of the jurisdictional delineation and the permit application.

For waters that meet the definition of WOTUS, as described above, the extent of jurisdiction is defined by the OHWM. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible. USACE jurisdiction over non-tidal WOTUS may extend beyond the OHWM to the limit of any contiguous wetlands, if any are present.

Waters found to be isolated and not subject to CWA regulation may still be regulated by the RWQCB under the State's Porter-Cologne Act, as discussed further below.

Wetland Waters of the United States

Jurisdictional delineations must be conducted according to the geographic specific regional supplement. In Southern California, the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Regional Supplement) and the USACE 1987 *Wetlands Delineation Manual* (1987 Manual) are used (USACE 1987, 2008a). Where there are differences between these two documents, the Regional Supplement takes precedence over the 1987 Manual.

The USACE and the EPA define wetlands as:

> Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions.

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

Hydrophytic vegetation and hydric soil indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years; these indicators are not present for episodes that have only occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not demonstrate that episodes have lasted more than a few days or occurred repeatedly over a period of years. If an area lacks one of the three characteristics, the area is considered non-wetland WOTUS under most circumstances (unless special conditions are applicable).

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding or in areas recently altered by anthropogenic activities. For example, during periods of drought, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas. Per *Sackett*, wetlands must have a continuous surface connection to another WOTUS to be considered an adjacent wetland. Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into previous non-wetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on experience and knowledge of local ecological conditions is used when delineating wetlands. The Regional Supplement provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation

Hydrophytic vegetation consists of plants that are typically adapted to permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (i.e., tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are listed in the National Wetland Plant List published by the USACE (2022a). Each species on the list is rated according to a wetland indicator category, as shown below in Table A. To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated as Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

Table A: Hydrophytic Vegetation Ratings

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

Source: Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a).
USACE = United States Army Corps of Engineers

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

Hydric Soils

Hydric soils[1] are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Soils are considered likely to meet the definition of a hydric soil when they meet one or more of the following criteria:

1. All Histels except Folistels and Histosols except Folists;

2. Soils that are frequently ponded for a long duration or very long duration[2] during the growing season; or

[1] The hydric soils definition and criteria included in the 1987 Wetland Delineation Manual are obsolete. The United States Department of Agriculture's Natural Resources Conservation Service website is used for the most current information on hydric soils.

[2] "Long duration" is defined as a single event ranging from 7 to 30 days. "Very long duration" is defined as a single event that lasts longer than 30 days.

3. Soils that are frequently flooded for a long duration or very long duration during the growing season.

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

The Regional Supplement has a number of field indicators that may be used to identify hydric soils. The NRCS (USDA 2025a) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation; accumulation of organic matter; and the reduction, translocation, and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology

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

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

Deepwater Aquatic Habitat

Deepwater aquatic habitats are areas that are permanently inundated at mean annual water depths greater than 6.6 feet or permanently inundated areas less than 6.6 feet in depth that do not support rooted-emergent or woody plant species.[3] Deepwater aquatic waters do not qualify as wetland waters due to the lack of hydrophytic terrestrial vegetation. Deepwater aquatic waters are

[3] Areas less than 6.6 feet mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands.

recognized as having a high habitat value due to their use as a fish and wildlife resource and limited distribution in the Arid West region.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

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

CDFW has various definitions and descriptions of the terms "channel bed" and "banks." The following definitions are taken from Appendix C: Legal Opinions of CDFW's *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600–1607, California Fish and Game Cod*e (CDFW 1994) to characterize the bed and bank:

> The extent of a stream bed and banks can be measured by several means: (1) flood plain, depending on the return frequency considered and if the riparian vegetation is present in the flood plain; (2) the outer edge of riparian vegetation used as a line of demarcation; (3) the bank, channel, or levee that confines flows; and (4) the extent of riparian vegetation outside of a levee.

The following concepts are also described in *A Field Guide to Lake and Streambed Alteration Agreements* (CDFW 1994):

> Streams can include intermittent ephemeral streams, dry washes, canals, aqueducts, irrigation ditches if they support aquatic life, riparian vegetation, or seasonally stream-dependent terrestrial wildlife, such as amphibians.
>
> Natural attributes or biological components of a stream include aquatic and riparian vegetation, and all aquatic animals, including fish, amphibians, reptiles, invertebrates, and terrestrial species, which derive benefits from the stream system.

CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined above. CDFW jurisdiction typically extends beyond the streambed/banks to the limits of the riparian vegetation (if present) associated with streams, rivers, or lakes. Riparian habitat includes willows (*Salix* spp.), mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines.[4] In most situations, wetlands associated with a stream or lake are typically located within the riparian habitat; thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. The CDFW jurisdiction may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream, away from frequently saturated soils).

[4] Riparian vegetation does not need to meet USACE definitions.

REGIONAL WATER QUALITY CONTROL BOARD

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

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

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

Wetland Waters of the State

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

The SWRCB and the RWQCBs define a wetland as stated below:

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

If the USACE has issued a formal jurisdictional determination, the RWQCB will use that to determine the extent of wetland WOTS. However, if a formal jurisdictional determination has not been made, the RWQCB follows the USACE 1987 Manual and the Regional Supplement to determine whether the area meets the State definition of a wetland. As described in the 1987 Manual and the Regional

Supplement, an area “lacks vegetation” if it has less than 5 percent area coverage of plants at the peak of the growing season. The methods are modified only to allow that areas that lack vegetation can still meet the State definition of wetland, as described above.

METHODOLOGY

Prior to conducting the fieldwork associated with this jurisdictional delineation, the following literature and materials were reviewed:

- Historic and current aerial photographic imagery (NETRonline 2025; Google Earth Pro 2025);
- Historic and current USGS topographic maps (USGS 2025);
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) wetland mapper (USFWS 2025);
- National Hydrography Database (NHD) maps (USGS 2025); and
- NRCS Web Soil Survey (USDA 2025b).

LSA Senior Biologist Heather Madera, with field assistance from LSA Biologist Samuel Bressler, conducted the fieldwork for the jurisdictional delineation on October 27, 2025. All features within the project site were evaluated according to the most current federal and/or State regulatory criteria and guidance, as described in the Regulatory Background section above. General conditions and characteristics associated with each drainage feature were noted on datasheets and photographed.

The project site was surveyed on foot and areas of potential jurisdiction observed within the project site were mapped on a recent, high-resolution aerial photograph (scale 1 inch = approximately 200 feet; March 2025) and/or on Esri Field Maps mobile application showing the project site. The widths of the features mapped during the course of the field investigation were determined by measurements taken in the field in accordance with guidelines set forth by *A Field Guide to the Identification of the OHWM in the Arid West Region of the Western U.S., A Delineation Manual* (USACE 2008b). Wetland delineation procedures described in the Regional Supplement and those recently enacted by the SWRCB were implemented for areas that exhibited characteristics potentially indicative of wetlands. Ms. Madera and Mr. Bressler completed USACE Wetland Determination Data Forms – Arid West for each sample plot (Appendix B and Appendix C). Photographs of each feature and sample plot are provided in Appendix D.

RESULTS

The project site is within the San Juan Creek Watershed (Hydrologic Unit Code 1807030101) (California Natural Resource Agency 2025). Trabuco Creek flows south for approximately 2.29 miles until it flows into San Jaun Creek and then flows south/southwest for approximately 2.30 miles until it ultimately flows into the Pacific Ocean, which is a traditional navigable water of the United States (TNW). The climate in the area of the project site is Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The project site receives an average of 13.99 inches of rain per year. The August high temperature averages 92 degrees Fahrenheit (°F) and a January low temperature average of 39°F (U.S. Climate Data 2025).

NATIONAL WETLANDS INVENTORY/NATIONAL HYDROLOGICAL DATABASE

Trabuco Creek is a documented blue-line intermittent drainage by the NWI and NHD; the lower portion of the creek within the project site is classified as a Palustrine/shrub scrub wetland. In addition, the northern tributary is a documented NWI Palustrine wetland and an NHD documented intermittent stream. The southern tributary was not shown as a NWI or NHD mapped feature. Figure 3 shows the NWI and NHD features occurring within the project site.

USDA SOIL SURVEY

Soils within the project site were mapped using the NRCS Web Soil Survey classifications (USDA 2025b). Eight soil types occur within the project site (Table B, Figure 4). The only hydric soils on the project site are mapped along Trabuco Creek.

Table B: Mapped Soils Classifications

Soil (Map Unit Symbol)	Drainage Class	Frequency of Flooding	Frequency of Ponding	Hydric Soil Rating
Botella clay loam 2% to 9% slopes	Well drained	None	None	No
Corralitos loamy sand, moderately fine substratum	Moderate	None	None	No
Cropley clay 2% to 9% slopes	Well drained	None	None	No
Riverwash	N/A	Frequent	None	Yes
Soboba gravelly loamy sand, 0 to 5% slopes	Excessively drained	None	None	No
Sorrento loam, 0% to 2% slopes	Well drained	None	None	No
Sorrento loam 2% to 9% slopes	Well drained	None	None	No
Sorrento clay loam, 2% to 9% slopes	Well drained	None	None	No

Source: Web Soil Survey Version 3.4.0 (USDA 2025b).
N/A = not applicable
USDA = United States Department of Agriculture

DELINEATED FEATURES

Three delineated features were present on the project site during the October 27, 2025, survey; Trabuco Creek and two tributaries (Figure 5). Trabuco Creek and Tributary 1 are mapped blue-line drainages by the NWI and NHD as intermittent riverine features and wetlands. Tributary 2 appears

to be a man-made concrete-lined drainage installed to facilitate flow from the surrounding development east of the project site. A description of each delineated feature and the regulatory basis for the determination of the jurisdictional status is provided below.

Trabuco Creek

Trabuco Creek flows along the eastern side of the project site, parallel with Camino Capistrano. According to NWI, Trabuco Creek is classified as an intermittent riverine feature. Within the project site, the upstream portion of the creek is concrete lined for approximately 560 linear feet, before turning into a soft bottomed drainage that flows in a south/southwest direction. Trabuco Creek enters the project site through an 80-foot-wide cement culvert and runs through the entirety of the project site for approximately 0.48 miles (3,100 linear feet), where it merges with Oso Creek, just south of the project boundary. As stated above, two tributaries flow into Trabuco Creek from the east side of the project site. Within the concrete-lined portion of the creek, the OHWM width ranges from 57 to 82 feet and averages approximately 69.5 feet. The remaining portion of Trabuco Creek within the project site is a soft-bottom channel with an OHWM width ranging from 19 to 70 feet and averages approximately 44.5 feet. Hydrological indicators within the OHWM include a break in the bank slope, shelving, instream bedforms, soil development, matted down vegetation, and wracking.

The banks of Trabuco Creek are densely vegetated by high-quality riparian woodland species including California sycamore, arroyo and black willow, coast live oak, mule fat, and scattered annuals. Flowing water was observed within the creek throughout the project site during the survey.

Tributary 1

Tributary 1 flows into the eastern portion of the project site through a culvert flowing under Camino Capistrano. This is a soft-bottom feature that flows for approximately 374 feet before emptying into Trabuco Creek. The OHWM ranges from 7 to 14 feet and averages approximately 7 feet. Hydrological indicators within the feature include a break in the bank slope, shelving, instream bedforms, soil development, matted down vegetation, and wracking. The banks of this feature are densely vegetated and exhibit a similar plant composition as Trabuco Creek, although there is a higher density of nonnative grasses and ornamental vegetation near the tops of the banks. Flowing water was observed throughout Tributary 1 during the survey.

Tributary 2

Tributary 2 flows into the project site south of Tributary 1. This feature is a concrete-lined channel and enters the project site through a large cement culvert directing flow under Camino Capistrano. The OHWM measures 5 feet 6 inches, and evidence of hydrological indicators include water staining and wracking. The banks of this feature are unvegetated concrete.

Wetlands

Trabuco Creek and Tributary 1 are mapped in the NWI as wetland/riverine features. Therefore, several soil pits were dug along the banks of the two features to refine the NWI wetland/riverine areas.

Positive indicators for all three wetland parameters (hydrophytic vegetation, hydric soils and wetland hydrology) were present throughout both of these features. Vegetation along the edges of the OHWM and lower portions of the banks in both features was dominated by arroyo willow (FACW), tall flat sedge (*Cyperus eragrostis*; FACW), common spikerush (*Eleocharis palustris*; OBL), Spanish false fleabane (*Pulicaria paludosa*; FAC), Douglas sagewort (*Artemisia douglasiana*; FAC), and coast live oak with no wetland plant indicator status (i.e., Obligate Upland [UPL]). Evidence of hydrology included surface flow, high water table, saturation, hydrogen sulfide odor, and water-stained leaves as the primary indicators.

Four soil pits were dug within the project site. Soil Pit 1 revealed a soil profile of sandy loam with a matrix consisting of 100 percent 7.5YR 4/2 from 0 to 18 inches (Munsell Color 2010). No hydric soil indicators were observed within Soil Pit 1; therefore, it was determined that these soils were not hydric.

Soil Pit 2 revealed a multi-layered soil matrix of 100 percent 7.5YR 2.5/1 sandy loam from 0 to 4 inches, 100 percent 10YR 3/1 sandy clay loam from 5 to 11 inches, and 100 percent Gley 1 2.5/10y sandy clay loam from 12 to 18 inches (Munsell Color 2010). Hydric soil indicators included hydric sulfide (A4) and sandy gleyed matrix (S4).

Soil Pit 3 revealed a soil matrix of 98 percent 7.5YR 4/2 clay loam and 2 percent 7.5YR 5/8 redox concentration in the root channel from 0 to 11 inches, and 90 percent 7.5YR 4/2 clay loam with 10 percent 7.5YR 5/8 redox concentration in the root channel from 12 to 18 inches (Munsell Color 2010). Hydric soil indicators included redox depressions.

Soil Pit 4 revealed a soil matrix of 85 percent 10YR 3/2 sandy clay loam from 0 to 10 inches and 15 percent 7.5YR 4/6 redox concentration located in the root channels. From 11 to 18 inches, the soil color consisted of 100 percent 2.5Y 2.5/1 sandy clay loam (Munsell Color 2010). Hydric indicators included hydrogen sulfide and redox depressions.

Soil Pits 2–4 revealed characteristics of hydrophytic vegetation, hydric soil, and wetland hydrology; Soil Pit 1 revealed characteristics of hydrophytic vegetation and wetland hydrology; however, it lacked the presence of hydric soils. Soil Pits 2–4 were taken within the OHWM along Trabuco Creek and Tributary 1, and Soil Pit 1 was taken along the bank approximately 4 feet from the edge of the water, immediately above/outside the OHWM within Trabuco Creek, indicating the wetland areas for both features follow the OHWM boundaries.

AGENCY JURISDICTION

United States Army Corps of Engineers

The waters from Tributaries 1 and 2 flow into Trabuco Creek, which eventually flows into San Juan Creek a few miles downstream of the project site. San Juan Creek flows into the Pacific Ocean, a TNW. Trabuco Creek and Tributary 1 are NWI and NHD classified intermittent features, and Tributary 2 appears to carry flow only during or following storm events. The USACE asserts jurisdiction over drainage features that carry a relatively permanent flow of water and connect to a TNW. Therefore, USACE will likely take jurisdiction over Trabuco Creek and Tributary 1 as WOTUS

(Table C). The USACE will likely not take jurisdiction over Tributary 2 because it does not carry relatively permanent flow.

Table C: Delineation Results

Feature	USACE		RWQCB		CDFW	Linear Feet
	Non-Wetland WOTUS (acres)	Wetland WOTUS (acres)	Non-Wetland WOTS (acres)	Wetland WOTS (acres)	CDFW Streambed/ Riparian (acres)	
Trabuco Creek	0.430	2.549	0.430	2.549	11.022	3,100
Tributary 1	0.000	0.121	0.000	0.121	0.514	374
Tributary 2	0.000	0.000	0.013	0.000	0.015	106
Total	**0.430**	**2.670**	**0.443**	**2.670**	**11.551**	

Source: Compiled by LSA (2025).
CDFW = California Department of Fish and Wildlife
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers
WOTS = waters of the State
WOTUS = waters of the United States

Wetlands

Trabuco Creek and Tributary 1 presented characteristics for all three wetland parameters. Soil Pits 2–4 were taken within the OHWM and showed hydric soils, and Soil Pit 1 was taken along the edge of the bank above/outside of the OHWM and did not show hydric soils. Therefore, the wetland appears to follow the boundaries of the OHWM.

There are approximately 2.670 acres of wetland WOTUS and 0.430 acre of non-wetland WOTUS for a total of 3.100 acres that would be subject to USACE regulatory authority (Figure 6).

California Department of Fish and Wildlife

In accordance with Section 1602 of the California Fish and Game Code, CDFW asserts jurisdiction over rivers, streams, and lakes, as well as any riparian vegetation associated with those features.

Trabuco Creek contains 11.022 acres of streambed (bank to bank) and riparian vegetation (Table C) and would be subject to the regulatory authority of CDFW under Section 1600 et seq. of the California Fish and Game Code.

Tributary 1 contains 0.514 acre of streambed (bank to bank) and riparian vegetation (Table C) and would be subject to the regulatory authority of CDFW under Section 1600 et seq. of the California Fish and Game Code.

Tributary 2 contains 0.015 acre of streambed (bank to bank, Table C) and would be subject to the regulatory authority of CDFW under Section 1600 et seq. of the California Fish and Game Code.

There is a total of 11.551 acres of streambed and riparian habitat within the project site that would be subject to CDFW regulatory authority (Figure 7).

Regional Water Quality Control Board

RWQCB jurisdiction includes all USACE jurisdictional areas, OHWMs, and any other features that influence surface or subsurface water quality within California. However, RWQCB jurisdiction often extends beyond the limits of USACE jurisdiction and may also include areas not identified as subject to USACE jurisdiction.

Trabuco Creek and Tributary 1 are intermittent features; however, Tributary 2 appears to be ephemeral and appears to flow only during or following storm events. All three features within the project site are considered WOTS under the Porter-Cologne Act, as these features convey ephemeral or intermittent surface flows and exhibit an OHWM.

Trabuco Creek and Tributary 1 contain riparian woodland containing hydrophytic plants. In addition, Soil Pits 2–4 showed hydric soils; therefore, these two features were determined to be wetland WOTS. Based on the findings of the survey, Trabuco Creek contains 2.549 acres of wetland WOTS and 0.430 acre of non-wetland WOTS (i.e., un-vegetated portions within the flood control channel). Tributary 1 contains 0.121 acre of wetland WOTS and Tributary 2 contains 0.013 acre of non-wetland WOTS.

There are 2.670 acres of wetland WOTS and 0.443 acre of non-wetland WOTS totaling 3.113 acres that would be subject to RWQCB regulatory authority (Figure 6).

RECOMMENDATIONS

The intent of the project applicant is to avoid and minimize impacts on jurisdictional features. This jurisdictional delineation should be used to refine the project design to avoid and minimize impacts on jurisdictional resources to the extent possible while still achieving the project's purpose.

The following permits would be needed if the project would impact the jurisdiction of the resource agencies:

- **USACE:**
  - Section 404 Nationwide Permit for impacts up to 0.5 acre of wetland WOTUS
- **CDFW:**
  - Streambed Alteration Agreement under Section 1602 of the California Fish and Game Code
- **RWQCB:**
  - Section 401 Water Quality Certification for waters that are under USACE jurisdiction
  - Report of Waste Discharge for impacts to WOTS that are not under USACE jurisdiction

To obtain the permits above, compensatory mitigation would be required to mitigate for impacts. This could be provided through the payment of in-lieu mitigation fees to an established mitigation bank or through creation, restoration, or enhancement of on-site or off-site mitigation to compensate for impacts on jurisdictional resources. If the project applicant would be providing on-site or off-site mitigation, a mitigation plan would be needed to describe the procedures and details of mitigation implementation. The minimum compensatory mitigation ratio for impacts on jurisdictional areas is 1:1, but the agencies may require a higher replacement ratio, depending on the resources impacted compared to the mitigation proposed. The same mitigation can typically be

designed to provide mitigation to satisfy each agency's requirements; however, because the resource agencies are each addressing different regulations, specific requirements may vary between the permits.

Disclaimer

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

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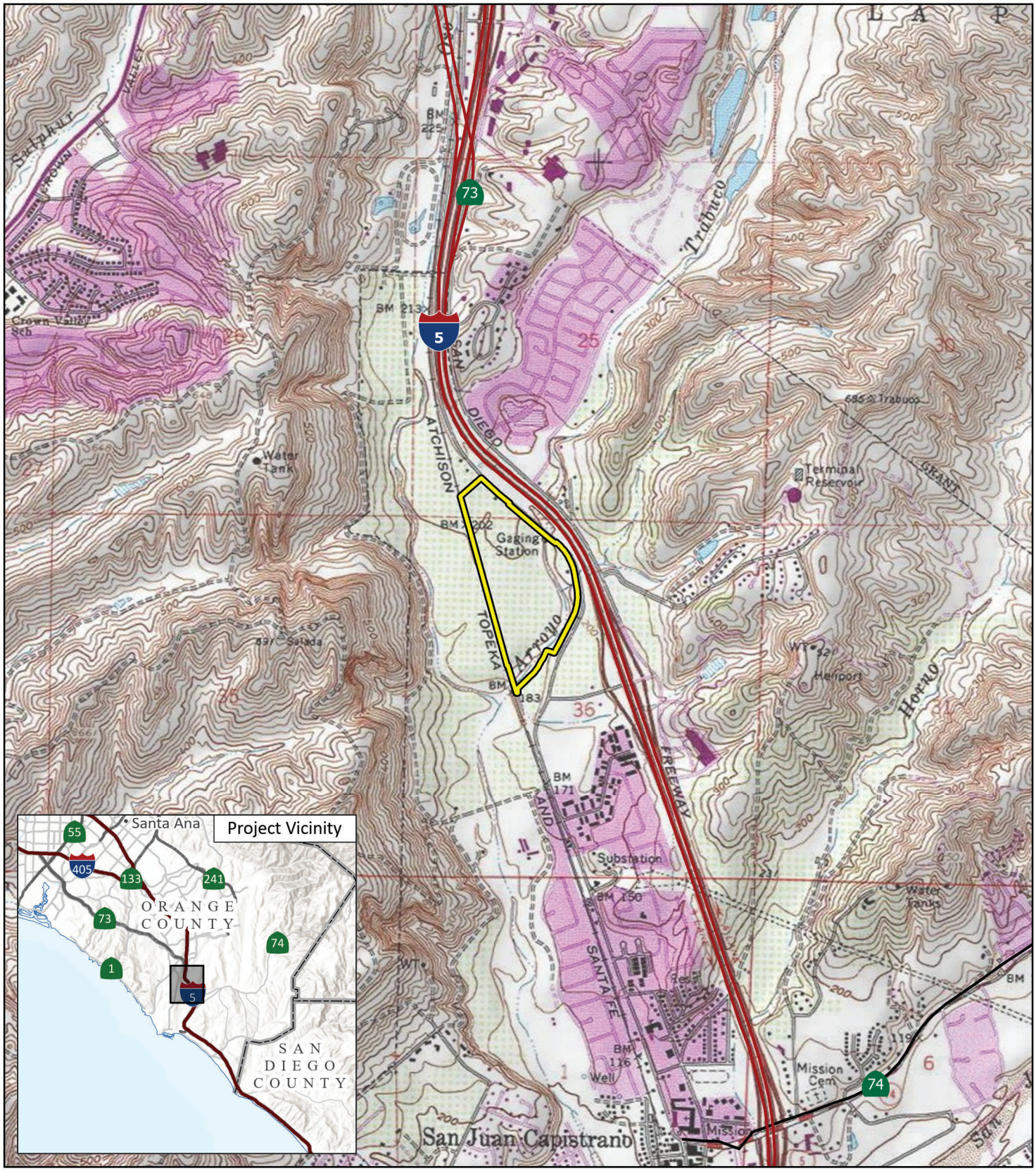
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APPENDIX A

FIGURES

Figure 1: Project Location and Vicinity
Figure 2: Vegetation Communities
Figure 3: National Wetlands Inventory and National Hydrography Dataset
Figure 4: Soils Map
Figure 5: Delineated Features
Figure 6: USACE/RWQCB Jurisdiction
Figure 7: Impacts to CDFW Jurisdiction



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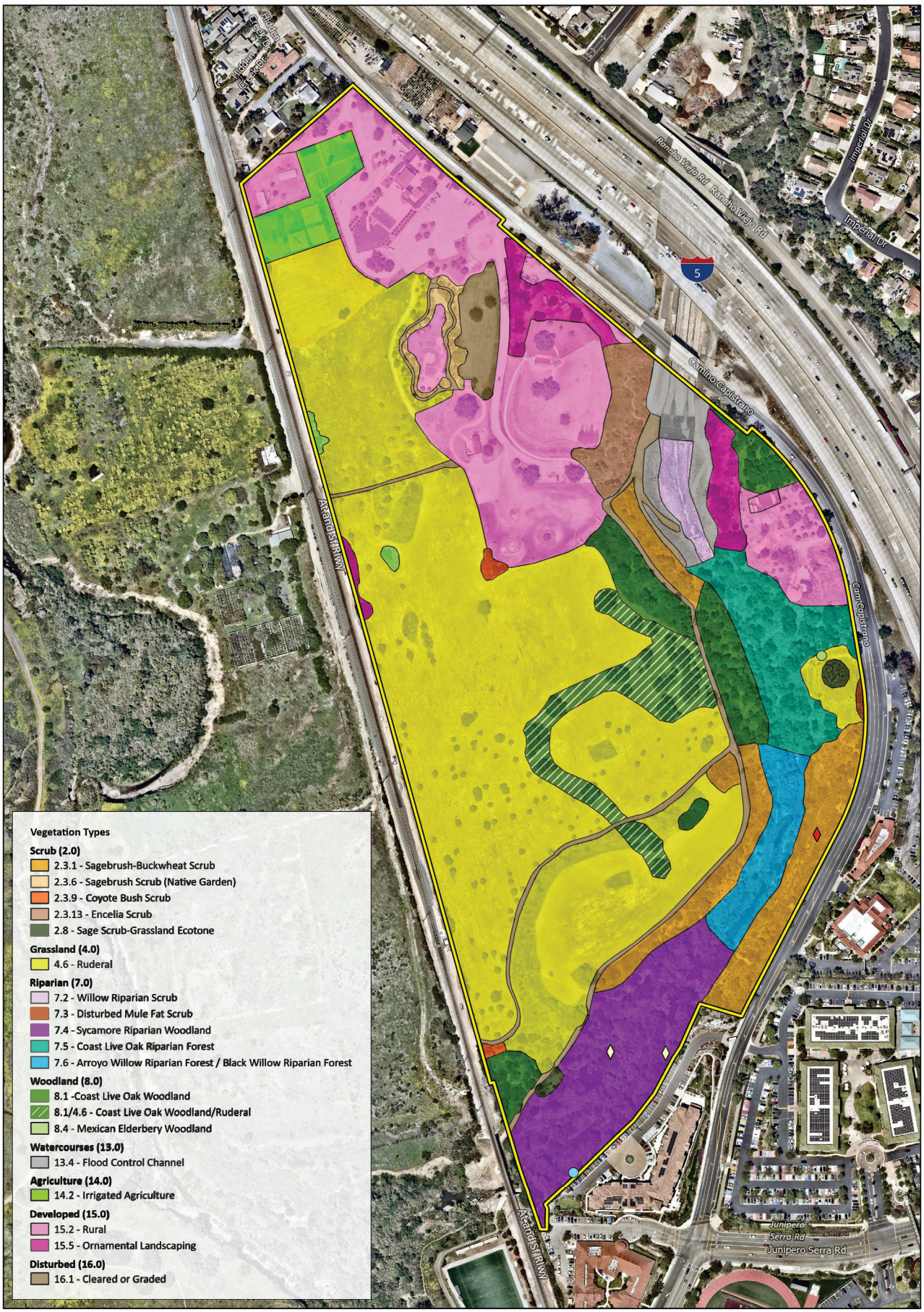
FIGURE 1

Legacy Ranch Project

Project Location and Vicinity

SOURCE: USGS 7.5' Quad - *San Juan Capistrano (1981)*, CA

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LSA

Project Site
Coastal California Gnatcatcher Observation
Yellow Warbler Observation
San Diego Sagewort Observation
Paniculate Tarplant Observation

0 125 250
FEET

SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 2

Legacy Ranch Project
Vegetation Communities



LSA

Project Site

USGS Hydrography

Channel Line

Canal

USFWS National Wetlands Inventory Classification

System, Subsystem, and Class

Palustrine Emergent

Palustrine Scrub-Shrub

Riverine Intermittent Streambed

0 150 300

FEET

FIGURE 3

Legacy Ranch Project

National Wetlands Inventory and National Hydrography Dataset

SOURCE: Nearmap Aerial Imagery (5/7/2025), USGS 3D Hydrography Program (7/2025), USFWS National Wetlands Inventory (10/2024)

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LSA

FIGURE 4

Project Site

Soils

- 132 - Botella Clay Loam, 2 to 9 Percent Slopes, Warm MAAT, MRLA 19
- 147 - Corralitos Loamy Sand, Moderately Fine Substratum
- 149 - Cropley Clay, 2 to 9 Percent Slopes, Warm MAAT MLRA 19
- 191 - Riverwash
- 197 - Soboba Gravelly Loamy Sand, 0 to 5 Percent Slopes
- 206 - Sorrento Loam, 0 to 2 Percent Slopes
- 207 - Sorrento Loam, 2 to 9 Percent Slopes, Warm MAAT, MRLA 19
- 209 - Sorrento Clay Loam, 2 to 9 Percent Slopes, Warm MAAT, MLRA 19

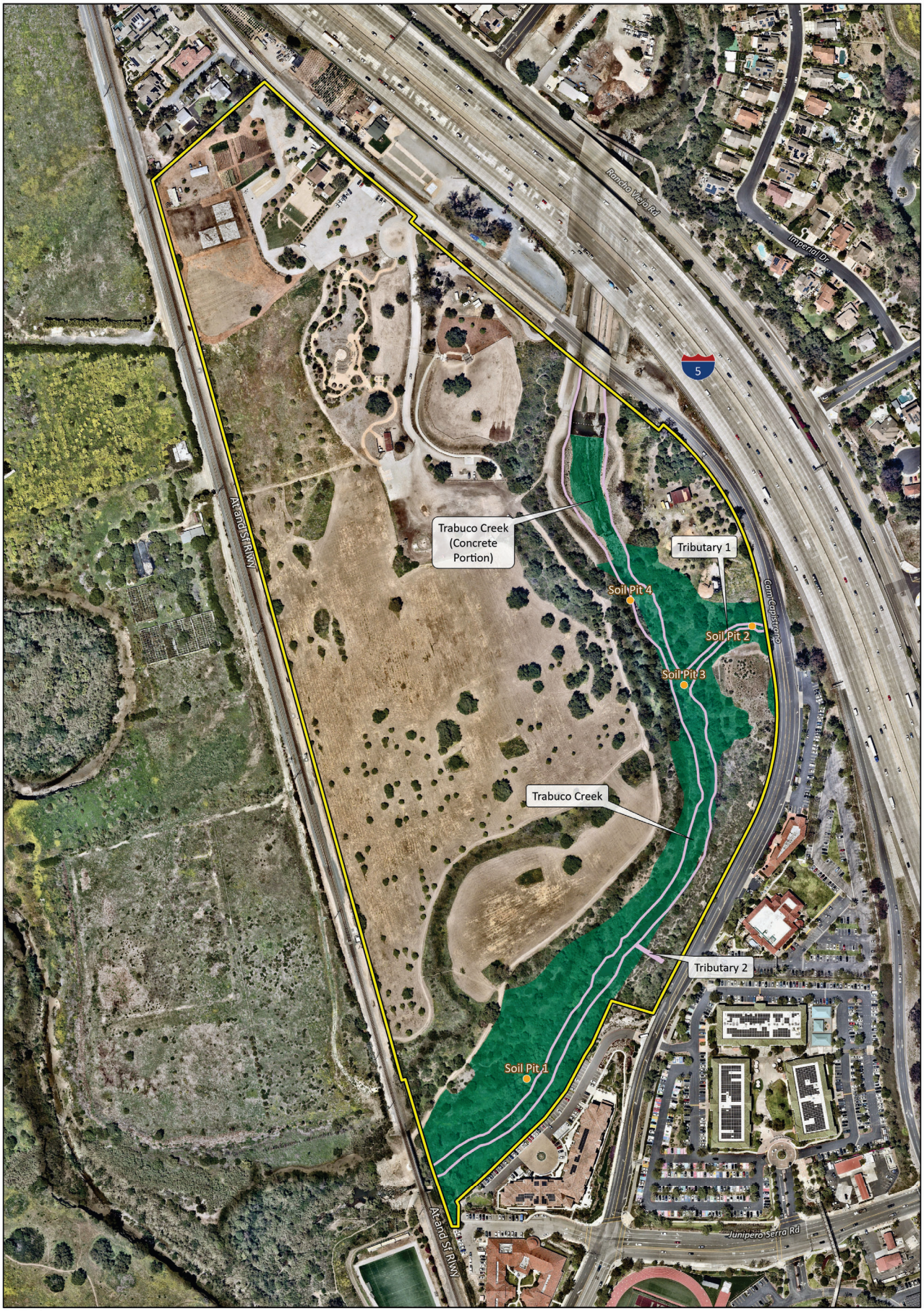
0 125 250
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SOURCE: Nearmap Aerial Imagery (5/7/2025), USDA NRCS SSURGO Database (12/2024)

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Legacy Ranch Project

Soils Map



LSA

Project Site
Soil Pit
Ordinary High Water Mark
Riparian Habitat

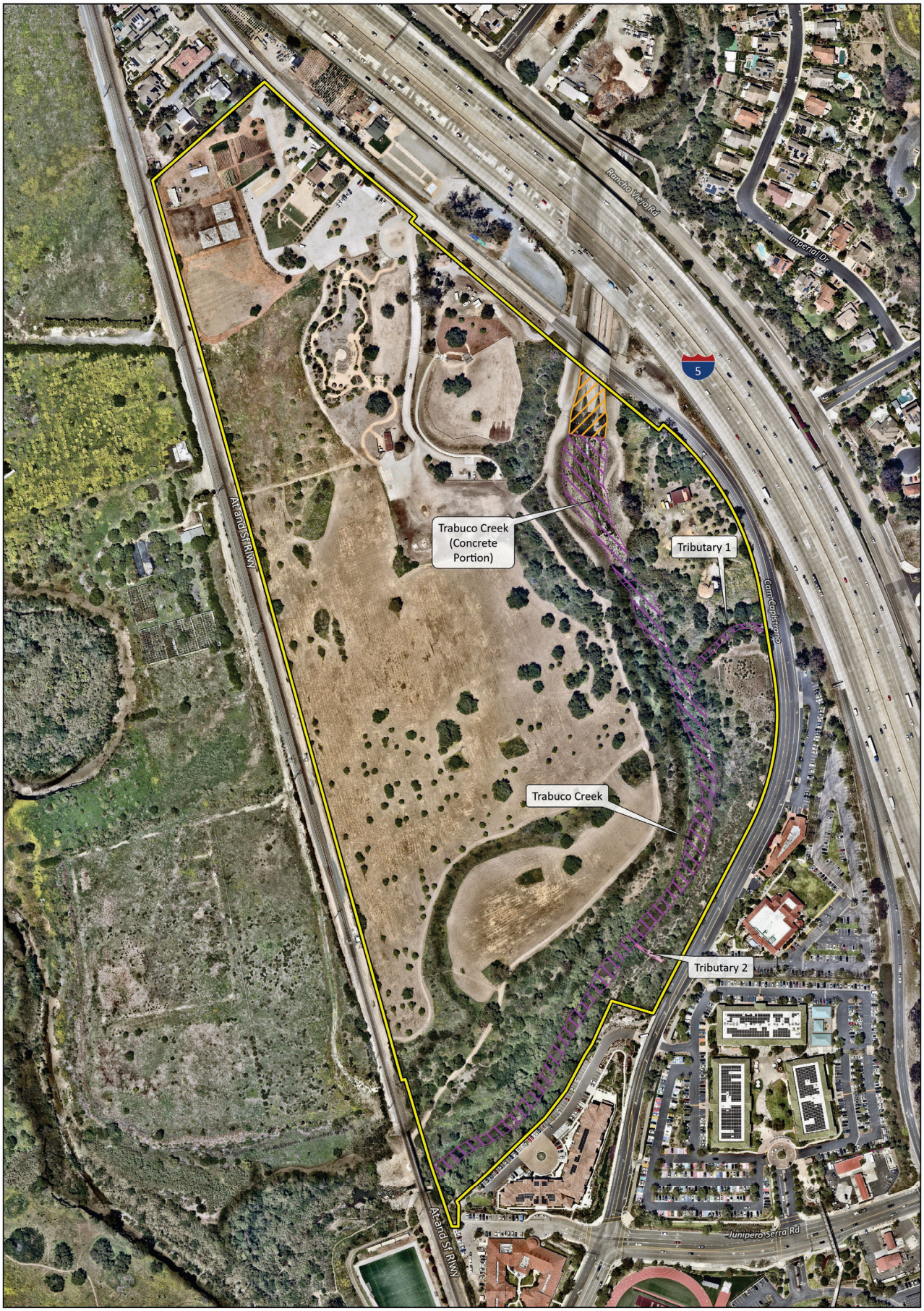
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SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 5

Legacy Ranch Project
Delineated Features



LSA

Project Site
RWQCB Non-wetland Waters
USACE/RWQCB - Wetland Waters
USACE/RWQCB - Non-Wetland Waters

0 125 250
FEET

SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 6

Legacy Ranch Project
USACE/RWQCB Jurisdiction



LSA

Project Site
Riparian Habitat
CDFW Jurisdiction

0 125 250
FEET

SOURCE: Nearmap Aerial Imagery (5/7/2025)

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FIGURE 7

Legacy Ranch Project
Impacts to CDFW Jurisdiction

APPENDIX B

USACE WETLAND DETERMINATION DATA FORM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Juan Capistrano Legacy Ranch City/County: San Juan Capistrano/Orange Sampling Date: 10/27/25

Applicant/Owner: City of San Juan State: CA Sampling Point: 1

Investigator(s): H. Madera, S. Bressler Section, Township, Range: Section 36, Township 7 South, Range 8 West

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

Subregion (LRR): C- Mediterranian California Lat: 33.521101 Long: -117.670412 Datum: NAD 83

Soil Map Unit Name: NA NWI classification: Riverine/Wetland

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Arroyo willow	75	Y	FACW
2. Coast live oak	40	N	N/A
3. Chinese elm	10	N	UPL
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Facillia cicutaria	20	N	N/A
2. Mugwort	40	Y	FAC
3. Common fleabane	15	N	FAC
4.			
5.			
6.			
7.			
8.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 75	x 2 =	150
FAC species 55	x 3 =	165
FACU species	x 4 =	
UPL species 10	x 5 =	50
Column Totals: 140 (A)		365 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Open water 10%

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 4/2	100					sandy loa	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

Taken 4' from edge of flowing creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Juan Capistrano Legacy Ranch City/County: San Juan Capistrano/Orange Sampling Date: 10/27/25

Applicant/Owner: City of San Juan State: CA Sampling Point: 1

Investigator(s): H. Madera, S. Bressler Section, Township, Range: Section 36, Township 7 South, Range 8 West

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

Subregion (LRR): C- Mediterranian California Lat: 33.524587 Long: -117.668417 Datum: NAD 83

Soil Map Unit Name: NA NWI classification: Riverine/Wetland

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia filisera	15	Y	FAC
2. Salix lasiolepis	30	Y	FACW
3.			
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis pilularis	1	N	FAC
2. Washingtonia flisera	2	N	FAC
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Eleocharis palustris	15	Y	OBL
2. short pod mustard	5	N	NA
3. Erigeron canadensis	3	N	FACU
4.			
5.			
6.			
7.			
8.			
	23	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	33	x 2 =	66
FAC species	18	x 3 =	54
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	66 (A)		135 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Open water 7%

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5 YR 2.5/1	100					sandy loa	
5-11	10 YR 3/1	100					Sandy CL	sandy clay loam
12-18	Gley 1 2.5/10Y	100					sandy cla	sandy clay loam

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No ___ Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0-18

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Taken 2' from edge of flowing creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Juan Capistrano Legacy Ranch City/County: San Juan Capistrano/Orange Sampling Date: 10/27/25

Applicant/Owner: City of San Juan State: CA Sampling Point: 1

Investigator(s): H. Madera, S. Bressler Section, Township, Range: Section 36, Township 7 South, Range 8 West

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

Subregion (LRR): C- Mediterranian California Lat: 33.524130 Long: -117.6690246 Datum: NAD 83

Soil Map Unit Name: NA NWI classification: Riverine/Wetland

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	70	Y	FACW
2. Ficus calica	10	N	FACU
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix lasiolepis	10	N	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Pulceria	30	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 80	x 2 = 160
FAC species 30	x 3 = 90
FACU species 10	x 4 = 40
UPL species _____	x 5 = _____
Column Totals: 120 (A)	290 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Open water 20%

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	7.5 YR 4/2	98	7.5 YR 5/8	2	C	RC	clay loam	
12-18	7.5 YR 4/2	90	7.5 YR 5/8	10	C	RC	clay loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

Soil is very moist and forms a uniform clay

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

Taken 3' from edge of flowing creek

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: San Juan Capistrano Legacy Ranch City/County: San Juan Capistrano/Orange Sampling Date: 10/27/25

Applicant/Owner: City of San Juan State: CA Sampling Point: 1

Investigator(s): H. Madera, S. Bressler Section, Township, Range: Section 36, Township 7 South, Range 8 West

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

Subregion (LRR): C- Mediterranian California Lat: 33.5247637 Long: -117.6695262 Datum: NAD 83

Soil Map Unit Name: NA NWI classification: Riverine/Wetland

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus agrifolia	70	Y	NA
2.			
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix lasiolepis	2	N	FACW
2.			
3.			
4.			
5.			
	2 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cypelus eragostis	5	Y	FACW
2. Pulicaris paludosa	15	Y	FAC
3. smilo grass	5	N	NA
4. Mexican tea	2	N	FAC
5.			
6.			
7.			
8.			
	27 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 33 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 7	x 2 = 14
FAC species 17	x 3 = 51
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 24 (A)	65 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Open water 40%

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10 YR 3/2	85	7.5 YR 4/6	15	C	RC	sandy cla	sandy clay loam
11-18	7.5 YR 2.5/1	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 18

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

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

Remarks:

Taken at edge of flowing creek

APPENDIX C

ORDINARY HIGH WATER MARK DATA FORMS

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U.S. Army Corps of Engineers (USACE)
RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 20252445	Site Name: San Juan Capistrano Legacy Ranch	Date and Time: 10/27/25; 1330
Location (lat/long): 33.5247693, -117.6695275	Investigator(s): H. Madera, S. Bressler	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [x] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?

Site is a open space located within the city of San Juan Capistrano. Hiking trails and dog park located within the site and adjacent. No major drought or floods recently.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Feature flows into area through a large cement lined flood control channel lined with rip rap then turns into a natural soft bottom channel downstream.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [x] **Break in slope**
  - [ ] *on the bank*
  - [x] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [x] **Shelving**
  - [x] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [x] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [x] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [x] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [x] **Changes in character of soil**
- [ ] **Mudcracks**
- [ ] **Changes in particle-sized distribution**
  - [ ] *transition from* _____ to _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [x] **Change in vegetation type from** T **to** Mosses and forbs
- [x] **Change in density of vegetation**
- [x] **Exposed roots below intact soil layer**
- [x] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [x] **Wracking/presence of organic litter**
- [x] **Presence of large wood**
- [x] **Leaf litter disturbed or washed away**
- [x] **Water staining**

Other observed indicators? Describe:

Vegetation changes from dense trees and shrubs above the OHWM to small forbs and mosses within the OHWM.

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Project ID #: _____

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

OHWM is clearly visible by change in vegetation type and density, matting of vegetation, exposed roots, and shelving.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ **Yes** ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
	See attached photo document

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OHWM Field Identification Data Sheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources (Chapter 5)** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on data sheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape. (Chapter 4)

a. **Note on the data sheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
   iii. Erosional and depositional environments
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 **Site conditions during the field assessment (assemble evidence) (Chapter 1 and 3)**

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious human-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the data sheet,** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a **List evidence (Chapter 2 and 3)**

Assemble evidence by marking each box with a slash next to each line of evidence.

If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators	**Sediment and soil indicators**	**Vegetation indicators**	**Other physical indicators**
Where are the breaks in slope?	Where does evidence of soil formation appear?	Where are the significant transitions in vegetation species, density, and age?	Is there organic litter present?
Are there identifiable banks?			
Is there an easily identifiable top of bank?	Are there mudcracks present?	Is there vegetation growing on the channel bed?	Is there any leaf litter disturbed or washed away?
Are the banks actively eroding?		If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?	
Are the banks undercut?	Is there evidence of sediment sorting by grain size?		
Are the banks armored?		Where are the significant transitions in vegetation?	Is there large wood deposition?
Is the channel confined by the surrounding hillslopes?			
Are there natural or man-made berms and levees?		Is the vegetation tolerant of flowing water?	
Are there fluvial terraces?		Has any vegetation been flattened by flowing water?	Is there evidence of water staining?
Are there channel bars?			

Are the following features of fluvial transport present?

Evidence of erosion: obstacle marks, scour, armoring
Bedforms; riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

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OHWM Field Identification Data Sheet Instructions and Field Procedure

Step 3b Weight each line of evidence (Chapter 1 and 3)

Consider importance of each indicator by assessing the following:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows? Did recent extreme events and/or land use affect this indicator?

ii. Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages?

iii. Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low-flow indicator. The difference between high-and extreme-flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 (Chapter 4) can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***In Chapter 2 of the OHWM field manual provides information on specific indicators that can assist in putting these in context and determining relevance, strength, and reliability.**

iv. Recent floods may have left many extreme-flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

v. Droughts may cause field evidence of OHWM to be obscured because there has been an extended time since the last high-flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

vi. Both human-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provide specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describe each indicator in detail and provide examples of areas where indicators are difficult to interpret.

Step 4 Was additional information used to support identification of the OHWM? Are other resources used to support the lines of evidence observed in the field?

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling and weighting evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were used to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the data sheet.

Step 5 Describe rationale for location of OHWM: (Chapter 1 and Chapter 3)

a. Weigh body of evidence:

Combine information from Step 3b: Why do the combination of indicators represent the OHWM?

i. Integrate the lines of evidence (relevance, strength, and reliability) of each indicator.

ii. Consider which indicators are high value indicators that co-occur along the stream reach. Which indicators are most relevant to identifying high flow elevations, which are most persistent across the landscape, and which are most persistent over time?

iii. Which indicators that are found above and below the location of the OHWM were helpful in identifying the elevation of the OHWM?

b. If there is more than one possible location, explain why. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the data sheet under Step 5 or attach additional sketches and field observations to the data sheet.

d. Take photographs of indicators and attach an imagery log using page 2 of data sheet or another method of logging images.

i. Annotate images with descriptions of indicators.

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U.S. Army Corps of Engineers (USACE)
RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: 20252445	Site Name: San Juan Capistrano Legacy Ranch	Date and Time: 10/27/25; 1130
Location (lat/long): 33.524585, -117.668412	Investigator(s): H. Madera, S. Bressler	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [x] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [x] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?

Site is a open space located within the city of San Juan Capistrano. Hiking trails and dog park located within the site and adjacent. No major drought or floods recently.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Feature flows into area under a major road through a culvert. The actual feature itself appears mostly unaltered by human use. Evidence of high flows during storms.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [x] **Break in slope**
  - [ ] *on the bank*
  - [x] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [x] **Shelving**
  - [x] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [x] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [x] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [x] **Changes in character of soil**
- [ ] **Mudcracks**
- [ ] **Changes in particle-sized distribution**
  - [ ] *transition from* _____ to _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** _____ **to** _____
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [x] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

_____

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [x] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [x] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

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Project ID #: _____

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Bank shows distinct undercut on south side of feature with exposed roots. Bank shelving on the north side of the feature with exposed roots. Evidence of wracking along the extent of the OHWM.

Additional observations or notes

Soil changes from sandy loam to saturated clay loam within the OHWM.

Attach an imagery log of the site.

Imagery log attached? ☒ **Yes** ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
	See attached photo document

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OHWM Field Identification Data Sheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources (Chapter 5)** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on data sheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape. (Chapter 4)

a. **Note on the data sheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
   iii. Erosional and depositional environments
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 **Site conditions during the field assessment (assemble evidence) (Chapter 1 and 3)**

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious human-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the data sheet,** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a **List evidence (Chapter 2 and 3)**

Assemble evidence by marking each box with a slash next to each line of evidence.

If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators	**Sediment and soil indicators**	**Vegetation indicators**	**Other physical indicators**
Where are the breaks in slope?	Where does evidence of soil formation appear?	Where are the significant transitions in vegetation species, density, and age?	Is there organic litter present?
Are there identifiable banks?			
Is there an easily identifiable top of bank?	Are there mudcracks present?	Is there vegetation growing on the channel bed?	Is there any leaf litter disturbed or washed away?
Are the banks actively eroding?		If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?	
Are the banks undercut?	Is there evidence of sediment sorting by grain size?		
Are the banks armored?		Where are the significant transitions in vegetation?	Is there large wood deposition?
Is the channel confined by the surrounding hillslopes?			
Are there natural or man-made berms and levees?		Is the vegetation tolerant of flowing water?	
Are there fluvial terraces?		Has any vegetation been flattened by flowing water?	Is there evidence of water staining?
Are there channel bars?			

Are the following features of fluvial transport present?

Evidence of erosion: obstacle marks, scour, armoring
Bedforms; riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

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OHWM Field Identification Data Sheet Instructions and Field Procedure

Step 3b Weight each line of evidence (Chapter 1 and 3)

Consider importance of each indicator by assessing the following:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows? Did recent extreme events and/or land use affect this indicator?

ii. Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages?

iii. Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low-flow indicator. The difference between high-and extreme-flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 (Chapter 4) can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***In Chapter 2 of the OHWM field manual provides information on specific indicators that can assist in putting these in context and determining relevance, strength, and reliability.**

iv. Recent floods may have left many extreme-flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.

v. Droughts may cause field evidence of OHWM to be obscured because there has been an extended time since the last high-flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.

vi. Both human-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provide specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describe each indicator in detail and provide examples of areas where indicators are difficult to interpret.

Step 4 Was additional information used to support identification of the OHWM? Are other resources used to support the lines of evidence observed in the field?

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling and weighting evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were used to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the data sheet.

Step 5 Describe rationale for location of OHWM: (Chapter 1 and Chapter 3)

a. Weigh body of evidence:

Combine information from Step 3b: Why do the combination of indicators represent the OHWM?

i. Integrate the lines of evidence (relevance, strength, and reliability) of each indicator.

ii. Consider which indicators are high value indicators that co-occur along the stream reach. Which indicators are most relevant to identifying high flow elevations, which are most persistent across the landscape, and which are most persistent over time?

iii. Which indicators that are found above and below the location of the OHWM were helpful in identifying the elevation of the OHWM?

b. If there is more than one possible location, explain why. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the data sheet under Step 5 or attach additional sketches and field observations to the data sheet.

d. Take photographs of indicators and attach an imagery log using page 2 of data sheet or another method of logging images.

i. Annotate images with descriptions of indicators.

APPENDIX D

SITE PHOTOGRAPHS



Photo 1: Flood control channel and concrete-lined portion of Trabuco Creek. Photo facing northeast.



Photo 2: Flood control channel in Trabuco Creek. Photo facing south.



Photo 3: Downstream area of the concrete-lined portion of Trabuco Creek with riparian vegetation. Photo facing north.



Photo 4: Lower portion of the concrete-lined channel in Trabuco Creek. Photo facing south.



Photo 5: Upstream area of soft-bottom portion of Trabuco Creek. Photo facing south.



Photo 6: Riparian vegetation and flowing water within Trabuco Creek.



Photo 7: Upstream portion of Tributary 1, showing the culvert entering the project site from Camino Capistrano. Photo facing east.



Photo 8: View of the OHWM and lower banks along Tributary 1. Photo facing east.



Photo 9: View of the channelization and OHWM in the middle portion of Tributary 1. Photo facing upstream.



Photo 10: Riparian vegetation and top of banks along Tributary 1. Photo facing west.



Photo 11: The confluence of Tributary 1 and Trabuco Creek. Photo facing west.



Photo 12: View of Trabuco Creek where Tributary 1 merges into the creek. Photo facing upstream.



Photo 13: View of riparian vegetation along the lower banks of Trabuco Creek.



Photo 14: Riparian vegetation occurring along the banks of the downstream portion of Trabuco Creek.



Photo 15: View of upland vegetation along the tops of the banks of Trabuco Creek transitioning to riparian.



Photo 16: OHWM indicators along Tributary 1, including wracking and matted vegetation.



Photo 17: Evidence of wracking along the OHWM boundary in Tributary 1.



Photo 18: OHWM indicators along the edges of Trabuco Creek, including change in sedimentation and matted down vegetation.



Photo 19: View of matted down vegetation within the OHWM boundaries of Trabuco Creek.



Photo 20: View of additional OHWM indicators within Trabuco Creek, including shelving, exposed roots, and matted down vegetation.



Photo 21: Soil pit 1, taken just outside of the OHWM in the downstream portion of Trabuco Creek.



Photo 22: Profile of soil pit 1, showing no hydric soil indicators.



Photo 23: Soil pit 2, taken below the OHWM in Tributary 1.



Photo 24: Soil pit 2 profile showing a gleyed matrix.



Photo 25: Soil pit 3, taken below the OHWM at the confluence of Tributary 1 and Trabuco Creek



Photo 26: Soil pit 3 profile showing redox features within the root lining.



Photo 27: Soil pit 4, taken below the OHWM in the upstream portion of Trabuco Creek.



Photo 28: Soil pit 4 profile showing the color matrix and redox features within the root lining.

APPENDIX E

SPECIAL-STATUS SPECIES IDENTIFIED AS POTENTIALLY OCCURRING IN THE PROJECT VICINITY

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
red-sand verbena	*Abronia maritima*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial herb. It occurs within coastal dunes at elevations from 0 to 300 ft.	February–November	**Not Expected.** No suitable habitat (coastal dunes).
aphanisma	*Aphanisma blitoides*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. Occurs on sandy or gravelly soils. Habitat types include coastal bluff scrub, coastal dunes, and coastal scrub habitats between 0 and 984 ft in elevation.	February–June	**Not Expected.** No suitable habitat; this species typically occurs on the immediate coast.
San Diego sagewort	*Artemisia palmeri*	US: –- CA: – CRPR: 4.2 NCCP: Not Covered	Perennial deciduous shrub. It occurs within chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland, at elevations from 15–3,000 ft.	(February) May–September	**Observed.** Suitable habitat. Observed along the banks of Trabuco Creek during general and focused surveys.
western spleenwort	*Asplenium vespertinum*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within chaparral, cismontane woodland, and coastal scrub, growing at elevations from 590–3,280 ft.	February–June	**Not Expected.** Project site is below the species' known elevational range.
Coulter's saltbush	*Atriplex coulteri*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial herb. Found in alkaline or clay soils. Habitat types include coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands.	March– October	**Not Expected.** Marginally suitable habitat; this species typically occurs on the immediate coast. However, there are some records further inland. Not observed during focused surveys.
south coast saltscale	*Atriplex pacifica*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. Habitat types include coastal dunes, coastal bluff scrub, coastal scrub, and playas between 0 and 460 ft in elevation.	March–October	**Not Expected.** No suitable habitat; this species typically occurs on the immediate coast.
Parish's brittlescale	*Atriplex parishii*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Annual herb. It occurs within chenopod scrub, playas, and vernal pools, growing at elevations from 80–6,235 ft.	June–October	**Not Expected.** No suitable habitat.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
Davidson's saltscale	*Atriplex serenana* var. *davidsonii*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. It occurs within coastal bluff scrub, and coastal scrub, growing at elevations from 35–655 ft.	April–October	**Not Expected.** Marginally suitable habitat; this species typically occurs on the immediate coast. However, there are some records further inland.
San Diego viguiera	*Bahiopsis laciniata*	US: – CA: – CRPR: 4.3 NCCP: Not Covered	Perennial shrub. It occurs within chaparral and coastal scrub, growing at elevations from 195–2,460 ft.	February–June (August)	**Observed.** Observed during focused surveys east of Trabuco Creek. Project site is outside the current known range for the species; Orange County populations are reported to be introduced (CNPS 2026a).
Nevin's barberry	*Berberis nevinii*	US: FE CA: CE CRPR: 1B.1 NCCP: Not Covered	Perennial evergreen shrub. It occurs within gravelly and sandy soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub, growing at elevations from 230–2,705 ft.	(February) March-June	**Not Expected.** Project site is outside the current known range for this species.
thread-leaved brodiaea	*Brodiaea filifolia*	US: FT CA: CE CRPR: 1B.1 NCCP: Not Covered	Perennial bulbiferous herb. It occurs within chaparral (openings), cismontane woodland, coastal scrub, Playas, valley and foothill grassland, and vernal pools, growing at elevations from 80–3,675 ft.	March– June	**Not Expected.** Suitable habitat (coastal scrub, grassland, woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
intermediate mariposa-lily	*Calochortus weedii* var. *intermedius*	US: – CA: – CRPR: 1B.2 NCCP: Conditionally Covered	Perennial bulbiferous herb. Habitat types include chaparral, coastal scrub, and valley and foothill grassland. Often occurs in dry, rocky soils from 395–2,805 ft in elevation.	May–July	**Not Expected.** Suitable habitat (coastal scrub, grassland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
Lewis' evening–primrose	*Camissoniopsis lewisii*	US: – CA: – CRPR: 3 NCCP: Not Covered	Sandy or clay areas in coastal scrub, grassland, and woodland below 1,000 ft in elevation. In California, known only from Los Angeles and San Diego counties. Believed extirpated from Orange County. Also occurs in Mexico.	March–June	**Not Expected.** Suitable habitat (coastal scrub, grassland, woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
Payson's jewelflower	*Caulanthus simulans*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral, and coastal scrub, growing at elevations from 295–7,220 ft. Granitic and sandy soils.	(February) March–May (June)	**Not Expected.** Project site is below the current known elevational range.
southern tarplant	*Centromadia parryi* ssp. *australis*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Annual herb. Habitat types include vernal pools, margins of marshes and swamps, and vernally mesic valley and foothill grasslands, sometimes with saltgrass on alkaline soils. Found up to 1,400 ft in elevation.	May–November	**Not Expected.** Marginally suitable habitat (grassland, woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
Orcutt's pincushion	*Chaenactis glabriuscula* var. *orcuttiana*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Annual herb. Habitat types include coastal bluff scrub (sandy) and coastal dunes. Found up to 330 ft in elevation.	January–August	**Not Expected.** No suitable habitat.
Peninsular spineflower	*Chorizanthe leptotheca*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral, coastal scrub, and lower montane coniferous forest, growing at elevations from 985–6,235 ft.	May–August	**Not Expected.** Project site is outside the current known range; project site is below the known elevational range.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
long–spined spineflower	*Chorizanthe polygonoides* var. *longispina*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. Habitat types include chaparral, coastal sage scrub, meadows and seeps, valley and foothill grassland, and vernal pools. Often occurs in clay soils between 100 ft and 5,019 ft in elevation.	April–July	**Not Expected.** Project site is outside the current known range.
seaside cistanthe	*Cistanthe maritima*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial herb. Found in chaparral, cismontane woodland, and coastal scrub. Occurs in sandy or gravelly soils between 230 ft and 2,650 ft in elevation.	(February) March–June (August)	**Not Expected.** Marginally suitable habitat (woodland, coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
San Miguel savory	*Clinopodium chandleri*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial shrub. Habitat types include chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Occurs in rocky, gabbroic, or metavolcanic soils between 390 ft and 3,550 ft in elevation.	March–July	**Not Expected.** No suitable soils; project site is below the known elevational range.
summer holly	*Comarostaphylis diversifolia* ssp. diversifolia	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial evergreen shrub. Habitat types include in chaparral and cismontane woodland between 100 ft and 2,600 ft in elevation.	April–June	**Not Expected.** Limited amount of suitable habitat (oak woodland); however, perennial shrub not observed during field survey.
small-flowered morning-glory	*Convulvulus simulans*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral (openings), coastal scrub, and valley and foothill grassland, growing at elevations from 100–2,430 ft.	March–July	**Not Expected.** Suitable habitat (coastal scrub, grassland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
paniculate tarplant	*Deinandra paniculata*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within coastal scrub, valley and foothill grassland, and vernal pools, growing at elevations from 80–3,085 ft.	(March) April–November	**Observed.** Suitable habitat. Observed along the banks of Trabuco Creek during general and focused surveys.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
western dichondra	*Dichondra occidentalis*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland, growing at elevations from 165–1,640 ft.	(January) March–July	**Not Expected.** Suitable habitat (coastal scrub, grassland, woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
Blochman's dudleya	*Dudleya blochmaniae* ssp. *blochmaniae*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Perennial herb. Habitat types include coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland. Occurs in rocky, often clay or serpentine soils between 5 ft and 1,480 ft in elevation.	April–June	**Not Expected.** Project site is outside the current known range of the species; this species typically occurs on the immediate coast.
many-stemmed dudleya	*Dudleya multicaulis*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial herb. Habitat types include chaparral, coastal scrub, and valley and foothill grassland. Usually occurs in heavy, often clayey soils from 45 ft to 2,370 ft in elevation.	April–July	**Not Expected.** Suitable habitat (coastal scrub, grassland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
Laguna Beach dudleya	*Dudleya stolonifera*	US: FE CA: CE CRPR: 1B.1 NCCP: Covered	Perennial stoloniferous herb. Habitat types include chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Occurs in rocky soils from 35 to 855 ft.	May–July	**Not Expected.** Project site is outside the current known range of this species.
sticky dudleya	*Dudleya viscida*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial herb. Habitat types include coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub. Occurs in rocky soils between 32 ft and 1,804 ft in elevation.	May–June	**Not Expected.** No suitable soils.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
Pendleton button–celery	*Eryngium pendletonense*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Perennial herb. Habitat types include coastal bluff scrub, valley and foothill grassland, and vernal pools. Occurs in clay, vernally mesic areas between 50 ft and 360 ft in elevation.	April–July	**Not Expected.** No suitable (mesic) habitat.
Palomar monkeyflower	*Erythranthe diffusa*	US: – CA: – CRPR: 4.3 NCCP: Not Covered	Annual herb. It occurs within chaparral, and lower montane coniferous forest, growing at elevations from 4,005–6,005 ft.	April–June	**Not Expected.** No suitable habitat; project site is below the current known elevational range.
cliff spurge	*Euphorbia misera*	US: – CA: – CRPR: 2B.2 NCCP: Not Covered	Perennial herb. Found in rocky soils, and in coastal bluff scrub, coastal scrub, and Mojavean desert scrub. Elevation from 320 ft to 1,640 ft.	December–August	**Not Expected.** No suitable soils; project site is below the known elevational range.
Palmer's grapplinghook	*Harpagonella palmeri*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral, coastal scrub, and valley and foothill grassland, growing at elevations from 65–3,135 ft.	March–May	**Not Expected.** Marginally suitable habitat (coastal scrub, grassland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
graceful tarplant	*Holocarpha virgata* ssp. *elongata*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland, growing at elevations from 195–3,610 ft.	May–November	**Not Expected.** Project site is outside the current known range.
vernal barley	*Hordeum intercedens*	US: – CA: – CRPR: 3.2 NCCP: Not Covered	Annual herb. It occurs within coastal dunes, coastal scrub, valley and foothill grassland (depressions, saline flats), and vernal pools, growing at elevations from 15–3,280 ft.	March–June	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
mesa horkelia	*Horkelia cuneata* var. *puberula*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Perennial herb. Found in chaparral, cismontane woodland, and coastal scrub. Occurs in sandy or gravelly soils between 230 ft and 2,650 ft in elevation.	February–September	**Not Expected.** Marginally suitable habitat (coastal scrub, oak woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
California satintail	*Imperata brevifolia*	US: – CA: – CRPR: 2B.1 NCCP: Not Covered	Perennial rhizomatous herb. Habitat types include mesic, chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali) and riparian scrub. Elevation from 0 to 3,986 ft.	September–May	**Not Expected.** Suitable habitat (coastal scrub, riparian scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial shrub. Habitat types include chaparral and coastal scrub (sandy, often disturbed areas) between 32 ft and 440 ft in elevation.	April–November	**Not Expected.** Suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
Southern California black walnut	*Juglans californica*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial deciduous tree. It occurs within chaparral, cismontane woodland, coastal scrub, and riparian woodland, growing at elevations from 165–2,955 ft.	March–August	**Not Expected.** Perennial species not observed during the general survey.
southwestern spiny rush	*Juncis acutus* spp. *leopoldii*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt), and meadows and seeps (alkaline seeps), growing at elevations from 10 –2,955 ft.	(March) May–June	**Observed.** Individuals observed were planted in the Putuidem Village area; does not naturally occur in the area.
Coulter's goldfields	*Lasthenia glabrata* ssp. *coulteri*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Annual herb. Habitat types include marshes and swamps, playas, and vernal pools up to 4,000 ft in elevation.	February–June	**Not Expected.** No suitable habitat.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
Robinson's peppergrass	*Lepidium virginicum* var. *robinsonii*	US: – CA: – CRPR: 4.3 NCCP: Not Covered	Annual herb. It occurs within chaparral, and coastal scrub, growing at elevations from 5–2,905 ft.	January–July	**Not Expected.** Suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
woolly-headed lessingia	*Lessingia hololeuca*	US: – CA: – CRPR: 3 NCCP: Not Covered	Annual herb. It occurs within broadleafed upland forest, coastal scrub, lower montane coniferous forest, and valley and foothill grassland, growing at elevations from 50 –1,000 ft.	June–October	**Not Expected.** Project site is outside known range of this species.
oscellated Humboldt lily	*Lilium humboldtii* var. *oscellatum*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial bulbiferous herb. It occurs within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland, growing at elevations from 100–5,905 ft.	March–July (August)	**Not Expected.** Project site is outside the known geographic range of this species (foothills). Not observed during focused surveys.
Santa Catalina Island desert-thorn	*Lycium brevipes var. hassei*	US: – CA: – CRPR: 3.1 NCCP: Not Covered	Perennial deciduous shrub. It occurs within coastal bluff scrub, and coastal scrub, growing at elevations from 215– 985 ft.	June (August)	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
California box-thorn	*Lycium californicum*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial shrub. It occurs within coastal bluff scrub, and coastal scrub, growing at elevations from 15–490 ft.	March–August (December)	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
cliff malacothrix	*Malacothrix saxatilis* var. saxatilis	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within coastal bluff scrub, and coastal scrub, growing at elevations from 1–655 ft.	March–September	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
small-flowered microseris	*Microseris douglasii* var. *platycarpa*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools, growing at elevations from 50–3,510 ft.	March–May	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
intermediate monardella	*Monardella hypoleuca* ssp. *intermedia*	US: – CA: – CRPR: 1B.3 NCCP: Not Covered	Perennial rhizomatus herb. Usually found in understory. Habitat types include chaparral, cismontane woodland, and lower montane coniferous forests. Elevations from 1,312 ft to 4,101 ft.	April–September	**Not Expected.** Project site below current known elevational range.
little mousetail	*Myosurus minimus ssp. apus*	US: – CA: – CRPR: 3.1 NCCP: Not Covered	Annual herb. It occurs within valley and foothill grassland, and vernal pools (alkaline), growing at elevations from 65–2,100 ft.	March–June	**Not Expected.** No suitable habitat.
mud nama	*Nama stenocarpa*	US: – CA: – CRPR: 2B.2 NCCP: Not Covered	Annual/perennial herb. Habitat type includes in marshes and swamps (lakes margins, and riverbanks).	January–July	**Not Expected.** Marginally suitable habitat (riparian scrub). Not observed during focused surveys.
prostrate vernal pool navarretia	*Navarretia prostrata*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. Found in coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools. Occurs in mesic areas between 10 ft and 3,970 ft in elevation.	April–July	**Not Expected.** No suitable habitat.
chaparral nolina	*Nolina cismontana*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial evergreen shrub. Habitat type includes chaparral and coastal scrub. Occurs on sandstone or gabbro soils between 460 ft and 4,183 ft in elevation.	March–July	**Not Expected.** Perennial shrub not observed during field survey; project site is below the known elevational range.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
California adders–tongue	*Ophioglossum californicum*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within chaparral, valley and foothill grassland, and vernal pools (margins), growing at elevations from 195–1,725 ft.	January–June (December)	**Not Expected.** No suitable habitat.
Allen's pentachaeta	*Pentachaeta aurea* ssp. *allenii*	US: – CA: – CRPR: 1B.1 NCCP: Not Covered	Annual herb. Habitat types include coastal scrub (openings) and valley and foothill grasslands. Elevations from 240 ft to 1,706 ft.	March–June	**Not Expected.** Suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
golden-rayed pentachaeta	*Pentachaeta auera* ssp. aurea	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Annual herb. It occurs within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland, growing at elevations from 260–6,070 ft.	March–July	**Not Expected.** Project site is outside the current known range.
south coast branching phacelia	*Phacelia ramosissima* var. *austrolitoralis*	US: – CA: – CRPR: 3.2 NCCP: Not Covered	Perennial herb. It occurs within chaparral, coastal dunes, coastal scrub, and marshes and swamps (coastal salt), growing at elevations from 15–985 ft.	March–August	**Not Expected.** Suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
chaparral rein orchid	*Piperia cooperi*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial herb. It occurs within chaparral, cismontane woodland, and valley and foothill grassland, growing at elevations from 50–5,200 ft.	March–June	**Not Expected.** Suitable habitat (woodland); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
white rabbit-tobacco	*Pseudognaphalium leucocephalum*	US: – CA: – CRPR: 2B.2 NCCP: Not Covered	Perennial herb. Found in sandy and gravelly soils. Habitat types include chaparral, cismontane woodland, coastal scrub, and riparian woodland.	(July) August–November (December)	**Moderate.** Suitable habitat (coastal scrub, oak woodland, riparian woodland); however, areas that have been routinely disced/disturbed are not suitable for this species.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
Nuttall's scrub oak	*Quercus dumosa*	US: – CA: – CRPR: 1B.1 NCCP: Covered	Perennial evergreen shrub. Habitat types include closed-coned coniferous forest, chaparral, and coastal scrub. Occurs in sandy and clay loam soils between 50 ft and 1,312 ft in elevation.	February–August	**Not Expected.** Perennial shrub not observed during field survey.
Engelmann oak	*Quercus engelmannii*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial deciduous tree. It occurs within chaparral, cismontane woodland, riparian woodland, and Valley and foothill grassland, growing at elevations from 156–4,265 ft.	March–June	**Not Expected.** Perennial not observed during field survey.
Fish's milkwort	*Rhinotropis cornuta* var. *fishiae*	US: – CA: – CRPR: 4.3 NCCP: Not Covered	Perennial deciduous shrub. It occurs within chaparral, cismontane woodland, and riparian woodland, growing at elevations from 330–3,280 ft.	May–August	**Not Expected.** Project site below the current known elevational range.
Coulter's matilija poppy	*Romneya coulteri*	US: – CA: – CRPR: 4.2 NCCP: Covered	Perennial rhizomatous herb. It occurs within chaparral, and coastal scrub, growing at elevations from 65–3,935 ft.	March–July (August)	**Observed.** Individuals observed were planted in the Putuidem Village area; does not occur naturally in the area.
ashy spike-moss	*Selaginella cinerascens*	US: – CA: – CRPR: 4.1 NCCP: Not Covered	Perennial rhizomatous herb. It occurs within chaparral, and coastal scrub, growing at elevations from 65–2,100 ft.	N/A	**Not Expected.** Marginally suitable habitat (coastal scrub); however, areas that have been routinely disced/disturbed are not suitable for this species. Not observed during focused surveys.
chaparral ragwort	*Senecio aphanactis*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Annual herb. Sometimes found in alkaline soils. Habitat types include chaparral, cismontane woodland, and coastal scrub.	January–April (May)	**Not Expected.** Species is considered extirpated from Orange County.

Table E.1: Special-Status Plant Species Known to Occur in the Project Region

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence on the Project Site and Rationale
salt spring checkerbloom	*Sidalcea neomexicana*	US: – CA: – CRPR: 2B.2 NCCP: Not Covered	Perennial herb. Found in alkaline and mesic soils. Habitat types include chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	March–June	**Not Expected.** No suitable soils.
estuary seablite	*Suaeda esteroa*	US: – CA: – CRPR: 1B.2 NCCP: Not Covered	Perennial herb found in coastal marshes and swamps up to 16 ft in elevation.	May–January	**Not Expected.** No suitable habitat; project site is above the current known elevational range.
woolly seablite	*Suaeda taxifolia*	US: – CA: – CRPR: 4.2 NCCP: Not Covered	Perennial evergreen. It occurs within coastal bluff scrub, coastal dunes, and marshes and swamps (coastal margins), growing at elevations from 0 to 165 ft.	January–December	**Not Expected**. No suitable habitat.
big-leaved crownbeard	*Verbesina dissita*	US: FE CA: CE CRPR: 1B.1 NCCP: Not Covered	Perennial herb. Habitat type includes chaparral (maritime) and coastal scrub.	(March) April–June	**Not Expected.** Project site is outside current known range.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), California Endangered (CE), California Threatened (CT),
California Rare Plant Rank (CRPR) Designations:
1B = Rare threatened, or endangered in California and elsewhere
2B = Rare, threatened, or endangered in California, but not elsewhere
3 = Plants with limited information
4 = Plants of Limited Distribution – Watch List
CRPR Threat Code Extension
0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Abbreviation/Acronym Definitions:
CA = California
CNDDB = California Natural Diversity Database
CNPS = California Native Plant Society
ft = foot/feet
NCCP = Natural Community Conservation Plan
US = United States

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
INVERTEBRATES				
San Diego fairy shrimp	*Branchinecta sandiegonensis*	US: FE CA: – NCCP: Conditionally Covered	Endemic to vernal pools in Orange and San Diego Counties. Usually appears in late fall, winter, and spring when rains fill the small, shallow (5–30 cm deep), seasonal pools. Dried cysts will survive in the soil through the dry seasons until pools are formed by rainwater.	**Not Expected.** No suitable habitat; no seasonal pooling based on a review of historic aerial photos available on Google Earth.
Riverside fairy shrimp	*Streptocephalus woottoni*	US: FE CA: – NCCP: Conditionally Covered	Inhabits vernal pools or other seasonal pools, usually at least 30 cm in depth. Dried cysts will survive in the soil through the dry seasons until pools are formed by rainwater.	**Not Expected.** No suitable habitat; no seasonal pooling based on a review of historic aerial photos available on Google Earth.
monarch (California overwintering population)	*Danaus plexippus plexippus pop. 1*	US: FPT CA: – NCCP: Not Covered	Overwintering habitat is located in wind-protected tree groves (gum [*Eucalyptus* sp], Monterey pine [*Pinus radiata*], Monterey cypress [*Cupressus macrocarpa*]) with nectar and water sources nearby. The majority of the overwintering habitat sites are located within 1.5 miles of the Pacific Ocean or San Francisco Bay. Sites are typically found at low elevations (200 to 300 feet) and situated on slopes oriented to the south, southwest, or west, or in shallow canyons or gullies. The sites need to have dappled sunlight, high humidity, fresh water, and an absence of freezing temperatures or high winds. Monarchs breed only where milkweeds are found. They forage on a wide variety of flowers.	**Low.** Limited amount of marginally suitable habitat (oak woodland, ornamental); however, many trees occur as scattered individuals and not as woodlands or windrows that would provide protection from wind. The project site is more inland (5 miles) than is typical for overwintering, but there are other atypical occurrences mapped nearby in San Juan Capistrano (Xerces Society 2025).
Crotch's bumble bee	*Bombus crotchii*	US: – CA: CE NCCP: Not Covered	Inhabits open scrub and grassland from coastal California to crest of Sierra- Cascade and in desert edge areas, south into Mexico. Primarily nests underground. Suitable bumble bee habitat requires the continuous availability of flowers on which to forage throughout the duration of the colony (spring through fall), colony nest sites, and overwintering sites for the queens.	**Observed.** Suitable habitat (coastal scrub, grassland, ornamental); however, areas that are routinely disced/ disturbed are not suitable for ground nesting, although flowering plants in ruderal areas could provide foraging habitat.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
FISHES				
Pacific lamprey	*Lampetra tridentata*	US: – CA: SSC NCCP: Not Covered	Anadromous fish that spawns in coastal and inland freshwater streams. Requires seasonally continuous flows to migrate from marine environments into freshwater streams for spawning and later for juvenile emigration back to the ocean. Spawns on gravel beds.	**Not Expected.** Suitable habitat is present along Trabuco Creek, but the grouted riprap slope under the railroad bridge is a barrier to upstream movement. This species has been reported from the confluence of Trabuco Creek and Oso Creek, which is just downstream of the project site (Caltrout 2024). Caltrout has a proposed project to remove the fish barriers at the railroad bridge and I–5 bridge by constructing fishways within the creek; following implementation of that project, this species would have potential to occur (Caltrout 2024).
steelhead – Southern California Distinct Population Segment (DPS)	*Oncorhynchus mykiss irideus*	US: FE CA: SE NCCP: Not Covered	Anadromous fish that spawns in coastal and inland freshwater streams. The Southern California DPS extends from Santa Maria south to the Tiajuana River. Requires seasonally continuous flows to migrate from marine environments into freshwater natal streams for spawning and later for smolt (juvenile) emigration back to the ocean. Spawns on gravel beds.	**Not Expected.** Suitable habitat is present along Trabuco Creek, but the grouted riprap slope under the railroad bridge is a barrier to upstream movement. This species has been reported from the confluence of Trabuco Creek and Oso Creek, which is just downstream of the project site (Caltrout 2024). Caltrout has a proposed project to remove the fish barriers at the railroad bridge and I–5 bridge by constructing fishways within the creek; following implementation of that project, this species would have potential to occur (Caltrout 2024).

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
arroyo chub	*Gila orcutti*	US: – CA: SSC NCCP: Not Covered	Found in slow-moving water with various substrates. Common in streams with low gradients, occurs in pools, runs, rifles, and edge-water over substrate ranging from sand and silt to boulders.	**Low.** Suitable habitat is present along Trabuco Creek, but the I-5 channelization is a barrier to upstream movement and grouted riprap slope under the railroad bridge is a barrier to upstream movement from downstream areas. This species is known from Trabuco Creek upstream of I-5 and could wash downstream into the project site. This species has also been reported from the confluence of Trabuco Creek and Oso Creek, which is just downstream of the project site (Caltrout 2024). Caltrout has a proposed project to remove the fish barriers at the railroad bridge and I-5 bridge by constructing fishways within the creek (Caltrout 2024). Following implementation of that project, this species would be able to move freely along Trabuco Creek instead of only in the downstream direction.
tidewater goby	*Eucyclogobius newberryi*	US: FE CA: SSC NCCP: Not Covered	Found primarily in waters of coastal lagoons, estuaries, and marshes. Habitat is characterized by brackish water in lower stream reaches where water is fairly still but not stagnant. Typically found within 0.5 mile of estuary habitat, though has been found up to 3 to 5 miles upstream.	**Not Expected.** No suitable habitat.
AMPHIBIANS				
Coast Range newt	*Taricha torosa*	US: – CA: SSC NCCP: Not Covered	Associated with foothill woodlands that are often interspersed with grasslands and chaparral. Breeding takes place in streams, ponds, lakes, and reservoirs. Breeding takes place from December to May. Estivation occurs in underground retreats and perhaps in rotting logs from July to early fall.	**Not Expected.** Project site is outside the current known range.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
western spadefoot	*Spea hammondii*	US: FPT CA: SSC NCCP: Covered (Coastal Subregion only)	Grasslands and occasionally hardwood woodlands; largely terrestrial but requires rain pools or other ponded water persisting at least 3 weeks for breeding; burrows in loose soils during dry season. Occurs in the Central Valley and adjacent foothills, the non-desert areas of Southern California, and Baja California.	**Low.** Limited amount of suitable foraging habitat (coastal scrub, grasslands); no suitable breeding habitat (seasonal ponds).
arroyo toad	*Anaxyrus californicus*	US: FE CA: SSC NCCP: Conditionally Covered	Found in parts of the South Coast range and Southern California. Found in washes, streams, and arroyos of semi-arid lowlands. Vegetation present is willows, cottonwoods, sycamores, and coast live oaks. Adults and juveniles require moist shorelines and stable, sandy terraces.	**Not Expected.** No suitable habitat (washes).
REPTILES				
southwestern [western] pond turtle	*Actinemys pallida* [*Emys marmorata*]	US: FPT CA: SSC NCCP: Not Covered	Occurs in a variety of habitats, including woodland, grassland, and open forest. Thoroughly aquatic, existing in good-quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. Requires basking sites (e.g., partially submerged logs, vegetation mats, or open mud banks).	**Observed.** Suitable habitat along Trabuco Creek.
coast horned lizard	*Phrynosoma blainvillii*	US: – CA: SSC NCCP: Covered	Occurs in coastal sage scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	**Moderate.** Limited amount of suitable habitat; however, areas that have been routinely disced/disturbed are not suitable for this species.
Coronado skink	*Plestiodon skiltonianus interparietalis*	US: – CA: WL NCCP: Covered	Grassland, chaparral, pinon-Juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of Southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides.	**Not Expected.** Project site is outside the current known range of this subspecies.
orange-throated whiptail	*Aspidoscelis hyperythra*	US: – CA: WL NCCP: Covered	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. perennial plants necessary for Its major food, termites.	**Moderate.** Suitable habitat; however, areas that have been routinely disced/disturbed are not suitable for this species.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
coastal whiptail	*Aspidoscelis tigris stejnegeri*	US: – CA: SSC NCCP: Covered	Wide variety of habitats, including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	**High.** Suitable habitat; however, areas that have been routinely disced/disturbed are not suitable for this species.
Southern California legless lizard	*Anniella stebbinsi*	US: – CA: SSC NCCP: Not Covered	Found in wide variety of habitat types, including sandy washes, alluvial fans, sparsely vegetated desert scrub, chaparral, and pine-oak woodlands. Requires moisture and leaf litter/surface objects. Most prevalent in coastal dune habitats in coastal counties to Baja California.	**Low.** Marginally suitable habitat; however, areas that have been routinely disced/disturbed are not suitable for this species.
California glossy snake	*Arizona elegans*	US: – CA: SSC NCCP: Not Covered	Found in a wide variety of habitats types, including open desert, grassland, shrublands, chaparrals, and woodlands. Records show that this species occurs in relatively open patches in a surrounding matrix of denser vegetation.	**Moderate.** Suitable habitat.
two-striped gartersnake	*Thamnophis hammondii*	US: – CA: SSC NCCP: Not Covered	Aquatic-feeding specialist, inhabiting permanent and intermittent drainages of the seasonally arid regions of southwest California. Prefers watercourses with good riparian stands, feeds on aquatic invertebrates.	**Moderate.** Suitable habitat along Trabuco Creek.
south coast gartersnake pop. 1	*Thamnophis sirtalis pop. 1*	US: – CA: SSC NCCP: Not Covered	Southern California Coastal Plain from Ventura County to San Diego County, and from sea level to about 2,789 ft. Occurs in marsh and upland habitats near permanent water with good strips of riparian vegetation.	**Low.** Suitable habitat along Trabuco Creek.
red-diamond rattlesnake	*Crotalus ruber*	US: – CA: SSC NCCP: Covered	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	**Moderate.** Suitable habitat.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
BIRDS				
golden eagle	*Aquila chrysaetos*	US: – CA: FP NCCP: Conditionally Covered	Rolling foothills, mountain areas, sage-juniper flats, and deserts. Nests in cliff-walled canyons and in large trees in open areas.	**Not Expected.** No suitable habitat.
Cooper's hawk (nesting)	*Astur cooperii*	US: – CA: WL NCCP: Not Covered	Occurs in woodlands, often along edges and openings. Nests mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains and in live oaks.	**High.** Suitable foraging and nesting habitat.
white-tailed kite (nesting)	*Elanus leucurus*	US: – CA: FP NCCP: Not Covered	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodlands, open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Moderate.** Suitable foraging and nesting habitat.
yellow rail	*Coturnicops noveboracensis*	US: – CA: SSC NCCP: Not Covered	Freshwater marshlands. Summer resident in Eastern Sierra Nevada in Mono County. One record in Orange County from a museum specimen collected at Newport Bay in 1896.	**Not Expected.** No suitable habitat; outside current known range.
long-eared owl (nesting)	*Asio otus*	US: – CA: SSC NCCP: Not Covered	Rare resident in Southern California coastal and foothill areas and uncommon resident in desert areas. Dense willow-riparian woodland and oak woodland. Breeds from valley foothill hardwood up to ponderosa pine habitat.	**Low.** Suitable foraging and nesting habitat along Trabuco Creek.
burrowing owl (burrow sites and some wintering sites)	*Athene cunicularia*	US: – CA: CE/SSC NCCP: Not Covered	Nests/winters in burrows in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent on burrowing mammals; locally, it most commonly nests in burrows of California ground squirrel.	**Low.** Potentially suitable nesting and wintering habitat, but there are very few occurrences in Orange County. Most recent records in Orange County were transient or wintering individuals. Not observed during protocol surveys to date (three of four visits completed June 2026).
southwestern willow flycatcher	*Empidonax traillii extimus*	US: FE CA: CE NCCP: Conditionally Covered	Riparian woodlands in southern California; needs brushy vegetation and wet areas.	**Low.** Suitable habitat along Trabuco Creek; however, there are very few recent records of this species breeding in Orange County. Not observed during protocol surveys to date (two of five visits completed June 2026).

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
loggerhead shrike (nesting)	*Lanius ludovicianus*	US: – CA: SSC NCCP: Not Covered	Open terrain with scattered trees or perches (e.g., utility lines, fences) for hunting, and areas with bare ground or low herbaceous cover. They require tall shrubs or trees for nesting and perching, and thorny plants, sticks, or barbed wires to impale prey.	**Low.** Potentially suitable habitat throughout the project site, however this species has largely been extirpated as a breeder in Orange County.
least Bell's vireo (nesting)	*Vireo bellii pusillus*	US: FE CA: CE NCCP: Conditionally Covered	Breeds in dense riparian shrubs, typically along watercourses. Preferred vegetation includes willow, wild rose, and other thick shrubs; in desert areas, it occurs in mesquite and arrow-weed bordering dry watercourses.	**Moderate.** Suitable habitat along Trabuco Creek. Not observed during protocol surveys to date (five of eight visits completed June 2026).
California horned lark	*Eremophila alpestris actia*	US: – CA: WL NCCP: Not Covered	Coastal regions from Sonoma County south to San Diego County, San Joaquin Valley and east to foothills. Occurs in short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	**Low.** Suitable habitat in the upland ruderal portions of the project site.
coastal cactus wren (San Diego and Orange Counties only)	*Campylorhynchus brunneicapillus sandiegensis*	US: – CA: SSC NCCP: Covered	Occurs in coastal sage scrub habitats with patches of tall cactus (*Cylindropuntia* or *Opuntia* spp.) for nesting and roosting.	**Not Expected.** No suitable habitat.
coastal California gnatcatcher	*Polioptila californica californica*	US: FT CA: SSC NCCP: Covered	Coastal sage scrub in low-lying foothills and valleys up to about 2,500 ft in elevation in cismontane southwestern California and Baja California.	**Observed.** Suitable habitat; incidentally observed an individual in coastal sage scrub in the southeastern portion of the project site during the July 2025 survey.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	US: – CA: WL NCCP: Covered	Resident in Southern California coastal sage scrub and sparse mixed chaparral often with relatively steep, often rocky hillsides with grass and forb patches.	**Low.** Limited amount of marginally suitable habitat.
grasshopper sparrow (nesting)	*Ammodramus savannarum*	US: – CA: SSC NCCP: Not Covered	Occurs in dense grasslands, preferring native grasslands with a mixture of forbs and shrubs.	**Not Expected.** No suitable habitat.
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	US: – CA: CE NCCP: Not Covered	Coastal salt marshes, from Santa Barbara south through San Diego County. Nests in pickleweed (*Salicornia* sp.) on and along margins of tidal flats.	**Not Expected.** No suitable habitat.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
yellow-breasted chat	*Icteria virens*	US: – CA: SSC NCCP: Not Covered	Riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry (*Rubus* sp.), and wild grape (*Vitis* sp.).	**Observed.** Suitable habitat along Trabuco Creek; singing individual incidentally observed during spring/summer 2026 surveys.
tricolored blackbird (nesting colony)	*Agelaius tricolor*	US: – CA: CT/ SSC NCCP: Not Covered	Freshwater wetlands, marshes, and agricultural fields, particularly in California's Central Valley, where it nests in dense colonies. Nests placed in cattails or bulrushes, or in willows at the water's edge, sometimes in tall growth in drier fields.	**Not Expected.** No suitable habitat.
yellow warbler	*Setophaga petechia*	US: – CA: SSC NCCP: Not Covered	Riparian plant associations in close proximity to water. Nests and forages in willow shrubs and thickets, and in other riparian plants Including cottonwoods (*Populus* sp.), sycamores (*Platanus* sp.), ash (*Fraxinus* sp.), and alders (*Alnus* sp.).	**Observed.** Suitable habitat along Trabuco Creek; incidentally observed at multiple locations along Trabuco Creek in the southern portion of the project site during the July 2025 general survey.
MAMMALS				
Stephens' kangaroo rat	*Dipodomys stephensi*	US: FT CA: CT NCCP: Not Covered	Occurs in annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat (*Eriogonum* sp.), chamise (*Adenostoma fasciculatum*), brome grass (*Bromus* spp.) and filaree (*Erodium* spp.). Burrows into firm soil.	**Not Expected.** Project site outside of known range of this species.
Mexican long-tongued bat	*Choeronycteris mexicana*	US: – CA: SSC NCCP: Not Covered	Occurs in a variety of habitats including thorn scrub, Palo Verde-saguaro desert, semidesert grassland, oak woodland, and deciduous forests. Typically roosts in twilight area near the entrance of caves, mines, rock crevices, and abandoned buildings. Feeds on nectar and pollen of night-blooming succulents.	**Not Expected.** Project site outside of known range of this species.
pallid bat	*Antrozous pallidus*	US: – CA: SSC NCCP: Not Covered	Roosts in crevices in rocky outcrops and cliffs, caves, mines, hallows or cavities of large trees, and anthropogenic structures (e.g., bridges and buildings); may also roost near the ground in rock piles.	**Moderate.** Suitable foraging and roosting habitat (barns) present within project site; may also roost on cliffs east of project site.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
western red bat	*Lasiurus blossevillii*	US: – CA: SSC NCCP: Not Covered	Roosts in foliage of broad-leafed trees or shrubs in streams or fields, in orchards and occasionally urban areas; commonly roosts in mature cottonwoods and sycamores. Also documented roosting in mature eucalyptus trees.	**Moderate.** Suitable foraging and roosting habitat (trees) present on the project site.
western mastiff bat	*Eumops perotis californicus*	US: – CA: SSC NCCP: Not Covered	Primarily a cliff-dwelling species, roosting under exfoliating rock slabs and in crevices in boulders and buildings. Travels widely when foraging.	**Moderate.** Suitable foraging and roosting habitat (barns) present within project site; may also roost on cliffs east of project site.
pocketed free-tailed bat	*Nyctinomops femorosaccus*	US: – CA: SSC NCCP: Not Covered	Varied habitats, but usually associated with high cliffs or rocky areas. Roosts primarily in cliffs/rock crevices; may use buildings for roosting. Rarely roosts in bridges.	**Moderate.** Suitable foraging and roosting habitat (barns, bridge) present within project site; may also roost on cliffs east of project site.
big free-tailed bat	*Nyctinomops macrotis*	US: – CA: SSC NCCP: Not Covered	Low-lying arid areas in Southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds on large moths.	**Moderate.** Suitable foraging; no suitable roosting habitat within project site; may roost on cliffs east of project site.
Pacific pocket mouse	*Perognathus longimembris pacificus*	US: FE CA: SSC NCCP: Conditionally Covered	Inhabits friable soils along the narrow coastal plains from the northern Mexican border to Orange County (formerly Los Angeles County). To date, this subspecies has not been recorded more than approximately 2.5 miles from the Pacific Ocean.	**Not Expected.** No suitable habitat; outside current known range.
San Diego desert woodrat	*Neotoma lepida intermedia*	US: – CA: SSC NCCP: Covered	Moderate to dense coastal sage scrub of Southern California from San Diego County to San Luis Obispo County. Often found in areas with rock outcrops, rocky cliffs, and slopes.	**High.** Suitable habitat.
American badger	*Taxidea taxus*	US: – CA: SSC NCCP: Not Covered	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents.	**Not Expected.** Limited amount of marginally suitable habitat.

Table E.2: Special-Status Wildlife Species Known to Occur in the Project Region

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence on the Project Site and Rationale
mountain lion Southern California/Central Coast Evolutionary Significant Unit (ESU)	*Puma concolor*	US: – CA: ST NCCP: Not Covered	Found in nearly all habitats, except xeric regions of the Mojave and Colorado deserts that do not support mule deer populations. Excluded from croplands in the Central Valley. Most abundant in riparian areas, and brushy stages of most habitats.	**Low.** Suitable habitat along Trabuco Creek.

Source: LSA (2026).

[1] Project vicinity = project site plus a 5-mile buffer.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed Endangered (FPE) Federal Proposed Threatened (FPT), California Endangered (CE), California Threatened (CT), California Candidate as Threatened or Endangered (CC), California Species of Special Concern (SSC), California Fully Protected Species (CFP) California Watch List (WL)

CA = California

cm = centimeter

CNDDB = California Natural Diversity Database

ft = foot/feet

I-5 = Interstate 5

NCCP = Natural Community Conservation Plan

US = United States