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Document Title:	Section 4-2_Biological Resources
Description:	This section describes the existing biological resource conditions of the Project site and vicinity, identifies associated regulatory standards, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.
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Submitter Role:	Applicant Consultant
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4.2 Biological Resources

This section describes the existing biological resource conditions of the project site and vicinity, identifies associated regulatory standards, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. The biological resources described in this section have been compiled from a literature review of mapping, databases, and general plans, as well as a biological reconnaissance conducted on the project site by Dudek's biologist Tommy Molioo in February 2021; a formal jurisdictional aquatic resources delineation conducted in 2021 and updated in 2023; and focused species surveys conducted through spring and summer 2023. For records search data for the preparation of this section, refer to the following appendices:

- Appendix 4.2A, Special Status-Species with a Potential to Occur within the Survey Area
- Appendix 4.2B, Observed Species List
- Appendix 4.2C, Resumes of Applicant's Biologists
- Appendix 4.2D, Special-Status Species Occurrence Records (CNDDB and CNPS Forms)

4.2.1 Affected Environment

The project site and a 100-foot buffer were assessed for this report (Survey Area). The Survey Area is located within the northern portion of the city, adjacent to Camino Capistrano with Interstate-5 located to the east. It is currently used by the prior owner, Saddleback Church Rancho Capistrano, for ancillary activities. The Survey Area is adjacent to Saddleback Church Rancho Capistrano to the north, undeveloped land to the south, Oso Creek to the south and east, Metrolink Railroad and Interstate-5 to the east, and open space and residences outside of the city limits to the west. The SDG&E Trabuco to Capistrano 138 kV transmission line is located immediately east of the Survey Area and runs alongside the Metrolink Railroad tracks.

The project is immediately adjacent to Oso Creek and currently consists of a mixture of undeveloped and developed lands. Open space is located on the northern side of the project site associated with Saddleback Church Rancho Capistrano; it contains dirt roads and light, non-commercial agricultural activity. Besides a few small dirt trails and roads, the southern portion of the project site is undeveloped, with no sign of recent agricultural activity. The Survey Area encompasses a portion of Oso Creek, which lies at the bottom of steep slopes. Outside of these steep areas, the Survey Area is flat to gently sloping. Elevation on the Survey Area ranges from approximately 165 to 270 feet above mean sea level.

Land use surrounding the Survey Area consists of residential development to the north, east, and west. Interstate 5 occurs to the east, separating the Survey Area from other developed areas. Residential development to the west is denser than the residential development to the east. Several schools, churches, and agricultural areas are scattered in areas surrounding the Survey Area. Several creeks, such as Oso Creek, Arroyo Trabuco, and Horno Creek, occur in the vicinity that eventually drain to the Pacific Ocean to the south.

For the purposes of analyzing jurisdictional resources, the Survey Area consists of the larger Saddleback Church property, the proposed project components including emergency vehicle access road, battery storage yard, interconnection switchyard, internal access roads, 20-foot-wide perimeter landscaping, transmission poles (two replacement poles and a new southern pole), two overhead transmission lines, plus a 100-foot buffer to account for immediately adjacent aquatic resources. In addition, note that the Survey Area discussed in Section 4.2.1.1 that provides the regional overview of biological resources includes a 10-mile radius as required by the CEC.

4.2.1.1 Regional Overview

The Survey Area is located in the southern portion of Orange County, California. Regionally, the Survey Area occurs within a valley between the Santa Ana Mountains to the northeast and the Laguna Woods to the west. Interstate 5 and State Route 73 are major transportation corridors in the region, and the Survey Area occurs immediately west of Interstate 5. Oso Creek is located to the immediate east of the Survey Area. Oso Creek originates in the Cleveland National Forest and travels southwest through southern Orange County before connecting with the Pacific Ocean. The Survey Area is located on the San Juan Capistrano, California, U.S. Geological Survey 7.5-minute map on Sections 25, 26, 35, and 36 of Township 75, Range 8 West. The Survey Area is located approximately 0.5-mile south of the confluence Interstate 5 and State Route 73.

The Survey Area is located southwest of the Santa Ana Mountains, west of the Peninsular Range, approximately 5 miles from the Pacific Ocean. It is in a Mediterranean climate characterized by mild, dry summers and wet winters. Average temperatures near San Juan Capistrano range from approximately 48°F to 79°F, and the area generally receives a yearly rainfall of less than 14 inches per year (WRCC 2024).

4.2.1.2 Significant Regional Wetlands and Protected Areas

The National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD) were reviewed to identify wetland or hydrologic features (USFWS 2024, USGS 2024). Figure 4.15-1 (see Section 4.15, Water Resources) depicts the mapped wetland and hydrologic features in the Survey Area. These resources are further described below.

Protected areas within 10 miles of the Survey Area were determined through a review of the California Protected Area Database (CPAD) and California Conservation Easement Database (CCED) mapping tools (CPA 2024). These resources are further described below.

4.2.1.2.1 Hydrologic Features

A review of the National Wetland Inventory (NWI) and National Hydrography Dataset (NHD) resulted in several waterbodies within the Survey Area (Figure 4-15-1). The NHD specifically maps Oso Creek as a perennial stream feature that flows north to south along the eastern edge of the Survey Area. An ephemeral drainage feature is mapped flowing across the southern portion of the Survey Area, originating from a concrete-lined channel at the southwestern corner of the Survey Area. This ephemeral feature flows northeast, eventually flowing into Oso Creek. One additional ephemeral stream feature is mapped on the western side of the Survey Area, but it was not observed in the field. Furthermore, a review of the NWI dataset revealed two wetland types, Riverine and Artificial Pond, within the Survey Area. Specifically, Oso Creek (R4SBC) habitat is classified as riverine, intermittent, streambed, and seasonally flooded. The ephemeral streams mentioned above are not shown in the NWI dataset. The artificial pond (PUBx) west of the proposed access road is classified as palustrine and excavated with an unconsolidated bottom (USFWS 2024, USGS 2024). It functions as an ornamental pond associated with Saddleback Church.

Oso Creek flows south, away from the Survey Area into Arroyo Trabuco. Arroyo Trabuco joins with San Juan Creek, a relatively permanent water downstream and outflows into the Pacific Ocean, a traditional navigable water, near Dana Point. Compass Energy Storage LLC and Dudek have prepared jurisdictional delineations to determine the accuracy of the NWI/NHD data and the presence/absence of potentially jurisdictional resources throughout the Survey Area (Dudek 2021, 2023). The formal wetland delineations were performed in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (USACE 1987). Jurisdictional delineation results are shown in Figure 4.2-1.

4.2.1.2.2 Protected Areas

The California Protected Areas Database (CPAD) is a database that includes lands that are owned and protected for open space purposed by over 1,000 public agencies or non-profit organizations. CPAD includes national, state, or regional parks, forests, preserves and wildlife areas. It also includes large and small urban parks; land trust preserves and special district open space lands (CPAD 2024).

A review of the CPAD and California Conservation Easement Database (CCED) confirmed that there are several protected areas or conservation easements within a 10-mile radius of the Survey Area (CCED 2024). Project activities will not encroach into any conservation easements or protected areas, and there are no conservation easements or protected areas on the Survey Area. Figure 4.2-2 depicts protected areas identified within a 10-mile radius of the Survey Area. A list of the CPAD and CCED identified areas that occur within the 10-mile buffer of the project is provided below.

California Protected Areas Database

Rio Oso Park

The nearest mapped protected area is Rio Oso Park, located approximately 1.5 miles south of the Survey Area. It is held by the City of San Juan Capistrano (CPAD 2024).

Other protected areas identified within the 10-mile buffer of the project include:

- Acu Canyon Park
- Aliso and Wood Canyons Wilderness Park – County of Orange
- Aliso Beach Park – County of Orange
- Beacon Hill Park
- Bear Brand Park
- Capistrano Beach Park
- Chapparosa Park
- Cook Cordova Park
- Cleveland National Forest – U.S. Forest Service
- Creekside Park – City of Dana Point
- Coronado Park – City of Mission Viejo
- Crystal Cove State Beach
- Doheny State Beach
- Dana Point Preserve
- El Camino Real Park
- Forster Ranch Community Park
- Florence Joyner Olympiad Park – City of Mission Viejo
- Hidden Hills Park – City of Laguna Niguel
- Juaneno Park – City of Laguna Niguel
- Junipero Serra Park – City of San Juan Capistrano
- Ladera Ranch Trails and Open Space

- La Hermosa Park - City of Laguna Niguel
- Laguna Niguel Reginal Park – City of Laguna Niguel
- Lake Forest Sports Park
- Lake Forest GC
- La Plata Park – City of Laguna Niguel
- Liberty Park
- Long View Park
- Los Rios Park
- Mission Viejo Youth Athletic Park
- Marco Forster Field
- O'Neil Regional Park – County of Orange
- Oso Viejo Regional Park
- Park Vista Overlook
- Reef View Park
- Redondo View Node Park
- Regency Park – City of Laguna Woods
- Richard T. Steed Memorial Park
- Ronald Caspers Wilderness Park
- San Juan Capistrano City Open Space
- Seminole Park
- Sea Canyon Park
- San Gorgonio Park – City of San Clemente
- Salt Creek Beach County Park – County of Orange
- Serrano Creek Park
- South Strands Conservation Park – City of Dana Point
- Starr Ranch – National Audubon Society
- Thomas F. Riley Wilderness Park
- Trabuco Rose Preserve
- Treasure Island Beach
- Vista Del Lago Open Space – City of Mission Viejo
- Whiting Ranch Wilderness Park – County of Orange

California Conservation Easement Database

The CCED is a database that defines boundaries of easements and deed-base restrictions on private lands. These lands may be actively farmed, grazed, forested, or held as nature preserves and typically have no public access (CCED 2024). The following easements were mapped within 10 miles of the project:

Gobernadora Conservation Easement

The nearest mapped conservation easement is the Gobernadora conservation easement, located approximately 5 miles east of the project (CCED 2024).

Bee Canyon Conservation Easement

This conservation easement Is located approximately 9 miles north of the project and is held by CDFW.

Gobernadora Conservation Easement

This conservation easement is located approximately 7 miles east of the project and is held by CDFW.

Irvine Ranch Conservation Easement

This conservation easement is located approximately 9 miles northwest of the project.

Irvine Ranch (East Orange) Conservation Easement

This conservation easement is located approximately 10 miles north of the project and is held by the Nature Conservancy.

Irvine Ranch (Fremont) Conservation Easement

This conservation easement is located approximately 10 miles northwest of the project and is held by the Nature Conservancy.

Irvine Ranch (laguna Laurel) Conservation Easement

This conservation easement is located approximately 6 miles northwest of the project site is held by the Nature Conservancy.

Rose Canyon Conservation Easement

This conservation easement is located approximately 8 miles northeast of the project and is held by CDFW.

Upper Chiquita Canyon Conservation Easement

This conservation easement is located approximately 8 miles northeast of the project and is held by the Transportation Corridor Agencies.

Nyes Place- Laguna Beach Conservation Easement

This conservation easement is located approximately 5 miles southwest of the project.

Shady Canyon Conservation Easement

This conservation easement is located approximately 8 miles northwest of the project and is held by CDFW.

4.2.1.3 Sensitive Habitat Types and Critical Habitat

Sensitive habitat types and critical habitats within a 10-mile radius of the project are shown on Figure 4.2-3 and Figure 4.2-4. The descriptions of the sensitive and critical habitats identified are described below.

4.2.1.3.1 Sensitive Habitat Types

As defined by CDFW, sensitive habitats are plant communities that have limited distributions, have high wildlife value, include sensitive species, or are particularly vulnerable to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in the California Natural Diversity Database (CNDDB) (CDFW 2024a). Currently, CDFW publishes the California Sensitive Natural Communities List

online (CDFW 2023). Vegetation rarity ranking is based on a rank calculated developed by NatureServe. Vegetation maps were taken from the CDFW Vegetation Classification Reports and Maps (CDFW 2024b). CDFW's Vegetation Program considers vegetation alliances with state ranks of S1-S3 as sensitive vegetative habitats. CDFW considers species or natural communities with one of the following NatureServe rankings as sensitive: Global(G)/State(S); Presumed Extinct (X); Possibly Extinct (G/S H); Critically Imperiled (G/S 1); Imperiled (G/S 2); Vulnerable (G/S 3). The following sensitive habitat types are mapped within a 10-mile radius of the project (Figure 4.2-3):

Soft Scrub/Mixed Chaparral

Soft scrub is characterized by shrubs in the Salvia genus, including black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and purple sage (*Salvia leucophylla*), and can also include other native shrubs including deer weed (*Acmispon glaber*). Mixed chaparral can co-dominate soft scrub communities, characterized by chamise (*Adenostoma fasciculata*), laurel sumac (*Malosma laurina*), lemonade berry (*Rhus integrifolia*), and sugar bush (*Rhus ovata*) (CNPS 2024). No soft scrub/mixed chaparral occurs on the Survey Area.

River/Stream/Canal/Barren

Rivers, streams, creeks, and canals within 10 miles of the project include Oso Creek, Santa Margarita Creek, Arroyo Trabuco, San Juan Creek, the Santa Ana River, Chiquita Creek, Aliso Creek, Sulphur creek, San Diego Creek, Salt Creek, and various flood control channels. Oso Creek occurs within the Survey Area and supports a mixed willow-cottonwood hardwood riparian habitat.

Coast Live Oak

Oak dominated habitats occur in canyons and on slopes with trees and shrubs in the Quercus genus, including coast live oak (*Quercus agrifolia*), canyon live oak (*Quercus chrysolepsis*), scrub oak (*Quercus berberidifolia*), Nuttal's scrub oak (*Quercus nuttali*), and interior live oak (*Quercus wislizeni*), as dense or open canopies (CNPS 2024). Nuttal's scrub oak is considered sensitive by CDFW (CDFW 2023). No coast live oak occurs on the Survey Area.

Baccharis (Riparian)

This vegetation community consists of shrubs from the *Baccharis* genus that are accustomed to saturated soils, including mulefat (*Baccharis salicifolia*), coyote brush (*Baccharis pilularis*), and desert broom (*baccharis sarothroides*) (CNPS 2024). Mulefat thickets occur along Oso Creek on the eastern Survey Area boundary.

Fremont cottonwood/mixed willow (*Populus fremontii-Salix laevigata*) Riparian Mixed Hardwood Woodland

Riparian mixed hardwood consists of mature riparian trees and shrubs including mixed willows and cottonwoods that can support a variety of special-status riparian birds including least Bell's vireo, yellow warbler, and yellow-breasted chat. This vegetation community also occurs along Oso Creek on the eastern Survey Area boundary.

California Sagebrush (*Artemisia californica*) Scrub Occupied by Coastal California Gnatcatcher (*Polioptila californica*)

CDFW considers this vegetation community as sensitive when occupied by a listed species (CDFW 2023). California sagebrush scrub is dominated by California sagebrush but can be co-dominate with California buckwheat (*Eriogonum fasciculatum*) and mixed Salvia species. Recent occurrence records for coastal California gnatcatcher

occur in California sagebrush scrub located approximately 0.5 miles south of the project site. These offsite areas where gnatcatcher was previously observed contain much higher quality habitat than what occurs on site. Coastal California gnatcatcher prefers relatively large contiguous swaths of coastal sage scrub vegetation as opposed to small, isolated patches of habitat for nesting. The Survey Area does not contain any California sagebrush scrub that could provide suitable nesting or foraging habitat for coastal California gnatcatcher. Therefore, no further analysis or focused surveys for this species were conducted for the project.

4.2.1.3.2 Critical Habitat

Critical habitats are designated areas occupied by the species at the time it was listed that contain the physical or biological features that are essential to the conservation of endangered and threatened species. In designated critical habitat, U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) consider the following requirements of the species:

> "Space for individual and population growth, and for normal behavior; nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing offspring; and, generally, any habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of this species (USFWS 2024)."

No designated critical habitats occur within the Survey Area. The following critical habitats were identified within 10 miles of the Survey Area:

Coastal California Gnatcatcher Critical Habitat

The northern boundary of Coastal California gnatcatcher critical habitat is located approximately 0.5 miles south and east of the project in upland California sagebrush scrub at the confluence of Arroyo Trabuco and Oso Creek (USFWS 2024a). This critical habitat extends to other locations approximately 1 mile southwest of the project in Salt Creek Corridor Regional Park, 3 miles south and southwest of the project in upland coastal sage scrub habitats, approximately 5 miles southwest of the project in Aliso Beach Park, and approximately 6 miles east of the project site in upland coastal sage scrub.

Arroyo Toad (*Anaxyrus californicus*) Critical Habitat

The northern boundary of Arroyo toad critical habitat is located approximately 2.5 miles east and south of the project, in riparian scrub habitat associated with San Juan Creek in Rancho Mission Viejo (USFWS 2024a). The western boundary of another critical habitat for this species is mapped approximately 7 miles southeast of the project, in San Clemente. Finally, the southern boundary of additional critical habitat for arroyo toad occurs approximately 7 miles northeast of the project, in the Trabuco Highlands.

Tidewater Goby (*Eucyclogobius newberryi*) Critical Habitat

The northern boundary of tidewater goby critical habitat is located approximately 5 miles southwest of the project in Aliso Creek. There is no direct connectivity between the suitable habitat within Aliso Creek to the existing habitat within the boundaries of Oso Creek to the immediate east of the site.

Thread-Leaved Brodiaea (*Brodiaea filifolia*) Critical Habitat

The eastern boundary of thread-leaved brodiaea critical habitat is located approximately 3 miles northwest of the project in habitat associated with Aliso and Wood Canyons Wilderness Park. Another designated critical habitat for this species occurs approximately 4.5 miles east of the project in upland habitat associated with the Gobernadora Conservation Easement. Finally, additional critical habitat for this species occurs approximately 7 miles southeast and northeast of the project in upland habitat (USFWS 2024a).

This perennial herb occurs in chaparral openings, cismontane woodland, coastal scrub, playas, vernal pools, and grassland at elevations ranging between 80 to 3,675 feet above mean sea level. It blooms from March to July and is often found on clay soils. It is federally threatened, state endangered, ranked S2 by CDFW, and has a California Rare Plant Rank (CRPR) of 1B.1- rare or endangered, seriously threatened (CNPS 2024a).

4.2.1.4 Regional Sensitive or Special-Status Species

Appendix 4.2A provides a list of special-status species found within a 10-mile radius of the Survey Area during the literature review. This appendix includes the status designation for each species, habitat types that may support these species in the regional vicinity, a determination of potential for these species to occur within the Survey Area, and a rationale for the occurrence determination. Sensitive or special-status species meet at least one or more of the following criteria:

- Regional species listed as threatened or endangered that have special requirements under the federal Endangered Species Act (FESA) (USFWS 1973);
- Regional species listed as threatened or endangered that have special requirements under the California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 seq.);
- Other non-listed sensitive and special-status species, including California Native Plant Society (CNPS) CRPR 1-4 species, CDFW Species of Special Concern (SSC), CDFW Fully Protected (FP) species, and other CDFW Special Animals (CDFW 2024a).

The results of the special-status species identified during the biological reconnaissance, protocol-level rare plant survey, and protocol-level least Bell's vireo (*Vireo bellii pusillus*) surveys on the Survey Area are discussed in Section 4.2.1.7. Appendix 4.2D lists the special-status plant and wildlife species known to occur within a 10-mile radius of the project. No federal or state listed special-status species are known to occur on the Survey Area. However, two non-listed state special-status SSC were observed within Oso Creek on the Survey Area during the least Bell's vireo surveys: yellow breasted chat (*Icteria virens*) and yellow warbler (*Setophaga petechia*) (further discussed in Section 4.2.1.7).

4.2.1.5 Biological Surveys

In February 2021, Dudek biologists conducted vegetation mapping and a general biological reconnaissance of the Survey Area. Focused surveys were conducted throughout spring and summer of 2021 by Dudek biologists to determine the presence/absence of various special-status species. Specifically, protocol-level rare plant surveys and least Bell's vireo (*Vireo bellii pusillus*) surveys were conducted within the Survey Area. Due to project design and footprint revisions in early 2023, updated focused surveys for rare plants and least Bell's vireo were conducted in the spring and summer of 2023. Further, Dudek conducted an updated jurisdictional delineation in 2023 to assess potentially jurisdictional features within the revised project footprint. Table 4.2-1 lists the dates, conditions, and focus for each survey. All focused surveys have been conducted to date, and the results are provided in this report.

Table 4.2-1. Schedule of Surveys

Date	Hours	Focus	Personnel	Conditions
2/24/2021	1230–1500	Biological Reconnaissance	TM, JH	60°F–62°F; 0%–0% cloud cover; 2–3 miles per hour (mph) winds
3/11/2021	0930–1400	Jurisdictional Delineation	DA	62°F–65°F; 5%–10% cloud cover; 1–2 mph winds
4/8/2021	0730–1130	LBV #1	TM, ES	55°F–64°F; 0%–0% cloud cover; 0–1 mph winds
4/28/2021	0900–1100	LBV #2	TM	61°F–63°F; 100%–100% cloud cover; 1–2 mph winds
5/10/2021	0655–1315	Botanical #1	EB, RS	58°F–2°F; 60%–100% cloud cover; 0–4 mph winds
5/14/2021	0630–0950	LBV #3	EM	65°F–68°F; 90%–100% cloud cover; 0–3 mph winds
5/26/2021	1001–1108	LBV #4	RS	68°F–70°F; 10%–0% cloud cover; 5–15 mph winds
6/18/2021	0921–1041	LBV #5	RS	66°F–73°F; 100%–60% cloud cover; 5–10 mph winds
7/2/2021	1000–1130	LBV #6	DA	69°F–70°F; 0%–0% cloud cover; 1–3 mph winds
7/15/2021	0849–1011	LBV #7	RS	73°F–75°F; 10%–0% cloud cover; 1–5 mph winds
7/25/2021	0836–0711	Botanical #2	EB	64°F–80°F; 0%–80% cloud cover; 1–3 mph winds
3/23/2023	0900-1200	Biological Reconnaissance, Jurisdictional Delineation Update	TM	53°F–60°F; 90% cloud cover; 2-4 mph winds
4/11/2023	0800-1100	LBV #1	SC	51°F–71°F; 10%–100% cloud cover; 1–5 mph winds
4/21/2023	0830-1100	LBV #2	KN	69°F–75°F; 0% cloud cover; 0–2 mph winds
5/3/2023	0900-1000	LBV #3	TM	58°F–60°F; 10% cloud cover; 2-4 mph winds
5/5/2023	0800-1720	Botanical #1	EB	58°F–77°F; 10%-40% cloud cover; 0-3 mph winds
5/17/2023	1000-1100	LBV #4	TM	55°F–67°F; 70 and-80% cloud cover; 1-3 mph winds
6/2/2023	0830-1100	LBV #5	SC	65°F–66°F; 100% cloud cover; 0-6 mph winds
6/13/2023	0830-1100	LBV #6	SC	68°F–71°F; 100% cloud cover; 1-4 mph winds
6/23/2023	1140-1930	Botanical #2	EB	65°F–77°F; 10%-20% cloud cover; 0-3 mph winds

Table 4.2-1. Schedule of Surveys

Date	Hours	Focus	Personnel	Conditions
6/27/2023	0640-0850	LBV #7	DA	65°F–66°F; 100% cloud cover; 0-6 mph winds
7/13/2023	0845-1100	LBV #8	KN	74°F–81°F; 0% cloud cover; 1-4 mph winds

Notes: LBV = least Bell's vireo
Personnel: DA = Dylan Ayers; EB = Erin Bergmann EM = Erin McKinney; ES = Eilleen Salas; JH = Janice Heller; KN = Kimberly Narel; RS = Rachel Swick; SC = Shana Carey; TM = Tommy Molioo.

Reconnaissance Survey

- **Vegetation Mapping.** Dudek Biologists Tommy Molioo and Janice Heller mapped vegetation communities in the field directly onto a 250-scale (1 inch = 250 feet) aerial photograph of the Survey Area. Following completion of the fieldwork, all vegetation polygons were transferred to a topographic base and digitized using ArcGIS, and a GIS coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the Survey Area was determined. Native plant community classifications used in this report follow the Habitat Classification System for Orange County (County of Orange 1992) and California Native Plant Society's A Manual of California Vegetation (Sawyer et al. 2009) where feasible, with modifications to accommodate the lack of conformity of the observed communities to those listed in the Habitat Classification System for Orange County. The initial mapping of the Survey Area used an approximately 0.25-acre minimum mapping unit for vegetation community polygons (i.e., clusters of particular vegetation types smaller than 0.25 acres were not necessarily mapped separately from the surrounding, larger vegetation community).
- **Biological Survey.** The potential for occurrences of special-status wildlife species, resulting from the literature review, were assessed in relation to the Survey Area. A total of 52 wildlife species (50 native, 2 non-native) and 75 plant species (11 native, 64 non-native) were observed either on or in the vicinity of the Survey Area. Many of these species are common to the region and would be expected in terrestrial habitats present in the Survey Area. Special-status species that are threatened, endangered, or protected found on this list are discussed in detail in Section 4.2.1.5. A comprehensive list of all plant and wildlife species observed is included in Appendix 4.2B.

Jurisdictional Delineation and Updated Jurisdictional Delineation. In March 2021, Dudek biologists conducted a formal jurisdictional wetlands delineation within the Survey Area. All areas identified as being potentially subject to the jurisdiction of the United Stated Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW were field-verified and mapped. The wetlands delineation was performed in accordance with the methods prescribed in the 1987 Wetlands Delineation Manual (USACE 1987), the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008), and the USACE and Environmental Protection Agency (EPA) Rapanos Guidance (USACE and EPA 2008). In March 2023, an updated formal jurisdictional wetlands delineation was conducted, focusing on potentially jurisdictional features within the latest project footprint. The Survey Area was assessed for the presence/absence of potentially jurisdictional Waters of the United States (WOTUS) as well as RWQCB and CDFW regulated waterbodies such as wetlands, vernal pools, washes, drainages, streams, lakes, ponds, and any other water bodies. Results of the formal aquatic resources delineations are summarized in Section 4.2.2.2.5.

Rare Plant Surveys. Dudek biologists conducted a spring focused special-status plant survey on May 10, 2021, and a summer focused special-status plant survey on July 25, 2021. Field survey methods and mapping of rare plants

conformed to CNPS's Botanical Survey Guidelines (CNPS 2001), CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). The surveys consisted of one survey pass in May and one survey pass in July that provided 100% coverage of the Survey Area. Updated protocol-level plant surveys were conducted in spring and summer of 2023 also provided 100% coverage of the Survey Area.

Before conducting the surveys, Dudek botanists conducted reference population checks prior to the 2021 botanical surveys to ensure the focal special-status plant species were in bloom and identifiable. Reference checks were conducted for the following species: threadleaf brodiaea (*Brodiaea filifolia*), Catalina mariposa lily (*Calochortus calalinae*), small flowered morning glory (*Convolvulus simulans*), paniculate tarplant (*Deinandra paniculata*), Palmer's grapplinghook (*Harpagonella palmeri*), cliff aster (*Malacothrix saxatilis var. saxatilis*), chaparral ragwort (*Senecio aphanactis*), bigleaf crownbeard (*Verbesina dissita*), and San Diego thorn mint (*Acanthomintha ilicifolia*). Results of the 2021 and 2023 focused rare plant surveys were negative. As such, special-status plants are considered absent from the Survey Area.

Least Bell's Vireo Surveys. Dudek biologists conducted eight survey passes within suitable habitat in the Survey Area to determine the presence/absence of least Bell's vireo (*Vireo bellii pusillus*). Suitable habitat for the species was identified during the biological reconnaissance within the riparian woodland habitat associated with Oso Creek and several unnamed tributaries. All surveys consisted of slowly walking a methodical, meandering transect within and adjacent to all riparian habitat. This route was arranged to cover all suitable habitat within the Survey Area. An electronically based vegetation map projected on an iPad or iPhone of the Survey Area was available to record any detected vireo. Binoculars (8×40 through 10×50) were used to aid in detecting and identifying wildlife species. Surveyors did not survey more than 3 linear kilometers of habitat on any given survey day. Surveyors generally surveyed between 1 to 2 kilometers of linear habitat on any given survey day. The least Bell's vireo focused survey area is depicted on Figure 4.2-5.

A Section 10(a)(1)(A) permit is not required to conduct presence/absence surveys for least Bell's vireo. The eight surveys for least Bell's vireo followed the currently accepted Least Bell's Vireo Survey Guidelines (USFWS 2001), which states that a minimum of eight survey visits should be made to all riparian areas and any other potential vireo habitats during the period from April 10 to July 31. The site visits are required to be conducted at least 10 days apart to maximize the detection of early and late arrivals, females, non-vocal birds, and nesting pairs. Taped playback of vireo vocalizations were not used during the surveys. Surveys were conducted between dawn and 11:15 a.m. and were not conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather. Any sign or observations of least Bell's vireo were noted and GPS points taken. All avian species encountered during the surveys were logged in an electronic datasheet. The results of the least Bell's vireo surveys in 2021 and 2023 were negative. As such, this species is considered absent from the Survey Area.

4.2.1.6 Land Cover Types and Vegetation Communities

All plant species encountered during the field reconnaissance surveys and jurisdictional delineations were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (formerly California Native Plant Society List) follow the California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2024a). For plant species without a California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2020) and common names follow the California Natural Community list (CDFW 2023) or the

United States Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2024). A list of plant species observed in the Survey Area during initial surveys is presented in Appendix 4.2B.

The Survey Area consists of mostly undeveloped lands, with a mix of native and non-native vegetation communities (Figure 4.2-6). Most of the Survey Area is dominated by agricultural land consisting of non-native annual grasses, with trees and shrubs occurring intermittently around the Survey Area. Dense riparian vegetation is found around the aquatic resources in the Survey Area, and non-native vegetation occurs sporadically throughout. The entire eastern edge of the Survey Area contains steep slopes that are associated with Oso Creek. Significant erosion is occurring on these steep slopes, leaving some areas as barren soils with no established vegetative cover. Communities observed throughout the Survey Area include Fremont Cottonwood – Arroyo Willow (*Populus fremontii – Salix lasiolepis*) Riparian Woodland (Popfre-Sallas), Mulefat Thickets (Bacsal), Agriculture (AGR), Urban/Developed (DEV), Disturbed Habitat (DH), Ornamental (ORN), Upland Mustards (UM), and Non-Vegetated Channel (NVC). These vegetation communities and land covers are described in further detail below and are summarized in Table 4.2-2. The complete list of plant species observed in the Survey Area is included in Appendix 4.2B. Vegetation communities and land covers observed on the Survey area are depicted on Figure 4.2-8.

Table 4.2-2. Vegetation Communities and Land Cover Types in the Survey Area

Vegetation Communities and Land Cover Types	Project Boundary (acres)	100-foot Survey Area Buffer (acres)
Native Vegetation Communities		
Mulefat Thickets (BacSal)	N/A	1.11
Fremont cottonwood – Arroyo Willow (*Populus fremontii – Salix lasiolepis*) Riparian Woodland (Popfre-Sallas)	N/A	0.94
Subtotal	*N/A*	*2.1*
Non-Native Vegetation Communities and Land Covers		
General Agriculture (AGR)	10.82	9.09
Urban/Developed (DEV)	1.45	4.67
Disturbed Habitat (DH)	1.72	5.85
Ornamental (ORN)	0.06	0.58
Upland Mustards (UM)	0.04	1.88
Non-vegetated Channel (NVC)	N/A	0.58
Subtotal	*14.1*	*22.7*
Total*	**14.1**	**24.8**

Note: * Totals may not exactly sum due to rounding.

4.2.1.6.1 Mulefat Thickets (BacSal)

The Bascal mapping unit occurs along the edges of the Popfre-Sallas vegetation community on the steep slopes associated with Oso Creek. Characteristic species of this community includes mulefat (*Baccharis salicifolia*), elderberry (*Sambucus nigra*), and tamarisk (*Tamarix ramoissima*). Other mixed herbs observed in this community include poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*), and horseweed (*Erigeron* sp.). The mulefat thickets are confined to Oso Creek beneath the proposed overhead transmission lines. Riparian *Baccharis* species such as the mulefat thickets on the Survey Area are considered a sensitive habitat type, as is Oso Creek.

4.2.1.6.2 Fremont Cottonwood-Arroyo Willow (*Populus fremontii – Salix lasiolepis*) Association (Popfre-Sallas)

The Popfre-Sallas vegetation community occurs along Oso Creek on both flat land and steep slopes. Characteristic species of this community includes Fremont's cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), mule fat, and California sycamore (*Platanus racemosa*). Other mixed herbs observed in this community include poison hemlock (*Conium maculatum*) and California wood sorrel (*Oxalis* sp.). This riparian woodland community is considered sensitive by CDFW and is confined to Oso Creek beneath the proposed overhead transmission lines.

4.2.1.6.3 General Agriculture

The Agriculture (AGR) mapping unit is not recognized by the Natural Communities List (CDFW 2023) but is described by Oberbauer et al. (2008). The Agriculture (AGR) mapping unit refers to areas that support an active agricultural operation. Agricultural activity occurring in the project site consisted of row crops and raised container gardens that are part of a non-commercial operation. Some herbaceous ruderal species were observed growing in the disturbed soils associated with these areas. Agriculture (AGR) habitat dominates the Survey Area.

4.2.1.6.4 Disturbed Habitat

The Disturbed Habitat (DH) mapping unit is not recognized by the Natural Communities List (CDFW 2023) but is described by Oberbauer et al. (2008). The Disturbed Habitat (DH) mapping unit refers to areas that lack vegetation but still retain a pervious surface, or that are dominated by a sparse cover of non-native grasses and ruderal species, such as wild oat (*Avena fatua)*, black mustard, red brome (*Bromus madritensis*), and prickly lettuce (*Lactuca serriola*). Disturbed Habitat (DH) consists of existing compacted dirt access paths within the project boundary as well as along the proposed access road.

4.2.1.6.5 Ornamental

The Ornamental (ORN) mapping unit is not recognized be the Natural Communities List (CDFW 2023) but is described by Oberbauer et al. (2008). The Ornamental (ORN) mapping unit refers to areas that are consistently managed and planted with decorative tree, shrub, and herbaceous species. Ornamental (ORN) vegetation associated with the existing Saddleback Church is located along a portion of the proposed access road as well as along the proposed relocated equestrian trail.

4.2.1.6.6 Upland Mustards

The Upland Mustards (UM) vegetation community occurs within the outer limits of the Survey Area, on both sloped areas and flat lands. Characteristic species of this community includes black mustard, red brome, ripgut brome (*Bromus diandrus*), wild oat, soft chess (*Bromus hordeaceus*), and Johnsongrass (*Sorghum halepense*). Other mixed herbs observed in this community include artichoke thistle (*Cynara cardunculus*), pampas grass (*Cortaderia selloana*), red stemmed filaree (*Erodium cicutarium*), and London rocket (*Sisymbrium irio*). This community is relatively low quality because many of the observed species are non-native and associated with prior disturbance.

4.2.1.6.7 Developed Areas

The Urban/Developed (DEV) unit is not recognized by the Natural Communities List (CDFW 2023) but is described by Oberbauer et al. (2008). Developed land typically includes areas that have been constructed upon and do not contain any naturally occurring vegetation. These areas are generally characterized as graded land with asphalt

and concrete placed upon it. Urban/Developed (DEV) areas mapped for the Survey Area include existing paved parking lots and roadway, and the developed community garden. The proposed transmission poles also occur on developed land adjacent to the existing Trabuco to Capistrano 138 kV transmission line. No vegetation was observed within Urban/Developed (DEV) areas in the Survey Area.

4.2.1.6.8 Non-Vegetated Channel

The Non-Vegetated Channel (NVC) unit is not recognized by the Natural Communities List (CDFW 2023) but is described by Oberbauer et al. (2008). It typically includes a concrete-lined floodway or flood control channel that conveys stormwater runoff and do not contain any naturally occurring vegetation. The non-vegetated channel on the Survey Area consists of the concrete channelized portion of Oso Creek within the Survey Area buffer.

4.2.1.7 Sensitive and Special-Status Species

Endangered, rare, or threatened species, as defined in CEQA Guideline 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status species" in this report and include (1) endangered or threatened species recognized in the context of the CESA and FESA; (2) plant species with a California Rare Plant Rank (CNPS 2024) (lists 1 through 4); (3) California Species of Special Concern (SSC) and Watch List species, as designated by CDFW (CDFW 2024); (4) mammals and birds that are Fully Protected species, as described in California Fish and Game Code Sections 4700 and 3511; (5) Birds of Conservation Concern as designated by USFWS (2024); and (6) plant and wildlife species that are "covered" under the Central–Coastal Subregion NCCP/HCP (County of Orange 1996).

Dudek biologists evaluated the regional special-status plant and wildlife species against observed conditions on the study are to determine the potential for each species to occur. Habitat requirements, occurrence determinations, and rationale for occurrence determination are included in Appendix 4.2A. The potential for each special-status species to occur was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on-site if present (e.g., oak trees). Protocol surveys (if conducted) did not detect species.
- **Low.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found onsite.
- **Present.** Species was observed on site or within the Survey Area

4.2.1.7.1 Sensitive and Special-Status Plant Species

Special-status plant surveys were conducted in 2021 and 2023 to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guideline 15380 (14 CCR 15000 et seq.). Two focused rare plant surveys were conducted by Dudek botanist Erin Bergman on May 5th, 2023, and June 23,

2023, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plants and Sensitive Natural Communities* (CDFW 2018) and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, proposed, and Candidate Plants* (USFWS 2000). Surveys were conducted during the blooming period for target species. A list of all special-status plant species known to occur in the vicinity of the Survey Area (and the surrounding seven topographic quadrangles) and plant species covered under the Central–Coastal Subregion NCCP/HCP, with their habitat requirements, potential to occur onsite, and survey observations, is provided in Appendix 4.2A. This appendix provides evaluations for each of the special-status species' occurrence in the Survey Area vicinity and their potential to occur based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. Special-status plant species that have low potential or are not expected to occur are not further analyzed in this report because no direct, indirect, or cumulative impacts are expected based on the negative surveys and evaluation that these species do not have a moderate or high potential to occur onsite.

No special-status or rare plants were identified in the Survey Area during the 2023 focused rare plant surveys. As such, special-status and rare plants are considered absent from the project site. Based on a review of the potential species to occur within the region, the habitat conditions identified on the project site, and the results of focused botanical surveys conducted on the Survey Area, special-status plant species are considered absent from the Survey Area.

4.2.1.7.2 Sensitive or Special-Status Wildlife Species

Special-status wildlife species are defined as follows:

- have been designated as either rare, threatened, or endangered by CDFW or USFWS and are protected under either the CESA (California Fish and Game Code Section 2050 et seq.) or FESA (16 USC 1531 et seq.), or meet the CEQA definition for endangered, rare, or threatened (14 CCR 15380[b],[d]);
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code (CFG) Sections 3511, 4700, 5050, or 5515;
- are of expressed concern to resource/regulatory agencies or local jurisdictions; this includes those wildlife that are considered a state SSC, are on the CDFW Watch List, are designated as a federal Bird of Conservation Concern, or are considered a state Special Animal; or
- are listed as Covered Species in the Central–Coastal Subregion NCCP/HCP (County of Orange 1996).

A list of all special-status wildlife species known to occur in the vicinity of the Survey Area (and surrounding seven quadrangles) and wildlife species covered under the Central–Coastal Subregion NCCP/HCP, with their habitat requirements, potential to occur in the Survey Area, and survey observations, is provided in Appendices 4.2A, 4.2B, and 4.2D Special-status species with a low potential to occur or species that are not expected to occur are excluded from further discussion in this report.

Additionally, two special-status wildlife species were observed in the Survey Area during the biological surveys: yellow-breasted chat and yellow warbler. Both species are listed as California SSCs when nesting, and were observed during the focused least Bell's vireo surveys conducted on the Survey Area within the cottonwood-willow riparian woodland and mulefat thicket habitats along Oso Creek. The locations of these observations, along with biological resources documented in the Survey Area, are depicted in Figure 4.2.6.

Observed Special-Status Wildlife

Yellow-breasted chat. Yellow-breasted chat is an SSC that inhabits riparian thickets of willow and other bushy tangles near watercourses for cover. This species occurs as an uncommon summer resident and migrant in coastal California and in the foothills of the Sierra Nevada (CDFG 2005). In Southern California, it breeds locally on the coast and very locally inland. In migration it may be found in lower elevations of mountains in riparian habitat. This species breeds from early May into early August, with peak activity in June. Yellow-breasted chat was observed in the southwestern corner of the Survey Area near an unnamed tributary to Oso Creek (Figure 4.2-6)

Yellow warbler. Yellow warbler is an SSC that inhabits riparian woodland in coastal and desert lowlands, montane chaparral, open ponderosa pine, and mixed conifer habitats (Zeiner et al. 1990). This species breeds along the coast of California west of the Sierra Nevada, and eastern California from Lake Tahoe south to Inyo County. Yellow warbler occurs in medium-density woodlands and forests with heavy brush understory, and migrates to sparse to dense woodland and forest habitats. Yellow warbler was observed within several locations in the southern portion of the Survey Area along the riparian corridor associated with Oso Creek (Figure 4.2-6)

4.2.1.7.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 USC 703 et seq.), as amended (MBTA), prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

The Applicant will protect any active migratory bird nests identified during preconstruction surveys against take. The two proposed transmission lines are raptor safe against electrocution and collisions.

4.2.1.7.4 Bald and Golden Eagle Protection Act

The golden eagle is a state FP species and a CDFW Watchlist (WL) species that is also protected by the federal Bald and Golden Eagle Protection Act. The Applicant's biologists determined that the potential to occur within the Survey Area is not expected for foraging and nesting. Potentially suitable nesting habitat occurs east of and approximately 10 miles outside of the survey area. Birds that may forage near the site may attract eagles. The transmission poles installed as part of the proposed project (one new pole and two replacement poles) will be low in profile (100 feet or less) and are not likely to result in significant bird strikes. The two proposed transmission lines are raptor safe and would parallel existing railroad infrastructure.

4.2.1.7.5 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is

intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. The FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under the FESA, it is unlawful to "take" any listed species, and "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

A total of 13 federally endangered or threatened species are known to occur within the U.S. Geological Survey (USGS) San Juan Capistrano 24-K topographic quadrangle in which the Survey Area resides, and the surrounding seven quadrangles. Nine were determined not to be expected on the Survey Area, while one, the least Bell's vireo, has a moderate potential to nest and forage within Oso Creek along the eastern portion of the Survey Area. Protocol-level least Bell's vireo surveys conducted in suitable habitat on the Survey Area in 2021 and 2023 were negative for this species. As such, least Bell's vireo is considered absent from the Survey Area, and no federally endangered species are anticipated to occur on the Survey Area.

4.2.1.7.6 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050–2068) provides protection and prohibits take of plant, fish, and wildlife species listed by the State of California. Unlike the FESA, under the CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to the FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

A total of 10 state endangered or threatened species are known to occur within the U.S. Geological Survey (USGS) San Juan Capistrano 24-K topographic quadrangle in which the Survey Area resides, and the surrounding seven quadrangles. Of those, eight were determined to not be expected on the Survey Area, and one proposed state endangered species has a low potential to forage within the grassland on the Survey Area (Crotch's bumble bee, *Bombus crotchii*).

Further, the state endangered least Bell's vireo has a moderate potential to nest and forage within Oso Creek on the eastern portion of the Survey Area. Protocol-level least Bell's vireo surveys conducted in suitable habitat on the Survey Area in 2021 and 2023 were negative for this species. As such, least Bell's vireo is considered absent from the Survey Area, and no federally endangered species are anticipated to occur onsite. As a result, neither construction nor operation of the proposed project will adversely affect CESA species.

4.2.1.7.7 State Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP). Within the following are the only state FP species identified within 10 miles the Survey Area.

Golden eagle (*Aquila chrysaetos*). Potential for occurrence is not expected as no suitable nesting or foraging habitat is present. Suitable habitat occurs approximately 10 miles east of and outside of the Survey Area (CDFW 2024a).

Ridgeway's Rail (*Rallus obsoletus levipes*). Potential for occurrence is not expected as no suitable nesting or foraging habitat is present. The closest known occurrence is approximately 15 miles northwest from the Survey Area (CDFW 2024a).

California black rail (*Rallus jamiacensis coturniculus*). Potential for occurrence is not expected as no suitable nesting or foraging habitat is present. The closest known occurrence is approximately 15 miles northwest from the Survey Area (CDFW 2024a).

California least tern (*Sturnula natillarum browni*). Potential for occurrence is not expected as no suitable nesting or foraging habitat is present. The closest known occurrence is approximately 15 miles northwest from the project site (CDFW 2024a).

White-tailed kite (*Elanus leucurus*). Potential for occurrence is not expected for nesting, but is low for foraging opportunistically in grassland and agricultural land onsite. The nearest occurrence record is 1 mile south of the Survey Area (CDFW 2024a).

4.2.1.7.8 State Species of Special Concern

It is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern (SSC), because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

The following SSC have been documented in the vicinity of the Survey Area and have a potential to occur on the project site, with the level of potential indicated in parentheses:

- **Amphibians:** western spadefoot (low); California newt (not expected).
- **Birds:** yellow warbler (*present*); yellow-breasted chat (*present*); tricolored blackbird (low for foraging); grasshopper sparrow (not expected); long-eared owl (low); burrowing owl (low); coastal cactus wren (not expected); northern harrier (not expected); yellow rail (not expected); coastal California gnatcatcher (not expected).

- **Fish:** arroyo chub (not expected); Santa Ana speckled dace (not expected).
- **Reptiles:** red diamond rattlesnake (moderate); northwestern pond turtle (not expected); southern California legless lizard (not expected); California glossy snake (not expected); San Diegan tiger whiptail (not expected); Bainville's horned lizard (not expected); coast patch-nosed snake (not expected); two-striped gartersnake (not expected).
- **Mammals:** pallid bat (moderate); Dulzura pocket mouse (not expected); northwestern San Diego pocket mouse (not expected); Mexican long-tongued bat (not expected); western mastiff bat (low); western red bat (low); San Diego desert woodrat (not expected); pocketed free-tailed bat (low); big free-tailed bat (not expected); southern grasshopper mouse (not expected); southern California saltmarsh shrew (not expected); American badger (not expected).

SSC described above with at least a moderate potential to occur on the Survey Area are described in further detail below.

Red-Diamond Rattlesnake. Red-diamond rattlesnake is an SSC that occurs in southwestern California, from the Morongo Valley west to the coast, and south along the peninsular ranges to mid Baja California (CalHerps 2024). It inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas on the desert slopes of mountains, and rocky desert flats. The breeding period for this species is July through September. This species may inhabit the native scrub and grassland habitat within the Survey Area, but was not observed during any of the biological surveys.

Pallid Bat. Pallid bat is an SSC that occurs in low-elevation rocky arid deserts and canyonlands (lower than 6,000 feet), shrub steppe grasslands, karst formations, and higher-elevation coniferous forests (higher than 7,000 feet) (WBWG 2017). It is most abundant in xeric ecosystems, including the Great Basin, Mojave, and Sonoran Deserts. Pallid bats roost alone, in small groups (2 to 20 bats), or gregariously (100s of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees, and various human structures such as bridges, barns, porches, bat boxes, and human-occupied and vacant buildings. Roosts generally have unobstructed entrances/exits, and are high above the ground, warm, and inaccessible to terrestrial predators.

Suitable roosting and foraging habitat for this species occurs within the riparian habitat located in the Survey Area. This species was not observed or detected during biological surveys conducted for the project, but focused bat surveys were not conducted.

4.2.1.7.9 State Special Species

State Special Species are considered to be sensitive but do not have regulatory protection, such as rare plants. Approximately 65 plants known to occur within the San Juan Capistrano 24-K topographic quadrangle map and surrounding seven topographic quadrangles are registered within the CNPS that are not state or federally protected by are considered rare (California Rare Plant Rank 1-4). Of the 65 rare plants identified, none were detected on the Survey Area during the 2021 or 2023 protocol-level rare plant surveys. As such, state special species are considered absent from the Survey Area.

4.2.2 Environmental Analysis

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of construction and operation of the proposed project. Results from the field surveys, habitat

evaluations and literature review were evaluated to address the potential for presence of sensitive biological resources within the Survey Area were presented in the prior section.

Section 4.2.2, contained herein, identifies the biological resources that may be affected directly or indirectly and may have temporary or permanent impacts. These impact categories are defined as follows:

Direct. The California Environmental Quality Act (CEQA) defines direct impacts as those that result from the project and occur at the same time and place. Project related activities, such as alteration, disturbance or destruction of biological resources are considered a direct impact.

Indirect. CEQA defines indirect impacts are impacts that are caused by the project but do not occur at the same time but rather at different but a reasonably foreseeable future time.

Permanent. All impacts that result in the irreversible removal of biological resources are considered permanent.

Temporary. Temporary impacts are considered to have reversible effects on biological resources.

4.2.2.1 Significance Criteria

Factors typically used to evaluate the significance of project-related impacts are set forth in Appendix G CEQA. Biological impacts resulting from the project were assessed by the following criteria:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as endangered, threatened, candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, NCCP, or other approved local, regional, or state habitat conservation plan.

4.2.2.2 Potential Impacts of Construction

The project components will require a total project impact area of approximately 14.1 acres, which includes 14.02 acres of direct permanent impacts and 0.08 acre of temporary impacts to the vegetation communities and land covers on the Survey Area.

4.2.2.2.1 Impacts to Sensitive Vegetation Communities

Direct Impacts

Direct permanent impacts would occur to a total of approximately 14.02 acres of non-native vegetation communities and land covers from development. The total acreage for project-related impacts to the mapped vegetation communities located within the development area are provided in Table 4.2-3.

Table 4.2-3. Project Impacts to Vegetation Communities and Land Cover Types

Vegetation Communities and Land Cover Types	Temporary Impacts (Acres)	Direct Impacts (Acres)
Non-Native Vegetation Communities and Land Covers		
Agriculture (AGR)	0.02	10.80
Urban/Developed (DEV)	0.02	1.44
Disturbed Habitat (DH)	NA	1.72
Ornamental (ORN)	0.04	0.02
Upland Mustards (UM)	NA	0.04
Subtotal Acres	*0.08*	*14.02*
Total Acres	**0.08**	**14.02**

Notes: NA = Not Applicable.

As currently designed, the proposed project would result in a total of approximately 14.02 acres of direct permanent impacts to non-native vegetation communities and land covers through the removal of vegetation and grading of land on the BESS, substation, and switchyard project footprint, development of the off-site access road, as well as the replacement of two transmission poles and installation of one new southern transmission pole. Project-related impacts to non-native vegetation communities and land covers are not considered significant because they are not considered sensitive natural communities by CDFW.

In addition, the proposed Project would result in a total of 0.08 acre of temporary impacts to non-native vegetation communities from installation of the replacement/new transmission poles and installation of the stormwater discharge line.

The project would result in no permanent direct impacts to native vegetation communities, as the proposed transmission lines stretch overhead above Oso Creek and the associated native riparian vegetation. No vegetation removal of mulefat thickets or cottonwood-willow riparian woodland will occur from construction or operation of the project. Furthermore, no direct impacts to Oso Creek will occur from project implementation. As such, **no direct impacts** to sensitive vegetation communities will occur.

Indirect Impacts

Construction-related indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on adjacent native habitats, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the project would employ dust control measures in accordance with the South Coast Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Since Oso Creek occurs beneath the proposed overhead transmission lines and contains sensitive Fremont cottonwood-willow woodland vegetation with riparian mulefat thickets, a Stormwater Pollution Prevention Plan (SWPPP) would also be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. Best management practice (BMP) categories employed would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP and BMPs would help to avoid and minimize the potential effects of stormwater erosion during construction. As such, with implementation of a SWPPP and BMPs, indirect impacts to sensitive vegetation communities would be **less than significant.**

Example BMPs to employ on site during construction to reduce potential indirect impacts to sensitive vegetation communities may include the following:

- Sediment and erosion control measures would be developed and implemented in accordance with RWQCB Construction General Permit requirements to reduce the potential for the project to result in increased siltation of, or release of pollutants into creeks and their tributaries.
- The footprint of disturbance would be limited to the maximum extent feasible, such as limiting access to via pre-existing access routes to the greatest extent possible. Parking, staging, storage, excavation, and disposal site locations would be confined to the smallest areas possible and be positioned at previously disturbed areas to the greatest extent practical.
- To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 2 feet deep would be covered with tarp, plywood, or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep-walled trenches to allow for animals to escape. Before such holes or trenches are backfilled, they would be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures would be installed immediately to allow escape. If the trapped animal is injured and cannot use escape ramps or structures, a qualified biologist would be contacted to identify the appropriate next steps.
- All construction pipes, culverts, and similar structures that are stored at the construction site for one or more overnight periods would be thoroughly inspected nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved. An option is to cap the ends of any stored pipes to prevent any animals from entering. If an animal is discovered inside a pipe, that section of pipe would not be moved until the project biologist or designated representative has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated out of harm's way by an approved biologist.

4.2.2.2.2 Construction Impacts to Special-Status Plant Species

No listed special-status plant species were observed during either of the focused botanical surveys conducted in the Survey Area or have high or moderate potential to occur within the Survey Area. The focused botanical surveys were conducted during the time of year when any of the special-status plant species identified in Appendix 4.2A with a potential to occur would be blooming. Reference checks were also conducted to ensure known populations of target plant species were in bloom. Despite the lack of rainfall in spring 2021, special-status plant species with a potential to occur would have been in bloom and conspicuous when surveyed, if present, during the 2023 rare plant surveys, due to above average rainfall in winter of 2022 and spring of 2023. No temporary or permanent impacts to special-status plant species will occur from construction and operation of the proposed project as the

results of the 2021 and 2023 protocol-level rare plant surveys on the Survey Area are negative. Therefore, the project would have **no direct or indirect impacts** to any special-status plant species.

4.2.2.2.3 Construction Impacts to Special-Status Wildlife Species

Direct Impacts

Temporary and permanent direct impacts to special-status wildlife could occur from construction and operation of the proposed project. The Survey Area contains suitable habitat to support six special-status wildlife species that were either observed during focused surveys or have a moderate to high potential to occur based on the presence of suitable habitat. The two species observed during focused surveys are yellow-breasted chat and yellow warbler, which are both listed by CDFW as SSC and occur within riparian habitats such as those found within Oso Creek. Focused surveys were conducted for least Bell's vireo in 2021 and 2023 to determine presence/absence of this species since it has a moderate potential to forage and nest within the riparian habitat on the Survey Area. The results were negative both years; as such, least Bell's vireo is currently considered absent from the Survey Area, and construction of the project would have no impact on this species. Note that the transmission lines proposed for the project will traverse over Oso Creek, and as such, will not directly impact the creek or its associated native riparian woodland vegetation, in which the yellow-breasted chat and yellow warbler were observed on the Survey Area.

No direct impacts to suitable habitat for riparian bird species would occur as a result of construction of the proposed project. Since suitable habitat for yellow-breasted chat and yellow warbler would be avoided by the project, and least Bell's vireo is determined to be absent from the Survey Area, the project would have **no direct impact** on special-status wildlife species.

Three other special-status wildlife species have at least a moderate potential to occur: Red diamond rattlesnake and pallid bat are listed by CDFW as SSC, and California horned lark is a Watch List species. Therefore, significant direct impacts to these species would occur by the project if construction activities result in the greater population of the species to dip below self-sustaining levels. None of these species were observed in the Survey Area during any of the biological surveys conducted during 2021 and 2023. However, due to the presence of suitable habitat, the potential for these species to move into the project site in the future cannot be entirely ruled out. Therefore, if a population of these species is found in the project site prior to the start of construction, the project could result in a significant direct impact to these species. Project implementation of **MM-BIO-1** would reduce potential impacts to **less than significant**. See Section 4.2.4.2 for further details on mitigation measures for the project.

Nesting Birds and Raptors

Similar to most other sites containing trees, shrubs, and other vegetation, the Survey Area contains opportunities for birds of prey (raptors) and other avian species to nest. Native nesting bird species with potential to occur within the project site are protected by California Fish and Game Code Sections 3503 and 3503.5, and by the federal MBTA (16 USC 703–711). In particular, Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the active nests or eggs of any bird in California; Section 3503.5 protects all raptors and their eggs and active nests; and the MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of native migratory bird species throughout the United States. Recently, the Department of Interior ruled that the MBTA should apply only to "affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs," and will not be applied to incidental take of migratory birds pursuant to otherwise lawful activities. However, that ruling is now under review as a revision to the MBTA that would include prohibitions to incidental take.

Potential direct impacts to nesting birds may occur during Project construction if construction activities commence during the avian breading season of February through August via direct take or nest failure, which would be considered significant. To avoid potential project-related impacts to nesting birds, implementation of **MM-BIO-2** would reduce potential impacts to **less than significant**.

Indirect Impacts

During construction activities, indirect impacts to sensitive wildlife in Oso Creek could include construction-related dust, soil erosion, and water runoff decreasing or permanently altering habitat suitability. Without construction-related minimization measures to control dust, erosion, and runoff, and without compliance with National Pollutant Discharge Elimination System (NPDES) requirements, indirect impacts to riparian resources and upland communities could occur. However, standard construction BMPs to control dust, erosion, and runoff, including straw bales and silt fencing, would be implemented to minimize these adverse effects. Additionally, implementation of **MM-BIO-1** to reduce direct impacts to special-status wildlife species would also contribute to the reduction of indirect impacts to **less than significant**.

4.2.2.2.4 Impacts to Wildlife Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The project is located in an undeveloped area that has been subject to previous disturbances related to previous and ongoing agricultural activities. This undeveloped area also occurs immediately adjacent to development such as the church facility to the north, residential development to the west, and Interstate 5 to the east. However, the approximately 2 miles of undeveloped land to the south provides opportunities for small- to medium-sized wildlife species to move through the area. Additionally, Oso Creek, located along the eastern portion of the Survey Area, provides opportunities for mammals, fish, and bird species to travel along the creek from upstream locations in Trabuco Canyon, south toward the Pacific Ocean. Downstream portions of Oso Creek are channelized but still provide opportunity for wildlife movement. The Survey Area and immediate surroundings are not mapped as a significant wildlife corridor or habitat linkage in the region, but do function as a corridor for the movement of local wildlife.

No significant direct or indirect permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with project activities. Existing habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following project completion. Construction activities would not likely result in permanent impacts to wildlife movement because no new structures that would impede wildlife movement are proposed.

During construction activities, temporary disturbance to local species may occur, but would not substantially degrade the quality or use of the vegetation communities in the vicinity. Some indirect impacts to localized wildlife movement could occur during construction activities due to construction-related noise. However, this impact would be temporary and would not be expected to significantly disrupt wildlife movement during and following construction activities.

Therefore, direct and indirect impacts on wildlife corridors and migratory routes resulting from the proposed project would be **less than significant**.

4.2.2.2.5 Impacts to Wetlands and Waters of the United States

The results of the 2021 and 2023 jurisdictional delineation identified Oso Creek as a jurisdictional non-wetland water of the U.S. subject to USACE jurisdiction, Regional Water Quality Control Board (RWQCB), and CDFW, due to the presence of an Ordinary High-Water Mark, downstream connectivity to a Traditionally Navigable Water (TNW) (Pacific Ocean), and presence of mature riparian habitat. Impacts to Oso Creek may require permitting from USACE, RWQCB, and CDFW, including but not limited to a Streambed Alteration Agreement and CWA Section 404 and 401 permits.

The jurisdictional delineations informed the design and placement of improvements to ensure avoidance of any work within CDFW or Clean Water Act (RWQCB and USACE) jurisdiction. Figure 4.2-1 depicts the water features detected on the project site during the jurisdictional delineations.

The results of the 2021 and 2023 jurisdictional delineation performed by Dudek biologists concluded that there is approximately 1.40 acres of non-wetland waters of the United States and State, and approximately 20.64 acres of CDFW non-wetland waters in the Survey Area. Table 4.2-4 summarized the jurisdictional aquatic resources within the Survey Area.

Table 4.2-4. Summary of Jurisdictional Aquatic Resources within the Survey Area

Jurisdiction	Project Boundary (acres/linear feet)	Survey Area (acres/linear feet)	Total (acres/linear feet)
Waters of the United States (USACE/RWQCB)			
Non-Wetland Waters			
Oso Creek OHWM	0.0/0.0	1.17/4,056	1.17/4,056
Stream 1 OHWM	0.0/0.0	0.21/1,474	0.21/1,474
Stream 1 – Concrete Channel OHWM	0.0/0.0	0.02/125	0.02/125
Waters of the United States and State (USACE/RWQCB) Total*	**0.0/0.0**	**1.40/5,655**	**1.40/5,655**
Waters of the State (CDFW)			
Non-Wetland Waters			
Oso Creek OHWM	0.0/0.0	1.17/4,056	1.17/4,056
Oso Creek Bank	0.0/0.0	0.71/3,655	0.71/3,655
Oso Creek Riparian	0.0/0.0	15.36/4,224	15.36/4,224
Stream 1 OHWM	0.0/0.0	0.21/1,474	0.21/1,474
Stream 1 – Concrete Channel OHWM	0.0/0.0	0.02/125	0.02/125
Stream 1 Bank	0.0/0.0	0.17/1,474	0.17/1,474
Stream 1 – Concrete Channel Bank	0.0/0.0	0.02/125	0.02/125
Stream 1 Riparian	0.0/0.0	2.92/1,578	2.92/1,578
Swale 1	0.0/0.0	0.03/189	0.03/189
CDFW Jurisdiction Total*	**0.0/0.0**	**20.64/16,900**	**20.64/16,900**

OHWM = ordinary high-water mark
* Totals may not exactly sum due to rounding.

No direct impacts to jurisdictional aquatic resources will occur from construction or operation of the proposed project. However, stormwater runoff from the existing project development area currently sheet flows to Oso Creek. As part of the project, to meet regulatory standards and reduce potential for stormwater to be discharged off site in exceedance of existing conditions, offsite and onsite stormwater will flow to an underground stormwater detention basin located in the central portion of the Survey Area. A waterline will be constructed from the proposed onsite stormwater detention basin and pumped north to the existing 18-inch and/or 30-inch storm drainpipe/outfalls located north, which currently discharge into the unvegetated channelized portion of Oso Creek.

The Applicant will obtain an MS4 permit from the RWQCB through Orange County Flood Control District to discharge into the two outfalls into Oso Creek (see Section 4.15, Water Resources for additional details). No impacts to jurisdictional aquatic resources will occur from project development. A SWPPP would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. BMP categories employed would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP help to avoid and minimize the potential effects of stormwater erosion during construction and impacts would be **less than significant**.

4.2.2.3 Potential Impacts of Operation

The BESS and all associated equipment will be remotely monitored and controlled. Qualified technicians would visit the site approximately 1-2 times per month to conduct routine inspections and maintenance as well as semiannual and annual services. Periodically, batteries and various components may be replaced or renewed to ensure optimal performance.

During operation, the project will produce water discharge, noise, and light. Following construction, the proposed use would not create emissions to air, would not require sanitary facilities, and would not require water. Operational water will be limited to water necessary for landscape irrigation and to supply on-site fire hydrants.

4.2.2.3.1 Noise and Light

The project site contains undeveloped land. Although there is a church and ancillary facilities north of the survey area , the existing conditions result in minimal sources of noise emissions. Operations of the project will produce some noise as described in Section 4.7, Noise.

As discussed in Section 4.13, Visual Resources, sources of light come from Saddleback Church, the railroad, cars from the I-5 freeway east of the Survey Area, numerous safety lights associated with the utility corridor for the Trabuco-Capistrano overhead transmission poles outside of the project site boundary. The project will introduce new light sources into the existing nighttime environment such as facility lighting for safety and security purposes and access road lighting. The outside lighting may include a combination of pole-mounted LED lighting and equipment-mounted fixtures. The Applicant will apply best practices to minimize the effects of obtrusive exterior lighting and make these light sources motion activated when possible. These practices include shielding light fixtures directed downward and scheduling controls.

Based on the project equipment and the limited application of outdoor lighting and best practices, nose, and light impacts from project operations will likely have a **less than significant** impact on special-status wildlife.

4.2.2.3.2 Potential for Collision and Electrocution Hazard to Wildlife

The new facility will include multiple structures that range in height from 10 to 32 feet tall. The tallest structure on the project site is the switchyard bus workat 32 feet above ground level. The two replacement poles and one new transmission pole as part of the loop-in transmission line will be up to 100 feet above ground. Most collisions involve nocturnal migrants flying at night in inclement weather and low-visibility conditions. The collisions typically occur when migrating birds collide with tall, guyed television or radio transmission towers (CEC 1995, Kerlinger 2000). Migratory birds generally fly at an altitude that would avoid ground structures, except when crossing over topographic features or when inclement weather forces the birds closer to the ground. Based on the project's design and location, operations are likely to result in **less than significant** impacts from potential collisions.

Bird collisions with electric conducting wires occur when birds are unable to see the lines, especially during fog or rain events. Factors that affect the risk of collision include weather conditions, behavior of the species of bird, and design and location of the line.

Electrocutions occur when a bird simultaneously contacts two conductors of different phases or contacts a conductor and a ground. This happens most frequently when a bird attempts to perch on a structure with insufficient clearance between these components. On a 138-kW transmission line, all clearances between conductors or between conductors and ground are sufficient to protect even the largest birds provided recommended horizontal and vertical spacing (55 – 76 inches) are used for conductor separation according to the Avian Power Line Interaction Committee (APLIC 2006). As such, operation of the project will not result in adverse impacts to wildlife from electrocution.

4.2.2.3.3 Effects of Operation on Special-Status Species

Impacts to Special-Status Plants

Based on the facility's design and absence of special-status plants on the Survey Area, operations will have **no impact** to special-status plant species and their habitat.

Impacts to Sensitive and Special-Status Wildlife Species

It is the proposed facility's intention to anticipate the potential for low-frequency noise in the design and specification of the project equipment and to take necessary steps to prevent ground or airborne vibration impacts. Only a nominal amount of habitat outside of the project site will experience noise levels within the 60 A-weighted decibel (dBA) equivalent sound level (Leq) contour (see Section 4.7, Noise). The two special-status wildlife species observed on the project site (yellow warbler and yellow-breasted chat) were detected in riparian habitat associated with Oso Creek, which parallels the I-5 freeway as well as active railroad tracks. As such, they are expected to adapt to the new noise levels that are less than the typical noise effect threshold of 60 dBA Leq hourly. Ambient noise levels and ground vibration from the operation of the proposed facility will be **less than significant**.

Potential temporary direct impacts to special-status species present in Oso Creek could occur from routine utility vegetation management to prevent tree encroachment near the two overhead transmission lines during the lifetime of the proposed facility. No tree removal would occur; only trimming of the overhead tree canopy branches that encroach near the power lines. The right distance between a tree and a power line depends on the height of the lines and the mature size of the tree. With implementation of **MM-BIO-2**, potential impacts of vegetation trimming to special-status riparian bird habitat within Oso Creek will be **less than significant.**

While lighting required during facility operation will create prominent new sources of light for nearby wildlife, effects from light will not result in substantial light or glare. Based on the localized adverse effect of new mitigated light sources, the long-term impact to special-status wildlife from facility generated light will be less than significant. Based on the project's design, the facility's operations will have a **less than significant** impact on special-status wildlife species and their habitat.

4.2.2.3.4 Operation Phase Impacts to Wetlands and Waters of the United States

The project will not result in any direct or indirect impacts to potentially regulated waters and wetlands of the U.S. during the construction phase of the project. Additionally, since the operational requirements of the project are relatively minimal and will be constrained to newly developed areas on site, there will be no future encroachment into regulated jurisdictional waters and wetlands. Therefore, the operational phase of the project will have **no impact** to wetlands and waters of the U.S.

4.2.3 Cumulative Effects

Cumulative effects on biological resources because of past, present, and reasonably foreseeable future actions, in combination with the project, would mainly result from loss of habitat and habitat disturbance and degradation. A cumulative impact refers to a project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the facility (Public Resource Code [PRC] Section 21083; 14 CRR 15064[h], 16065[c], 15130, and 15355). Most of the projects in the vicinity of the project involve infill development and redevelopment on developed parcels which have limited potential for sensitive biological resources. As such, the project is unlikely to have impacts that would combine cumulatively with other closely related past, present, and reasonably foreseeable future projects to cumulatively impact biological resources.

4.2.4 Avoidance and Minimization Measures

The following section describes the measures that are intended to avoid and minimize potential adverse effects of the project to biological resources.

4.2.4.1 Minimization Measures for Construction

Pre-Construction Surveys. As described in **MM-BIO-1** in the following subsection, prior to the onset of work, a qualified biologist shall conduct a pre-construction survey for sensitive biological resources within and near the project site. Should special-status species be found, then measures recommended by the qualified biologist shall be incorporated into the project to reduce the likelihood of species impacts.

Nesting Bird Season Avoidance. As detailed in **MM-BIO-2** in the following subsection, potential impacts exist for avian species during the breeding season occurring between February 1 and August 31 for general nesting birds and January 1 through September 15 for raptors. Work conducted during these months will require a nesting bird survey conducted by a qualified biologist within and near the project footprint within 72 hours of the onset of activities. Should the qualified biologist discover any nesting birds, then appropriate measures, as determined by the qualified biologist, will be implemented to minimize impacts.

Best Management Practices (BMPs). No significant direct permanent impacts would occur to federally or state-defined wetlands or non-wetland waters as a result of project activities. Short-term and long-term indirect impacts to jurisdictional waters relating to construction activities (edge effects) and trash/pollution would not likely result in significant impacts, especially with the application of the standard BMPs that would be implemented during project construction.

The following BMPs will be implemented:

- BMPs to address erosion and excess sedimentation shall be incorporated into the project plans.
- Work shall be limited to the construction footprint as outlined in the project plans. Access routes, staging areas, and the total footprint of disturbance shall be the minimum number/size necessary to complete the project and will be selected/placed to avoid impacts to sensitive habitat/resources.
- Sensitive resources will be marked and protected by temporary fencing (e.g., orange plastic fencing, silt fencing, signage) or other acceptable method. Works limits will be clearly marked in the field and confirmed by the project biologist/biological monitor prior to the start of construction. All staked/fenced boundaries will be maintained in good repair throughout construction.
- Where applicable, weed-free products shall be used to minimize the accidental spread of exotic plants. All construction equipment used for the project shall be clean and free of soil and plant material before arrival on-stie and before leaving the work area to prevent the spread of invasive plants.
- All storage and staging areas should be placed on existing developed or disturbed locations to the greatest extent feasible (e.g., paved, or bare ground surfaces) that have been reviewed and approved by the project biologist and project archaeologist.
- All areas used for stockpiling shall be kept free from trash and other waste. No project-related items shall be stored outside approved staging areas at any time.
- All contractor equipment and vehicles shall be inspected for leaks immediately prior to the start of construction, and regularly thereafter until the equipment and/or vehicles are removed from project premises. Any leaks shall be properly contained, or the equipment/vehicle(s) repaired, and if failing repair, removed off-site.
- Unless authorized by regulatory authority, project activities particularly involving cleaning or fueling or motorized equipment, will occur greater than 100 feet from jurisdictional or potentially jurisdictional waters. Contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside project boundaries at a lawfully authorized destination.
- Dust impacts shall be minimized by implementing appropriate measures that will reduce/control emissions generated by the project. water shall be applied (e.g., using a water truck) at sufficient quantities to prevent airborne dust from leaving the project area.
- In areas of excavation (e.g., pits, trenches, drilling holes) shall be covered overnight or during periods of inactivity. Routes of escape from excavated pits and trenches shall also be installed for wildlife that could potentially become entrapped (e.g., wood planks, sticks, or equivalent with dimensions of roughly 2-inch thick by 6-inch wide, and earthen ramps/slopes). These locations will be regularly inspected over the course of the project and immediately prior to filling. Should any entrapped wildlife be discovered, then work shall be suspended at the excavation site until the animal can be safely relocated by the biological monitor or project biologist.

4.2.4.2 Minimization Measures for Special-Status Species

MM-BIO-1 Pre-Construction Surveys for Special-Status Species. One pre-construction clearance survey for red diamond rattlesnake and pallid bat shall be conducted no more than 14 days prior to initiation of site preparation and grading activities. A qualified biologist shall walk the entire project site to determine if any red-diamond rattlesnakes or pallid bats are observed or detected. Acoustic detection for bats may be used in conjunction with visual observation of individuals and sign to determine presence/absence of occupied roosts or foraging behavior. If either species is observed or detected during the pre-construction surveys, additional measures may be required, such as establishing a buffer around known locations and/or conducting monitoring during construction near occupied areas to move observed individuals out of harm's way. For pallid bat, if a roost may be impacted during construction, additional measures, such as a focused bat survey, replacement roost installation, and/or agency consultation, may be required.

MM-BIO-2 Pre-Construction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the Survey Area, including yellow warbler, yellow-breasted chat, and California horned lark. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in proximately to an active nest buffer. No project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that the nestlings have fledged and the nest is no longer active.

Environmental Awareness Training. A qualified biologist shall present an education program on yellow warbler, yellow-breasted chat, California horned lark, red diamond rattlesnake, and pallid bat to all project employees prior to the start of construction and before new employees begin work onsite. Materials discussed in the program will include, at a minimum, the following topics: (1) species description, general behavior, and ecology; (2) distribution and occurrence near the project site; (3) species' sensitivity to human activities; (4) legal protection; (5) penalties for violation of State and Federal Laws; (6) reporting requirements; and (7) project conservation measures. The biological monitor shall document the names, dates, and affiliation of those persons who attend the training.

4.2.4.3 Minimization Measure for Site Restoration (Decommissioning)

Over the long term, once the project facilities are no longer needed, the structures will be removed the project area will be restored to approximate preconstruction conditions as described in the draft Decommissioning Plan (see Appendix 2A). This draft plan can then be updated at a later date (but no more than 1 year prior to closure). A formal

plan for the project facility closure will be developed by the project owner and submitted to the CEC at least 1 year prior to facility closure.

4.2.5 Laws, Ordinances, Regulations, and Standards

The following subsections describe the laws, ordinances, regulations, and standards (LORS) that apply to potential impacts on biological resources in the project area and list the agencies responsible for enforcing the regulations. A summary of the applicable federal, state, and local LORS is provided below.

4.2.5.1 Federal

4.2.5.1.1 Federal ESA (16 United States Code [USC] 153 et seq.)

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

The FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

4.2.5.1.2 MBTA (16 USC 703 to 711)

The Migratory Bird Treaty Act (16 USC 703 et seq.), as amended (MBTA), prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets the MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

4.2.5.1.3 Bald and Golden Eagle Protection Act (16 USC 668)

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since, prohibits anyone, without a permits issues by the Secretary of the Interior, from "taking" bald or golden eagles, includes their parts, nests, or eggs. The Act provides criminal penalties for person who "take, possess, sell, purchase, bater, offer to sell, transport, export or import, at any time or ay manner, any bald eagle…[or any golden

eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, kill, wound, capture, trap, collect, molest or disturb."

4.2.5.2 State

4.2.5.2.1 CESA

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050–2068) provides protection and prohibits take of plant, fish, and wildlife species listed by the State of California. Unlike the FESA, under the CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to the FESA and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of implementation, and monitoring of mitigation measures.

4.2.5.2.2 Fish and Game Code

Sections 3500, 3511, and 3513

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

Fully Protected Species

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

Section 5901

Section 5901 of the California Fish and Game Code makes it unlawful to construct or maintain any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. Fish are defined in Section 45 as a wild fish, mollusk, crustacean, invertebrate, or amphibian, or part, spawn, or ovum of any of those animals.

Section 5937

Section 5937 of the California Fish and Game Code requires that the owner of any dam must allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around, or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by CDFW to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of CDFW, it is impracticable or detrimental to the owner to pass the water through a fishway.

Section 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of a definable bed and banks and existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high-water mark (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

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

4.2.5.2.3 California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and to protect endangered and rare plants from take. The CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, the CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the CESA as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in the CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

4.2.5.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). As of April 2019, the State Water Resources Control Board has narrowed its definition of a water of the state to include the following (SWRCB 2019):

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

All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

4.2.5.2.5 Plants and Animals of California Declared to be Endangered or Threatened (Title 14, CCR, Sections 670.2 and 670.5

These codes list plants and animals designated as threatened or endangered in California. State SSC is a category conferee by CDFW of those species that are indicators of regional habitat change or are considered potential future protected species. These species do not have any species legal status but are intended by CDFW for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

4.2.5.2.6 CEQA (PRC Section 15380)

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

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

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

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

4.2.5.2.7 Warren Alquist Act (PRC Section 25000, et seq.)

The AFC process is a certified regulatory process pursuant to the Warren-Alquist Act and, therefore, fulfills the requirements of CEQA. CEQA is codified in the California PRC, Section 2100-2118.1. Guidelines for implementation of CEQA are codified in the California Code of Regulations (CRR), Sections 15000-15387.

4.2.5.3 Local

4.2.5.3.1 San Juan Capistrano General Plan

The City of San Juan Capistrano General Plan includes goals and policies designed for the protection of natural resources within the city limits. To preserve the important biological resources within the city for future generations, and to preserve the quality of life in the community that these resources contribute, these important ecological and biological resources need to be protected through implementation of the following goals and policies (City of San Juan Capistrano 1999):

Conservation and Open Space Goal 2: Protect and preserve important ecological and biological resources.

Policy 2.1: Use proper land use planning to reduce the impact of urban development on important ecological and biological resources.

Policy 2. 2: Preserve important ecological and biological resources as open space.

Policy 2.3: Develop open space uses in an ecologically sensitive manner.

Policy 2.4: Continue to designate the City as a bird sanctuary to preserve and protect the populations of all migratory birds which serve as a prime resource to the character and history of the community.

Conservation and Open Space Goal 7: Protect water quality.

Policy 7.1: Coordinate water quality and supply programs with the responsible water agencies.

Policy 7.2: Encourage the production and use of recycled water.

Policy 7.3: Conserve and protect watershed areas.

4.2.5.3.2 City of San Juan Capistrano Municipal Code

Section 9-3.557 of the City of San Juan Capistrano Municipal Code requires tree preservation of existing trees within the City of San Juan Capistrano while permitting reasonable use and development of properties containing such trees, as well as the reasonable trimming and maintenance of such trees. The city's definition of a protected tree includes any living woody perennial plant having a trunk diameter greater than 6 inches, measured at a point 3 feet above the ground. This ordinance prevents any property owner or his or her agent in any district in the city that will cause any tree on his or her property to be severely trimmed, unless prior approval is given by the Planning Director, upon recommendation of an arborist. This ordinance also provides suggested tree trimming standards to preserve the health, beauty, and longevity of trees. Trimming for such purpose would also make trees safer, more functional, and valuable.

4.2.5.3.3 Habitat Conservation Plan

The Natural Community Conservation Act, codified at California Fish and Game Code Sections 2800–2840, authorizes the preparation of Natural Community Conservation Plans (NCCPs) to protect natural communities and species while allowing a reasonable amount of economic development. At the same time, FESA Section 10 provides for the preparation of Habitat Conservation Plans (HCPs) to permit the taking of federally listed threatened and endangered species. Under both state and federal statutes, joint planning processes result in the preparation and adoption of an NCCP/HCP. The proposed Project's Survey Area is within the NCCP/HCP area for the County of Orange Central and Coastal Subregion, specifically within the Central Subregion of the NCCP/HCP area (County of Orange 1996), and is therefore analyzed in this report in the context of the NCCP/HCP with regards to the special-status species identified in the NCCP/HCP and the mitigation provisions of the NCCP/HCP.

The NCCP/HCP was reviewed and approved by USFWS and the California Department of Fish and Game (now CDFW) in 1996 to address protection and management of coastal sage scrub habitat, coastal sage scrub obligate species, and other covered habitats and species, and to mitigate anticipated impacts to those habitats and species on a programmatic, sub-regional level rather than on a project-by-project, single-species basis (County of Orange 1996).

A Southern Subregion NCCP/HCP was proposed, but the California Department of Fish and Game did not adopt it. However, USFWS finalized the Southern Subregion HCP to authorize development of Rancho Mission Viejo and select County of Orange projects (i.e., expansion of a landfill and an extension of La Pata). There is an in-lieu fee program authorized for only a few select development sites within Cota de Caza (Snyder 2012).

The Central and Coastal Subregion NCCP/HCP (herein referred to as "NCCP/HCP") includes a habitat reserve in excess of 37,000 acres for the protection of coastal sage scrub, other upland habitats, coastal California gnatcatcher (*Polioptila californica californica*), and other primarily coastal sage scrub–dependent species. Specifically, the NCCP/HCP, USFWS, and CDFW authorize "take" under the FESA and CESA of 39 "identified species" of plants and wildlife (including "covered" and "conditionally covered" species). Further, the NCCP/HCP contains requirements for adaptive management, interim management, and funding management for the habitat reserve, as well as procedures and minimization measures related to the take of identified species and habitat. Thus, the NCCP/HCP provides for the protection and management of a broad range of plant and wildlife populations while providing certainty to the public and affected landowners with respect to the location of future development and open space in the subregion (County of Orange 1996).

The project site occurs within the NCCP/HCP area, specifically within the Coastal Subarea Plan area, and does not occur within any mapped habitat reserve areas. Project-related impacts to covered species and/or covered sensitive habitats would require compliance with the mitigation plan for participating landowners; however, non-signatories to the NCCP/HCP would be required to comply with local, state, and federal policies that pertain to mitigating for impacts to special-status species and sensitive natural communities.

4.2.6 Permit and Permit Schedule

No permits are required.

4.2.7 Agency Contacts

The table below lists regulatory agency contacts for biological resources for this project.

Natural Resource	Agency	Contact Information
State-listed species	CDFW - Region 5, South Coast	David Mayer, Environmental Program Manager Jennifer Turner, Environmental Scientist Supervisor (858) 467-4201; AskR5@wildlife.ca.gov 3883 Ruffin Road, San Diego, CA 92123
Federally-listed species	USFWS - Pacific Southwest Region, Carlsbad Field Office	(760) 431-9440 2177 Salk Avenue Suite 250 Carlsbad, CA 92008

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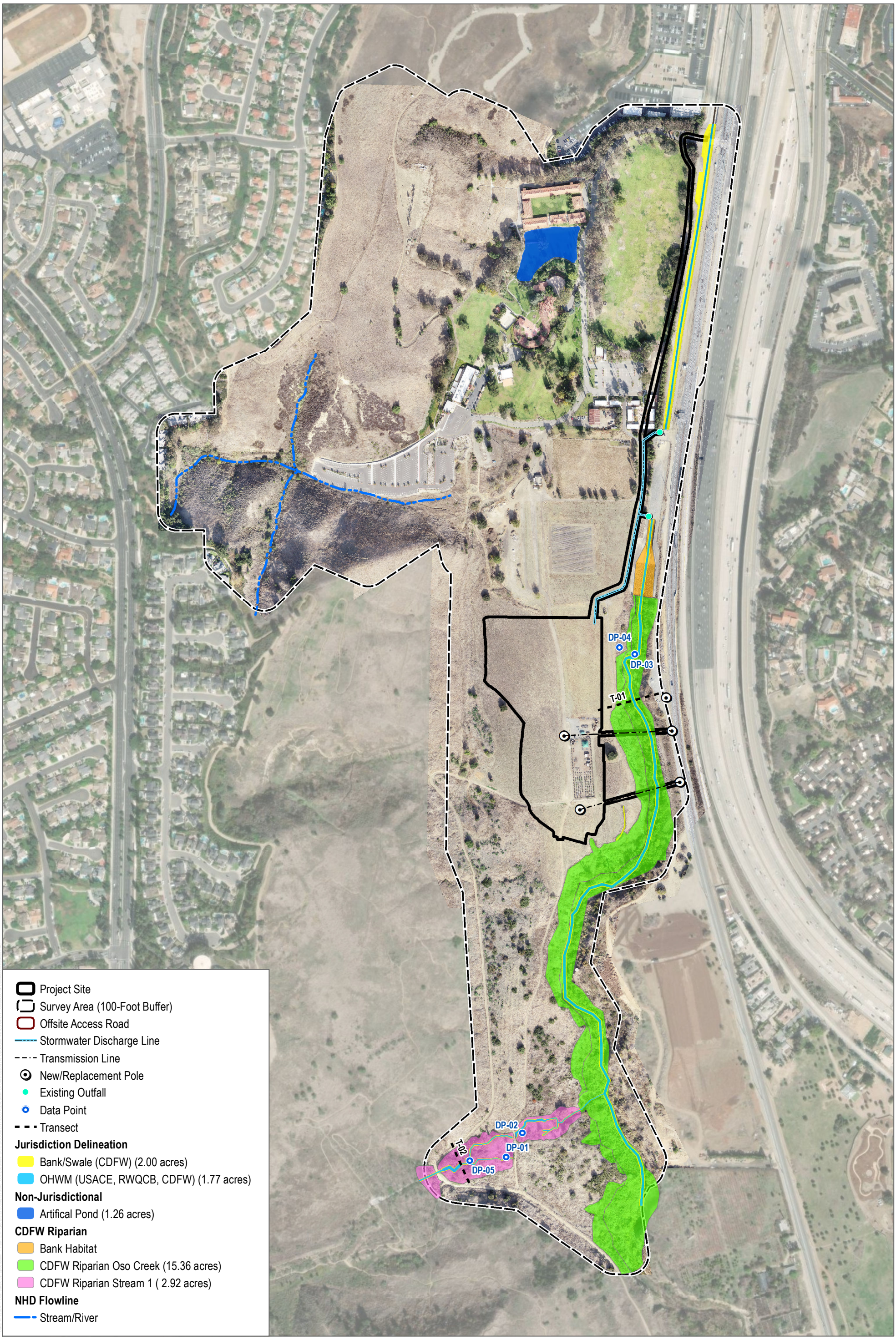

SOURCE: Dudek 2021; Esri World Imagery 2019; NHD 2018

DUDEK

0 250 500 Feet

FIGURE 4.2-1

Jurisdictional Delineation Results

Compass Energy Storage Project

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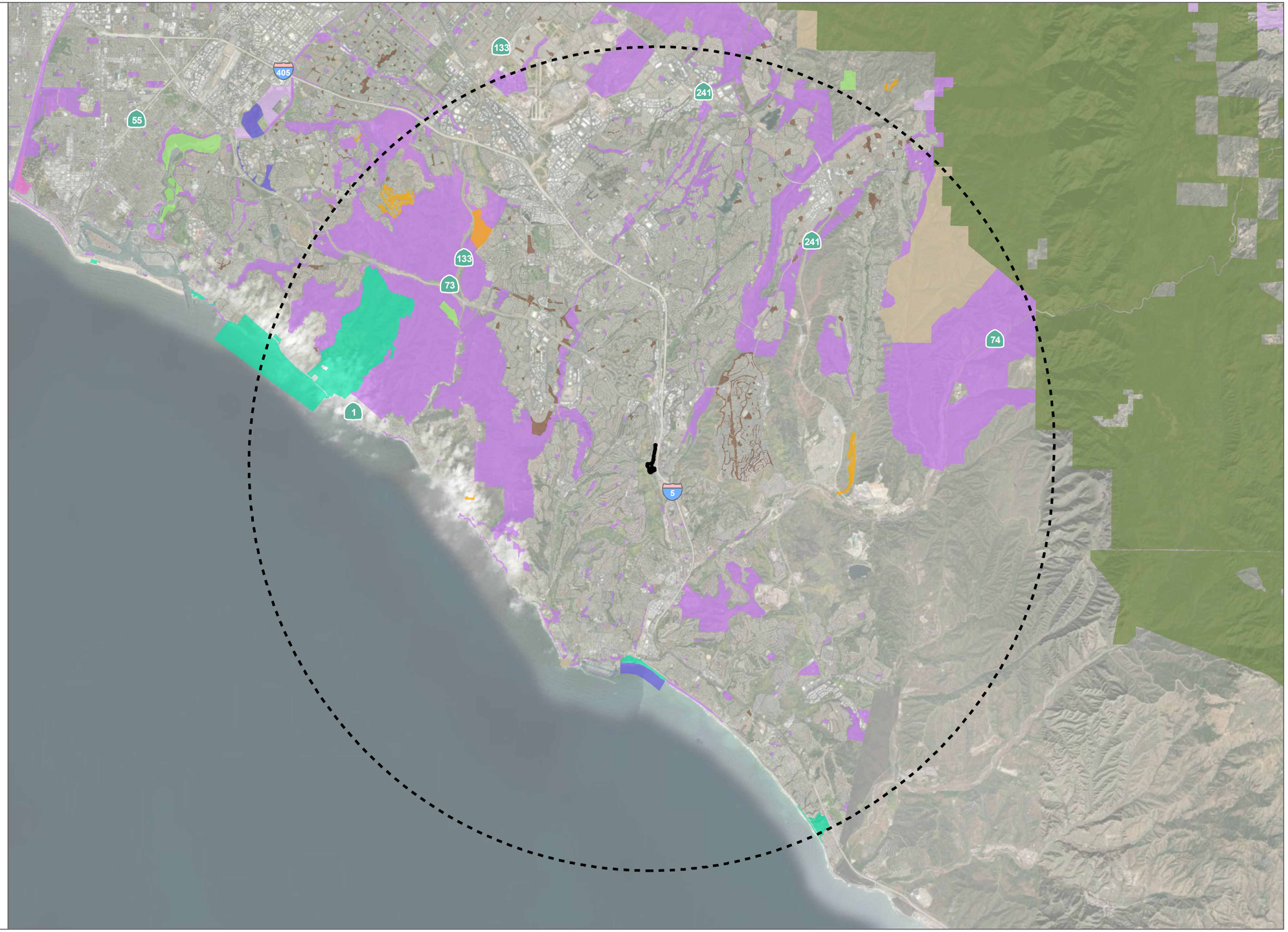
Project Site
Study Area (10-Mile Buffer)
CA Conservation Easement

CA Protected Area - Ownership

California Department of Fish and Wildlife
California Department of Parks and Recreation
City; County
National Park Service
Non Governmental Organization
Other Federal
Other State
Private
Special District
Tribal
US Bureau of Land Management
US Fish and Wildlife Service
US Forest Service
US Military/Defense



SOURCE: Esri World Imagery; CPAD 2022; CCED 2022

DUDEK

0 1.5 3 Miles

FIGURE 4.2-2
Protected Areas
Compass Energy Storage Project

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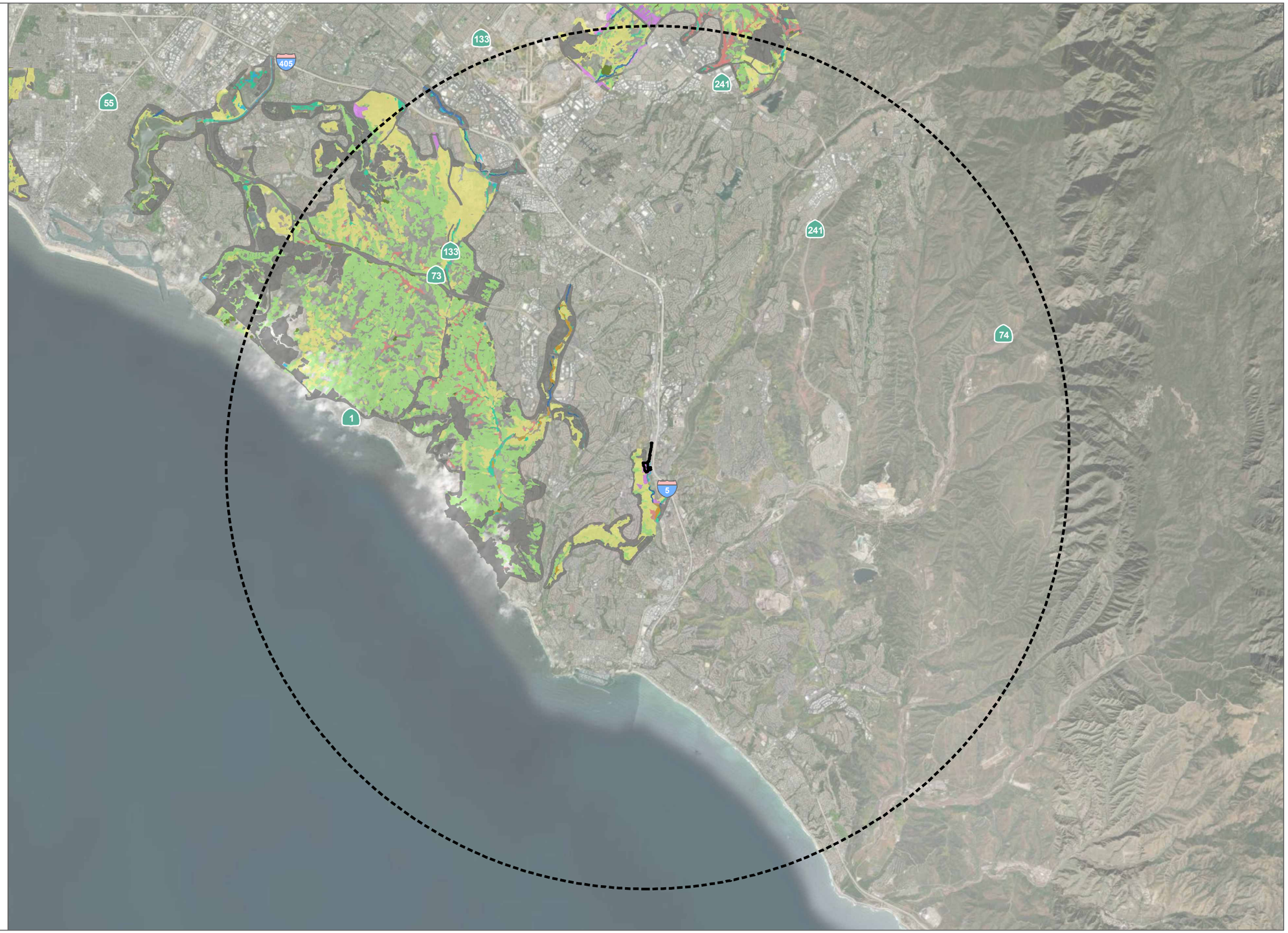
Project Site

Study Area (10-Mile Buffer)

CDFW Vegetation

- Agriculture, Orchard Agriculture
- Annual Grasses and Forbs, Perennial Grasses and Forbs
- Baccharis (riparian)
- California Sagebrush
- Coast Live Oak
- Giant Reed/Pampas Grass
- Riparian Mixed Hardwood
- River/Stream/Canal, Barren
- Soft Scrub-Mixed Chaparral, California Sagebrush
- Urban



SOURCE: Esri World Imagery 2022; CAFWS 2012

DUDEK

0 1.5 3 Miles

FIGURE 4.2-3

Sensitive Habitat Types

Compass Energy Storage Project

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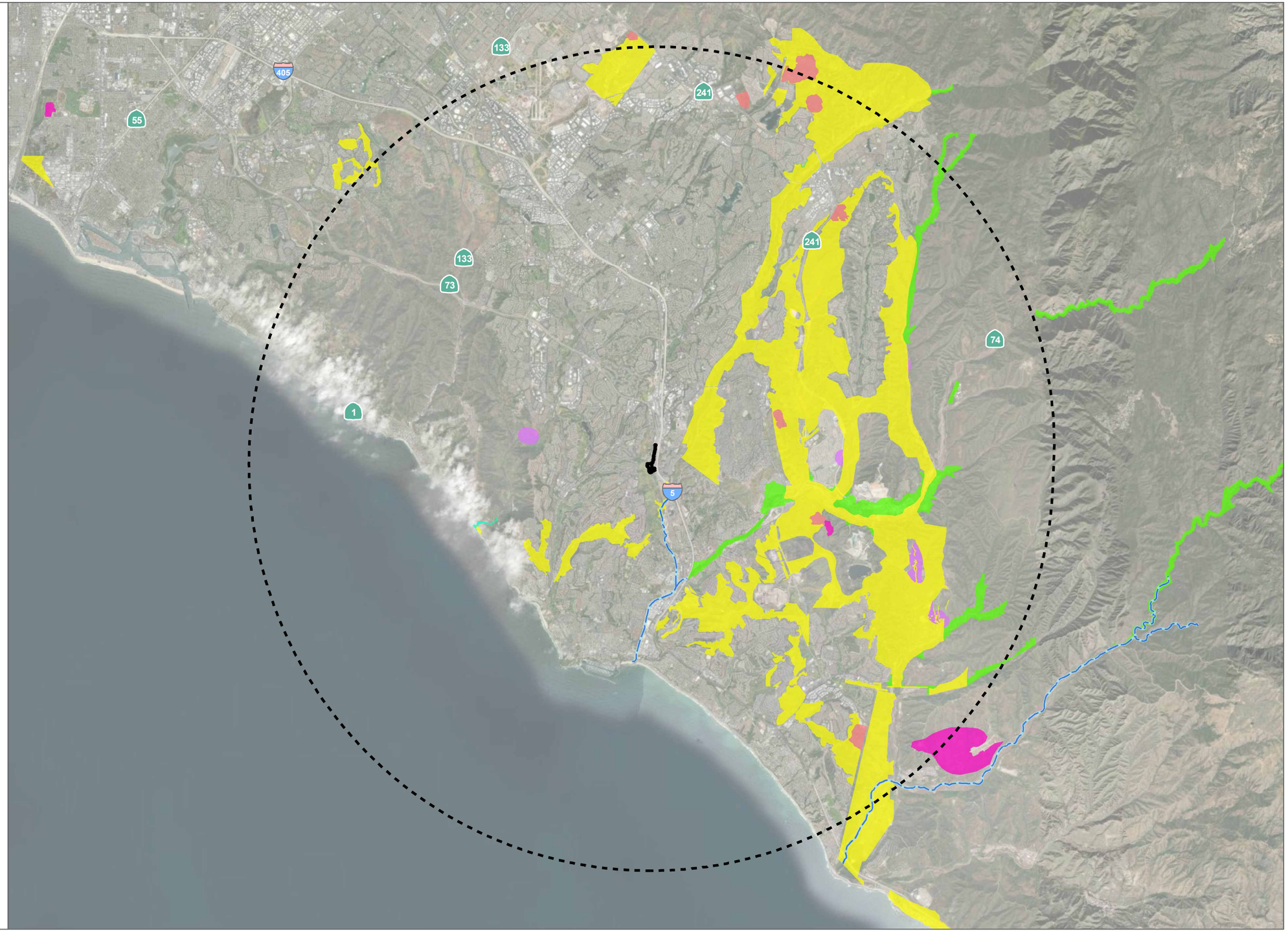
- Project Site
- Study Area (10-Mile Buffer)
- Steelhead (*Oncorhynchus mykiss*
- Riverside fairy shrimp (*Streptocephalus woottoni*
- Coastal California gnatcatcher (*Polioptila californica californica*)
- Tidewater goby (*Eucyclogobius newberryi*
- Thread-leaved brodiaea (*Brodiaea filifolia*
- San Diego fairy shrimp (*Branshinecta sandiegonensis*
- Arroyo toad (*Anaxyrus californicus*



SOURCE: Esri World Imagery; USFWS 2023

DUDEK 0 1.5 3 Miles

FIGURE 4.2-4
Critical Habitat
Compass Energy Storage Project

INTENTIONALLY LEFT BLANK

SOURCE: Dudek 2021; Esri World Imagery 2019

DUDEK

0 250 500 Feet

FIGURE 4.2-5

Least Bell's Vireo Survey Area

Compass Energy Storage Project

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Project Site
Project Site - 10 Mile Buffer

CNDDB

Plant Occurrences

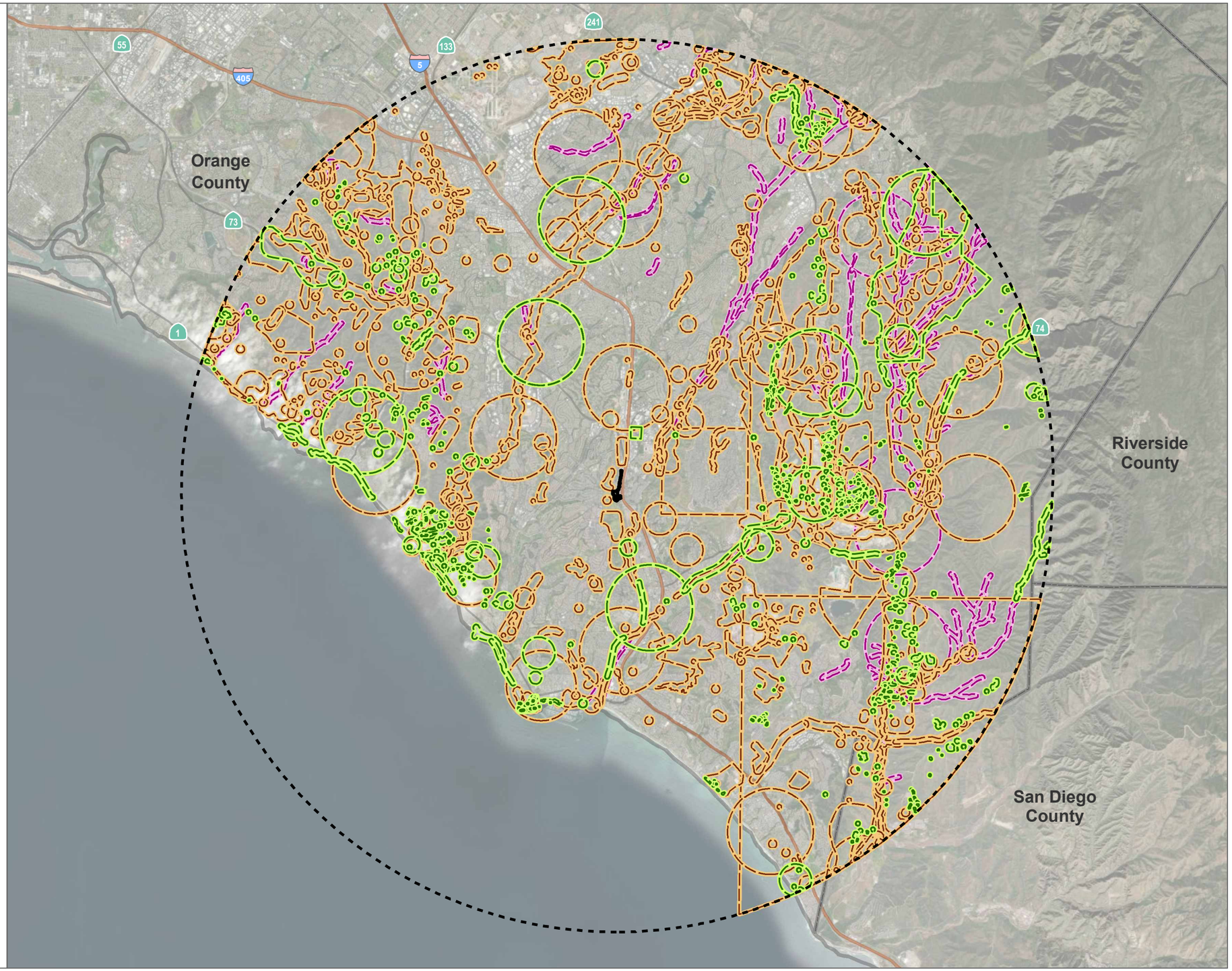
- Allen's pentachaeta, (*Pentachaeta aurea ssp. allenii*)
- Blochman's dudleya, (*Dudleya blochmaniae ssp. blochmaniae*)
- California satintail, (*Imperata brevifolia*)
- Coulter's saltbush, (*Atriplex coulteri*)
- Davidson's saltscale, (*Atriplex serenana var. davidsonii*)
- Laguna Beach dudleya, (*Dudleya stolonifera*)
- Nuttall's scrub oak, (*Quercus dumosa*)
- Orcutt's pincushion, (*Chaenactis glabriuscula var. orcuttiana*)
- Palmer's grapplinghook, (*Harpagonella palmeri*)
- Parish's brittlescale, (*Atriplex parishii*)
- San Miguel savory, (*Clinopodium chandleri*)
- Santa Catalina Island desert-thorn, (*Lycium brevipes var. hassei*)
- aphanisma, (*Aphanisma blitoides*)
- big-leaved crownbeard, (*Verbesina dissita*)
- chaparral nolina, (*Nolina cismontana*)
- chaparral ragwort, (*Senecio aphanactis*)
- cliff spurge, (*Euphorbia misera*)
- decumbent goldenbush, (*Isocoma menziesii var. decumbens*)
- estuary seablite, (*Suaeda esteroa*)
- intermediate mariposa-lily, (*Calochortus weedii var. intermedius*)
- intermediate monardella, (*Monardella hypoleuca ssp. intermedia*)
- many-stemmed dudleya, (*Dudleya multicaulis*)
- mesa horkelia, (*Horkelia cuneata var. puberula*)
- mud nama, (*Nama stenocarpa*)
- prostrate vernal pool navarretia, (*Navarretia prostrata*)
- salt spring checkerbloom, (*Sidalcea neomexicana*)
- south coast saltscale, (*Atriplex pacifica*)
- southern tarplant, (*Centromadia parryi ssp. australis*)
- sticky dudleya, (*Dudleya viscida*)
- summer holly, (*Comarostaphylis diversifolia ssp. diversifolia*)
- thread-leaved brodiaea, (*Brodiaea filifolia*)
- white rabbit-tobacco, (*Pseudognaphalium leucocephalum*)

Wildlife Occurrences

- American badger, (*Taxidea taxus*)
- American bumble bee, (*Bombus pensylvanicus*)
- Belding's savannah sparrow, (*Passerculus sandwichensis beldingi*)
- California glossy snake, (*Arizona elegans occidentalis*)
- California horned lark, (*Eremophila alpestris actia*)
- Coast Range newt, (*Taricha torosa*)
- Cooper's hawk, (*Accipiter cooperii*)
- Crotch bumble bee, (*Bombus crotchii*)
- Dulzura pocket mouse, (*Chaetodipus californicus femoralis*)
- Mexican long-tongued bat, (*Choeronycteris mexicana*)
- Pacific pocket mouse, (*Perognathus longimembris pacificus*)
- Riverside fairy shrimp, (*Streptocephalus woottoni*)
- San Diego desert woodrat, (*Neotoma lepida intermedia*)
- San Diego fairy shrimp, (*Branchinecta sandiegonensis*)
- Southern California legless lizard, (*Anniella stebbinsi*)
- Yuma myotis, (*Myotis yumanensis*)
- arroyo chub, (*Gila orcuttii*)
- arroyo toad, (*Anaxyrus californicus*)
- burrowing owl, (*Athene cunicularia*)
- coast horned lizard, (*Phrynosoma blainvillii*)
- coastal California gnatcatcher, (*Polioptila californica californica*)
- coastal cactus wren, (*Campylorhynchus brunneicapillus sandiegensis*)
- coastal whiptail, (*Aspidoscelis tigris stejnegeri*)
- ferruginous hawk, (*Buteo regalis*)
- golden eagle, (*Aquila chrysaetos*)
- grasshopper sparrow, (*Ammodramus savannarum*)
- least Bell's vireo, (*Vireo bellii pusillus*)
- long-eared owl, (*Asio otus*)
- monarch - California overwintering population, (*Danaus plexippus plexippus pop. 1*)
- northern harrier, (*Circus hudsonius*)
- orange-throated whiptail, (*Aspidoscelis hyperythra*)
- pallid bat, (*Antrozous pallidus*)
- red-diamond rattlesnake, (*Crotalus ruber*)
- southern California rufous-crowned sparrow, (*Aimophila ruficeps canescens*)
- southwestern willow flycatcher, (*Empidonax traillii extimus*)
- steelhead - southern California DPS, (*Oncorhynchus mykiss irideus pop. 10*)
- tidewater goby, (*Eucyclogobius newberryi*)
- tricolored blackbird, (*Agelaius tricolor*)
- two-striped gartersnake, (*Thamnophis hammondii*)
- western mastiff bat, (*Eumops perotis californicus*)
- western pond turtle, (*Emys marmorata*)
- western red bat, (*Lasiurus frantzii*)
- western spadefoot, (*Spea hammondii*)
- white-tailed kite, (*Elanus leucurus*)
- yellow warbler, (*Setophaga petechia*)
- yellow-breasted chat, (*Icteria virens*)

Community Occurrences

- Southern Coast Live Oak Riparian Forest, (*Southern Coast Live Oak Riparian Forest*)
- Southern Cottonwood Willow Riparian Forest, (*Southern Cottonwood Willow Riparian Forest*)
- Southern Mixed Riparian Forest, (*Southern Mixed Riparian Forest*)
- Southern Sycamore Alder Riparian Woodland, (*Southern Sycamore Alder Riparian Woodland*)
- Valley Needlegrass Grassland, (*Valley Needlegrass Grassland*)



SOURCE: Esri World Imagery 2019; CDFW 2023

DUDEK

1:150,000

0 1.5 3 Miles

FIGURE 4.2-6

Biological Resources

Compass Energy Storage Project

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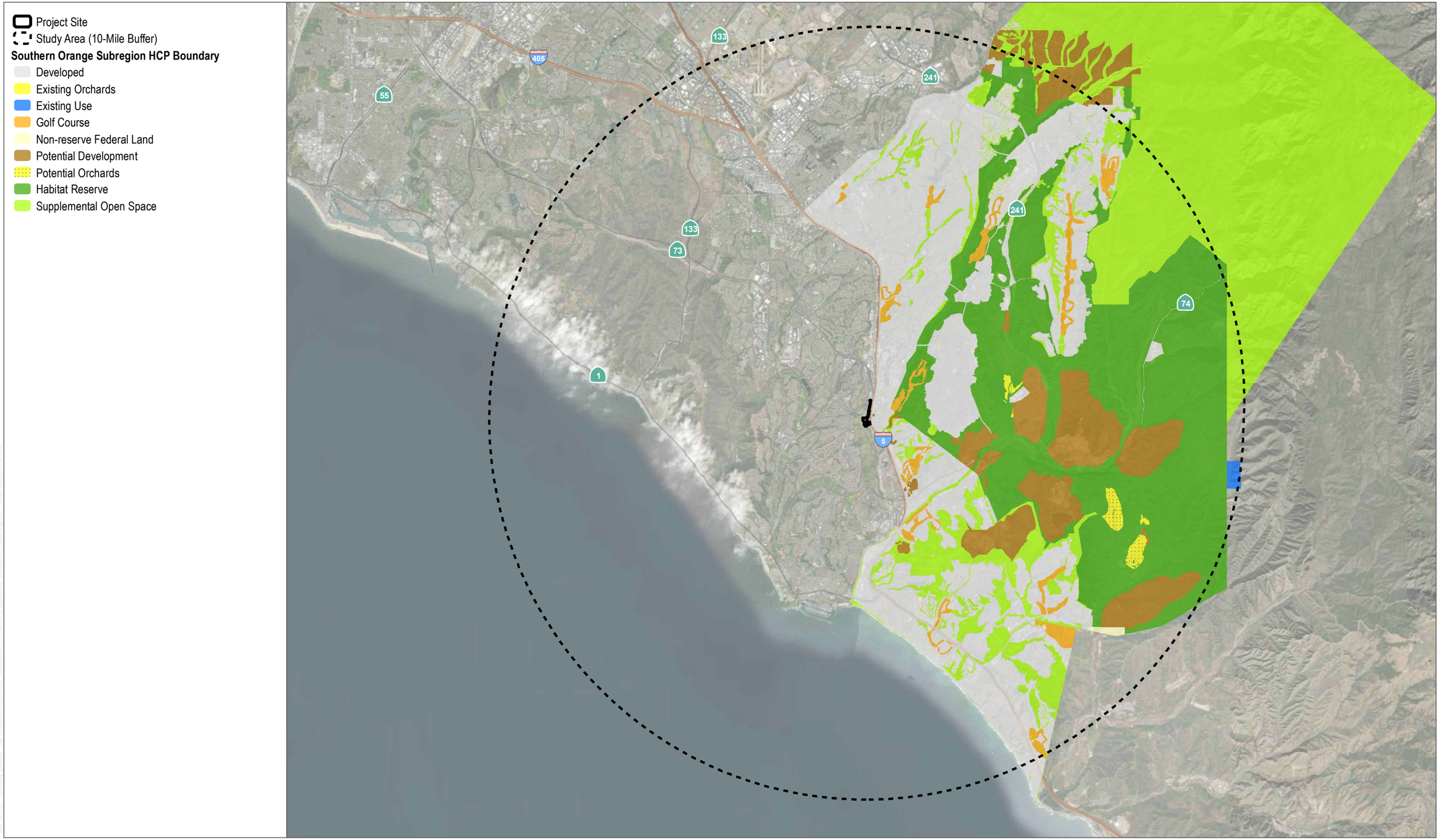

SOURCE: Esri World Imagery; Orange County 2019

DUDEK

0 1.5 3 Miles

FIGURE 4.2-7

Southern Subregion OC HCP

Compass Energy Storage Project

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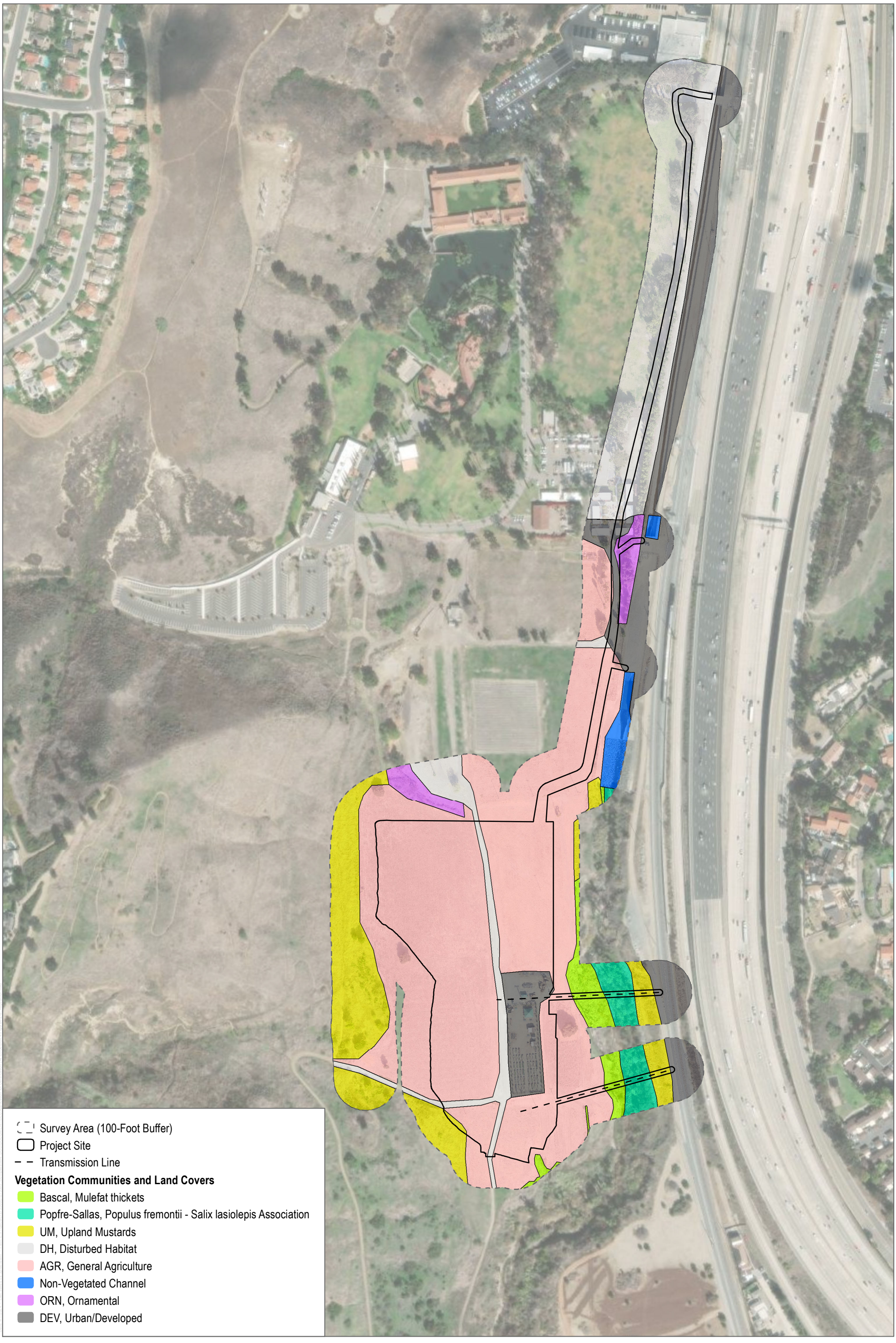

SOURCE: Dudek 2021; Esri World Imagery 2019

DUDEK

0 150 300 Feet

FIGURE 4.2-8

Vegetation Communities/Land Cover Types

Compass Energy Storage Project

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