DISTRICT PROPERTIES COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
ADMINISTRATIVE FACILITY, CONFERENCE ROOM
SEPTEMBER 13, 2022 AT 5:00 PM

COMMITTEE MEMBERS
Stephen Dopudja, Committee Chair
Ed Mandich, Committee Member
Don Chadd, Alternate Committee Member

DISTRICT STAFF
Fernando Paludi, General Manager
Michael Perea, District Secretary

AGENDA NOTE:
Trabuco Canyon Water District (District) will make this meeting available by telephone audio as follows:

Telephone Audio: *1 (669) 900-6833* ***Access Code:*** *818 1243 1650*

Persons desiring to monitor the Committee meeting agenda items may download the Executive Committee meeting agenda and documents on the internet at ***www.tcwd.ca.gov****. You may submit public comments by email to the Committee at* ***mperea@tcwd.ca.gov****. In order to be part of the record, emailed comments on meeting agenda items must be received by the District, at the referenced e-mail address, not later than 1:00 p.m. (PDT) on the day of the meeting.*

CALL MEETING TO ORDER

VISITOR PARTICIPATION
Members of the public wishing to address the Committee regarding a particular item on the agenda are requested to complete a speaker card and submit it to staff. The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decisions on matters. The Committee makes recommendations only to the Board of Directors. Members of the public will be given the opportunity to speak to the Committee prior to making a recommendation on the matter. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

ORAL COMMUNICATION
Members of the public who wish to make comment on matters not appearing on the agenda are invited to identify themselves and encouraged to make comment at this time. The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decision on matters. The Committee makes recommendations only to the Board of Directors. Under the requirements of State Law, Committee Members cannot take action on items not identified on the agenda and will not make decisions on such matters. The Committee Chair may direct District Staff to follow up on issues as may be deemed appropriate. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

COMMITTEE MEMBER COMMENTS

REPORT FROM THE GENERAL MANAGER

TRABUCO CANYON WATER DISTRICT
DISTRICT PROPERTIES COMMITTEE MEETING AGENDA | SEPTEMBER 13, 2022

ADMINISTRATIVE MATTERS

ITEM 1: APPROVAL OF DISTRICT PROPERTIES COMMITTEE MEETING RECAP

RECOMMENDED ACTION:

Approve the following District Properties Committee Meeting Recap and recommend that the Board receive and file the same (Consent Calendar):

1. *August 29, 2022*

DISCUSSION MATTERS

ITEM 2: PRESENTATION TO THE COMMITTEE FROM PSOMAS ENGINEERING ON BIOLOGICAL RESOURCES TECHNICAL REPORT

RECOMMENDED ACTION:

Committee to receive presentation at the time of the meeting, and take action(s) as deemed appropriate.

OTHER MATTERS

ITEM 3: REPORTS OR COMMENTS FROM THE GENERAL MANAGER AND/OR STAFF

RECOMMENDED ACTION:

Hear other matters from the General Manager and/or Staff.

ADJOURNMENT

AVAILABILITY OF AGENDA MATERIALS

Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Facility). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available in the lobby area of the District Facility at the same time as they are distributed, except that, if such writings are distributed immediately prior to or during the meeting, they will be available in the Boardroom at the District Facility.

COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2

In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277 at least 48 hours in advance of the scheduled meeting. Notification 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The District office is wheelchair accessible.

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TRABUCO CANYON WATER DISTRICT
DISTRICT PROPERTIES COMMITTEE MEETING | SEPTEMBER 13, 2022

DISCUSSION MATTERS

ITEM 1: APPROVAL OF DISTRICT PROPERTIES COMMITTEE MEETING RECAP

The District Properties Committee Meeting Recap for the following meeting(s) is attached for Committee review.

RECOMMENDED ACTION:

Approve the following District Properties Committee Meeting Recap and recommend that the Board receive and file the same (Consent Calendar):
1. August 29, 2022

CONTACTS (staff responsible): PALUDI/PEREA

TRABUCO CANYON WATER DISTRICT
DISTRICT PROPERTIES COMMITTEE MEETING RECAP | AUGUST 29, 2022

DIRECTORS PRESENT
Vice President Stephen Dopudja, Committee Chair
Director Ed Mandich, Committee Member

STAFF PRESENT
Fernando Paludi, General Manager
Michael Perea, Assistant General Manager

CONSULTANTS PRESENT
None

PUBLIC PRESENT
Jim Ruane, Orange County Fire Authority
Patrick Bauer, Orange County Fire Authority

CALL MEETING TO ORDER
Committee Chair/Vice President Dopudja called the August 29, 2022 District Properties Ad Hoc Committee Meeting to order at 5:00 p.m.

VISITOR PARTICIPATION
No visitor participation was received.

ORAL COMMUNICATION
No oral communication was received.

COMMITTEE MEMBER COMMENTS
No comments were received.

REPORT FROM THE GENERAL MANAGER
Mr. Paludi reported that Wastewater Operations staff have identified a leak on the sluice gate drain ventilation pipe on Dove Lake, and that District staff are working to repair the leak.

ITEM 1: APPROVAL OF DISTRICT PROPERTIES COMMITTEE MEETING RECAP

Mr. Paludi presented the District Properties Committee Meeting Recap for Committee review in accordance with the agenda

RECOMMENDED ACTION:
The Committee approved the April 14, 2022 District Properties Committee Meeting Recap and recommended that the Board of Directors receive and file the same (Consent Calendar).

OTHER MATTERS

ITEM 2: PRESENTATION TO THE COMMITTEE FROM ORANGE COUNTY FIRE AUTHORITY (OCFA)

Mr. Paludi presented this matter for Committee consideration, and he introduced Mr. Ruane and Mr. Bauer to the Committee. Mr. Ruane provided a handout to the Committee which provided an overview of the OCFA's need for additional hand crew and heavy equipment facilities beyond Station 18 located in Trabuco Canyon which has currently reached its total capacity. Mr. Ruane briefly reviewed OCFA's goals for meeting the local area challenges due to its proximity to the wildfire interface, and he presented a proposed concept design of a wildland vehicle and apparatus storage facility/camp for Committee review. Discussion occurred concerning certain property access constraints and biological/environmental impact considerations. Mr. Ruane indicated that OCFA is interested in working with the District in the event there is an opportunity to acquire or lease property owned by the District for this type of facility. The Committee received the information for consideration. Mr. Ruane mentioned that the OCFA would follow up with the District with additional information concerning this proposed facility.

RECOMMENDED ACTION:

Committee to receive presentation at the time of the meeting. No action was taken.

ITEM 3: REPORTS OR COMMENTS FROM THE GENERAL MANAGER AND/OR STAFF

Mr. Paludi reported that Psomas Engineering has completed the biological resources assessment of the District's Porter Property, and that he would be scheduling a Committee Meeting to review the technical report.

RECOMMENDED ACTION:

No action was taken.

ADJOURNMENT

Vice President Dopudja adjourned the April 14, 2022 District Properties Committee Meeting at 6:15 p.m.

TRABUCO CANYON WATER DISTRICT
DISTRICT PROPERTIES COMMITTEE MEETING | SEPTEMBER 13, 2022

OTHER MATTERS

ITEM 2: PRESENTATION TO THE COMMITTEE FROM PSOMAS ENGINEERING ON BIOLOGICAL RESOURCES TECHNICAL REPORT

Trabuco Canyon Water District (TCWD or District) owns certain facilities and properties within and outside of its service area for District-related purposes and uses. In April 2002, the District purchased approximately 120 acres of land in Trabuco Canyon that is more commonly known as the "Porter Ranch Property" (Property). This land primarily includes slopes and is only partially improvable but has remained largely unimproved to date. The Property is influenced and impacted by several factors, including but not limited to, onsite habitat and geologic features, limited road accessibility, adjacent residential neighborhoods, and specific planning control guidelines with local governmental agencies.

District staff issued an RFP to solicit proposals from professional environmental surveying consultants to identify and document the existing biological resources of the Property, including, but not limited to, (1) literature review and database research; (2) Biological Field Survey; and (3) Biological Resources Report. The Board of Directors approved a proposal from Psomas Engineering to performing this work, and a presentation of the biological survey findings will be provided at the meeting. More information may be presented at the time of the meeting.

FUNDING SOURCE:
General Fund, Professional Services Budget

FISCAL IMPACT:

Biological Services/Report Preparation:	$13,925
10% Contingency:	$ 1,393
Total Budget:	$15,318

RECOMMENDED ACTION:
Committee to receive presentation at the time of the meeting, and take action(s) as deemed appropriate.

EXHIBIT(S):
1. Psomas Engineering – Biological Resources Technical Report – TCWD 120-Acre Project Site

CONTACTS (staff responsible): PALUDI/PEREA

Biological Resources Technical Report

Trabuco Canyon Water District
120-Acre Project Site, Orange County, California

Prepared for

Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679
Contact: Michael Perea
Assistant General Manager

Prepared by

Psomas
5 Hutton Centre Drive, Suite 300
Santa Ana, California 92707
T: 714.751.7373
Contact: Ann Johnston
Vice President, Resource Management

August 2022

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TABLES

EXHIBITS

1.0 INTRODUCTION

This Biological Resources Technical Report has been prepared to support resource management planning for the Trabuco Canyon Water District (TCWD) 120-acre Project Site (hereinafter referred to as "the Project Site"). This information has been reported in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW).

1.1 BACKGROUND

The Project Site comprises approximately 120 acres and was acquired by the TCWD to support water service and/or potential mitigation opportunities for its future capital improvement projects. Relative to mitigation opportunities, the TCWD requires a very clear understanding of the existing conditions, including the known presence, absence, or potential to support special status species and other natural resources to receive the maximum value (or credit) from the Project Site. This Biological Resources Technical Report will help identify the biological value of the Project Site, or portions thereof, should this area be utilized for mitigation.

1.2 PROJECT SITE LOCATION

The Project Site is located in southeastern Orange County, northeast of State Route 241 and near the unincorporated community of Trabuco Canyon, California (Exhibit 1). It is bound to the west by Trabuco Creek and Trabuco Creek Road, to the northwest by agricultural/rural lands owned by the Irvine Ranch Water District, to the north by agricultural/rural lands, to the east and southeast by Forest Service and County of Orange open space, and the southwest by residentially development of Robinson Ranch (Exhibit 2). The Project Site is depicted on the U.S. Geological Survey Santiago Peak 7.5-minute quadrangle map and elevations on the Project Site range from approximately 1,160 feet to 1,670 feet above mean sea level (msl).

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Regional Location

Exhibit 1

Trabuco Canyon Water District 120-Acre Project Site

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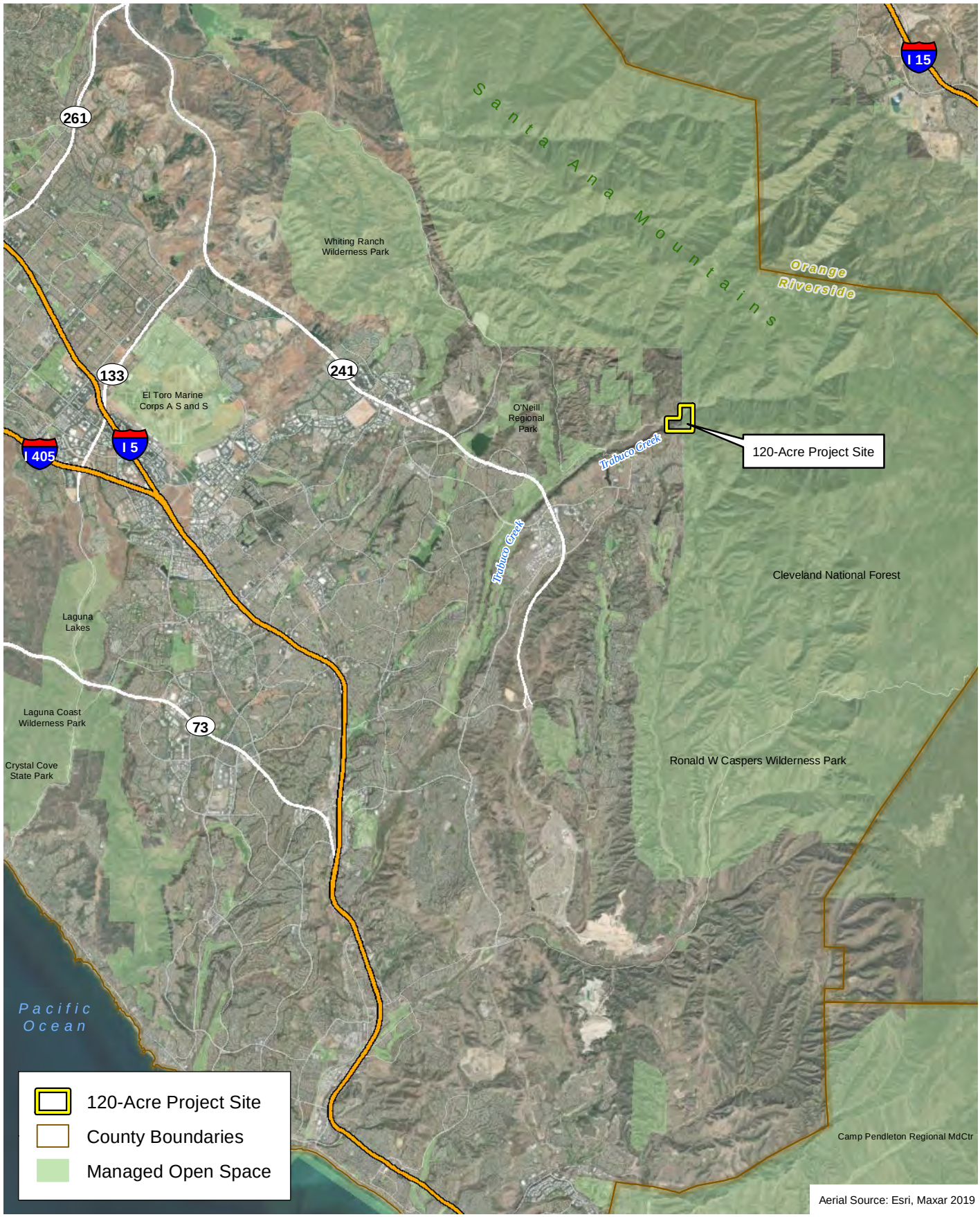

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Regional Environmental Setting

Exhibit 2

Trabuco Canyon Water District 120-Acre Project Site

N W E S

13,560 6,780 0 13,560 Feet

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2.0 METHODS

2.1 LITERATURE REVIEW

Prior to the start of surveys, Psomas conducted a literature search to identify special status plants, wildlife, and habitats reported from the vicinity of the Project Site. The search region included the Santiago Peak USGS 7.5-minute quadrangle. The following sources of information were consulted:

- The CDFW's California Natural Diversity Database (CNDDB) (CDFW 2022a)
- The California Native Plant Society's (CNPS') Inventory of Rare and Endangered Plants (CNPS 2022)
- The U.S. Fish and Wildlife Service official species list (USFWS 2022)
- The Consortium of California Herbaria (CCH 2022)
- The CDFW's Sensitive Natural Communities List (CDFW 2022b), Special Animals List (CDFW 2022d), and Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022c)

2.2 VEGETATION MAPPING AND GENERAL SURVEYS

Vegetation on the Project Site was mapped by Botanist Erin Ruckman and Senior Biologist Ann Johnston on July 9, 2022. In addition, potential jurisdictional water resources were mapped on the Project Site during the field survey. The purpose of the survey was to document existing biological resources on the Project Site and to evaluate its potential to support special status species. Vegetation classification follows that of Holland (1986).

Plant and wildlife species observed on the Project Site during the survey conducted by Psomas were recorded in field notes. Note, the wildlife species discussed in the wildlife population section includes species likely to occur on the Project Site even if they were not observed during the survey efforts. Some wildlife species may only occur seasonally onsite while others may be present only in limited numbers decreasing the likelihood of detection.

Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys, descriptions, and illustrations in Baldwin et al. (2012), Hickman (1993), and Munz (1974). Plants were identified to the taxonomic level necessary to determine whether they are a special status species. Nomenclature of plant taxa conform to the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022c) for special status species and the Jepson eFlora (Jepson Flora Project 2022) for all other taxa; ornamental species not listed in the Jepson eFlora are named based on the *Sunset Western Garden Book* (Brenzel 2007).

Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing objects such as rocks, boards, and debris. Birds were identified by visual and auditory recognition. Mammals were identified by visual recognition or evidence of diagnostic sign including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Nomenclature of wildlife taxa conform to the *Special Animals List* (CDFW 2022d) for special status species; nomenclature for non-special status wildlife generally follows Crother (2012) for amphibians and reptiles, American Ornithological Society (AOS 2021) for birds, and the Smithsonian National Museum of Natural History (SNMNH 2019) for mammals.

3.0 EXISTING BIOLOGICAL RESOURCES

3.1 PHYSICAL ENVIRONMENTAL SETTING

Regional Environment

The Project Site is located in the cismontane foothills on the west side of the Santa Ana Mountains. The large blocks of undeveloped land of O'Neill Regional Park are to the west and the Cleveland National Forest is to the east. This area is part of a 31-mile swath of continuous wildlife habitat spanning from the National Forest in the south to the west end of the Puente Hills, above Whittier Narrows, in the north. This represents the "last major natural open space resource connecting Los Angeles, Orange, San Bernardino, and Riverside Counties" (Los Angeles County et al. 2003). Specifically, the northern portion of the Project Site occurs along Trabuco Creek (Exhibit 3). This area is part of the San Juan Hydrologic Unit of the Aliso-San Onofre Watershed. Trabuco Creek joins San Juan Creek approximately 15 miles to the southwest and, ultimately, discharges into the Pacific Ocean in the City of Dana Point.

The Project Site is within the Foothill/Trabuco Specific Plan area. The purpose of the Foothill/Trabuco Specific Plan was to "set forth goals, policies, land use district regulations, development guidelines, and implementation programs in order to preserve the area's rural character and to guide future development in the Foothill/Trabuco area" (Orange County 1991). The Specific Plan identifies significant regional resources, such as wildlife corridors, oak woodlands, and streambeds in the planning area. A designated wildlife corridor located along Trabuco Creek runs through the Project Site in an east/west direction. The Project Site also contains designated oak woodlands. Furthermore, Trabuco Creek is a designated streambed which runs through the Project Site.

Climate

Southern California experiences a Mediterranean climate characterized by mild, rainy winters and hot, dry summers. There can also be dramatic differences in rainfall from year to year. Consequently, the vegetation types in the Southern California area consist of drought-tolerant, woody shrubs and trees and annual, fall/winter-sprouting grasses.

The temperature in Southern California is moderated by the coastal influence of the Pacific Ocean, which creates mild conditions throughout most of the year. The stable atmosphere creates cloudless conditions, producing dry summers and a subtropical climate with many days of sunshine (Ritter 2006). The most distinguishing characteristic of a Mediterranean climate is its seasonal precipitation. In Southern California, precipitation is characterized by brief, intense storms generally between November and March. It is not unusual for a majority of the annual precipitation to fall during a few storms over a close span of time. Rainfall patterns are subject to extreme variations from year to year and longer-term wet and dry cycles. The average annual precipitation within the watershed ranges from 13 inches near the coast to 18 inches in the mountains.

Local Environment

Remnants of an old single-family residence is in the central portion of the Project Site; the remainder of the Project Site is undeveloped open space. The Project Site consist of high ridges/steep slopes, gentle- to moderate-sloped hillside, and an alluvial valley bottom that supports Trabuco Creek. The elevations within the Project Site are between approximately 1,160 feet above msl along Trabuco Creek up to approximately 1,670 feet above msl along the ridge in the eastern portion of the site. Trabuco Creek enters the Project Site at the northeastern corner

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Project Site

Exhibit 3

Trabuco Canyon Water District 120-Acre Project Site

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Feet

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and travels for approximately 1,900 feet before it exits the Project Site into lands owned by the Irvine Ranch Water District. Trabuco Creek traverses the Irvine Ranch Water District lands, then re-enters the Project Site at the northwest most portion of the Project Site, where it continues through the Project Site for approximately 400 feet until it exits the site as the creek continues to flow in a westerly direction.

3.2 VEGETATION TYPES AND OTHER AREAS

The vegetation types that occur on the Project Site include California sagebrush-California buckwheat scrub, scrub oak-sagebrush, coastal sage-chaparral scrub ecotone, toyon-sumac chaparral, southern mixed chaparral, open southern mixed chaparral, coast live oak woodland, southern sycamore riparian woodland, mule fat scrub, floodplain sage scrub, wash, annual grassland, and ruderal (Exhibit 4; Table 1). Other landcover present on the Project Site includes disturbed and ornamental areas. Descriptions of the vegetation types and other areas are discussed below.

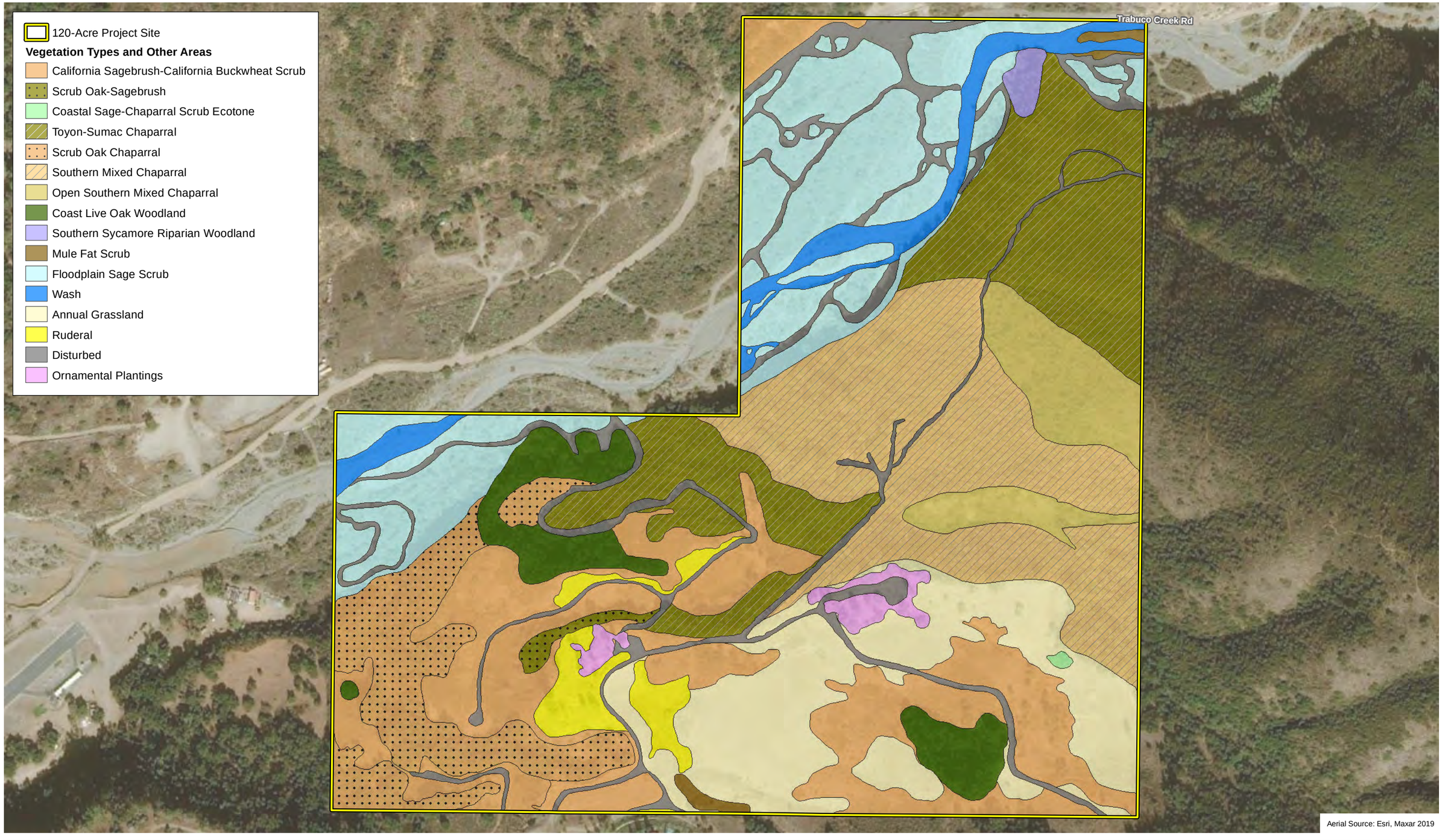
TABLE 1
VEGETATION TYPES AND OTHER AREAS

Vegetation Types and Other Areas	Acres on Project Site*
California Sagebrush-California Buckwheat Scrub	19.21
Scrub Oak-Sagebrush	0.48
Coastal Sage-Chaparral Scrub Ecotone	0.07
Toyon-Sumac Chaparral	15.68
Scrub Oak Chaparral	8.20
Southern Mixed Chaparral	18.42
Open Southern Mixed Chaparral	5.43
Coast Live Oak Woodland	4.64
Southern Sycamore Riparian Woodland	0.49
Mule Fat Scrub	0.50
Floodplain Sage Scrub	17.44
Wash	3.64
Annual Grassland	13.23
Ruderal	2.69
Disturbed	7.91
Ornamental	1.21
Total	**119.24**

California Sagebrush-California Buckwheat Scrub

California sagebrush-California buckwheat scrub primarily occurs on south-facing slopes located in the southern portions of the Project Site and in a small area in the norther portion of the Project Site. These areas were dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), with other components, including deerweed (*Acmispon glaber*), deergrass (*(Muhlenbergia rigens*), giant wild rye (*Elymus condensatus*), chaparral yucca (*Hesperoyucca whipplei*), coast prickly pear (*Opuntia littoralis*), and white sage (*Salvia apiana*).

This vegetation type is consistent with the *Artemesia californica – Eriogonum fasciculatum* association (CNPS 2022). This association is not considered sensitive by CDFW (CDFW 2022b).



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Vegetation Types and Other Areas

Exhibit 4

Trabuco Canyon Water District 120-acre Project Site

N W E S

300 150 0 300

Feet

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Scrub Oak-Sagebrush

Scrub oak-sagebrush is located in a small, centrally positioned, portion of the Project Site on a north facing slope. This vegetation type, which is typically associated with north-facing slopes, is dominated by scrub oak that often forms dense, monotypic stands. Vegetative cover varies from somewhat open to dense, approaching 100 percent cover. Where canopy cover is dense, understory is sparse. In areas that are more open, the understory includes western poison oak (*Toxicodendron diversilobum*) and California goldenrod (*Solidago velutina* ssp. *californica*). This association often integrates with toyon-sumac chaparral.

This area contains a mosaic of scrub oak and sagebrush scrub vegetation. Species present include California sagebrush, California buckwheat, scrub oak (*Quercus berberidifolia*), chaparral yucca, black sage (*Salvia mellifera*), toyon (*Heteromeles arbutifolia*), lemonade berry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*). Dominant chaparral species observed include inland scrub oak and holly leaf redberry (*Rhamnus ilicifolia*.)

This vegetation type is not considered sensitive by CDFW (CDFW 2022b).

Coastal Sage-Chaparral Scrub Ecotone

A small area in the southeastern portion of the Project Site is a mosaic of coastal sage scrub and chaparral vegetation. Coastal sage-chaparral scrub ecotone represents a gradation or intermingling of components of these scrub communities. The association is ecotonal where mature coastal sage scrub and chaparral communities intergrade such that no components of either community are clearly dominant. In other instances, the presence of both sage scrub and chaparral elements is indicative of a seral or successional site where early successional elements (sage scrub) are being replaced by later successional elements (chaparral). Species present in this vegetation type on the Project Site include California sagebrush, California buckwheat, chaparral yucca, black sage, toyon, lemonade berry, and laurel sumac.

This vegetation type is consistent with the *Heteromeles arbutifolia – Artemisia californica* association (CNPS 2022); this association is considered sensitive by CDFW (CDFW 2022b).

Toyon-sumac Chaparral

Large areas in the central and northeastern portion of the Project Site support toyon-sumac chaparral. Vegetative cover is typically dense, approaching 100 percent cover with little or no understory. Dominant species present include toyon, lemonade berry, and laurel sumac. Scattered occurrences include scrub oak and holly leaf redberry.

This vegetation type is consistent with the *Heteromeles arbutifolia – Malosma laurina* association (CNPS 2022); this association is not considered sensitive by CDFW (CDFW 2022b).

Scrub Oak Chaparral

Scrub oak chaparral is located in western portion of the Project Site. Species present include scrub oak, chaparral yucca, black sage, toyon, lemonade berry, birch-leaf mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), holly leaf redberry, and laurel sumac.

This vegetation type is consistent with the *Quercus berberidifolia* association (CNPS 2022); this association is not considered sensitive by CDFW (CDFW 2022b).

Southern Mixed Chaparral

Southern mixed chaparral is present across a large area in the eastern/central portion of the Project Site. Species present include California sagebrush, California buckwheat, chaparral yucca, black sage, toyon, lemonade berry, and laurel sumac.

This vegetation type is consistent with the *Heteromeles arbutifolia – Artemisia californica* association (CNPS 2022); this association is considered sensitive by CDFW (CDFW 2022b).

Open Southern Mixed Chaparral

The eastern portion of the Project Site contain two large areas of open southern mixed chaparral. Species present include toyon, lemonade berry, and laurel sumac. California sagebrush, California buckwheat, chaparral yucca, and black sage are also present.

This vegetation type is consistent with the *Heteromeles arbutifolia – Artemisia californica* association (CNPS 2022); this association is considered sensitive by CDFW (CDFW 2022b).

Coast Live Oak Woodland

Coast live oak woodland vegetation is mapped primarily on the southwestern and southeastern portions of the Project Site. The vegetation is predominantly comprised of mature coast live oak trees (*Quercus agrifolia)*. The understory within this vegetation type is primarily leaf litter, with scattered non-native grasses such as common ripgut grass (*Bromus diandrus*), red brome (*B. rubens*), and smilo grass (*Stipa miliacea*).

This vegetation type is consistent with the *Quercus agrifolia* association (CNPS 2022); This association is not considered sensitive by CDFW (CDFW 2022b).

Southern Sycamore Riparian Woodland

Trabuco Creek, which conveys flows from the northeast to the southwest along the norther boundary of the Project Site, support a small area of southern sycamore riparian woodland. The riparian canopy is primarily comprised of mature coast live oak trees and mature western sycamore (*Platanus racemosa*) trees with scattered occurrences of blue elderberry (*Sambucus nigra* spp. *caerulea*) shrubs. The understory within this vegetation type includes native species such as mulefat (*Baccharis salicifolia*), western poison oak and California mugwort (*Artemisia douglasiana*). Non-native grasses are present including ripgut grass and red brome.

This vegetation type is consistent with the *Plantanus racemosa – Quercus agrifolia* association (CNPS 2022); this association is considered sensitive by CDFW (CDFW 2022b).

Mule Fat Scrub

The mule fat scrub vegetation type onsite is dominated by mulefat with scattered occurrences of California mugwort and red willow (*Salix laevigata*). The mule fat scrub vegetation occurs along portions of the Trabuco Creek and along the southern boundary adjacent to the residential development.

This vegetation type is consistent with the *Baccharis salicifolia* association (CNPS 2022). This association is not considered sensitive by CDFW (CDFW 2022b).

Floodplain Sage Scrub

The floodplain sage scrub on the Project Site occurs across a wide swath across the norther area in the alluvia floodplain of Trabuco Creek. Floodplain sage scrub is commonly associated with alluvial floodplains and can also be found colonizing sandbars and terraces in the more active parts of the channel. Vegetative cover is typically open, and dominant species include scalebroom (*Lepidospartum squamatum)* and California buckwheat. Additional species include deerweed, mulefat, Coulter's matilija poppy (*Romneya coulteri*), and California mugwort). This association is highly dynamic, depending on the flooding regimes associated with the large drainages with which it is typically associated.

This vegetation type is consistent with the *Eriogonum fasciculatum – Lepidospartum squamatum alluvial fan* association (CNPS 2022). This association is considered sensitive by CDFW (CDFW 2022b).

Wash

Washes are present on the Project Site along Trabuco Creek. Where such features are vegetated, they are covered as a separate habitat type such as floodplain sage scrub. Where these features support little or no vegetation, they are mapped as wash. Because these areas are subject to scouring by flood events during high rainfall years, periodic changes in the vegetation may occur. Vegetation maps for these systems may change from year to year based on such flooding.

Annual Grassland

Annual grassland is a common vegetation type on the southeast portion of the Project Site. The presence of annual grassland is generally indicative of past disturbance that has resulted in the conversion of native habitats, such as sage scrub, chaparral, or native bunchgrass, into annual grasslands dominated by grasses and forbs that are of Mediterranean origin. Non-native annual grasses include wild oats (*Avena fatua)*, slender wild oats (*Avena barbata)*, ripgut grass, and soft chess (*Bromus hordeaceus)*.

Annual forbs make up a significant component of the annual grassland in the area. Common forbs include tocalote (*Centaurea melitensis*), common cryptantha (*Cryptantha intermedia*), black mustard (*Brassica nigra*), shortpod mustard *(Hirschfeldia incana)*, red-stemmed filaree (*Erodium cicutarium),* beaked filaree *(Erodium botrys), and* clustered tarweed *(Deinandra fasciculata)*.

This vegetation type is consistent with the *Avena barbata – Avena fatua* association (CNPS 2022). This association is not considered sensitive by CDFW (CDFW 2022b).

Ruderal

Ruderal habitat occurs in several isolated areas in the southern/central portion of the Project Site. This vegetation type is typically associated with areas subject to substantial disturbance. The species present can vary according to the nature and severity of the disturbance and generally include black mustard, shortpod mustard, tocalote, prickly lettuce (*Lactuca serriola*), and cardoon (*Cynara cardunculus)*. Non-native annual grasses such as oats, bromes, and barleys are often a substantial component of ruderal areas. However, ruderal areas can be distinguished from annual grassland by a greater dominance of species such as mustard rather than grass species.

This vegetation type is consistent with the *Brassica nigra* association (CNPS 2022). This association is not considered sensitive by CDFW (CDFW 2022b).

Disturbed

The disturbed areas on the Project Site consist of areas typically devoid of vegetation due to repeated or extensive disturbance. Areas identified as disturbed include historic building pads, dirt roads, and trails. The vegetation in these areas has been altered such that native species do not represent a dominant feature. The plant species present in these areas include ripgut grass, red brome, and smilo grass; dense stands of non-native annual species including hedge mustard (*Sisymbrium officinale*), tocalote, short-pod mustard, and scattered occurrences of perennial, non-native species including tree tobacco (*Nicotiana glauca*) and castor bean (*Ricinus communis*).

This vegetation type is consistent with the *Bromus diandrus* – Mixed herbs association (CNPS 2022). This association is not considered sensitive by CDFW (CDFW 2022b).

Ornamental

Ornamental vegetation was mapped in two areas on the Project Site that were known to support residential buildings. The vegetation consists of planted trees and shrubs. Species present include Canary island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Peruvian pepper tree (*Schinus mole*), Mexican fan palm (*Washingtonia robusta*), and gum tree (*Eucalyptus* sp).

Ornamental is not considered a sensitive vegetation type by CDFW (CDFW 2022b).

3.3 WILDLIFE POPULATIONS AND MOVEMENT PATTERNS

Habitat on and adjacent to the Project Site provides habitat for a variety of wildlife species. Wildlife species observed or expected to occur on the Project Site are discussed below.

Fish

Most creeks and waterways in Southern California are subject to periods of high water-flow in winter and spring and little to no flow during the late summer and fall. Above-ground water was not present in Trabuco Creek during the surveys; however, the area is expected to have ephemeral connectivity to upstream and downstream waters during and shortly after large storm events.

No fish species were observed on the Project Site during the surveys. Regardless, Trabuco Creek has potential to provide a temporary transit corridor during high flow events for native fish species, such as arroyo chub (*Gila orcuttii*), and non-native fish species, such as western mosquitofish (*Gambusia affinis*) and largemouth bass (*Micropterus salmoides*).

Amphibians

Amphibians require moisture for at least a portion of their life-cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction; they survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as amount of vegetation cover, elevation, and slope/aspect.

No amphibian species were observed on the Project Site; however, woodland, riparian, and some scrub/chaparral communities onsite have the potential to support several amphibian species. Common amphibian species that are expected to occur on the Project Site include California newt (*Taricha torosa*), arboreal salamander (*Aneides lugubris*), garden slender salamander (*Batrachoseps major major*), Monterey ensatina (*Ensatina eschscholtzii eschscholtzii*), western toad (*Anaxyrus boreas*), Baja California treefrog (*Pseudacris hypochondriaca*), and California treefrog *(Pseudacris cadaverine)*.

Reptiles

Reptiles are well-adapted to life in arid habitats. They have several physiological adaptations that allow them to conserve water. Reptiles can also become dormant during weather extremes, allowing them to survive prolonged droughts and paucity of food (Ruben and Hillenius 2005). Reptilian diversity and abundance typically varies with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most reptile species that occur in open areas will excavate a burrow or use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

One common reptile was observed during the surveys: western fence lizard (*Sceloperus occidentalis*). Additional common reptile species expected in scrub, chaparral, woodland, and wash communities onsite include the side-blotched lizard (*Uta stansburiana)*, San Diego horned lizard (*Phrynosoma blainvillii),* coastal western whiptail (*Aspidoscelis tigris stejnegeri)*, southern alligator lizard (*Elgaria multicarinata)*, California striped racer (*Coluber lateralis lateralis*), California kingsnake (*Lampropeltis californiae)*, gopher snake (*Pituophis catenifer),* and Southern Pacific rattlesnake (*Crotalus oreganus helleri)*.

Birds

A variety of bird species are expected to be residents on the Project Site, using the habitats throughout the year. Other species are present only during certain seasons. For example, the white-crowned sparrow (*Zonotrichia leucophrys*) is expected to occur on the Project Site during the winter season but would not occur in the summer season because it migrates north to its breeding range.

Birds of prey (raptors) observed on the Project Site include turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*). Additional common raptor species expected to occur on the Project Site include Cooper's hawk (*Accipiter cooperii)*, red-shouldered hawk (*Buteo lineatus*), great horned owl (B*ubo virginianus),* and barn owl (*Tyto alba*). The abundance of raptors that are expected to occur in the area is, in large part, due to the moderate weather conditions, range of habitats, lack of development, and associated year-round abundance of prey, including rodents, reptiles, amphibians, birds, and invertebrates.

Other bird species observed on the Project Site include California quail (*Callipepla californica),* mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Cassin's kingbird (*Tyrannus vociferans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), cliff swallow (*Petrochelidon pyrrhonota*), bushtit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), and California towhee (*Pipilo crissalis*).

Additional common bird species expected on the Project Site include band-tailed pigeon (*Patagioenas fasciata*), Eurasian collared-dove (Streptopelia decaocto), common poorwill (*Phalaenoptilus nuttallii*), Allen's hummingbird (*Selasphorus sasin*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker *(Picoides nuttallii*), northern flicker (*Colaptes auratus*), western wood-pewee (*Contopus sordidulus*), black phoebe (*Sayornis nigricans*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), Cassin's vireo (*Vireo cassinii*), California scrub-jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), white-breasted nuthatch (*Sitta carolinensis*), Bewick's wren (*Thryomanes bewickii*), blue-gray gnatcatcher (*Polioptila caerulea*), wrentit (*Chamaea fasciata*), western bluebird (*Sialia mexicana*), European starling (*Sturnus vulgaris*), phainopepla (*Phainopepla nitens*), purple finch (*Haemorhous purpureus*), lesser goldfinch (*Spinus psaltria*), spotted towhee (*Pipilo maculatus*), hooded oriole (*Icterus cucullatus*), brown-headed cowbird (*Molothrus ater*), orange-crowned warbler (*Oreothypis celata*), Townsend's warbler (*Setophaga townsendi*), Wilson's warbler (*Cardellina pusilla*), western tanager (*Piranga ludoviciana*), black-headed grosbeak (*Pheucticus melanocephalus*), and lazuli bunting (*Passerina amoena*).

Mammals

Active burrows are present throughout the Project Site which provide cover for numerous small mammal species. Mammals observed on the Project Site include California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*).

Other common mammal species anticipated to occur onsite include deer mouse (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), Botta's pocket gopher (*Thomomys bottae*), big-eared woodrat (*Neotoma macrotis*), Bryant's woodrat (*Neotoma bryanti*), common gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), southern mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*).

The Project Site contains a substantial number of large trees and rocky cliff faces. These large trees and rocky areas can support roosting habitat for bat species that roost in crevices, cavities, or foliage. Bat species that are expected to occur onsite include the western small-footed myotis (*Myotis ciliolabrum*), silver-haired bat (*Lasionycteris noctivagans*), big brown bat (*Eptesicus fuscus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), California myotis (*Myotis californicus*), Yuma myotis (*Myotis yumanensis*), hoary bat (*Lasiurus cinereus*), and pallid bat (*Antrozous pallidus*).

Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water; defending territories; or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- ***Travel route –*** a landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas; and it provides a relatively direct link between target habitat areas.
- ***Wildlife corridor –*** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate their movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat linkages" or "landscape linkages") can provide both transitory and resident habitat for a variety of species.
- ***Wildlife crossing –*** a small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that in a large, open space area with few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors (as defined above) may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large, open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (such as roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

In general, wildlife corridor discussions typically focus on larger, more mobile mammal species such as southern mule deer, mountain lion, and coyote. Discussing the needs of larger mammal species typically also captures the needs of mid-sized mammals such as foxes (*Vulpes* sp.), northern raccoon, striped skunk, and American badger (*Taxidea taxus*). Most mammal species have relatively large home ranges through which they move to find adequate food, water, and

breeding and wintering habitat. It is assumed that corridors that serve larger, more mobile mammal species also serve as corridors for many smaller, less mobile species, such as reptiles, amphibians, and rodents. Regional movement for these species facilitates gene flow and requires at least some local “stepping stone” movement of individuals between populations.

Discussions of wildlife corridors generally focus less on bird species because they are more mobile and can fly over inhospitable habitat. Long-distance migrants are able to move great distances over unsuitable habitat; however, they must have stopover sites to rest and forage in order to continue their migration. Many resident species are habitat-specific, moving only through their preferred habitat type(s), or similar adjacent habitat; wildlife corridors would be more important for these bird species.

Ideally, an open space corridor should encompass a heterogeneous mix of vegetation types to accommodate the ecological requirements of a wide variety of resident species in any particular region. Most species typically prefer adequate vegetation cover during movement, which can serve as both a food source and as protection from weather and predators. Drainages, riparian areas, and forested canyon bottoms typically serve as natural movement corridors because these features provide cover, food, and often water for a variety of species. Very few species will move across large expanses of open, uncovered habitat unless it is the only option available to them. Landscape linkages must also provide “live-in” habitat (food and cover) to support smaller and less mobile species, such as amphibians, reptiles, and rodents, that require longer periods to traverse a corridor.

Open space on the Project Site is contiguous with larger areas of open space in the region. The landscape matrix around the Project Site is generally undeveloped, broken primarily by residential development to the southwest. Although the Project Site is also bound to the north by Trabuco Canyon Road, this roadway is not expected to support the level of traffic that would significantly limit movement opportunities for wildlife to travel to and from the Project site to the open space within the Santa Ana Mountains. The Project site directly abuts agricultural/rural lands owned by the Irvine Ranch Water District to the north, open space to the east and southeast managed by the U.S. Forest Service and the County of Orange, and the residentially development of Robinson Ranch to the southwest. Collectively, the relatively undeveloped nature of the landscape is highly conducive to regional wildlife movement.

Opportunities for movement within the Project Site are also abundant as the site contains several open pathways lined with vegetation including dirt roads and trails along ridgelines, streambeds with minimal understory vegetation and tall tree canopy, and minimally used dirt roadways beneath the oak and chaparral understory. The following species are expected to utilize the Project site as part of their regional travel routes:

- Mountain lion,
- Southern mule deer,
- Coyote,
- Striped skunk, and
- Common gray fox.

3.4 SPECIAL STATUS BIOLOGICAL RESOURCES

The following section addresses special status biological resources that were observed, reported, or have the potential to occur on the Project site. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and State resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. In addition to species, special status biological resources include vegetation types and habitats that are either unique; of relatively limited distribution in the region; or of particularly high wildlife value. These resources have been defined by federal, State, and local government conservation programs. Sources used to determine the special status of biological resources are listed below.

- ***Habitats –*** the CNDDB (CDFW 2022a); *NatureServe Conservation Status Assessments: Methodology for Assigning Ranks* (Faber-Langendoen et al. 2012); and the *California Sensitive Natural Communities List* (CDFW 2022b).
- ***Plants –*** the CNDDB (CDFW 2022a); the Inventory of Rare and Endangered Plants (CNPS 2022); various USFWS *Federal Register* notices regarding listing status of plant species; and the *List of Special Vascular Plants, Bryophytes, and Lichens* (CDFW 2022c).
- ***Wildlife –*** the CNDDB (CDFW 2022a); various USFWS *Federal Register* notices regarding listing status of wildlife species; and the *List of Special Animals* (CDFW 2022d).

Definitions

A **federally Endangered species** is one facing extinction throughout all or a significant portion of its geographic range. A **federally Threatened species** is one likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally listed Threatened or Endangered species in a project impact area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. "Harm" in this sense can include any disturbance of species' habitats during any portion of its life history.

Proposed species or **Candidate species** are those officially proposed by the USFWS for addition to the federal Threatened and Endangered species list. Because proposed species may soon be listed as Threatened or Endangered, these species could become listed prior to or during implementation of a proposed project. The presence of a Proposed or Candidate species within a project impact area may impose constraints on development if they are listed prior to issuance of project permits, particularly if a project would result in "take" of the species or its habitat.

The State of California considers an **Endangered species** to be one whose prospects of survival and reproduction are in immediate jeopardy, a **Threatened species** as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management, and a **Rare species** as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. "Rare species" only applies only to California native plants. State-listed Threatened and Endangered species are protected against take unless an Incidental Take Permit is obtained from the resource agencies. The presence of any State-listed Threatened or Endangered species in a project impact area generally imposes severe constraints on development, particularly if a project would result in "take" of the species or its habitat.

California Species of Special Concern is an informal designation used by the CDFW for some declining wildlife species that are not State Candidates for listing. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFW. A few years ago, the CDFW downlisted several species from Species of Special Concern to the **Watch List**. Although not considered special status, Watch List species are tracked by the CNDDB.

Species that are **California Fully Protected** and **Protected** include those protected by special legislation for various reasons, such as the mountain lion and white-tailed kite (*Elanus leucurus*). Fully Protected species may not be taken or possessed at any time. California Protected species include those species that may not be taken or possessed at any time except under special permit from the CDFW issued pursuant to Sections 650 and 670.7 of the *California Code of Regulations,* or Section 2081 of the *California Fish and Game Code.*

Species of **Local Concern** are those that have no official status with the resource agencies but are being watched because either the region has a unique population or the species is declining in the region.

Special Animal is a general term that refers to species tracked in the CNDDB, regardless of legal or protective status. This term includes species designated as any of the above terms but also includes species that may be considered biologically rare; restricted in distribution; declining throughout their range; have a critical, vulnerable stage in their life cycle that warrants monitoring; are on the periphery of their range and are threatened with extirpation in California; are associated with special status habitats; or are considered by other State or federal agencies or private organizations to be sensitive or declining.

The **California Rare Plant Rank (CRPR)**, formerly known as CNPS List, is a ranking system by the Rare Plant Status Review group[1] and managed by the CNPS and the CDFW. A CRPR summarizes information on the distribution, rarity, and endangerment of California's vascular plants. Plants with a CRPR of **1A** are presumed extirpated from the state because they have not been seen in the wild in California for many years and they are either rare or extinct elsewhere. Plants with a CRPR of **1B** are Rare, Threatened, or Endangered throughout their range. Plants with a CRPR of **2A** are presumed extirpated from California but are more common elsewhere. Plants with a CRPR of **2B** are considered Rare, Threatened, or Endangered in California, but are more common elsewhere. Plants with a CRPR of **3** require more information before they can be assigned to another rank or rejected; this is a "review" list. Plants with a CRPR of **4** are of limited distribution or are infrequent throughout a broader area in California; this is a "watch list". The Threat Rank is an extension that is added to the CRPR to designate the plant's endangerment level. An extension of **.1** is assigned to plants that are considered to be "seriously threatened" in California (i.e., over 80 percent of the occurrences are threatened or have a high degree and immediacy of threat). Extension **.2** indicates the plant is "fairly threatened" in California (i.e., between 20 and 80 percent of the occurrences are threatened or have a moderate degree and immediacy of threat). Extension **.3** is assigned to plants that are considered "not very threatened" in California (i.e., less than 20 percent of occurrences are threatened or have a low degree and immediacy of threat or no current threats are known). The absence of a threat code extension indicates that this information is lacking for the plant(s) in question.

[1] This group consists of over 300 botanical experts from the government, academia, non-governmental organizations, and the private sector.

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types that are considered special status by the State and federal resource agencies, academic institutions, and various conservation groups (e.g., the CNPS). Special status natural communities are "of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects"; they may or may not contain special status species (CDFG 2009). Determination of the level of imperilment (i.e., exposure to injury, loss, or destruction) is based on the NatureServe Heritage Program Status Ranks that rank both species and vegetation types on a global (G) and statewide (S) basis according to their rarity, trend in population size or area, and recognized threats (e.g., proposed developments, habitat degradation, and non-native species invasion) (Faber-Langendoen et al. 2012). Global and state ranks are provided for all native vegetation types on the *California Sensitive Natural Communities List* (CDFW 2022b). The ranks are scaled from 1 to 5. NatureServe considers **G1** and/or **S 1** communities to be critically imperiled and at a very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors; **G2** and/or **S2** communities to be imperiled and at high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors; **G3** and/or **S3** communities to be vulnerable and at moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors; **G4** and/or **S4** communities to be apparently secure and uncommon but not rare with some cause for long-term concern due to declines or other factors; and **G5** and/or **S5** communities to be secure. A question mark (?) denotes an inexact numeric rank, but existing information points to this rank (Faber-Langendoen et al. 2012). Currently, association ranks are not provided, but associations ranked as S3 or rarer are noted. For vegetation alliances[2] that have State ranks of S1–S3, all associations within the alliance are considered to be highly imperiled.

Special Status Vegetation Types

Five special status vegetation types are present on the Project Site: coastal sage scrub/chaparral mix, southern mixed chaparral. open southern mixed chaparral, southern sycamore riparian woodland, and floodplain sage scrub. Table 2 shows all the vegetation types observed and their respective sensitivity rankings.

[2] A vegetation alliance is "a classification unit of vegetation, containing one or more associations and defined by one or more diagnostic species, often of high cover, in the uppermost layer or the layer with the highest canopy cover" (Sawyer et al. 2009). This term is generally interchangeable with vegetation type.

TABLE 2
STATUS OF VEGETATION TYPES AND OTHER AREAS

Vegetation Types and Other Areas	Rank	CDFW Sensitive	Acres on Project Site
California Sagebrush-California buckwheat Scrub (*Artemesia californica – Eriogonum fasciculatum* association)	G4, S4	No	19.21
Scrub Oak-Sagebrush (no comparable association)		No	0.48
Coastal Sage-Chaparral Scrub Ecotone (*Heteromeles arbutifolia – Artemisia californica* association)		Yes	0.07
Toyon-Sumac Chaparral (*Heteromeles arbutifolia – Malosma laurina* association)	G5, S4	No	15.68
Scrub Oak Chaparral (*Quercus berberidifolia* association)	G4, S4	No	8.20
Southern Mixed Chaparral (*Heteromeles arbutifolia – Artemisia californica* association)		Yes	18.42
Open Southern Mixed Chaparral (*Heteromeles arbutifolia – Artemisia californica* association)		Yes	5.43
Coast Live Oak Woodland (*Quercus agrifolia* association)		No	4.64
Southern Sycamore Riparian Woodland (*Plantanus racemose – Quercus agrifolia* association)	G3, S3	Yes	0.49
Mule Fat Scrub (*Baccharis salicifolia* association*)*	G5, S5	No	0.5
Floodplain Sage Scrub (*Eriogonum fasciculatum – Lepidospartum squamatum alluvial fan* association)		Yes	17.44
Wash (no comparable association)		No	3.64
Annual Grassland (*Avena barbata – Avena fatua* association)		No	13.23
Ruderal (*Brassica nigra* association)		No	2.69
Disturbed (*Bromus diandrus* – Mixed herbs association)		No	7.91
Ornamental (no comparable association)		No	1.21
		Total	**119.22**

G: Global; S: State.

Sources:

CDFW 2022 (Rank and CDFW Sensitive)

Threat Ranking

3 Vulnerable and at moderate risk of extinction or elimination
4 Apparently secure and uncommon but not rare
5 Secure
– No threat rank

Upland Shrub/Chaparral Vegetation Types

Approximately 67.49 acres of scrub and chaparral vegetation types occur on the Project site. The California sagebrush-California buckwheat scrub, scrub oak-sagebrush, toyon-sumac chaparral, and scrub oak chaparral (totaling 43.57 acres) are not considered sensitive by CDFW. The remaining scrub/chaparral types (23.92 acres) include coastal sage-chaparral scrub ecotone, southern mixed chaparral, and open southern mixed chaparral. These forms of scrub and chaparral are considered sensitive by the CDFW.

While some of the scrub types onsite may not have the sensitive ranking of CDFW, these areas are of local concern as part of the larger coastal sage scrub community. Coastal sage scrub had, as a whole, declined approximately 70 to 90 percent in its historic range in California by the mid-1990s (Noss and Peters 1995). Sage scrub has largely been lost to land use changes in Southern California basins and foothills. The ecological function of Southern California's remaining sage scrub is threatened by habitat fragmentation and degradation, which is largely the result of invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and air pollution (O'Leary 1995).

Chaparral is a drought tolerant plant community dominated by sclerophyllous, woody shrubs shaped by a Mediterranean-type climate and naturally recurring wildfires. It is the most extensive vegetation community in California and is not presently considered to have special status, though its status in the future may be uncertain given continuing drought conditions; increased fire frequencies; and limited understanding of the system. In general, chaparral vegetation types on the Project Site are considered secure or apparently secure.

Woodland Vegetation Types

Approximately 4.64 acres of coast live oak woodland occurs on the Project Site. This vegetation type is not considered sensitive by CDFW. Oak woodlands are declining throughout California due to residential, commercial, and industrial development. Woodlands are an important resource in California that provide aesthetic, cultural, economic, and environmental value, in addition to wildlife habitat. In addition, some woodlands, specifically the southern sycamore riparian woodland located on the Project Site, may be associated with jurisdictional resources. The southern sycamore riparian woodland is discussed in detail below.

Riparian Vegetation Types

Approximately 0.49 acre of southern sycamore riparian woodland and 17.44 acres of floodplain sage scrub occurs on the Project Site. While both vegetation types are expected to be included within the jurisdiction of the USACE, the RWQCB, and/or the CDFW, they are also ranked by the CDFW according to their degree of imperilment. Southern sycamore riparian woodland is G3 S3 and is considered sensitive by CDFW. Floodplain sage scrub is also considered sensitive by CDFW.

Typically, riparian vegetation provides important biological functions for an ecosystem such as (1) for cover and water sources for wildlife; (2) for filtration of runoff water and groundwater to be recharged; and (3) for flood control and sediment stabilization purposes. Riparian habitats are biologically productive as well as diverse and are the exclusive habitat of several special status species. As a result, the resource agencies often consider riparian vegetation types to be important resources. It is estimated that as much as 95 to 97 percent of historic riparian habitats in Southern California had been lost by the late 1980s due to agriculture, urban development, flood control, and other human-caused impacts (Faber et al. 1989; Bell 1997). Additionally, since the 1970s, giant reed (*Arundo donax*) has become the greatest threat to the remaining riparian resources in coastal Southern California (Bell 1997). This invasive species competes with native

species such as willows (*Salix* spp.), mule fat, and cottonwoods (*Populus* spp.); is difficult to control; and apparently does not provide food or nesting habitat for native species (Bell 1997).

Other Areas

Annual grasslands, ruderal, disturbed, ornamental, and unvegetated wash areas are not given a threat ranking because they are characterized by non-native species or lack vegetation. These areas are considered relatively low in biological value compared to native habitat and would not be considered special status vegetation types, although the wash areas may be considered jurisdictional by the regulatory agencies.

Jurisdictional Resources

Jurisdictional water resources considered for this report include waters of the United States under the regulatory authority of the U.S. Army Corps of Engineers (USACE); waters of the State under the regulatory authority of the Regional Water Quality Control District (RWQCB); and the bed, bank, and channel of all lakes, rivers, and/or streams (and associated riparian vegetation), under the regulatory authority of the CDFW.

Non-wetland waters of the United States are delineated based on the limits of the ordinary high-water mark (OHWM), which can be determined by a number of factors, including the presence of a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; and the presence of litter and debris. For streams with well-defined bed and banks, the limits of CDFW jurisdictional waters were identified as the top of bank or the outer drip line of riparian vegetation.

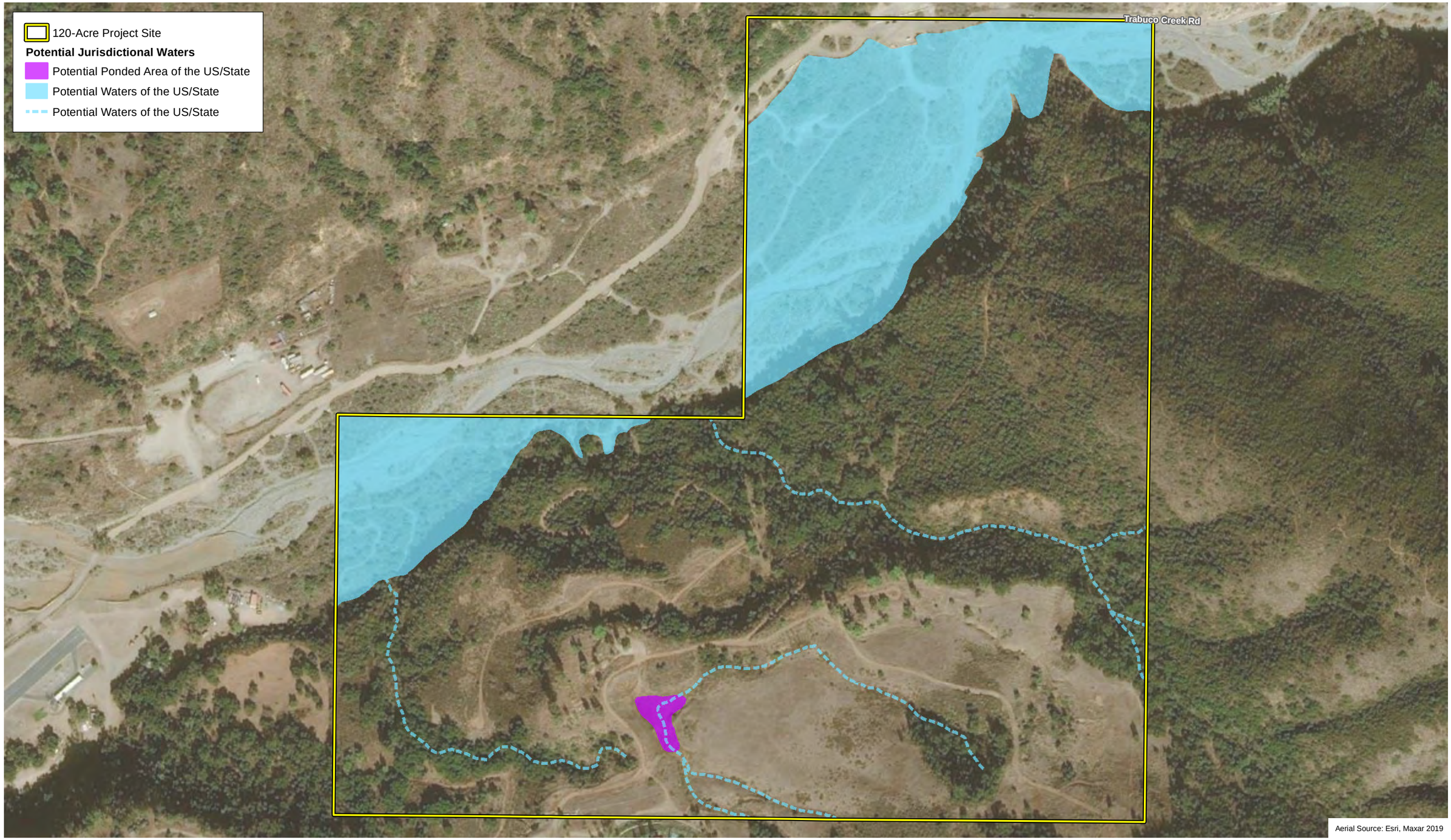
It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. Water resources lacking connectivity to a Traditional Navigable Water[3] (TNW), whether by definition or through a significant nexus analysis, are considered isolated. If isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands method pursuant to the 1987 Wetlands Manual. Note that the USACE does not require continuous surface connectivity to establish jurisdiction; waters are considered a tributary even if there is a natural or constructed break along the connection to a TNW. Therefore, drainage channels disrupted by roads in the jurisdictional delineation survey area may still be considered under the jurisdiction of the USACE and/or the RWQCB. Swales and erosional features are not considered jurisdictional.

Potential jurisdictional features were mapped on the Project Site based on field conditions, aerial photography, and areas mapped by the National Wetlands Inventory (USFWS 2018). The results of the assessment are summarized below.

Trabuco Creek

The primary drainage feature that conveys most surface flows across the site to downstream waters is Trabuco Creek (Exhibit 5). Historically, Trabuco Creek was perennial with flows derived from storm water runoff during the rainy season and from springs and groundwater seepage into the creek during the dry season (Corps 2002). Extensive development in the Trabuco Creek watershed has increased the impermeable surface area and decreased infiltration. Stream gauge data indicates that Trabuco Creek is ephemeral with consistent flows occurring only during the winter and spring (Corps 2002).

[3] Traditional Navigable Waters are all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.



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Potential Jurisdictional Waters

Trabuco Canyon Water District 120-acre Project Site

Exhibit 5

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W E
S

300 150 0 300

Feet

PSOMAS

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Currently, Trabuco Creek conveys flows onto the Project Site from the open floodplain/creek channel to the east. The creek meanders through Project Site along braided alluvial streams, with coarse substrate that support open, unvegetated wash areas, scrub, and southern sycamore riparian woodland habitat along the margins of the creek. Drift deposits, sediment deposits, and drainage patterns (i.e., secondary indicators of wetland hydrology) were observed throughout the survey area.

The OHWM throughout Trabuco Creek, which is used to identify the limits of non-wetland waters of the U.S. on-site subject to USACE and RWQCB jurisdiction pursuant to the federal Clean Water Act (CWA) Sections 404 and 401, respectively, could be up to 40 feet wide in some portions of this creek. Streambed and active banks subject to CDFW jurisdiction pursuant to California Fish and Game Code Sections 1600 et seq. are expected to be greater in size compared to USACE features. In the vicinity of where southern sycamore riparian woodland and mule fat scrub is present, the CDFG jurisdiction could be up to 120 feet wide in some portion of this creek.

Ephemeral Features

There are approximately four ephemeral features within the Project Site that are tributary to Trabuco Creek (Exhibit 5). The tributaries originate on-site or immediately offside via a small canyons or drainage features that convey ephemeral flows to Trabuco Creek in a generally northwest direction. The OHWM within these areas is expected to be very narrow (anticipated less than 2 foot wide), with banks expected to be less than 8 feet wide. Any riparian vegetation canopy associated with these drainages may extend CDFW limits of these feature on the Project Site.

Ponded Area

In the southern portion of the Project Site, a manufactured agricultural pond receives ephemeral flows from the south into the area that appears to have been dammed for historical uses on-site. It is unknown if there is a man-made culvert on the northern portion of the ponded area that conveys flow under a built-up dam/access road. The ponded area did not contain recent evidence on ponding (i.e., wetland vegetation and/or cracked soils). Addition investigation is warranted to determine if the ponded area is considered waters of the State or US.

Special Status Plants

Table 3 provides a summary of special status plant species reported to occur in the region of the Project Site (i.e., Santiago Peak 7.5-minute quadrangle) and are potentially present based suitable habitat onsite. Table 3 includes information on the status, preferred habitat, potential for occurrence, and any observations during the site visit. Note that species are grouped alphabetically according to their scientific name. This list includes species reported by the CNDDB and CNPS, supplemented with species from the project Biologist's experience that either occur nearby or could occur based on the presence of suitable habitat. Two species were observed during the site survey—intermediate mariposa lily and Coulter's matilija poppy—and are discussed below.

TABLE 3
SPECIAL STATUS PLANT SPECIES POTENTIALLY ON THE PROJECT SITE

Scientific Name	Common Name	Status			Preferred Habitat	Potential to Occur/Observed
		USFWS	CDFW	CRPR		
Brodiaea filifolia	thread-leaved brodiaea	FT	SE	1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools.	Potential to occur.
Calochortus catalinae	Catalina mariposa lily	–	–	4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	Potential to occur.
Calochortus weedii var. *intermedius*	intermediate mariposa lily	–	–	1B.2	Chaparral, coastal scrub, valley and foothill grassland.	**Observed**.
Clinopodium chandleri	San Miguel savory	–	–	1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	Potential to occur.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	–	–	1B.2	Chaparral, cismontane woodland.	Potential to occur
Convolvulus simulans	small-flowered morning-glory	–	–	4.2	Chaparral (openings), coastal scrub, valley and foothill grasslands.	Potential to occur
Deinandra paniculata	paniculate tarplant	–	–	4.2	Coastal scrub, valley and foothill grassland, vernal pools, disturbed areas.	Potential to occur
Diplacus clevelandii	Cleveland's bush monkeyflower	–	–	4.2	Chaparral, cismontane woodland, lower montane coniferous forest.	Potential to occur
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT	–	1B.1	Chaparral, coastal scrub.	Potential to occur.
Dudleya multicaulis	many-stemmed dudleya	–	–	1B.2	Chaparral, coastal scrub, valley and foothill grassland.	Potential to occur.
Dudleya viscida	sticky dudleya	–	–	1B.2	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub.	Potential to occur.
Erythranthe diffusa	Palomar monkeyflower	–	–	4.3	Chaparral, lower montane coniferous forest.	Potential to occur
Horkelia cuneata var. *puberula*	mesa horkelia	–	–	1B.1	Chaparral (maritime), cismontane woodland, coastal scrub	Potential to occur
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	–	–	4.3	Chaparral, coastal scrub.	Potential to occur

TABLE 3
SPECIAL STATUS PLANT SPECIES POTENTIALLY ON THE PROJECT SITE

Scientific Name	Common Name	Status			Preferred Habitat	Potential to Occur/Observed
		USFWS	CDFW	CRPR		
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	–	–	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes).	Potential to occur
Monardella hypoleuca ssp. lanata	felt-leaved monardella	–	–	1B.2	Chaparral, cismontane woodland.	Potential to occur
Nolina cismontana	chaparral nolina	–	–	1B.2	Chaparral, coastal sage scrub.	Potential to occur
Pentachaeta aurea ssp. *allenii*	Allen's pentachaeta	–	–	1B.1	Coastal scrub (openings), valley and foothill grasslands.	Potential to occur
Piperia cooperi	chaparral rein orchid	–	–	4.2	Chaparral, cismontane woodland, valley and foothill grassland.	Potential to occur
Polygala corunuta var. *fishiae*	Fish's milkwort	–	–	4.3	Chaparral, cismontane woodland, riparian woodland.	Potential to occur
Quercus dumosa	Nuttall's scrub oak	–	–	1B.1	Closed-cone coniferous forest, chaparral, coastal scrub.	Potential to occur.
Romneya coulteri	Coulter's matilija poppy	–	–	4.2	Chaparral, coastal scrub.	**Observed**.
Sidalcea neomexicana	salt spring checkerbloom	–	–	2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas.	Potential to occur.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; CRPR: California Rare Plant Rank

Federal (USFWS)
FE Endangered
FT Threatened

State (CDFW)
SE Endangered

CRPR
1B Plants Rare, Threatened, or Endangered in California and elsewhere
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 Plants about which we need more information - review list
4 Plants of limited distribution - watch list

CRPR Threat Code Extension
None Plants lacking any threat information
.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% of occurrences threatened; moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known)

Intermediate Mariposa Lily

Intermediate mariposa lily has a CRPR of 1B.2. It typically blooms between May and July (CNPS 2022). This perennial bulbiferous herb occurs on dry, rocky, open slopes in chaparral, coastal sage scrub, and valley and foothill grasslands at elevations between sea level and 2,805 feet above msl (Jepson Flora Project 2021; (CNPS 2022); Roberts 2008). It is sometimes locally common following fire (Roberts 2008). This species is known from the South Coast and northern Peninsular Ranges (Jepson Flora Project 2021).

Two populations of intermediate mariposa lily individuals were observed on the Project Site.

- The first population was observed on gentle north facing slopes within California sagebrush-California buckwheat scrub in the south-central portion of the Project Site.

- The second population was found along the cliff edge on the south side of the Trabuco Creek canyon. The plants were observed on rocky substrate at the margins of the chaparral and woodland vegetation types.

It is important to note that the intermediate mariposa lilies observed during the July 9, 2022 site visit was at the end of the typical blooming period for this species. It is expected that the size of the observed populations would increase if focused surveys for this species are conducted earlier within their blooming period. In addition, it is expected that additional populations may also be present onsite.

Coulter's Matilija Poppy

Coulter's matilija poppy is a CNPS List 4.2 species. It typically blooms between March and July (CNPS 2022). This rhizomatous herb occurs in chaparral and coastal sage scrub often in burn areas (CNPS 2022). This species is known from Los Angeles, Orange, San Diego, and Riverside Counties (CNPS 2022). This species was observed at several locations along the Trabuco Creek in the floodplain sage scrub. The plants were vegetative during the surveys and occurred in rocky/sandy soils.

As noted above for the intermediate mariposa lily, it is expected that additional populations of Coulter's matilija poppy may be present onsite. Focused surveys for this species conducted earlier within their blooming period would likely document more plants throughout the Project Site.

Special Status Wildlife

Table 4 provides a summary of special status wildlife species reported to occur in the Project Site region (i.e., the USGS' Santiago Peak 7.5-minute quadrangle) and are potentially present based suitable habitat onsite. Table 4 includes information on the status, species background and range, potential for occurrence, and observations. This list includes species recorded by the CNDDB, supplemented with species from the Biologist's experience that either occur nearby or could occur based on the presence of suitable habitat. Note that these species are listed taxonomically. Special status species with federally designated Critical Habitat located onsite are discussed further below.

Arroyo Toad

Arroyo toad (*Anaxyrus californicus*) is a federally Endangered species and a California Species of Special Concern. The arroyo toad population is currently distributed in coastal drainages and along the desert slopes of the Transverse and Peninsular Ranges from approximately 1,000 feet to 4,600 feet above msl; however, the species has been recorded from sea level to 8,000 feet

above msl in Baja California (Patten and Myers 1992; Jennings and Hayes 1994; Welsh 1988; USFWS 1999). It occurs in intermittent washes/streams and perennial streams. In the northern portion of their range, they generally occur in third- to sixth-order or greater streams; however, in the southern portion of their range, they can occur in first- and second-order streams (USFWS 1999; Griffin et al. 1999; USFWS 2009). "Episodic flooding is critical to keeping the low stream terraces relatively vegetation free and soils friable enough for juveniles and adults to create burrows" (Jennings and Hayes 1994). The most favorable breeding habitat for arroyo toad consists of slow-moving streams with shallow pools, nearby sandbars, and adjacent stream terraces. Outside the breeding season, arroyo toads are essentially terrestrial, using a variety of upland habitats, including sycamore-cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral, and grasslands (Holland 1995; Griffin et al. 1999; USFWS 2009). Adult toads burrow into sandy terraces where they shelter during the day when the surface is damp or during longer periods during the dry season (Sweet 1989). During the non-breeding season (August to January), arroyo toad will aestivate (a state of dormancy similar to hibernation) to prevent dehydration during hot or dry times of the year (Ramirez 2003). Suitable habitat is present in the areas along, and immediately adjacent to Trabuco Creek on the Project Site.

On February 9, 2011, the USFWS published the Revised Critical Habitat for the arroyo toad. The Revised Critical Habitat designated 98,366 acres of critical habitat for the arroyo toad in portions of Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties, California (USFWS 2011). The Property is within designated as arroyo toad critical habitat.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed Threatened species and a California Species of Special Concern. It occurs in most of Baja California, Mexico's arid regions, but this subspecies is extremely localized in the United States, where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego Counties (Atwood 1992). The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from between sea level and 820 feet above msl along the coast and between sea level and 1,800 feet above msl inland (Atwood and Bolsinger 1992). In California, this subspecies is an obligate resident of coastal sage scrub vegetation types. Brood parasitism by brown-headed cowbirds (*Molothrus ater*) and loss of habitat to urban development have been cited as causes of coastal California gnatcatcher population decline (Unitt 1984; Atwood 1990). Suitable habitat for coastal California gnatcatcher occurs on the Project Site in the scrub and coastal sage scrub/chaparral mix vegetation types.

On December 19, 2007, the USFWS published the current Final Rule designating 197,303 acres of land as critical habitat for the coastal California gnatcatcher in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura Counties (USFWS 2007). The Project Site is located within final critical habitat designations for the coastal California gnatcatcher.

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY ON THE PROJECT SITE

Species	Status		Species Background	Range	Potential to Occur/Observed
	USFWS	CDFW			
Fish					
Gila orcuttii arroyo chub	–	SSC	Coastal freshwater streams and rivers with steady current and emergent vegetation.	San Diego, Orange and Los Angeles County.	May occur; marginally suitable habitat.
Amphibians					
Taricha torosa California range newt	–	SSC	Wet forests, oak forests, chaparral, grasslands. Breeds in streams, rivers, ponds, lakes, and reservoirs.	Coast and coast range mountains from Mendocino County south to San Diego County. Locally known to cross Trabuco Canyon Road from the Arroyo Trabuco.	May occur; suitable habitat.
Spea hammondii western spadefoot	–	SSC	Quiet streams, vernal pools, and temporary ponds.	Great Valley and bordering foothills and Coast Ranges from Monterey Bay south to Baja California, Mexico.	May occur; suitable habitat.
Anaxyrus californicus arroyo toad	FE	SSC	Semi-arid regions near washes or intermittent streams; requires suitable breeding pools.	Southern California and northwestern Baja California, Mexico.	May occur; suitable habitat.
Reptiles					
Phrynosoma blainvillii coast horned lizard	–	SSC	Scrubland, grassland, coniferous forests, and broadleaf woodland with friable soil for burrowing.	Northern California south to northern Baja California, Mexico.	May occur; suitable habitat.
Aspidoscelis hyperytha orange-throated whiptail	–	SSC	Washes and open areas of sage scrub and chaparral in friable, gravelly soil.	Western Peninsular Ranges from Orange and San Bernardino Counties south to Baja California, Mexico.	May occur; suitable habitat.
Aspidoscelis tigris stejnegeri coastal whiptail	–	SA	Hot and dry open areas with sparse foliage such as chaparral, woodland.	Coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, and north into Ventura County.	May occur; suitable habitat.
Anniella stebbinsi Southern California legless lizard	–	SSC	In loose sandy soil of chaparral, pine-oak woodland, beach, and riparian areas.	Coast, Transverse, and Peninsular Ranges from Contra Costa County south to Baja California, Mexico.	May occur; suitable habitat.
Salvadora hexalepis virgultea coast patch-nosed snake	–	SSC	Sandy or rocky grasslands, chaparral, sagebrush plains, piñon-juniper woodlands, and desert scrub.	Coast of California from San Luis Obispo County south to Baja California, Mexico.	May occur; suitable habitat.

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES POTENTIALLY ON THE PROJECT SITE

Species	Status		Species Background	Range	Potential to Occur/Observed
	USFWS	CDFW			
Crotalus ruber red-diamond rattlesnake	–	SSC	Open scrub, chaparral, woodland, and grassland.	Orange County and San Bernardino County south to Baja California, Mexico.	May occur; suitable habitat.
Birds					
Accipiter cooperii Cooper's hawk (nesting)	–	WL	Prefers to nest in oak woodlands and riparian woodlands. Forages primarily in forest habitats.	Breeds from southern Canada into northwestern and north-central Mexico. Wintering range extends south.	May occur; suitable habitat
Aquila chrysaetos golden eagle (nesting and wintering)	–	FP, WL	Nests in open and semi-open habitats, such as tundra, shrublands, grasslands, woodland-brushlands, coniferous forests, farmland, and riparian habitats. Forages in broad expanses of open country.	Resident throughout Southern California, except in the Colorado Desert and Colorado River, where it is a casual winter visitor.	May occur for foraging/wintering but not expected to occur for nesting; suitable habitat.
Elanus leucurus white-tailed kite (nesting)	–	FP	Low elevation grassland, agricultural areas, wetlands, oak woodlands, savannahs, and riparian habitat adjacent to open areas.	Resident in coastal Southern California and a visitor and local breeder on the western edge of the deserts.	May occur; suitable habitat
Asio otus long-eared owl (nesting)	–	SSC	Nests in dense trees such as oaks and willows. Forages over grasslands and other open habitats.	Breeds in Canada south to northern Baja California, Mexico. Winters throughout breeding range to the interior of Mexico.	May occur; suitable habitat.
Athene cunicularia burrowing owl (burrow sites and some wintering sites)	–	SSC	Sparse vegetation in arid and semi-arid habitats such as grasslands, steppes, deserts, prairies, and agricultural areas. Nests in mammal burrows or man-made cavities.	In California from the Central Valley and Southern California.	May occur; suitable habitat
Lanius ludovicianus loggerhead shrike (nesting)	–	SSC	Grasslands and other dry, open habitats.	Throughout North America; a year-round resident in Southern California.	May occur; suitable habitat
Progne subis purple martin (nesting)	–	SSC	Breeds in cavities of conifer or western sycamore. Forages over riparian areas, forests, and woodlands.	Throughout much of eastern North American and locally in the Rocky Mountains, Sonoran Desert, Central Mexico, and Pacific coast states. Summer resident and migrant in California.	May occur; suitable habitat

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY ON THE PROJECT SITE

Species	Status		Species Background	Range	Potential to Occur/Observed
	USFWS	CDFW			
Polioptila californica californica coastal California gnatcatcher	FT	SSC	Coastal sage scrub vegetation.	Los Angeles, Orange, Riverside, and San Diego Counties south to Baja California, Mexico.	May occur; suitable habitat
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	–	WL	Steep, dry, rocky, south- or west-facing slopes in scrub vegetation interspersed with grasses and forbs or rock outcrops.	Year-round in Southern California.	May occur; suitable habitat
Amphispiza belli belli Bell's sage sparrow	–	WL	Low, dense chamise chaparral and dry scrub vegetation, often with stands of cactus.	Resident in interior foothills or coastal Southern California.	May occur; suitable habitat
Mammals					
Antrozous pallidus pallid bat	—	SSC	Occurs in a variety of habitats such as grasslands, shrublands, and woodlands, but most commonly in open habitats with rocky areas for roosting (Zeiner et al. 1990). Roosts in caves, crevices, mines, and occasionally hollow trees and buildings (Whitaker 1980; Zeiner et al. 1990).	Throughout California except for the high Sierra Nevada and the northwestern corner of the State.	May occur; suitable habitat.
Corynorhinus townsendii Townsend's big-eared bat	—	SSC	Occurs in a variety of habitats such as oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows (Hall 1981). Roosts in mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures (Williams 1986).	Throughout California; distribution poorly known.	May occur; suitable habitat.
Eumops perotis californicus western mastiff bat	—	SSC	Forages in dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Roosts primarily in cliffs high above the ground (WBWG 2005).	San Joaquin Valley and Coastal Ranges through southern California. The coast eastward through the Colorado Desert.	May occur; suitable habitat.
Lasionycteris noctivagans silver-haired bat	–	SA	Coastal and montane forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Primarily a forest dweller.	North America, from southern British Columbia to northern Mexico.	May occur; suitable habitat.
Lasiurus cinereus hoary bat	–	SA	Prefers open habitats or habitat mosaics, with access to trees and open areas or habitat edges.	Widest range of any New World bat, living from Argentina and Chile northward through Canada.	May occur; suitable habitat.
Lasiurus blossevillii western red bat	–	SSC	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in these broad-leafed trees.	Found in western Canada, the western U.S., western Mexico and Central America.	May occur; suitable habitat.

TABLE 4
SPECIAL STATUS WILDLIFE SPECIES
POTENTIALLY ON THE PROJECT SITE

Species	Status		Species Background	Range	Potential to Occur/Observed
	USFWS	CDFW			
Myotis ciliolabrum western small-footed myotis	–	SA	Arid uplands, primarily in arid wooded and brushy uplands near water. Roosts in caves, buildings, mines, crevices, and occasionally under bridges and under bark.	Southern British Columbia, Alberta, and Saskatchewan, Canada to the southwestern U.S.	May occur; suitable habitat.
Lepus californicus bennettii San Diego black-tailed jackrabbit	–	SSC	Herbaceous and desert-shrub areas and open, early stages of forest and chaparral.	Pacific slope from Santa Barbara County south to northwestern Baja California, Mexico.	May occur; suitable habitat.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	–	SSC	Chaparral, coastal sage scrub, and grassland.	Southwest San Bernardino County south to northern Baja California, Mexico.	May occur; suitable habitat.
Neotoma lepida intermedia San Diego desert woodrat	–	SSC	Joshua tree woodland, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and desert habitats.	Pacific slope from San Luis Obispo south to northwestern Baja California, Mexico.	May occur; suitable habitat.
Onychomys torridus ramona southern grasshopper mouse	–	SSC	Desert areas, especially in scrub habitats with friable soil. Also in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	Along the coast of Southern California from Los Angeles County south through San Diego County.	May occur; suitable habitat.
Taxidea taxus American badger	—	SSC	Occurs in a wide range of habitats, but is most abundant in drier, open stages of most shrub, forest, and herbaceous habitats with friable soil.	Throughout California except the extreme northwest.	May occur; suitable habitat.

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife

LEGEND:

Federal (USFWS)

FE Endangered
FT Threatened

State (CDFW)

SE Endangered
ST Threatened
CE Candidate for Listing as Endangered
FP Fully Protected
SSC Species of Special Concern
WL Watch List
SA Special Animal (tracked by CNDDB)

BIOLOGICAL CONSTRAINTS AND RECOMMENDATIONS

Should the TCWD decide to pursue development on the Project Site that would result in physical disturbance to the area, the following is a list of recommendations to ensure that a project is consistent with regulations protecting biological resources.

- Two special status plant species, and potentially more, occur on the Project Site. Focused surveys to determine the presence/absence of all special status plant species potentially present are recommended. Based on the results of the presence/absence surveys, the district may either chose to avoid the area (if feasible) or may have to mitigate for project impacts if the level of impact is found to be significant according to CEQA and/or is required by state or federal endangered species laws.
- Potentially suitable habitat is present on the Project Site for 1 fish, 3 amphibians, 6 reptiles, 10 birds, and 12 mammals. As with the special status plants above, should the TCWD pursue development on site, it is recommended that focused surveys are conducted for select special status wildlife species. Species that are reasonably detectable or are listed as state and/or federally Threatened or Endangered would be a priority. These include California range newt, western spadefoot, arroyo toad, coast horned lizard, orange-throated whiptail, coastal whiptail, burrowing owl, coastal California gnatcatcher, and multiple bat species. More elusive species or species that may only be onsite periodically (i.e., arroyo chub when Trabuco Creek is flowing) can be evaluated on a habitat preference perspective. These include arroyo chub, Southern California legless lizard, coast patch-nosed snake, red-diamond rattlesnake, Cooper's hawk, golden eagle, white-tailed kite, long-eared owl, loggerhead shrike, purple martin, Southern California rufous-crowned sparrow, Bell's sage sparrow, San Diego black-tailed jackrabbit, northwestern San Diego pocket mouse, San Diego desert woodrat, southern grasshopper mouse, and American badger.

  The possible presence of the majority of these wildlife species is likely not a constraint to project activities, though avoidance/minimization measures may be required. Those wildlife species, if found to be present onsite, that would be considered a constraint to development because of their state or federal listing status include the arroyo toad (federally Endangered) and coastal California gnatcatcher (federally Threatened),
- Streambed and wetland resources are usually under the jurisdiction of the USACE, the RWQCB, and the CDFG. Regulatory authority is granted to these agencies by the Federal Clean Water Act, the California Porter-Cologne Act, and the California Fish and Game Code. Impacts (e.g., discharges of fill or other material) to these resources or associated habitat are generally considered a significant impact under CEQA and require permits from these agencies.
- The potential jurisdictional features that were mapped on the Project Site may be considered jurisdictional by these agencies. Should the TCWD pursue development on site that would directly or indirectly impact these areas, it is recommended that a formal jurisdictional delineation be conducted to determine and extent of jurisdictional features across the site. This documentation of jurisdictional resources would be necessary if regulatory permits are required before project implementation. The process of obtaining regulatory permits would require additional analysis and documentation than what is provided in this report and world involve consultation with the USACE, the RWQCB, and the CDFG to initiate the regulatory permitting process. The USACE may require consultation with the USFWS as part of their permitting process if it is determined that the proposed project has the potential to affect the arroyo toad (federally Endangered) and/or the coastal California gnatcatcher (federally Threatened).

- The Foothill/Trabuco Specific Plan was developed by the County of Orange Environmental Management Agency to set forth goals, policies, land use district regulations, development guidelines, and implementation programs in order to preserve the area's rural character and to guide future development in the Foothill/Trabuco area encompassing the Project Site. Policy 3.3 of Section 2 of the Specific Plan outlines the Tree Management/Preservation Plan for oak woodlands within the Specific Plan area and states that any oak tree which is greater than five inches in diameter at 4.5 feet above the existing grade shall be transplanted unless otherwise certified by an arborist as being in poor health and unlikely to survive transplantation. In cases where trees are deemed unfit for transplantation, Policy 3.3 states that removed trees must be replaced according to the following scale (Table 5).

TABLE 5
TREE REPLACEMENT SCALE

Trunk diameter (inches) of Tree Removed at 4.5 feet Above Ground Level	Minimum Number of Replacement Trees Required
5 to 11	5
12 to 17	8
18 to 23	10
24 to 35	12
36 and above	15

- Should the TCWD pursue development on site that would directly impact oak trees, it is recommended that a tree report for the impacted trees be prepared by a professional arborist. Depending on the trunk diameters provided in the arborist site survey report, and according to the above scale, removal of the onsite coast live oaks would require planting replacement trees.
- For any site development, vegetation removal activities should be planned outside the nesting season for birds (generally February 1 through September 15) to ensure compliance with the Migratory Bird Treaty Act and Fish and Game Code. Nesting surveys would be needed prior to vegetation removal within the nesting season, and any active nests would require a buffer that may seriously constrain project activities.

BIOLOGICAL OPPORTUNITIES AND RECOMMENDATIONS

Preservation

The potential preservation of the Project Site has been evaluated against the draft criteria for its biological and conservation value in the area. The following draft criteria include:

- Habitat Alignment – Does the Project Site support vegetation types that are typically in need of mitigation by the TCWD or other entities (i.e., scrub, jurisdictional features)?
- Special Status Vegetation Types – Does the Project Site provide for conservation and/or restoration opportunities for special status vegetation types (i.e., scrub, jurisdictional features, woodlands)?
- Special Status Species – Does the Project Site support special status plant and/or wildlife species, particularly those listed as Threatened or Endangered?
- Open Space Connectivity – Is the Project Site located in an area that provides increased wildlife movement opportunities and connections and/or buffers to other existing open space areas?

- Size Matters - Is the Project Site large enough to provide meaningful conservation value in the area?
- Biological Diversity – Does the Project Site include a variety of vegetation types, including various stages of vegetation development/structure?
- Habitat Quality – Does the Project Site support high quality vegetation types that have a wide variety of plant species and have limited non-native components?

Habitat Alignment

The Project Site support several vegetation types that are typically in need of mitigation by the TCWD or other entities. These include scrub types (California sagebrush-California buckwheat scrub, scrub oak-sagebrush, and coastal sage-chaparral scrub ecotone) and riparian areas (jurisdictional features, southern sycamore riparian woodland, mule fat scrub, and floodplain sage scrub).

Special Status Vegetation Types

The Project Site supports several special status vegetation types including California sagebrush-California buckwheat scrub, coastal sage-chaparral scrub ecotone, southern mixed chaparral, open southern mixed chaparral, southern sycamore riparian woodland, mule fat scrub, and floodplain sage scrub. In addition, the annual grassland, ruderal, and disturbed areas could all provide restoration opportunities for these special status vegetation types.

Special Status Species

Two special status plant species, and potentially more, occur on the Project Site. Focused surveys to determine the presence/absence of all special status plant species potentially present are recommended. Based on the results of the presence/absence surveys, the site may have more conservation value if more special status plant species are found onsite.

A variety of wildlife species also have the potential to occur on the Project Site region based on suitable habitat onsite. It is recommended that focused surveys are conducted for select special status wildlife species. As with the special status plants, the site may have more conservation value if more special status wildlife species are found onsite.

Those wildlife species, if found to be present onsite, that would add the most value and potential mitigation opportunity to the Project Site are the arroyo toad (federally Endangered) and coastal California gnatcatcher (federally Threatened). Therefore, it is recommended that focused surveys are conducted for these species.

Open Space Connectivity

The Project Site is bound to the west by Trabuco Creek and Trabuco Creek Road, to the northwest by agricultural/rural lands owned by the Irvine Ranch Water District, to the north by agricultural/rural lands, to the east and southeast by Forest Service and County of Orange open space, and the southwest by residentially development of Robinson Ranch. The Project Site is surrounded by areas supporting natural resources on all side, except for a small area to the southwest of the site. This connectivity provides additional conservation value to both the Project Site and the adjacent open space areas. The preservation of the site also supports regional and local wildlife movement opportunities, especially the anticipated movement through the Trabuco Creek area.

Size Matters

The Project Site comprises approximately 120 acres and is considered large enough to provide meaningful conservation value in the area. The size of the Project Site is consistent with other areas that have been acquired by OCTA for preservation including the following preserves: Trabuco Rose (396 acres), Wren's View (116 acres), Live Oak Creek (84 acres), Pacific Horizon (151 acres), Bobcat Ridge (48 acres), Eagle Ridge (301 acres), and Silverado Chaparral (204 acres).

Biological Diversity

The Project Site support 12 native vegetation types that includes a variety of form and species composition. The variation of vegetation wash, scrub types, chaparral forms, and woodland structure provides for a diversity of plant and wildlife species onsite. In addition, the site includes a variety of environmental gradients such as slope, elevation, aspect, and soil substrate.

Habitat Quality

A total of 94.20 acres of native vegetation types are present on the Project Site. These communities include California sagebrush-California buckwheat scrub, scrub oak-sagebrush, coastal sage-chaparral scrub ecotone, toyon-sumac chaparral, scrub oak chaparral, southern mixed chaparral, open southern mixed chaparral, coast live oak woodland, southern sycamore riparian woodland, mule fat scrub, floodplain sage scrub, and wash. These areas contain only a limited amount of non-native plant species as part of their vegetation type species composition. The non-native plant species that are present onsite primarily occur within the 25.04 acres of annual grassland, ruderal, disturbed, and ornamental areas. These areas would be considered important candidate for habitat restoration to increase the value of the site as a whole.

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OTHER MATTERS

ITEM 3: REPORTS OR COMMENTS FROM THE GENERAL MANAGER AND/OR STAFF

Other matters may have arisen after the posting of the agenda and will be brought forward for discussion and/or information at the time of the meeting.

RECOMMENDED ACTION:

Hear other matters from the General Manager and/or Staff.

CONTACTS (staff responsible): PALUDI/PEREA