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Biological Technical Report

Nighthawk Energy Storage Project, Poway, California

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
BESS	battery energy storage system
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	federal Endangered Species Act
HCP	Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Plan
project	Nighthawk Energy Storage Project
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas & Electric Company
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

Summary of Findings

This biological technical report was prepared to provide the biological evaluation of the proposed Nighthawk Energy Storage Project (project) site (10-acre site and gen-tie line) within the City of Poway. The biological study area refers to the approximately 10-acre battery energy storage system site, associated gen-tie line, and a 500-foot buffer surrounding both the project site and gen-tie line. The project is in the City of Poway in San Diego County, California.

The City of Poway Subarea Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is used as a biological guidance document for development projects in Poway. Approximately 50% of the project site is outside of the Poway HCP/NCCP mitigation area within the City of Poway. Because the other 50% of the project site is within the Poway HCP/NCCP mitigation area (South Poway Planned Community Section) in a land use zone designated for a planned community (PC), the project site is not considered critical HCP conservation land when compared to rural residential or open space designations. The planned community (PC) designation allows a greater intensity of development than the RR (rural residential) designation, but the value of these areas as a biological resource and open space linkage is important to overall function of the mitigation area (City of Poway 1996). Due to historical development of the biological study area and fencing around the quarry site, overall function of the open space linkage is limited.

A review of aerial photography (Historic Aerials 2023) and Google Earth (Google Earth 2023) suggests that most of the biological study area has experienced heavy levels of disturbance through historical grading, mineral resource extraction, commercial use, and mining over a span of approximately 59 years. Impacts to the biological study area started as early as 1964, when disking and scraping were present on aerials, and heavy grading for a quarry started in 1978 (Historic Aerials 2023). Aerial photography shows the heaviest levels of disturbance in 1996, 2001, 2002, 2003, and 2004, when most of the vegetation had been cleared and scraped, with impacts to the topsoil of the biological study area and project site (Google Earth 2023; Historic Aerials 2023). In 2002, the project site was most disturbed, with large quarry impacts and complete degradation of the project site to mineral soils. Vegetation was completely absent from the project site and a majority of the biological study area.

Dudek biologists conducted vegetation mapping, rare plant surveys, wildlife surveys, jurisdictional delineation, coastal California gnatcatcher (*Polioptila californica californica*) surveys, and Quino checkerspot butterfly (*Euphydryas editha quino*) surveys in 2021 and 2022. This report documents the results of Dudek's fieldwork and provides overall biological conditions of the biological study area.

Based on species composition and general physiognomy, Dudek biologists mapped vegetation communities and land covers within the project site: Diegan coastal sage scrub, Diegan coastal sage scrub: inland form, Diegan coastal sage scrub: Baccharis-dominated, non-native grassland, non-native grassland broadleaf-dominated, urban/developed, urban/developed ornamental, and disturbed habitat, and disturbed habitat–Pennisetum setaceum. The 500-foot buffer vegetation is also described in this report.

Two California Native Plant Society list 4 plant species were observed during the rare plant surveys: small flower microseris (*Microseris douglasii* ssp. *platycarpha*) and ashy spike moss (*Selaginella cinerascens*). California Rare Plant Rank 4 plant taxa are considered infrequent throughout a broader area in California, and their vulnerability to threat appears low at this time from a statewide perspective (CNPS 2023).

Special-status wildlife species were observed within the 500-foot buffer and include coastal California gnatcatcher and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). Both species are covered under the City of Poway HCP/NCCP (City of Poway 1996). One species with high potential to occur in the buffer is Cooper's hawk (*Accipiter cooperii*), which is also covered under the City of Poway HCP/NCCP.

A paved V-ditch was mapped within the approximately 10-acre project site that is not considered jurisdictional. The project site consists of a historical quarry site that was impacted most heavily in 2002 when most vegetation was graded and disked. The project site is surrounded by development on both the northern and southern sides. The site consists of fencing, which limits wildlife corridors and habitat linkages.

Overall, the proposed project would result in 9.21 acres of permanent impacts associated with grading for and development of the proposed project. There would be impacts from the permanent loss of Diegan coastal sage scrub and non-native grassland. Additionally, there would be direct and/or indirect effects on special-status vegetation communities, special-status wildlife species and their habitat, jurisdictional resources adjacent to the project site, and wildlife corridors/habitat linkages adjacent to the project site.

Mitigation to reduce these impacts to a less-than-significant level would include designation of habitat mitigation credits for impacts to native vegetation depending upon the City of Poway's decision to approve previous mitigation, and pre-construction nesting bird surveys.

1 Introduction

1.1 Purpose of the Report

This biological technical report summarizes the methods and results of biological studies conducted on the Nighthawk Energy Storage Project (project) site and a 500-foot buffer (biological study area), which occur north of Beeler Canyon Road within the City of Poway, California. This report describes the existing conditions of biological resources, including vegetation, jurisdictional resources, flora, wildlife, the potential for special-status species, and wildlife movement.

1.2 Location and Project Description

1.2.1 Location

The overall project spans the City of Poway and the City of San Diego and includes land on Miramar Marine Corps Air Station (Figure 1, Project Location). The City of Poway property is north of Beeler Canyon Road and would provide the location for the battery energy storage system (BESS) and a portion of the gen-tie line. The approximate center of the BESS site is at 32.933703 N, 117.037755 W (decimal degrees). This report focuses on the property within the City of Poway exclusively.

The overall property consists of approximately 83 acres in the southern portion of the City of Poway, California, north of Beeler Canyon Road and south of Kirkham Way. The 10-acre project site is in the northern portion of the property (see Figure 2, Project Site, and Figure 3, Planning). It is approximately 1.2 miles to the east of Interstate 15.

The southern portion of the property is currently being used for mineral resource extraction in accordance with the Planned Community 7 – South Poway Business Park permitted uses. The project components would be located on the northern section of the 83-acre property, adjacent to Kirkham Way. Land uses in the area consist of undeveloped lands, mineral resource extraction, and commercial uses. The San Diego Gas & Electric Company (SDG&E) Sycamore Canyon Substation is approximately 1.1 miles to the south.

1.2.2 Project Description

This project description was prepared by Nighthawk Energy Storage, LLC (the applicant), for the City of Poway, which is the lead agency, for a proposed approximately 300-megawatt BESS. The project would be located on an approximately 10-acre portion (the project site) of an 83-acre parcel of developed land that is identified as Assessor's Parcel Number 320-031-0300 in the City of Poway, California.

The proposed project would be composed of lithium-ion batteries installed in racks, inverters, medium-voltage transformers, switchgear, a collector substation, and other associated equipment to interconnect into the SDG&E Sycamore Canyon Substation (point of interconnection). The batteries would be installed in purpose-built enclosures. The enclosures would have battery storage racks with relay and communications systems for automated monitoring and managing of the batteries to ensure design performance. A battery management system would be provided to control the charging/discharging of the batteries, along with temperature monitoring and control of the individual battery cell temperature with an integrated cooling system. Batteries operate with direct current (DC) electricity, which

must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC, along with transformers to step up the voltage, would be included.

The proposed facility would provide a service to the regional electric grid by receiving energy (charging) from the SDG&E electric transmission system, storing the energy on site, and then later delivering the energy (discharging) back to the point of interconnection. Following construction, the proposed use would not create emissions to air, would not require sanitary facilities, and would not require water.

1.3 Project Objectives

The proposed project would provide the City of Poway and the State of California with a reliable and economically attractive development to receive, store, and discharge electricity from the California Independent System Operator (CAISO) controlled electric grid, including renewable energy produced by existing solar and wind energy resources, in the region. Construction of the project would accomplish the following:

- Establish a new energy storage facility to reliably capture and manage renewable energy in an economically feasible and commercially financeable manner.
- Provide economic benefit to the City of Poway, the region, and the state through construction jobs, property and sales taxes, construction and maintenance services, and increased energy efficiency and reliability.
- Use a proven and established energy storage technology that is efficient, has low maintenance requirements, and is recyclable.
- Assist California in meeting its greenhouse gas emissions reduction goals by 2020 and 2030, as required by the California Global Warming Solutions Act (Assembly Bill 32), as amended by Senate Bill 32 in 2016.
- Assist California in achieving its switch away from fossil-fueled energy generation by allowing renewables to be stored and discharged back to the market when necessary.

In addition to these benefits to the region and California, the project would have specific benefits for the City of Poway. The project would accomplish the following:

- Invest approximately 0.5 billion in the local economy.
- Have limited traffic impacts to nearby residents or businesses during construction, and no traffic impact when operating.
- Create approximately 100 well-paying construction jobs.
- Strengthen existing electrical infrastructure.
- Improve electric grid resiliency and reliability and help avoid blackouts.
- Be operationally quiet.
- Maximize the use and integration of renewable energy sources.
- Provide new capacity for growing businesses and residential communities.
- Be able to safely power up to 300,000 homes for 4 hours (based on megawatt capacity).
- Look to partner with/invest in local organizations to promote science, technology, engineering, and math (STEM)-related education.

2 Regulatory Context

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) 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 extinction of plants and wildlife. The ESA 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 ESA, it is unlawful to "take" any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The ESA 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. Upon development of a habitat conservation plan, the USFWS can issue incidental take permits for listed species.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. Each of the treaties protects selected species of birds, and provides for closed and open seasons for hunting game birds. The MBTA protects more than 800 species of birds, and prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Current federal interpretation of the MBTA prohibits incidental take of migratory birds, and applies enforcement discretion associated with incidental take (October 4, 2021, 86 FR 54642–54656).

Two species of eagles that are native to the United States, bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent these species from becoming extinct.

2.1.3 Clean Water Act

Pursuant to Clean Water Act Section 404, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into "waters of the United States." The term "adjacent wetlands" (a subset of waters of the United States) is defined in Title 33 of the Code of Federal Regulations (CFR), Section 328.3(c)(16) (33 CFR 328.3[c][16]), as "areas that are inundated or saturated by surface or ground water at a frequency and

duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(c)(7) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

2.2 State

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the "take" of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in California. Under CESA Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

The CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the [California Fish and Game] Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." The CESA does not list invertebrate species.

The CESA authorizes the taking of threatened, endangered, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require the CDFW to coordinate consultations with the USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, the CESA allows the CDFW to adopt a CESA incidental take authorization as satisfactory for California Environmental Quality Act (CEQA) purposes based on a finding that the federal permit adequately protects the species and is consistent with state law.

A CESA permit may not authorize the take of "fully protected" species that are protected in other provisions of the California Fish and Game Code, discussed further below.

2.2.2 California Fish and Game Code

Section 3511, Birds; Section 4700, Mammals; Section 5050, Reptiles and Amphibians; and Section 5515, Fish, of the California Fish and Game Code provide that designated fully protected species may not be taken or possessed without a permit. Incidental take of these species is not authorized by law.

Pursuant to California Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds of prey; or to take, possess, or destroy any nest or eggs of such birds. Birds of prey refer to species in the orders Falconiformes and Strigiformes.

Nests of all other birds (except English sparrow [*Passer domesticus*] and European starling [*Sturnus vulgaris*]) are protected under California Fish and Game Code Sections 3503 and 3513.

Pursuant to California Fish and Game Code Section 1602, the CDFW regulates all diversions, obstructions, and changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from the CDFW by means of entering into an agreement pursuant to California Fish and Game Code Section 1602.

2.2.3 Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter–Cologne Act) protects water quality and the beneficial uses of water. It applies to surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCBs) develop regional basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of statewide plans and basin plans. Waters regulated under the Porter–Cologne Act include isolated waters that are not regulated by the USACE. 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]). Waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). Developments with impacts on jurisdictional waters must demonstrate compliance with the goals of the Porter–Cologne Act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification. If a Clean Water Act Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) for impacts to waters of the state under the Porter–Cologne Act.

2.2.4 California Environmental Quality Act

CEQA (California Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 CCR 15000 et seq.) require identification of a project's potentially significant impacts on biological resources, and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently 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). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

In Title 14 of the California Code of Regulations (CCR), Section 1.72 (14 CCR 1.72), the CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."

In 14 CCR 1.56, the CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from the CDFW by means of entering into an agreement pursuant to California Fish and Game Code Section 1602.

The CDFW recognizes that all plants with a California Rare Plant Rank (CRPR) of 1A, 1B, 2, and some ranked 3, of the California Native Plant Society's Inventory of Rare and Endangered Plants in California (CNPS 2023) may meet the criteria for listing as threatened or endangered and should be considered under CEQA (CDFW 2023a). Some of the CRPR 3 and 4 plants meet the criteria for determination as "rare" or "endangered" as defined in Section 1901, Chapter 10 (Native Plant Protection Act), Division 2, of the California Fish and Game Code, as well as Section 2062 and Section 2067, Chapter 1.5 (CESA), Division 3. Therefore, consideration under CEQA for these CRPR 3 and 4 species is strongly recommended by the California Native Plant Society (CNPS 2023). For purposes of this report, animals considered "rare" under CEQA include endangered or threatened species, Birds of Conservation Concern (USFWS 2021), California Species of Special Concern (CDFW 2023b), and fully protected species.

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) 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 Wildlife or U.S. Fish and Wildlife Service."

2.3 Local

2.3.1 City of Poway Habitat Conservation Program

The City of Poway Subarea Habitat Conservation Plan/Natural Community Conservation Plan (Poway HCP/NCCP) was developed to conserve Poway's natural areas. The Poway HCP/NCCP protects biological resources and open space, and complies with the federal ESA, the California Fish and Game Code, the CESA, the Poway General Plan, subregional Multiple Species Conservation Programs (MSCPs), regional and subregional guidelines, and the Poway Municipal Code, with a goal of permanent protection for target species and maintaining regional biodiversity (City of Poway 1996).

The Poway HCP/NCCP is specific to the lands within Poway's jurisdiction, with a goal to promote interconnectedness with adjoining jurisdictions. The Poway HCP/NCCP area lies in an overlap between two subregional NCCP plan areas (the San Diego MSCP Plan [City of San Diego 1998] and Multiple Habitat Conservation Program Plan [SANDAG 2003]) and is officially recognized as a subarea by both plans. The Poway HCP/NCCP defines mitigation

requirements for development projects (both public and private) inside and outside of mitigation areas and defines methods of funding. For private property owners proposing clearing or development that would impact plant or wildlife species associated with natural habitats, the private owner must comply with the Poway HCP/NCCP or apply for individual authorization with the CDFW or USFWS.

Implementation of the Poway HCP/NCCP would result in an estimated loss of up to 22% of the remaining natural habitat areas to development in Poway in areas of limited habitat value where a loss of native plants and animals is less likely. These losses would be largely restricted to already disturbed or fragmented lands. Implementation of the Poway HCP/NCCP would minimize impacts to sensitive vegetation communities and biological core and linkage areas. Long-term implementation of the Poway HCP/NCCP would consolidate an interconnected preserve system sufficient to sustain Poway's diverse ecological communities in perpetuity, and it would preserve potential connections with existing or future preserves in adjoining jurisdictions. The preserve is estimated to total approximately 10,832 acres of natural habitat. The preserve would protect at least 80% of the recorded locations for most target species, including coastal California gnatcatcher (*Polioptila californica californica*) (City of Poway 1996).

Lists of target species were established as part of the MSCP and Multiple Habitat Conservation Program processes to guide development of these multiple species preserve systems. Target species include those plants and animals known or potentially occurring in the planning region that are listed as threatened or endangered by state and/or federal agencies or that are likely to be listed in the future (e.g., candidate species). They also include non-sensitive species that are considered indicators of habitat quality or are otherwise important to preserve design, for example, wide-ranging species for which habitat linkages and corridors must be maintained to ensure their survival. A target species list was also established for the Poway HCP/NCCP to ensure adequate coverage of the regional flora and fauna (City of Poway 1996).

For all species, the conservation of habitat linkages and wildlife movement corridors by the Poway HCP/NCCP is considered adequate. All species analyzed that are considered adequately conserved by the Poway HCP/NCCP are included in Table 8-2 of the Poway HCP/NCCP. The Poway HCP/NCCP provides sufficient protection and management for the covered species and their habitats to qualify as an HCP as called for under Section 10(a) of the federal ESA for federally listed species. Similarly, the Poway HCP/NCCP provides sufficient protection and management for those target species listed or likely to be listed by the CDFW as state rare threatened or endangered, and therefore meets the requirements of a management authorization for take of these species pursuant to California Fish and Game Code Sections 2081 and 2835 (City of Poway 1996).

Impacts to vegetation communities and wildlife habitats in Poway either inside or outside of the Poway HCP/NCCP mitigation area require compensating mitigation, restoration, or revegetation, or a combination thereof inside the mitigation area. Compensating mitigation can consist either of outright purchase or dedication of lands inside the mitigation area as biological open space, or payment of in-lieu fees into a mitigation bank administered by the City of Poway or a land trust acting as an agent of the City of Poway. Mitigation lands should be selected according to the priority ratings for proposed resource protection areas (City of Poway 1996).

3 Survey Methods

3.1 Literature Review

Prior to conducting field surveys for the project, Dudek biologists reviewed regional California Natural Diversity Database occurrence data (CDFW 2023c), the California Rare Plant Inventory (CNPS 2023), USFWS occurrence data and critical habitat (USFWS 2023a), the San Diego Geographic Information Source (SanGIS 2023), the National Wetlands Inventory (USFWS 2023b), and the U.S. Department of Agriculture's Natural Resources Conservation Service Web Soil Survey (USDA 2023a) to analyze the occurrence potential of special-status species and jurisdictional waters that are known to occur or may potentially occur within the biological study area[1].

General information regarding wildlife species present in the region was obtained from Unitt (2004) for birds, Tremor (2017) for mammals, and Stebbins (2018) and California Herps (CaliforniaHerps.com 2023) for reptiles and amphibians.

3.2 Survey Schedule

The 2021–2022 survey and site conditions are presented in Table 1.

Table 1. Survey Details and Conditions

Date	Time	Personnel	Purpose	Conditions
4/12/2021	5:00 a.m.–10:05 a.m.	Brock Ortega	California gnatcatcher survey	58°F–66°F; 50%–30% cloud cover; 0–5 mph winds
4/19/2021	5:00 a.m.–9:50 a.m.	Brock Ortega	California gnatcatcher survey	57°F–67°F; 40%–10% cloud cover; 0–3 mph winds
3/8/2022	9:30 a.m.–2:10 p.m.	Brock Ortega	Quino checkerspot butterfly survey	68°F–78°F; 10% cloud cover; 0–3 mph wind
3/13/2022	5:30 a.m.–10:00 a.m.	Brock Ortega	California gnatcatcher survey	55°F–65°F; 20%–10% cloud cover; 0–3 mph winds
3/13/2022	10:00 a.m.–1:50 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–74F; 0%–10% cloud cover; 0–5 mph wind
3/17/2022	9:00 a.m.–12:00 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–77°F; 0% cloud cover; 0–4 mph wind
3/24/2022	9:00 a.m.–1:55 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–79°F; 0% cloud cover; 0–3 mph wind
3/30/2022	8:10 a.m.–12:10 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–75°F; 0% cloud cover; 0–3 mph wind
4/2/2022	9:30 a.m.–12:30 p.m.	Brock Ortega	Quino checkerspot butterfly survey	70°F–83°F; 0% cloud cover; 0–3 mph wind
4/14/2022	12:20 p.m.–4:40 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–77°F; 0%–10% cloud cover; 0–4 mph wind

[1] U.S. Geological Survey 7.5-minute Poway quadrangle and surrounding eight quadrangles: Rancho Santa Fe, Escondido, San Pasqual, Del Mar, San Vicente Reservoir, La Jolla, La Mesa, and El Cajon.

Table 1. Survey Details and Conditions

Date	Time	Personnel	Purpose	Conditions
4/16/2022	8:00 a.m.–12:12 p.m.	Brock Ortega	California gnatcatcher survey	65°F–77°F; 0%–10% cloud cover; 0–3 mph winds
4/19/2022	10:30 a.m.–2:20 p.m.	Brock Ortega	Quino checkerspot butterfly survey	65°F–77°F; 0%–10% cloud cover; 0–4 mph wind
4/23/2022	6:45 a.m.–5:21 p.m.	Erin Bergman	Vegetation mapping, habitat assessment, biological reconnaissance, rare plant reference checks	61°F–75°F; 0%–20% cloud cover; 0–3 mph wind
4/24/2022	6:05 a.m.–4:50 p.m.	Erin Bergman	Spring rare plant reference checks	66°F–78°F; 10%–80% cloud cover; 0–3 mph wind
4/25/2022	6:03 a.m.–5:50 p.m.	Erin Bergman	Jurisdictional delineation, spring rare plant survey	62°F–80°F; 10%–80% cloud cover; 0–3 mph wind
4/27/2022	6:15 a.m.–5:35 p.m.	Erin Bergman	Spring rare plant survey	60°F–76°F; 0%–50% cloud cover; 0–5 mph wind
4/29/2022	6:12 a.m.–11:00 a.m.	Brock Ortega	California gnatcatcher survey	59°F–70°F; 40%–20% cloud cover; 0–3 mph winds
4/29/2022	11:55 a.m.–3:15 p m.	Brock Ortega	Quino checkerspot butterfly survey	71°F–80°F; 0%–20% cloud cover; 0–5 mph wind
5/5/2022	1:10 p.m.–4:20 p.m.	Brock Ortega	Quino checkerspot butterfly survey	78°F–85°F; 0% cloud cover; 0–3 mph wind
5/7/2022	7:30 a.m.–11:25 p.m.	Brock Ortega	California gnatcatcher survey	63°F–80°F; 0% cloud cover; 0–5 mph winds
5/12/2022	8:15 a.m.–1:10 p.m.	Brock Ortega	Quino checkerspot butterfly survey	67°F–83°F; 0%–10% cloud cover; 0 mph wind
6/14/2022	7:30 a.m.–11:25 p.m.	Brock Ortega	California gnatcatcher survey	61°F–72°F; 20%–0% cloud cover; 0–5 mph winds
7/20/2022	6:05 a.m.–10:10 a.m.	Brock Ortega	California gnatcatcher survey	65°F–75°F; 0%–100% cloud cover; 0–3 mph winds
7/24/2022	8:05 a.m.–5:15 p.m.	Erin Bergman	Rare plant reference checks	70°F–103°F; 0% cloud cover; 0–4 mph wind
7/30/2022	6:00 a.m.–6:30 p.m.	Erin Bergman	Late-season rare plant survey	72°F–102°F; 0%–50% cloud cover; 0–2 mph wind
8/3/2022	6:00 a.m.–5:10 p.m.	Erin Bergman	Late-season rare plant survey	70°F–95°F; 0%–10% cloud cover; 0–6 mph wind
8/4/2022	6:10 a.m.–3:15 p.m.	Erin Bergman	Vegetation mapping buffer, late-season rare plants/buffer wetland mapping	60°F–89°F; 0%–100% cloud cover; 0–3 mph wind
5/9/2024	6:29 a.m.-5:57 p.m.	Erin Bergman	Crotch bumble bee survey	60°F- 76°F -; 0%–75% cloud cover; 0–3 mph wind

Note: mph = miles per hour.

3.3 Field Reconnaissance and Field Surveys

Biological field surveys for the proposed project were conducted in March 2021 and February, March, April, May, June, July, August 2022 and May 2024 by Dudek biologists Brock Ortega and Erin Bergman. Field surveys included vegetation and land cover mapping, habitat quality assessments, biological reconnaissance, spring and late-season rare plant surveys, Quino checkerspot butterfly (*Euphydryas editha quino*) surveys, coastal California gnatcatcher surveys, and jurisdictional resource delineation. Table 1 lists the survey dates, times, surveying biologists, and weather conditions during the surveys.

3.4 Vegetation Mapping

Vegetation communities were evaluated within the biological study area on an aerial map at 200 scale (1 inch = 200 feet). These boundaries and locations were digitized and downloaded by Dudek GIS technicians using ArcGIS software. Vegetation communities and land covers were mapped using the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as modified by San Diego County and noted in Vegetation Communities of San Diego County (Oberbauer et al. 2008).

3.5 Special-Status Plants Surveys

Special-status plant species considered in this report are those that are (1) species listed by federal and/or state agencies, proposed for listing as threatened or endangered, or candidate species (CDFW 2023a); (2) species with a CRPR (CNPS 2023); or (3) species listed in the Poway HCP/NCCP (City of Poway 1996).

A focused survey for special-status plants and rare plant reference checks were conducted in the spring and late season on April 23, 24, 25, and 27, 2022; July 24 and 30, 2022; and August 3 and 4, 2022. Prior to special-status plant surveys, Dudek biologists evaluated plant records in the Poway quadrangle and the surrounding eight quadrangles: Rancho Santa Fe, Escondido, San Pasqual, Del Mar, San Vicente Reservoir, La Jolla, La Mesa, and El Cajon (CDFW 2023c; CNPS 2023; USFWS 2023a) to determine target species. In addition to Dudek biologists' knowledge of biological resources and regional distribution of each species, elevation, habitat, and soils present within the biological study area were evaluated to determine the potential for various special-status plant species to occur. Field survey methods conformed to California Native Plant Society's Botanical Survey Guidelines (CNPS 2001); Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000); and General Rare Plant Survey Guidelines (Cypher 2002). Surveys were conducted by walking meandering transects throughout the project site to detect special-status species.

3.6 Special-Status Wildlife Surveys

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. Binoculars (10 × 40) were used to aid in the identification of observed wildlife.

Special-status wildlife species considered in this report are those that are (1) listed by federal and/or state agencies, proposed for listing as threatened or endangered, or are candidate species (CDFW 2023b); (2) Species of Special Concern and Birds of Conservation Concern (CDFW 2023b; USFWS 2021); (3) fully protected species (CDFW 2023b); and/or (4) listed in the Poway HCP/NCCP (City of Poway 1996).

3.7 Quino Checkerspot Butterfly Surveys

Dudek biologist Brock Ortega conducted focused Quino checkerspot butterfly surveys in 2022 (Dudek 2022a) over the impact area and a 50-foot buffer. Prior to the focused surveys, Dudek biologists conducted a habitat assessment within the biological study area to identify suitable habitat and exclude unsuitable habitat. Developed and treed areas were excluded. Although host plant surveys were performed separately, surveyors also looked for host plants during the focused surveys to document any changes from the initial host plant mapping effort.

Host plant mapping was completed in March 2022 (Table 1). The survey was conducted on foot during the first protocol Quino checkerspot butterfly survey due to a delay in site access.

The host plant mapping survey focused on the identification and location of potential host plants for Quino checkerspot butterfly: dwarf plantain (*Plantago virginica*), woolly plantain (*P. ovata*), Coulter's snapdragon (*Antirrhinum coulterianum*), stiff-branch bird's beak (*Cordylanthus rigidus* ssp. *brevibracteatus*), purple owl's clover (*Castilleja exserta* ssp. *exserta*), and Chinese houses (*Collinsia* spp.) (Pratt and Pierce 2009; USFWS 2014).

The 2014 USFWS protocol states that focused Quino checkerspot butterfly surveys should begin the third week of February and end the second Saturday in May, unless otherwise approved by the USFWS (USFWS 2014). In addition, Dudek biologists Erin Bergman and Callie Amoaku performed a reference check on February 18, 2022, to determine the flight status of Quino checkerspot butterflies and the current status of dwarf plantain near the base of Otay Mountain off the Otay Mountain Truck Trail (32.57978 N, 116.89845 W). Five Quino checkerspot butterflies were observed during the reference check, and dwarf plantain was mostly vegetative but occurring in high numbers (weather 60°F–64°F, wind 1–4 miles per hour [mph], cloud cover 20%).

Surveys are to be conducted during the adult flight season by biologists possessing a recovery permit for this species pursuant to Section 10(a)(1)(A) of the federal ESA (USFWS 2014).

The survey area was surveyed in one person-day per pass. Because site access was not finalized until March, focused surveys were conducted over 11 passes from March 8, 2022, to May 12, 2022 (Table 1), throughout the entire biological study area. Because the survey also covered focused surveys for California gnatcatcher, the areas were first covered for gnatcatcher then Quino, but both species were looked for throughout the surveys. A reference check was performed to determine the status of the Quino checkerspot butterfly flight period on May 3, 2022 (weather 55°F–60°F, wind 1–4 mph, cloud cover 80%), and May 6, 2022 (weather 80°F–90°F, wind 1–5 mph, cloud cover 10%), at the same location where Quino checkerspot butterflies were previously observed. No Quino checkerspot butterflies were observed during the May survey dates at the reference site location.

The biologists used an Esri mobile application to identify the biological study area. Binoculars were used to aid in detecting and identifying butterflies and other wildlife species.

The survey methods consisted of slowly walking roughly parallel transects spaced approximately 30 feet (10 meters) apart throughout all suitable habitats within the biological study area. Survey routes were arranged to thoroughly cover suitable habitats at a rate of no more than 10 acres per person-hour.

Surveys were conducted only during acceptable weather conditions (i.e., surveys were not conducted during fog, drizzle, or rain; winds greater than 15 mph measured 4 to 6 feet above ground level for more than 30 seconds; temperature in the shade at ground level less than 60°F on a clear, sunny day; or temperature in the shade at

ground level less than 70°F on an overcast or cloudy day). Survey times, personnel, and conditions during the Quino checkerspot butterfly survey are shown in Table 1.

3.8 Coastal California Gnatcatcher Surveys

Focused surveys for coastal California gnatcatchers were performed within suitable habitat between April 12, 2021, and July 20, 2022, by coastal California gnatcatcher-permitted biologist Brock Ortega according to the schedule provided in Table 1 (Dudek 2022b). The surveys were conducted following the currently accepted protocol of the Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 1997) using the breeding season survey methods.

Survey routes for site visits completely covered the areas of suitable coastal California gnatcatcher habitat on site. Appropriate birding binoculars (8 × 40) were used to aid in detecting and identifying bird species. A recording of coastal California gnatcatcher vocalizations was used to elicit a response from the species. The recording was played approximately every 20 to 100 feet. A 100-scale (1 inch = 100 feet) aerial photograph of the biological study area overlaid with the vegetation and site boundaries was used to map any coastal California gnatcatcher detected. Weather conditions, time of day, and season were within protocol limits and appropriate for the detection of gnatcatchers, as shown in Table 1.

3.9 Crotch Bumble Bee Surveys

Dudek conducted three evenly spaced protocol level surveys for Crotch bumble bee (*Bombus crotchii*) spaced throughout the sampling season (early spring to late summer, as determined by host plant phenology). Visual surveys were conducted from May 9, 2024 to June 6, 2024. A separate report will be provided. The surveys were conducted by qualified biologists with expertise in surveying for Crotch bumble bees. Surveys occurred after sunrise and 3 hours before sunset and were not conducted during wet conditions (e.g., foggy, raining, or drizzling) or windy conditions (i.e., sustained winds greater than 8 mph). The surveys were conducted during optimal conditions when there was sunny to partly sunny skies that were greater than 60° Fahrenheit. Suitable floral resource habitat was identified and mapped within the Project area. For each survey pass, each patch of suitable habitat was visually surveyed for 1 person-hour per three acres of the highest quality habitat.

3.10 Jurisdictional Resource Delineation

Jurisdictional resources are areas under the jurisdiction of one or all of the resource agencies (USACE, RWQCB, and CDFW) and/or the City of Poway. Dudek biologists completed a formal jurisdictional resource delineation on April 25, 2022, which delineated the extent of jurisdictional features on the project site in both the City of San Diego and the City of Poway. The delineation mapped jurisdictional resources (including federally defined wetlands) within the survey areas under the purview of the CDFW pursuant to Sections 1600 et seq. of the California Fish and Game Code, areas under the jurisdiction of the USACE pursuant to Section 404 of the federal Clean Water Act (CWA), areas under the jurisdiction of the RWQCB pursuant to CWA Section 401 and Section 13000 et seq. of the California Water Code (the 1969 Porter–Cologne Water Quality Act), and wetlands defined under the Poway HCP/NCCP (City of Poway 1996).

The delineation methodology used for each jurisdiction or regulating agency, including the USACE, CDFW, RWQCB, and the City of Poway, is described as follows:

- The 1987 USACE Wetlands Delineation Manual (USACE 1987)
- The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008)
- The Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010)
- Guidance provided by the USACE and U.S. Environmental Protection Agency on the geographic extent of jurisdiction based on the U.S. Supreme Court's interpretation of the CWA (USACE and EPA 2008)

Pursuant to CWA Section 404, USACE regulates the discharge of dredged and/or fill material into "waters of the United States." The term "wetlands" (a subset of waters of the United States) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(e).

The USACE and RWQCB, pursuant to the federal CWA, regulate all areas supporting all three wetlands criteria as "wetlands" described in the USACE manual: hydric soils, hydrology, and hydrophytic vegetation. Wetland statuses of plant species to assist in determining if hydrophytic vegetation is present are outlined in the National Wetland Plant List 2016 wetland ratings (Lichvar et al. 2016). The RWQCB may also take jurisdiction over surface waters lacking USACE regulation pursuant to the state Porter–Cologne Water Quality Control Act. These state exclusive jurisdictional waters generally present a "beneficial use" to people or wildlife, and can be a wetland, seasonal water feature that is hydrologically connected and/or geographically isolated.

In practice, the CDFW extends its jurisdiction to the top of a streambank or the associated riparian extent (a plant community dependent on the stream feature), whichever is wider.

Data was collected using a Trimble GeoXT handheld GPS unit with sub-meter accuracy. Jurisdictional areas were digitized in GIS based on the GPS data collected in the field. The data were collected directly onto field maps into a project-specific GIS using ArcGIS software.

4 Physical Characteristics

4.1 Site Description, Location within the HCP Area, and Historical Disturbance

The project site is north of Beeler Canyon Road in the City of Poway, San Diego County. The elevations in the biological study area range from approximately 602 feet above mean sea level at the lowest point within Beeler Creek and the paved roads of the quarry, to approximately 927 feet above mean sea level at the highest section of the slope within City of Poway property near Kirkham way.

Currently, the BESS site consists of disturbed land and coastal sage scrub. A large portion of the gen-tie line consists of paved roads. A small portion of the gen-tie line consists of Beeler Creek, which would be avoided. See Appendix A, Biological Constraints Report, for avoidance details.

Approximately 50% of the project site is outside of the Poway HCP/NCCP mitigation area within the City of Poway. Because the other 50% of the project site is within the Poway HCP/NCCP mitigation area (South Poway Planned Community Section) in a land use zone designated for a planned community (PC), the project site is not considered critical HCP conservation land when compared to rural residential or open space designations. The planned community (PC) designation allows a greater intensity of development than the RR (rural residential) designation, but the value of these areas as a biological resource and open space linkage is important to overall function of the mitigation area (City of Poway 1996). Due to historical development of the biological study area and fencing around the quarry site, overall function of the open space linkage is limited.

A review of aerial photography (Historic Aerials 2023) and Google Earth images (Google Earth 2023) suggests that most of the biological study area has experienced heavy levels of disturbance through historical disking, grading, mineral resource extraction, commercial use, and mining over a span of approximately 59 years. Impacts to the biological study area started as early as 1964 when scraping was present on aerials; heavy grading for a quarry started in 1978 (Historic Aerials 2023). Aerial photography shows the heaviest levels of disturbance in 1996, 2001, 2002, 2003, and 2004, when most of the vegetation had been cleared and scraped and created impacts to the topsoil of the biological study area and project site (Google Earth 2023; Historic Aerials 2023). In 2002, the site was most disturbed with large quarry impacts and complete degradation of the project site to mineral soils. Vegetation was completely absent from the project site and a majority of the biological study area. See the attached photo document for image examples from this timeframe (1996–2004) (Google Earth 2023) (Appendix B). The property is fenced along all the boundaries, limiting access for wildlife movement.

4.2 Soils

According to the Natural Resources Conservation Service Soil Survey, two soil types were mapped in the biological study area, as shown in Table 2: Redding cobbly loam and Visalia gravelly sandy loam (USDA 2023a). These two soil types are not considered hydric (USDA 2023b).

Table 2. Soils within the Biological Study Area

Soil Category	Soil Description	Hydric Rating
Redding	Redding cobbly loam, dissected 15%–30% slopes (RfF)	No
Visalia	Visalia gravelly sandy loam, 2%–5% slopes (VbB)	No

4.3 Hydrology

The entire project site occurs within the 4,022-square-kilometer San Diego Watershed (Hydrologic Unit Code 18070304) and the 149-square-kilometer Los Peñasquitos Creek Watershed (Hydrologic Unit Code 180703040402). Within the southern portion of the site, Beeler Creek drains west. Beeler Creek is a tributary to Poway Creek, which flows into the Pacific Ocean approximately 17 miles west of the project site (NHD 2023).

5 Results

5.1 Vegetation Communities

The vegetation communities and land cover types recorded in the biological study area (project site and 500-foot buffer) are described in detail below; their acreages are presented in Tables 3a and 3b; and their spatial distributions are presented in Figure 4, Vegetation Communities. Vegetation within the tables is listed in alphabetical order. Vegetation is described in the numbered order of the Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008).

Table 3a. Vegetation Communities and Land Covers in the Project Site

Vegetation/Land Cover Type	Acreage on the Project Site
Diegan coastal sage scrub	5.68
Diegan coastal sage scrub: inland form	1.51
Diegan coastal sage scrub: Baccharis-dominated	0.28
Disturbed habitat	0.62
Non-native grassland	0.17
Non-native grassland: broadleaf-dominated	0.27
Urban/developed	0.24
Urban/developed-ornamental	0.44
Total*	**9.21**

Note:
* Acreages may not sum precisely due to rounding.

Table 3b. Vegetation Communities and Land Covers in the 500-Foot Buffer

Vegetation/Land Cover Type	Acreage in 500-Foot Buffer
Coast live oak woodland	0.89
Diegan coastal sage scrub	39.71
Diegan coastal sage scrub: Baccharis-dominated	8.30
Diegan coastal sage scrub: inland form	8.79
Disturbed habitat	7.99
Disturbed wetland	0.35
Eucalyptus woodland	0.45
Non-Native grassland: broadleaf-dominated	0.31
Non-vegetated channel or floodway	3.01
Southern mixed chaparral	1.10
Southern riparian woodland	3.31
Urban/developed	26.49
Urban/developed-ornamental	0.06
Total*	**100.76**

Note:
* Acreages may not sum precisely due to rounding.

5.1.1 Disturbed Habitat (11300)

Disturbed habitat is a land cover type characterized by a predominance of non-native species, often introduced and established through human action. Oberbauer et al. (2008) describes disturbed habitat as areas that have been physically disturbed by previous legal human activity and are no longer recognizable as native or naturalized vegetation associations, but continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species, such as ornamentals or ruderal exotic species (i.e., weeds).

Disturbed habitat occurs within the project site and buffer. Disturbed habitat occurs on old roads, within the main site, and within the quarry impact areas. Disturbed areas consist of no vegetation, little vegetation, or non-native invasive plant species. When disturbed habitat does not consist of bare ground, non-native vegetation is dominant. Disturbed habitat is dominated by tocalote (*Centaurea melitensis*) and in some areas African fountain grass (*Cenchrus setaceus*/*Pennisetum setaceum*). Less commonly occurring within the disturbed habitat are prickly sow-thistle (*Sonchus asper*), short-pod mustard (*Hirschfeldia incana*), and tree tobacco (*Nicotiana glauca*).

5.1.2 Urban/Developed (12000)

According to Oberbauer et al. (2008), urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or has some ornamental vegetation.

Urban developed land occurs within the project site and buffer. Developed lands are the paved roads, the main quarry site, paved turnarounds, buildings, structures, and parking areas.

5.1.3 Urban/Developed Ornamental (12000)

Urban/developed ornamental consists of planted species for landscaping purposes and are many times connected to urban development, paved areas, highways, parking lots, and other built features. Ornamental plantings are considered developed lands. If trees are associated with ornamental plantings, nesting species may have potential to occur.

Ornamental land cover consists of species planted for landscaping purposes and occurs within the project site and buffer. Areas mapped as ornamental are located along many of the slopes near paved roads and highways. The soils are disturbed and previously graded. These areas consist of non-native plantings.

5.1.4 Diegan Coastal Sage Scrub (32500)

Diegan coastal sage scrub is a native vegetation community that, according to Oberbauer et al. (2008), is composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species—such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.)—with scattered evergreen shrubs, including lemonade sumac (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*). The average height of coastal sage scrub reaches 3 to 4 feet.

Dominant species on the project site and in the buffer include the coastal sage scrub, California sagebrush, deerweed (*Acmispon glaber*), and Menzies' goldenbush (*Isocoma menziesii vernonioides*). Less commonly occurring species include stinkwort (*Dittrichia graveolens*), smooth cat's ear (*Hypochaeris glabra*), and California buckwheat.

5.1.5 Diegan Coastal Sage Scrub: Inland Form (32520)

Diegan coastal sage scrub is a native vegetation community that, according to Oberbauer et al. (2008), is composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species—such as California sagebrush, California buckwheat, and sages (*Salvia* spp.)—with scattered evergreen shrubs, including laurel sumac. The average height of coastal sage scrub reaches 3 to 4 feet. Inland form is dominated by white sage (*Salvia apiana*).

Dominant species on the project site and within the buffer include black sage (*Salvia mellifera*). Less commonly occurring species include California sagebrush, California buckwheat, laurel sumac, long stem golden yarrow (*Eriophyllum confertiflorum* var. *confertiflorum*), and Menzie's goldenbush. The majority of these areas have been previously graded or mowed. Graminoids are scattered within the coastal sage scrub community on site within limited areas.

5.1.6 Diegan Coastal Sage Scrub: Baccharis Dominated (32530)

Diegan coastal sage scrub–Baccharis dominated is similar to Diegan coastal sage scrub except that it is dominated by *Baccharis* species (broom baccharis [*B. sarothroides*] and/or coyote brush [*B. pilularis*] (Oberbauer et al. 2008). This community typically occurs on disturbed sites or sites within nutrient-poor soils, and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. Diegan coastal sage scrub–Baccharis dominated is typically a new colonizer of disturbed areas.

Diegan coastal sage scrub–Baccharis dominated occurs within the buffer. This vegetation community occurs in disturbed areas as a new colonizer. In the buffer, Diegan coastal sage scrub–Baccharis dominated is dominated by broom baccharis. Broom baccharis makes up approximately 85% of the vegetation community. Less commonly occurring species include compact brome (*Bromus madritensis*), deerweed, and California buckwheat.

5.1.7 Southern Mixed Chaparral (37120)

Southern mixed chaparral consists of broad-leaved sclerophyll shrubs that range in height from 5 to 10 feet (1.5 to 3 meters) tall. Areas within southern mixed chaparral consist of patches of bare soils or can form mosaics with other coastal sage scrub communities like Venturan coastal sage scrub or Riversidean sage scrub. Southern mixed chaparral can be divided into subtypes like granitic (37121) or mafic (37122) based on the substrates that are present. Floristic distinctions are unknown. Within San Diego County, southern mixed chaparral is dominated by lilacs such as Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*), as well as *C. leucodermis* and *C. oliganthus*; other *Ceanothus* spp. generally indicate other chaparral types. Some site factors include the substrate is dry, rocky, and often steep. Southern mixed chaparral is often adjacent to and on moister sites than chamise chaparral (37200). Some characteristic plants in this community include chamise (*Adenostoma fasciculatum*), Eastwood manzanita (*Arctostaphylos glandulosa*), Peninsular manzanita (*Arctostaphylos peninsularis*), white fairy lantern (*Calochortus albus*), woollyleaf ceanothus (*Ceanothus tomentosus olivaceus*), wart stemmed lilac (*Ceanothus verrucosus*), San Diego mountain mahogany (*Cercocarpus minutiflorus*), bush rue (*Cneoridium dumosum*), chocolate lily (*Fritillaria biflora*), toyon (*Heteromeles arbutifolia*), honeysuckle (*Lonicera subspicata*), Nuttall's scrub

oak (*Quercus dumosa*), laurel sumac, spiny redberry (*Rhamnus crocea*), sugar bush (*Rhus ovata*), white chaparral currant (*Ribes indecorum*), mission manzanita (*Xylococcus bicolor*), Mojave yucca (*Yucca schidigera*), and chaparral yucca (*Yucca whipplei*).

Areas mapped as southern mixed chaparral are within the buffer and dominated by San Diego mountain mahogany. Less common species include spiny redberry, thick leaved yerba santa (*Eriodictyon crassifolium*), and a mix of graminoid species.

5.1.8 Non-Native Grassland (42200)

Non-native grassland consists of dense to sparse cover of annual grasses with flowering culms from 0.5 to 3 feet in height (Oberbauer et al. 2008). In San Diego County, the presence of wild oat (*Avena barbata*), bromes (*Bromus* spp.), stork's bill (*Erodium cicutarium*), and short-pod mustard are common indicators of this community. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will dominate (Oberbauer et al. 2008).

Within the project site, non-native grassland occurs in a small area and is disturbed. These areas are small, so they are not ideal ground for foraging raptors. Non-native grassland on site consists of a variety of European bromes, including red brome (*Bromus madritensis*), rip-gut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). It is also dominated by invasive African fountain grass. Tecolote is also common within the non-native grassland patches. Less common within these non-native grasslands are slender wild oat (*Avena barbara*) and wild oat (*Avena fatua*).

5.1.9 Non-Native Grassland—Broadleaf Dominated (42210)

Non-native grassland—broadleaf dominated consists of dense to sparse cover of non-native invasive broadleaf species (Oberbauer et al. 2008). This designation is used when non-native invasive broad-leafed species make up more than 50% cover of the vegetation community. In San Diego County, the presence of black mustard (*Brassica nigra*) and short pod mustard (*Hirschfeldia incana*) are common indicators of this community. In some areas, depending on past disturbance and annual rainfall, some mustards can be more abundant than others (Oberbauer et al. 2008).

Non-native grassland–broadleaf dominated is disturbed on site and within the buffer, and consists of short pod mustard. On site, the coverage of short pod mustard is high at approximately 75% cover. Overall, this is a disturbed non-native community. Less commonly occurring species include stinkwort with red brome and stork's bill.

5.1.10 Southern Riparian Woodland (62500)

Southern riparian woodland is moderate density riparian woodlands that is dominated by small trees or shrubs and has scattered taller riparian trees. Southern riparian woodland occurs within major river systems where flood scour occurs, and within smaller major tributaries. Characteristic species that are typically found in southern riparian woodland include broom baccharis (*Baccharis sarothroides*), western sycamore (*Platanus racemosa*), western cottonwood (*Populus* spp.), willow species (*Salix* spp.), and elderberry species (*Sambucus* spp.) (Oberbauer et al. 2008).

Southern riparian woodland occurs within one small portion of the buffer. Within the buffer, southern riparian woodland occurs within the buffer of Beeler Creek. Southern riparian woodland in this area is dominated by red willow (*Salix laevigata*) outside the buffer. In some areas, only red willow occurs as an over story. Other areas consist of red willow with just a few western cottonwood (*Populus fremontii*) seedlings or Goodding's willow (*Salix gooddingii*). Both western cottonwood and Goodding's willow vary in height and occur near the buffer edge. Red willow also varies in height, but generally makes up the majority of the density of these riparian woodland patches.

5.1.11 Unvegetated Stream Channel (64200)

Non-vegetated floodplain or channel is not recognized by Holland (1986) but is recognized by Oberbauer et al. (2008). According to Oberbauer et al. (2008), non-vegetated floodplain or channel is the sandy, gravelly, or rocky fringe of waterways or flood channels that is unvegetated on a relatively permanent basis. Vegetation may be present but is usually less than 10% total cover and grows on the outer edge of the channel.

Unvegetated stream channels contain less than 5% total vegetation cover on site and occurs only within the buffer west of the quarry road. The unvegetated channels consist of sandy soils and cobble. Unvegetated stream channels are surrounded by coastal sage scrub and disturbed habitat.

5.1.12 Coast Live Oak Woodland (71160)

Coast live oak woodland is dominated by a single evergreen species, coast live oak (*Quercus agrifolia* var. *oxyadenia*), with a canopy height reaching 32.8 to 82.0 feet (10 to 25 meters). The shrub layer is poorly developed, but may include toyon, gooseberry (*Ribes* spp.), or laurel sumac. The herb component is continuous, dominated by a variety of introduced species (Oberbauer et al. 2008).

Areas mapped as coast live oak woodland are in the buffer. The overstory is composed of coast live oak with an understory of red brome, stinkwort, and short-pod mustard. Less common associated species include soft chess and tumbleweed (*Salsola tragus*). On site, oak trees have likely been planted because they are aligned in a perfect row. The oaks and their root masses are within the buffer area.

5.1.13 Eucalyptus Woodland (79100)

Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous shrubby understory. Eucalyptus species can form a dense stand with a closed canopy or an open stand that may be installed as a windbreak or as ornamental plantings. Eucalyptus species produce a large amount of leaf and bark litter. Overstory composition is typically limited to one species of the genus, or mixed stands composed of several eucalyptus species; few native overstory species are present within eucalyptus-planted areas. Some characteristic species of this community include blue gum (*Eucalyptus globulus*) and red gum (*Eucalyptus camaldulensis*) (Oberbauer et al. 2008).

Eucalyptus woodland occurs within the buffer. Eucalyptus woodland is composed of red gum and would be considered an open-canopy stand. This eucalyptus woodland community can be easily observed on aerial photography within the buffer.

5.1.14 Flora and Fauna

A total of 85 plants were observed during the spring and late-season 2022 survey, consisting of 50 native and 35 non-native species. A cumulative list of plant species observed by Dudek biologists during all surveys is presented in Appendix C, Plant Species List. Latin and common names for plant species with a CRPR follow the California Native Plant Society's Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2023). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2023) and common names follow the California Natural Communities List (CDFW 2023d) or the U.S. Department of Agriculture Natural Resources Conservation Service's Plants Database (USDA 2023c).

A total of 74 wildlife species were observed during the 2021 and 2022 surveys, consisting of 43 birds, 16 butterflies, 10 mammals, 2 amphibians, and 3 reptiles. All wildlife species observed or detected during the surveys were recorded and are presented in Appendix D, Wildlife Species List. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, the American Ornithological Society (AOS 2021) for birds, Wilson and Reeder (2005) for mammals, and the North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies.

The biological study area supports habitat primarily for upland species within coastal sage scrub habitat. These upland habitats also provide foraging and nesting habitat for migratory and resident bird species and other wildlife species.

5.2 Special-Status Plants

Two California Native Plant Society CRPR 4 special-status plants were observed during the focused plant surveys: small-flower microseris (*Microseris douglasii* ssp. *platycarpha*) and Ashy spike moss (*Selaginella cinerascens*). CRPR 4 plant taxa are of limited distribution or infrequent throughout a broader area in California, and their susceptibility to threat appears low at this time, from a statewide perspective (CNPS 2023). Special-status plants evaluated but that have low potential to occur or are not expected to occur are described in Appendix E, Special-Status Plant Species with Potential to Occur within the Biological Study Area.

Small-Flower Microseris

Small-flower microseris (*Microseris douglasii* ssp. *platycarpha*) has a CRPR of 4.2. Small-flower microseris is an annual herb and is distributed along the coast of San Diego County. Small-flower microseris is found in valley grassland, coastal sage scrub, and foothill woodland. This species' blooming period is March through May. Small-flower microseris occurs in elevations less than 3,600 feet above mean sea level.

A total of 27 small-flower microseris individuals were observed on the hillside facing east within the coastal sage scrub (Figure 5, Rare Plants).

Ashy Spike Moss

Ashy spike moss (*Selaginella cinerascens*) has a CRPR of 4.1. Ashy spike moss is a lycophyte, which includes clubmosses, spikemosses, and quillworts. Ashy spikemoss is found in coastal sage scrub and chaparral. Ashy spikemoss occurs at elevations less than 1,150 feet above mean sea level.

Ashy spikemoss covers an area; therefore, individuals cannot be counted. The area where ashy spikemoss was present was walked as a polygon and is shown in Figure 5.

5.3 Special-Status Wildlife

Sensitive wildlife species are those listed as federal/state endangered or threatened, those proposed for listing, those fully protected by CDFW, those on the California Watch List, California Species of Special Concern, and/or MSCP Covered Species. An evaluation was conducted of known records in the Poway quadrangle and the surrounding quadrangles, including Del Mar, Rancho Santa Fe, San Vicente Reservoir, La Jolla, El Cajon, La Mesa, San Pasqual, and Escondido. In addition, Dudek biologists' knowledge of biological resources and regional distribution of each species, as well as elevation, habitat, and soils present within the project area, were used to evaluate, and determine the potential for various special-status species to occur.

Protocol-level wildlife surveys were conducted for Quino checkerspot butterfly and coastal California gnatcatcher. CDFW protocol surveys for Crotch bumble bee were conducted. Other sensitive wildlife species known to occur in the surrounding region, and those that have a potential to occur within the project site, are described in Appendix F. Coastal California gnatcatcher and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) were observed within the buffer. One pair of Coastal California gnatcatchers was observed in 2022 during protocol surveys. Sensitive wildlife species determined to have high potential to occur include Cooper's hawk (*Accipiter cooperii*).

Coastal California Gnatcatcher

Coastal California gnatcatcher is federally listed as threatened, is a species of Special Concern, and is an HCP Covered Species. Coastal California gnatcatcher breeds in lower elevations (less than 1,640 feet [500 meters]) south and west of the Transverse and Peninsular Ranges (Atwood and Bolsinger 1992). Higher densities of this species occur in coastal San Diego and Orange Counties, and lower densities are found in Los Angeles, Orange, western Riverside, southwestern San Bernardino, and inland San Diego Counties (Atwood 1993; Preston et al. 1998). Coastal California gnatcatchers primarily occupy open coastal sage scrub habitat that is dominated by California sagebrush. This species is less likely to be observed in coastal sage scrub habitats dominated by black sage, white sage, or sugar sumac (*Rhus ovata*).

One coastal California gnatcatcher pair was observed in the coastal sage scrub buffer habitat within the City of Poway vicinity in January 2022 by Brock Ortega (Figure 6, Wildlife). The pair was found within the western buffer west of the road. Suitable habitat within the project site has the potential to support the federally threatened coastal California gnatcatcher along with the buffer. Coastal California gnatcatcher is covered by the MSCP (City of San Diego 1998).

Cooper's Hawk

Cooper's hawk is a California Watch List species that nests and forages in dense stands of live oak, riparian woodlands, and other woodlands habitats, often near water. This species has high potential to occur in the project buffer. Southern riparian woodland and coast live oak woodland associated with the buffer of Beeler Creek are present. The buffer consists of high-quality habitat for nesting. The nearest California Natural Diversity Database occurrence record is from 1985, located 3.5 miles east in Sycamore Canyon (CDFW 2023c). Cooper's hawk is covered by the MSCP (City of San Diego 1998).

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow is a California Watch List species that inhabits open coastal scrub and chaparral with a low cover of scattered scrub interspersed with rocky and grassy patches. There are suitable grasslands and coastal sage scrub for this species to nest and forage within the buffer. The nearest California Natural Diversity Database occurrence is 0.75 miles northeast, recorded in 1998 (CDFW 2023c). Southern California rufous-crowned sparrow was observed during the biological surveys within the buffer. Southern California rufous-crowned sparrow is covered by the MSCP (City of San Diego 1998).

5.4 Jurisdictional Resources

Jurisdictional resources related to Beeler Creek are discussed under another cover addressed to the CDFW (Appendix A). Beeler Creek would be avoided with jack-and-bore methods, as discussed in Biological Constraints Report for the Proposed Nighthawk Underground Gen-Tie Transmission Route on Beeler Creek, Poway, San Diego County, California (Appendix A).

No potentially jurisdictional features were mapped within the project site. One concrete-lined stormwater control feature (V-ditch) was observed along the northeastern boundary and is not considered jurisdictional. These features likely include sheet flow runoff from the road and hillside (Figure 7, Non-Jurisdictional Features).

5.5 Wildlife Corridors/Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to population viability by (1) ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; (2) providing access to adjacent habitat areas, representing additional territory for foraging and mating; (3) allowing for a greater carrying capacity; and (4) providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires).

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals, such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat “islands” that function as steppingstones for dispersal.

The buffer likely provides refuge and cover for wildlife species and their movements. The project site gen-tie line is narrow, paved, and fenced, and, therefore, does not provide any cover. The BESS area has been previously disturbed and has sections surrounded by development. The BESS area is also fenced with some paved edges. Wildlife could move between the habitat along the project site and move within buffers and use the cover of buffers. Due to the fencing within the City of Poway portion of the site, wildlife movement is limited.

6 Anticipated Project Impacts and Analysis of Significance

This chapter addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project.

Direct impacts are defined as those that result in the direct removal of a biological resource through clearing, grubbing, and/or grading. These impacts are further classified as temporary or permanent: temporary impacts primarily result from staging or work areas outside of the permanent footprint that will be restored to its pre-project conditions, and permanent impacts refer to the buildings, roads, and other permanent structures. No temporary impacts are proposed; permanent impacts would occur in all areas of the biological study area (i.e., project site).

Indirect impacts primarily result from adverse "edge effects" as either short-term indirect impacts related to construction activities or long-term indirect impacts associated with the proximity of a development to natural areas. Cumulative impacts refer to incremental individual environmental effects over long-term implementation of a project when considered together with other impacts from other projects in an area. These impacts taken individually may be minor, but can become collectively significant as they occur over a period of time.

6.1 Explanation of Findings of Significance

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

6.2 Direct Impacts

On-site impacts consist of permanent impacts from the proposed project. The permanent impacts consist of the grading and development of the proposed project.

6.2.1 Vegetation Communities

The proposed project would result in permanent direct impacts. These impacts are summarized in Table 4.

Table 4. Permanent Direct Impacts to Vegetation Communities and Land Covers

Vegetation/Land Cover Type	Impacts (Acres)	Mitigation	
	Development	Ratio[a]	Total Impacts[b]
Diegan coastal sage scrub	5.79	2:1	11.58
Diegan coastal sage scrub: inland form	1.50	2:1	3.00
Diegan coastal sage scrub: Baccharis-dominated	0.29	2:1	0.58
Disturbed habitat	0.58	N/A	0
Non-native grassland	0.14	2:1	0.28
Non-native grassland: broadleaf-dominated	0.30	2:1	0.60
Urban/developed	0.21	N/A	0
Urban/developed–ornamental	0.39	N/A	0
Total[b]	**9.2**		**16.04**

Notes: N/A = not applicable.
[a] Mitigation ratio per the City of Poway
[b] Acreages may not sum precisely due to rounding.

The project site is partially within the City of Poway HCP/NCCP. Therefore, impacts to disturbed Diegan coastal sage scrub and non-native grassland would require mitigation per Table 4 as defined within the City of Poway Conservation Plan Mitigation Standards for Impacts to Natural Vegetation and Habitat (City of Poway 1996).

Diegan coastal sage scrub requires a mitigation ratio of 2:1 and non-native grassland has a mitigation ratio of 2:1. Permanent impacts to these vegetation communities would be a potentially significant impact. The permanent loss of these vegetation communities would be mitigated to less than significant through the conservation of native habitats. Mitigation Measure (MM) BIO-1 (Habitat Mitigation), provided in Section 7.1, Minimization and Mitigation Measures describes mitigation. Permanent impacts to ornamental areas, urban developed areas and disturbed areas would be less than significant and no mitigation is required. ***Since the City does not require mitigation for disturbed habitat, ornamental habitat or developed habitat, there is no mitigation proposed.***

6.2.2 Special-Status Plant Species

Special-status plants were observed during focused survey and include two California Native Plant Society CRPR 4 special-status plants: small-flower microseris (*Microseris douglasii* ssp. *platycarpha*) and Ashy spike moss (*Selaginella cinerascens*). CRPR 4 plant taxa are of limited distribution or infrequent throughout a broader area in California, and their susceptibility to threat appears low at this time, from a statewide perspective (CNPS 2023). Due to the local abundance throughout the broader Poway area, list 4 species would be considered less than significant within the Poway preserve.

6.2.3 Special-Status Wildlife Species

Special-status species within the area and with high or moderate potential to occur on site are listed in Appendix D and include coastal California gnatcatcher, Cooper's hawk, and Southern California rufous-crowned sparrow. These species would primarily occur in the Diegan coastal sage scrub, but could occasionally use the non-native grassland

on site. Impacts to the non-native grassland could result in loss of foraging and/or breeding and nesting habitat for these species and would be a potentially significant impact. The permanent loss of habitat would be mitigated to less than significant through the conservation of native habitats, as described in MM-BIO-1 (Habitat Mitigation), provided in Section 7.1.

The California Fish and Game Code protects bird nests, and the MBTA prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. If clearing, grubbing, or other activities that result in the removal of vegetation occur during the nesting bird season, any impacts to active nests or the young of nesting bird species would be potentially significant. This impact would be mitigated to less than significant through nesting bird surveys and establishment of appropriate buffers, as described in MM-BIO-2 (Nesting Bird Surveys), provided in Section 7.1.

6.2.4 Jurisdictional Resources

No potentially jurisdictional features were mapped within the biological study area. Therefore, no direct impacts to jurisdictional resources would occur as a result of the project.

6.2.5 Wildlife Corridors/Habitat Linkages

The 500-foot buffer likely provides refuge and cover for wildlife species and their movements. However, the buffer will not be impacted. The project site gen-tie line is narrow, paved, and fenced, and, therefore, does not provide any cover. The BESS area has been previously disturbed and has sections surrounded by development. The BESS area is also fenced with some paved edges. Wildlife could move between the habitat along the project site and move within buffers and use the cover of buffers. However, due to the fencing and previous development within the project area, wildlife movement is limited. Therefore, no impacts to wildlife corridors or habitat linkages would occur as a result of the proposed project.

6.3 Indirect Impacts

6.3.1 Vegetation Communities and/or Special-Status Plants

Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to any special-status vegetation communities and special-status plants adjacent to the biological study area (if they occur) would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). These impacts are described in detail in the following paragraphs and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Generation of Fugitive Dust

Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology

Construction could result in hydrologic impacts adjacent to and downstream of the limits of grading.

Chemical Pollutants

Erosion, sedimentation, and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status vegetation communities and/or special-status plants. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Long-Term Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proposed project to special-status vegetation communities and/or special-status plants adjacent to the site (if they occur) after construction. Permanent indirect impacts that could affect special-status vegetation communities include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. Each of these potential indirect impacts is discussed in the following paragraphs and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Chemical Pollutants

The effects of chemical pollutants on vegetation communities and special-status plant species are described above. During activities, herbicides may be used to prevent vegetation from reoccurring around structures. However, weed control treatments would include only legally permitted chemical, manual, and mechanical methods. Additionally, the herbicides used during landscaping activities would be contained within the project site.

Altered Hydrology

Water would be used for landscaping purposes that may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status vegetation communities and special-status plant communities. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants (*Linepithema humile*), which can compete with native ant species that could be seed dispersers or plant pollinators. However, the water, and associated runoff, used during landscaping activities would be contained within the project site, and long-term indirect impacts associated with altered hydrology are not expected because the storm drain design proposed for the project would mitigate flood and water quality impacts such that no adjacent properties would be negatively impacted from runoff generated by the development (Kimley-Horn and Associates 2021).

Non-Native, Invasive Plant and Animal Species

Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including exotic plant competition for light, water, and nutrients, and the formation of thatches that block sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators or seed dispersal agents for plants within vegetation communities and special-status plant populations. However, the

project site has historical patterns of disturbance. The majority of the site is already disturbed by non-native species and human activity historically.

Increased Human Activity

Increased human activity could result in trampling of vegetation and soil compaction and could affect the viability of surrounding buffer plant communities. Trampling can alter the ecosystem, creating gaps in vegetation, and allow exotic, non-native plant species to become established, leading to soil erosion. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, surface flows, and erosion. An increased human population would increase the risk for damage to buffer vegetation communities and/or special-status plants if they occur adjacent to the site.

6.3.2 Special-Status Wildlife Species

Short-Term Indirect Impacts

Short-term, construction-related, or temporary indirect impacts to special-status wildlife species that occur within the biological study area (e.g., coastal California gnatcatcher, Cooper's hawk, and Southern California rufous-crowned sparrow) would primarily result from construction activities. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise, chemical pollutants, and increased human activity. These impacts are described in detail in the following paragraphs and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Generation of Fugitive Dust

Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.

Noise

Construction-related noise could occur from equipment used during vegetation clearing and construction of the residences and associated infrastructure. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, cited in Lovich and Ennen 2011).

Chemical Pollutants

Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater, and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity

Increased human activity associated with construction activities can deter wildlife from using habitat areas near the buffer of the project site.

Long-Term Indirect Impacts

Potential long-term or permanent indirect impacts to special-status wildlife species that could occur within the biological study area include increased non-native, invasive plant and animal species and increased human activity. These impacts are described in detail in the following paragraphs and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Non-Native, Invasive Plant and Animal Species

Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including the fact that exotic plants compete for light, water, and nutrients, and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. However, the project site is in an area already disturbed by non-native species and human disturbance.

Increased Human Activity

Increased human activity could result in trampling of vegetation and soil compaction, which could affect the viability and function of suitable habitat for wildlife species within the buffer. In addition, increased human activity can deter wildlife from using habitat areas near the project site buffer. However, the project site is in an area with historical disturbance.

6.3.3 Jurisdictional Resources

Short-Term Indirect Impacts

Potential short-term or temporary indirect impacts to jurisdictional resources adjacent to the biological study area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants, including herbicides. Potential short-term indirect impacts that could affect jurisdictional aquatic resources adjacent to the biological study area are described in detail in the following paragraphs and would be be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Generation of Fugitive Dust

As stated above, excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, and transpiration, as well as increased penetration of phytotoxic gaseous pollutants and increased incidence of pests and diseases.

Changes in Hydrology

Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. The effects of changes in hydrology would be similar to those described in Section 6.3.1, Vegetation Communities and/or Special-Status Plants.

Chemical Pollutants

Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional resources. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

Long-Term Indirect Impacts

Long-term (operation-related) or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional aquatic resources after construction. Permanent indirect impacts that could affect jurisdictional aquatic resources include chemical pollutants, altered hydrology, non-native invasive species, and increased human activity. Each of these potential indirect impacts is discussed in detail in the following paragraphs and would be mitigated to be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Chemical Pollutants

The effects of chemical pollutants on jurisdictional resources are described above.

Altered Hydrology

Water used for landscaping purposes may alter the adjacent hydrologic regime. These hydrologic alterations may affect nearby jurisdictional resources. However, the water, and associated runoff, used during landscaping activities would be contained within the project site, and long-term indirect impacts associated with altered hydrology are not expected because the storm drain proposed for the project is designed to mitigate flood and water quality impacts such that no adjacent properties would be negatively impacted from runoff generated by the development (Kimley-Horn and Associates 2021).

Non-Native, Invasive Plant and Animal Species

The effects of non-native, invasive plant and animal species would be similar to those described in Section 6.3.1. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within nearby jurisdictional resources. However, the project site is in an area already disturbed by non-native species and human disturbance.

Increased Human Activity

The effects of increased human activity would be similar to those described in Section 6.3.1. An increased human population increases the risk for damage to jurisdictional resources occurring adjacent to the site.

6.3.4 Wildlife Corridors/Habitat Linkages

Short-Term Indirect Impacts

Short-term indirect impacts to habitat connectivity and wildlife corridors could result from increased human activity. These impacts are described in detail in the following paragraphs and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Increased Human Activity

Project construction would occur during the daytime and would not affect wildlife species, such as mammals, that are most active in evenings and nighttime. Wildlife species such as birds, rabbits, and lizards are active in the daytime, but use a variety of habitats and could continue using other areas adjacent to the biological study area for wildlife movement.

Long-Term Indirect Impacts

Long-term indirect impacts include increased human activity and lighting. These impacts are described in detail below and would be reduced to less than significant with implementation of standard best management practices (BMPs) provided in Section 7.1.

Increased Human Activity

Increased human activity can deter wildlife from using habitat areas near the proposed project. However, the project site is in an area already disturbed by non-native species and human disturbance.

6.4 Cumulative Impacts

The cumulative biological study area is the area covered by the Poway HCP/NCCP. Direct impacts to special-status plant species and special-status wildlife could occur due to project implementation but would be mitigated per the Poway HCP/NCCP, and therefore would not contribute to any cumulative sensitive species impacts. The project would implement standard best management practices, which would avoid contributions toward a cumulative indirect impact to special-status wildlife species and sensitive habitats. As with all other projects, the proposed project would be required to comply with the California Fish and Game Code and MBTA to avoid impacts to nesting birds. Therefore, the project is not anticipated to result in significant cumulative impacts to regional biological resources.

7 Best Management Practices and Mitigation Measures

7.1 Best Management Practices

BMP-1 Flagging/Markings at Work Area Limits. To prevent inadvertent disturbance to areas outside the limits of grading, the contractor shall install markings that are clearly visible along the limits of grading.

BMP-2 Invasive Species Prohibition. The final landscape plans shall be reviewed by the City to confirm that there are no invasive plant species as included on the most recent version of the California Invasive Plant Council's inventory for the project region.

7.2 Mitigation Measures

MM-BIO-1 Habitat Mitigation. The applicant shall mitigate for impacts to Diegan coastal sage and non-native grassland in accordance with Table 4 of this report based upon the City of Poway Habitat Conservation Plan/Natural Community Conservation Plan at a rate or 2:1 for coastal sage scrub and 2:1 for non-native grassland.

The biological impacts are not new or more severe and have been applied for previously required environmental impact reports (EIRs) of the area, according to research conducted via California Environmental Quality Act (CEQA) expert analysis of previous EIR:

South Poway Planned Community Development Plan EIR

The South Poway Planned Community Development Plan EIR anticipated development of approximately 15 acres of land on the property as light industrial, but the project would develop only approximately 10 acres; thus the biological impacts are less than those anticipated in the 1985 EIR and its SEIRs. No new sensitive species, jurisdictional waters or vegetation communities were identified as compared to the prior EIR and SEIRs. The City also previously determined that modification of the CUP to revise the location of the industrial building pad locations would have no new or more severe impacts than disclosed in the 1990 SEIR. The project would incorporate Biological Resources Mitigation Measure 4 and Mitigation Measure 10 as identified in the 1985 EIR to reduce potential impacts to special status species. These mitigation measures require landscaping standards and pre-construction activity surveys for sensitive species and habitats.

Additionally, the project would implement mitigation measures from the 1990 SEIR including long-term biological monitoring and maintenance of specified resources on site and comply with the conditions of approval of CUP 22-0005 approved in April 2023 requiring submittal of a habitat vegetation map prepared

by a qualified biologist prior to commencement of grading for the industrial pads and compliance with all requirements of the Zoning Ordinance and all other applicable City ordinances in effect at the time of Building Permit issuance. Pursuant to the Zoning Ordinance Section 17.20.040, all development projects within the Planned Community- PC zone that have the potential to adversely impact sensitive plant species, wildlife species and associated natural habitats shall either demonstrate that any removal of habitat associated with the proposed development has been authorized by the Wildlife agencies or shall comply with the adopted Poway HCP, implementing agreement and the requirements thereof, including the compensation mitigation strategy, mitigation ratios, and special development requirements. Accordingly, the project permits will require the project to document compliance with the Poway HCP including mitigation requirements. With compliance with the Poway HCP guidelines, impacts would be less than significant.

MM-BIO-2 Nesting Bird Surveys. Construction-related ground-disturbing activities (e.g., clearing/grubbing, grading, and other intensive activities) that occur during the breeding season (typically February 1 through August 31) shall require a survey for nesting bird species to be conducted on or within 300 feet of the construction area for non-listed nesting migratory birds, and within 500 feet of the construction area for federally or state-listed birds and raptors. This survey is necessary to ensure avoidance of impacts to nesting raptors and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503 and 3513.

The pre-construction survey must be conducted within 10 calendar days prior to the start of construction. The results of the survey must be submitted to the City of Poway (City) prior to initiating any construction activities. If nesting birds are detected, the following buffers shall be established: (1) no work within 300 feet of a non-listed nesting migratory bird nest, and (2) no work within 500 feet of a listed bird or raptor nest. However, the City may reduce these buffer widths depending on site-specific conditions (e.g., the width and type of screening vegetation between the nest and proposed activity) or the existing ambient level of activity (e.g., existing level of human activity within the buffer distance). If construction must take place within the recommended buffer widths, the project applicant shall contact the City to determine the appropriate buffer. Once the nest is no longer occupied for the season, construction may proceed in the setback areas. If construction activities, particularly clearing/grubbing, grading, and other intensive activities, stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area.

7.3 Regional Resource Planning Context – Compliance Review

City of Poway Habitat Conservation Plan

The project site is within the jurisdiction of Poway and does it include any wetlands or riparian areas on site or adjacent to the site. With implementation of the measures provided in Section 7.1, this project will be in compliance with the City of Poway Habitat Conservation Plan.

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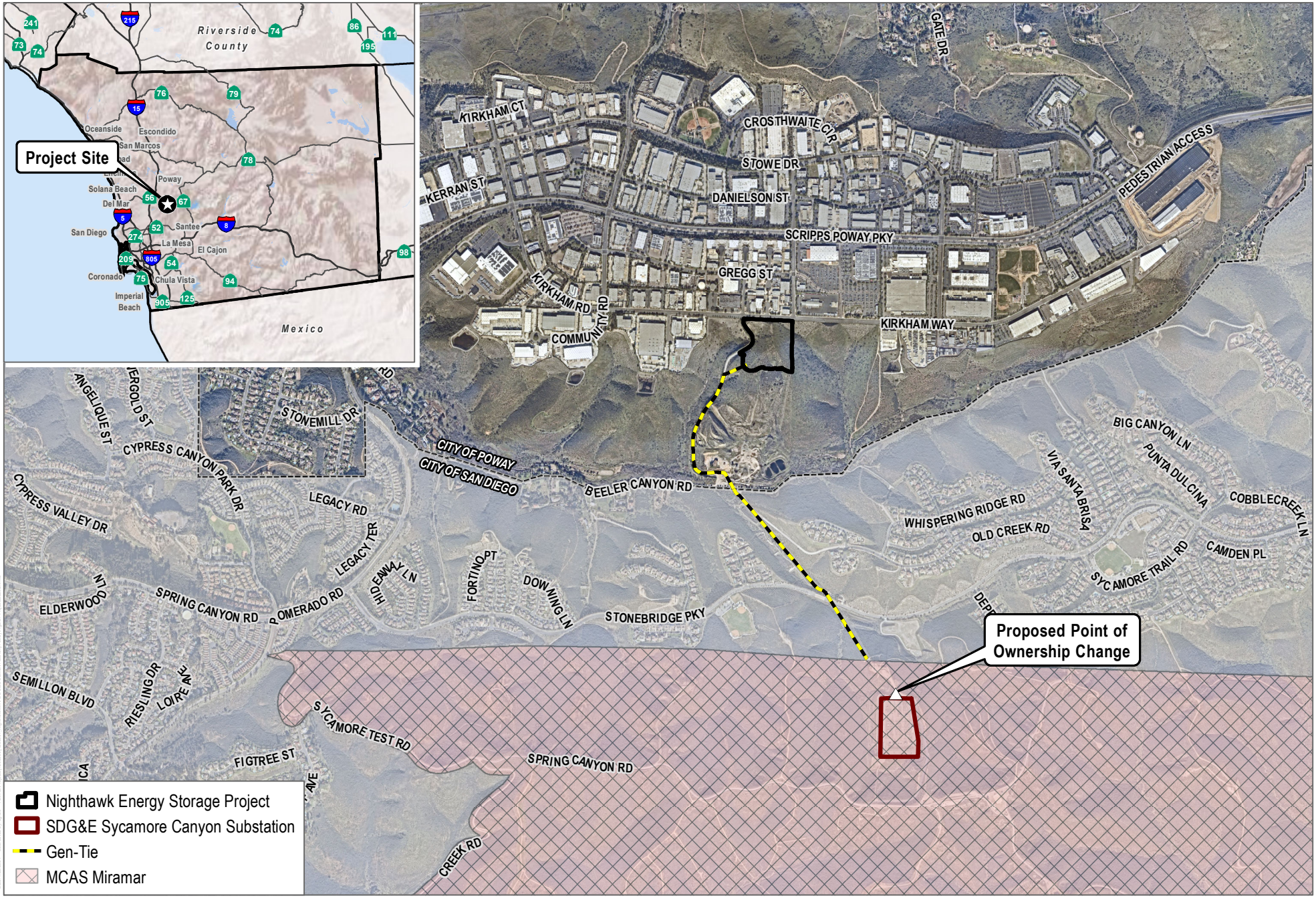

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2020, 2024

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2023, 2024

DUDEK

0 250 500 Feet

FIGURE 2

Project Site

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; City of Poway; SANGIS 2023, 2024

DUDEK

0 250 500 Feet

FIGURE 3

MSCP

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2023, 2024

DUDEK

0 150 300 Feet

FIGURE 4

Vegetation Communities

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2023, 2024

DUDEK

0 150 300 Feet

FIGURE 5

Rare Plants

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2023, 2024

DUDEK

0 150 300 Feet

FIGURE 6

Wildlife

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

SOURCE: Power Engineering 2022; Arevon 2023; SANGIS 2023, 2024

DUDEK

0 150 300 Feet

FIGURE 7

Non-jurisdictional Features

Existing Conditions Report for the Nighthawk Energy Storage Project Poway, CA

Appendix A

Biological Constraints Report for the Proposed Nighthawk Underground Gen-Tie Transmission Route on Beeler Creek, Poway, San Diego County, California

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November 6, 2023

Mr. Dave Mayer
California Department of Fish and Wildlife
3883 Ruffin Road
San Diego, California 92123

Subject: **Biological Constraints Report for the Proposed Nighthawk Underground Gen-Tie Transmission Route on Beeler Creek, Poway, San Diego County, California**

Introduction

Dudek understands that an updated constraints evaluation for potential regulated biological resources occurring on the project site identified as a biological conservation easement (BCE; project site) of Beeler Creek has been requested by Dave Mayer and Alison Kalionwski at the California Department of Fish and Wildlife (CDFW). A meeting was held on July 27, 2023, to discuss recommendations. The following letter report (report) has been prepared to evaluate aboveground potentially sensitive biological resources of fish, wildlife, and vegetation for the proposed Nighthawk Underground Gen-Tie Transmission Route.

This report provides a description of the current site conditions, an assessment of potential biological resources including biological resources with potential to occur, and photographs of the gen-tie underground transmission route located within the biological conservation easement of Beeler Creek, Poway, San Diego County, California. The methods, details, results, and discussion of the investigation are provided herein.

Project Location

The project site is located within the City of Poway, San Diego County, California. The project site is north of Beeler Canyon Road, south of Kirkham way, east of Pomerado road, and west of Carowind Lane, and directly adjacent to Beeler Canyon Road on Beeler Creek. The approximate coordinates for the location of the proposed gen-tie intersecting Beeler Creek are 32.927415 N and 117.039284 W (Figure 1, Project Location; see Attachment A for figures).

Project Description and Background

The applicant is proposing to seek approval from the City of Poway and CDFW to construct a transmission line under the biological conservation easement of Beeler Creek. The proposed route would facilitate superior engineering and construction methodology—jack and bore—that would not disturb any aboveground wildlife habitat. Jack and bore construction is a trenchless construction method that protects sensitive aboveground resources; this method has three different components: a launch pit on one end of the site and a receiving pit on the other, a boring machine, and a casing pipe. The boring machine drills into the earth and simultaneously pushes the casing pipe into the space created, which means that the surface area between the launching and receiving pits is not

disturbed. For this project, the launching and receiving pits and the underground path for the pipe will total 40 feet long, 12 feet wide, and 20 feet deep, and the casing pipe is 20 feet long by 3 feet in diameter.

The biological conservation easement of Beeler Creek is currently being restored and is in its earliest stages. More specifically, the site is in the second year of a 5-year plan.

Methods

Vegetation Mapping

Vegetation communities and land use within the survey area were mapped in the field directly onto a 200-foot-scale (1 inch = 200 feet), aerial photograph-based field map of the survey area. Following completion of the fieldwork, all vegetation polygons were transferred to a topographic base, digitized using ArcGIS, and then geographic information system coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the survey area was determined.

The vegetation community and land cover mapping follow Draft Vegetation Communities of San Diego County (Oberbauer et. al. 2008), which is based on the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986).

Pre-fieldwork Literature Review

Prior to conducting the field investigation, an updated review of existing biological resources within the vicinity of the project site was conducted using the California Natural Diversity Database nine quad (CDFW 2023), California Native Plant Society's Online Inventory of Rare and Endangered Vascular Plants (CNPS 2023), and the San Diego Plant Atlas (SDNHM 2023). The purpose of this review was to determine if sensitive plant and wildlife species were known to occur within the survey area or in the nearby vicinity and what constraints these occurrences might have on the project. Soil Survey for the San Diego Area, California – Part 1 (Bowman 1973) was also reviewed to identify potentially occurring special-status plants based on known soil associations.

Plants and Wildlife

Dudek flagged the location of the underground gen-tie transmission route from launch pit to receiving pit, spanning Beeler Creek. This route was photographed. Next, transects were walked on both sides of the flags every 10 feet parallel to the flagging. These transects encompassed a 100-foot buffer on each side of the route to capture all plant and wildlife species. This detail helped to identify any burrows, scat, tracks and/or potential rare plants.

The plant species encountered during the field survey were identified and recorded. An updated potential-to-occur table evaluating each species can be found in Attachment B. A compendium of plant species observed within the project site is provided in Attachment C.

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded. In addition to species detected during the surveys, expected wildlife use of the survey area was determined by known habitat preferences of local species and knowledge of their relative distributions in the area; this is detailed in the updated

potential-to-occur list in Attachment D. A compendium of wildlife species observed in the survey area is provided in Attachment E.

Attachment F includes photo documentation of the survey route taken from bore pit to bore pit, first looking south and then north across Beeler Creek. The central line is documented with pink flags every 10 feet. Labels are included in each photo to indicate the direction the photo was taken from.

Field Survey and Conditions

On September 14, 2023, Dudek biologist Erin Bergman surveyed the project site and conducted vegetation mapping. Incidental observations of plants and wildlife were documented. The survey was conducted from 9:43 a.m. to 12:39 p.m., the temperature ranged from 64°F to 65°F, cloud cover varied between 0% and 40%, and wind speeds ranged from 2 to 5 miles per hour.

Results

Vegetation Mapping Results

In total, four vegetation communities were identified within the survey area that would buffer the jack and bore location (Figure 2, Vegetation Communities and Land Cover Types). These communities are discussed in further detail in the following sections.

Disturbed Habitat

Disturbed habitat comprises areas that have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association (Oberbauer et. al. 2008). These areas may continue to retain soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes, graded firebreaks, graded construction pads, temporary construction staging areas, off-road-vehicle trails, dirt road areas repeatedly cleared for fuel management, or areas that are repeatedly used in ways that prevent revegetation (e.g., parking lots, trails that have persisted for years).

On site, disturbed habitat consists of old dirt roads, compacted bare ground, and weedy ruderal patches with edges of stinkwort (*Dittrichia graveolens*). Overall, the soils within the disturbed habitat are highly disturbed soils or compacted soils. Plant species that were present within the disturbed habitat include non-native graminoids like red brome (*Bromus rubens*) and short-pod mustard (*Hirschfeldia incana*).

Non-vegetated Floodplain or Channel

Non-vegetated floodplain or channel refers to sandy, gravelly, or rocky fringes of larger waterways or flood channels. These areas are relatively unvegetated on a permanent basis. Variable water lines inhibit the growth of vegetation, although some weedy species and grasses may grow along the outer edges. Vegetation can be present but at less than 10% total cover.

On site, non-vegetated channel occupies the majority of the area and is being avoided by using jack and bore construction. The non-vegetated channel runs east to west and consists of patches of stinkwort and tumbleweed (*Salsola tragus*) through the central section. These weedy species make up less than 10% cover of the channel. Generally, the channel is unvegetated.

Urban/Developed

According to Oberbauer et. al. (2008), urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated.

On site, urban developed areas consist of paved roads, compacted dirt roads, and highly compacted areas of quarry construction work and other quarry development.

Coast Live Oak Woodland

Coast live oak woodland is dominated by a single evergreen species, coast live oak (*Quercus agrifolia* var. *oxyadenia*), with a canopy height reaching 32.8 to 82.0 feet (10 to 25 meters). The shrub layer is poorly developed but may include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), or laurel sumac (*Malosma laurina*). The herb component is continuous, dominated by a variety of introduced species (Oberbauer et. al. 2008).

On site, areas mapped as coast live oak woodland are in the 100-foot buffer zone; the overstory is composed of coast live oak with an understory of red brome, stinkwort, and short-pod mustard. Less-common associated species include soft chess (*Bromus hordeaceus*) and tumbleweed. On site, oak trees have likely been planted as they are aligned in a perfect row. The oaks and their root mass are within the buffer area, but using the jack and bore method would avoid these trees.

Soils Mapping Results

The U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey indicates the entire project site consists of two soil types: Visalia gravelly loam, 2% to 5% slopes (VbB), within Beeler Creek; and Redding cobbly loam, dissected, 15% to 50% slopes (RfF), within the quarry area and the edges of the quarry on the upslope of Beeler creek (USDA 2023).

Wildlife Results

Special-status species are those defined by San Diego County or another regulatory agency as species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes, or species recognized by local and regional resource agencies as sensitive.

CDFW assigns Species of Special Concern status to species whose population levels are declining, have limited ranges, and/or are vulnerable to extinction due to continuing threats (CDFW 2023; CDFW 2021a, 2021b, 2021c). Fully Protected species are protected by CDFW, and Watch List species are candidates for higher sensitive status. The U.S. Fish and Wildlife Service assigns the Birds of Conservation Concern status to migratory and non-migratory

bird species that meet the requirements of the 1988 amendment to the Fish and Wildlife Conservation Act, which mandates the U.S. Fish and Wildlife Service to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973" (16 USC 1531-1544).

After reconnaissance site studies and a nine-quad review of wildlife species within and surrounding the Poway quadrangle (location of project site), it was determined there was "no expectance" or "low potential" for rare wildlife to occur within the project site. This is due to the level of disturbance and development within the project site, which has been completely disturbed, and based upon the reconnaissance study appears to be in the very early stages of restoration. See Attachment D and E for details on each species observed and each rare species with potential to occur that was reviewed.

Plants Results

Endangered, rare, or threatened plant species as defined in the California Environmental Quality Act Guidelines Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this report and include (1) endangered or threatened plant species recognized in the context of the state and federal Endangered Species Acts (CDFW 2021b), (2) plant species with a California Rare Plant Rank of 1 through 4 (CNPS 2023), and (3) plant species considered "sensitive" by San Diego County (County of San Diego 2010).

After reconnaissance site studies and an updated nine-quad review of plant species within and surrounding the Poway quadrangle, the site has been designated "not expected to occur" for rare plants from bore pit to bore pit. This is due to the high level of disturbance and development within this area. See Attachment B for details on each species and each rare plant species reviewed. No special-status plant species were incidentally observed during the survey. A list of species that are present is provided in attachment C. A total of 30 species of native or naturalized plants, 8 native (27%) and 22 non-native (73%), was recorded on the site. The site consisted almost entirely of weedy species, with the dominant plant being stinkwort, a noxious weed.

California Natural Diversity Database

The California Natural Diversity Database search showed the locations of sensitive species that occur within a 9-quad radius of the project site. These occurrences were considered when evaluating the potential for sensitive species to occur on site (Attachments B and D).

Discussion of Findings

Most plants on site consist of non-native weeds including stinkwort and tumbleweed. A detailed analysis of the site was performed from bore pit to bore pit along with a 100-foot buffer on both sides, and no habitat for wildlife within these noxious weeds is present. Mapped vegetation communities indicate that the site is disturbed and developed with a section of non-vegetated channel (Beeler Creek), which will be avoided. Oaks occur on the buffer that will be avoided. Impacts to potential jurisdictional aquatic resources are avoided with jack and bore technology. The disturbed site is in the early stages of restoration based upon the findings on site. A Year 1 Annual Monitoring Report, prepared in conjunction with the 5-year restoration plan, is included in Attachment G. The work proposed for this site would not interfere with any aspects of the restoration plan.

Overall, the proposed underground transmission route of Beeler Creek consists almost entirely of scattered weedy species with no suitable habitat for wildlife. If you have any questions, please contact me at 760.274.3927.

Sincerely,

Erin Bergman
Senior Biologist

Att.: *A – Figures*
B – Special-Status Plant Species' Potential to Occur
C – Plant Compendium
D – Special-Status Wildlife Species' Potential to Occur
E – Wildlife Compendium
F – Site Photo Document
G – Year 1 Annual Monitoring Report of the Beeler Creek Restoration Project

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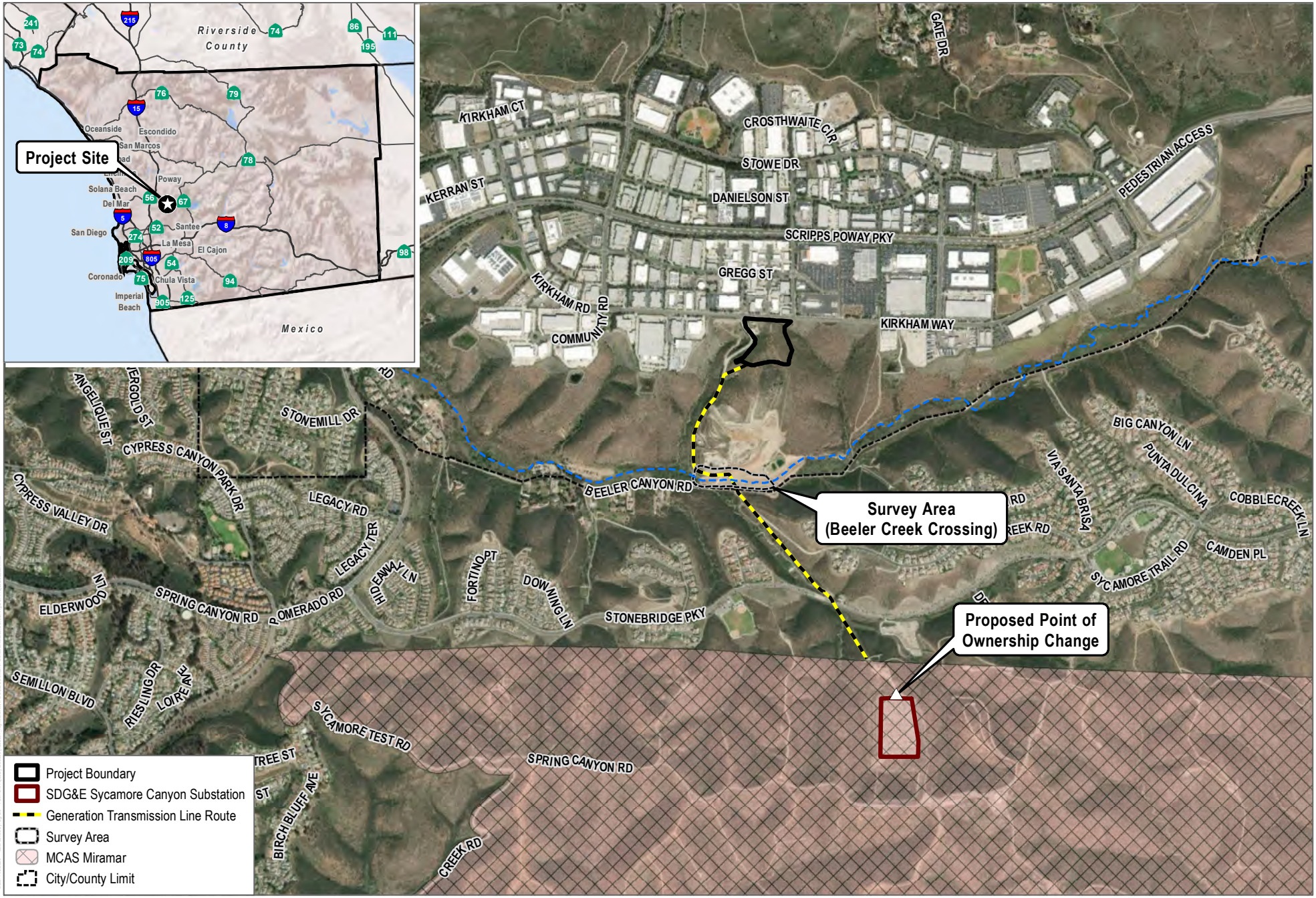
Attachment A

Figures



SOURCE: Tenaska 2023; SANGIS 2023; ESRI World Imagery 2022

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Nighthawk Energy Storage Project

SOURCE: Tenaska 2023; SANGIS 2023

DUDEK

0 50 100 Feet

FIGURE 2

Vegetation Communities and Land Cover Types

Nighthawk Energy Storage Project

Attachment B

Special-Status Plant Species' Potential to Occur

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2	Coastal dunes/perennial herb/Feb–Nov/ 0–330	Not expected to occur. No suitable vegetation present.
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay, Openings/annual herb/Apr–June/ 35–3,145	Not expected to occur. No suitable vegetation present.
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1	Coastal dunes, Coastal scrub (sandy)/annual herb/Mar–June(July)/ 0–35	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Adolphia californica	California adolphia	None/None/2B.1	Chaparral, Coastal scrub, Valley and foothill grassland; Clay/perennial deciduous shrub/Dec–May/35–2,425	Not expected to occur. No suitable vegetation present.
Agave shawii var. *shawii*	Shaw's agave	None/None/2B.1	Coastal bluff scrub, Coastal scrub/ perennial leaf/Sep–May/10–395	Not expected to occur. No suitable vegetation present.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2	Chaparral, Sonoran desert scrub; Sandy/perennial shrub/Aug–Nov/ 35–1,640	Not expected to occur. Singlewhorl burrobush, a large perennial shrub would have been observed during the reconnaissance survey.
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Alkaline (sometimes), Clay (sometimes), Disturbed areas (often), Loam (sometimes), Sandy (sometimes)/ perennial rhizomatous herb/Apr–Oct/ 65–1,360	Not expected to occur. No suitable vegetation present.
Aphanisma blitoides	aphanisma	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/ Feb–June/5–1,000	Not expected to occur. No suitable vegetation present.
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/None/1B.1	Chaparral (maritime, sandy)/perennial evergreen shrub/June–Apr/0–1,195	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Artemisia palmeri	San Diego sagewort	None/None/4.2	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; Mesic, Sandy/perennial deciduous shrub/(Feb)May–Sep/15–3,000	Not expected to occur. San Diego sagewort, a large perennial shrub would have been observed during the reconnaissance survey.
Asplenium vespertinum	western spleenwort	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub; Rocky/perennial rhizomatous herb/Feb–June/590–3,280	Not expected to occur. No suitable vegetation present.
Astragalus deanei	Dean's milk-vetch	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian forest/perennial herb/Feb–May/245–2,280	Not expected to occur. No suitable vegetation present.
Astragalus oocarpus	San Diego milk-vetch	None/None/1B.2	Chaparral (openings), Cismontane woodland/perennial herb/May–Aug/ 1,000–5,000	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Astragalus tener var. *titi*	coastal dunes milk-vetch	FE/SE/1B.1	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic); Mesic (often), Vernally Mesic (often)/annual herb/Mar–May/5–165	Not expected to occur. No suitable vegetation present.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/Mar–Oct/ 10–1,505	Not expected to occur. No suitable vegetation present.
Atriplex pacifica	south coast saltscale	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/ Mar–Oct/0–460	Not expected to occur. No suitable vegetation present.
Atriplex parishii	Parish's brittlescale	None/None/1B.1	Chenopod scrub, Playas, Vernal pools; Alkaline/annual herb/June–Oct/ 80–6,230	Not expected to occur. No suitable vegetation present.
Baccharis vanessae	Encinitas baccharis	FT/SE/1B.1	Chaparral (maritime), Cismontane woodland; Sandstone/perennial deciduous shrub/Aug–Nov/195–2,360	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Bergerocactus emoryi	golden-spined cereus	None/None/2B.2	Chaparral, Closed-cone coniferous forest, Coastal scrub; Sandy/perennial stem/ May–June/10–1,295	Not expected to occur. No suitable vegetation present.
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/perennial bulbiferous herb/ Apr–May/165–1,525	Not expected to occur. No suitable vegetation present.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; Clay (often)/perennial bulbiferous herb/ Mar–June/80–3,670	Not expected to occur. No suitable vegetation present.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay, Mesic/perennial bulbiferous herb/May–July/100–5,550	Not expected to occur. No habitat is present onsite.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2	Chaparral, Coastal scrub; Burned areas, Disturbed areas, Loam (sometimes), Sandy (sometimes)/annual herb/ (Jan)Mar–June/35–4,000	Not expected to occur. No suitable vegetation present.
Calochortus plummerae	Plummer's mariposa-lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Granitic, Rocky/perennial bulbiferous herb/May–July/330–5,575	Not expected to occur. No suitable vegetation present.
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3	Cismontane woodland, Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Clay (sometimes), Sandy (sometimes)/annual herb/Mar–May(June)/0–985	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Castilleja plagiotoma	Mojave paintbrush	None/None/4.3	Great Basin scrub (alluvial), Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr–June/985–8,200	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Ceanothus cyaneus	Lakeside ceanothus	None/None/1B.2	Chaparral, Closed-cone coniferous forest/perennial evergreen shrub/ Apr–June/770–2,475	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2	Chaparral (gabbroic, metavolcanic)/ perennial evergreen shrub/Jan–Apr/ 1,965–3,605	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Ceanothus verrucosus	wart-stemmed ceanothus	None/None/2B.2	Chaparral/perennial evergreen shrub/Dec–May/5–1,245	Not expected to occur. No suitable vegetation present.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/ 0–1,570	Not expected to occur. Southern tarplant would have been observed during the reconnaissance survey as the left over annual is still present year-round.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; Alkaline/annual herb/Apr–Sep/0–2,095	Not expected to occur. Smooth tarplant would have been observed during the reconnaissance survey as the left over annual is still present year-round.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1	Coastal bluff scrub (sandy), Coastal dunes/annual herb/Jan–Aug/0–330	Not expected to occur. No suitable vegetation present.
Chamaebatia australis	southern mountain misery	None/None/4.2	Chaparral (gabbroic, metavolcanic)/ perennial evergreen shrub/Nov–May/ 985–3,345	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. Salt marsh birds beak occurs near the coast in saline water.
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2	Chaparral, Coastal scrub, Lower montane coniferous forest; Granitic/annual herb/May–Aug/985–6,230	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/SE/1B.1	Chaparral (maritime), Closed-cone coniferous forest, Coastal scrub; Openings, Sandy/annual herb/ Mar–May/10–410	Not expected to occur. No suitable vegetation present.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/1B.2	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay (often)/annual herb/Apr–July/100–5,015	Not expected to occur. Long-spined spineflower is found in meadows and seeps. Beeler Creek is a flowing channel which would prevent germination and growth of long-spined spineflower.
Cistanthe maritima	seaside cistanthe	None/None/4.2	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Sandy/annual herb/(Feb)Mar–June(Aug)/15–985	Not expected to occur. No suitable vegetation present.
Clarkia delicata	delicate clarkia	None/None/1B.2	Chaparral, Cismontane woodland; Gabbroic (often)/annual herb/ Apr–June/770–3,280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Clinopodium chandleri	San Miguel savory	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland; Gabbroic (sometimes), Rocky (sometimes)/ perennial shrub/Mar–July/395–3,525	Not expected to occur. No suitable vegetation present.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/100–2,590	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; Clay, Seeps, Serpentinite/annual herb/Mar–July/ 100–2,425	Not expected to occur. No suitable vegetation present.
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	None/None/1B.1	Chaparral, Coastal bluff scrub, Coastal scrub/perennial herb/June–Sep/ 10–375	Not expected to occur. No suitable vegetation present.
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	None/None/1B.1	Chaparral (maritime, openings), Coastal bluff scrub, Coastal scrub; Sandy/ perennial herb/May–Sep/15–490	Not expected to occur. No suitable vegetation present.
Cylindropuntia californica var. *californica*	snake cholla	None/None/1B.1	Chaparral, Coastal scrub/perennial stem/Apr–May/100–490	Not expected to occur. No suitable vegetation present.
Dichondra occidentalis	western dichondra	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial rhizomatous herb/(Jan)Mar–July/165–1,640	Not expected to occur. No suitable vegetation present.
Diplacus aridus	low bush monkeyflower	None/None/4.3	Chaparral (rocky), Sonoran desert scrub/perennial evergreen shrub/ Apr–July/2,460–3,935	Not expected to occur. The site is outside of the species' known elevation range.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1	Chaparral, Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Clay (often), Rocky, Serpentinite/perennial herb/Apr–June/15–1,475	Not expected to occur. No suitable vegetation present.
Dudleya brevifolia	short-leaved dudleya	None/SE/1B.1	Chaparral (maritime, openings), Coastal scrub; Sandstone/perennial herb/ Apr–May/100–820	Not expected to occur. No suitable vegetation present.
Dudleya variegata	variegated dudleya	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/perennial herb/Apr–June/10–1,900	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dudleya viscida	sticky dudleya	None/None/1B.2	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub; Rocky/perennial herb/May–June/ 35–1,800	Not expected to occur. No suitable vegetation present.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	None/None/1B.1	Chaparral, Coastal scrub; Mesic/ perennial evergreen shrub/ (July)Sep–Nov/100–1,965	Not expected to occur. No suitable vegetation present.
Eriodictyon sessilifolium	sessile-leaved yerba santa	None/None/2B.1	Coastal scrub; Volcanic/perennial shrub/July/560–560	Not expected to occur. No suitable vegetation present.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/1B.1	Coastal scrub, Valley and foothill grassland, Vernal pools; Mesic/ annual/perennial herb/Apr–June/ 65–2,030	Not expected to occur. No suitable vegetation present.
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2	Chaparral (maritime), Coastal dunes, Coastal scrub; Openings, Sandy/ perennial herb/Feb–June(July–Aug)/ 0–195	Not expected to occur. No suitable vegetation present.
Erythranthe diffusa	Palomar monkeyflower	None/None/4.3	Chaparral, Lower montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–June/ 4,000–6,000	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Euphorbia misera	cliff spurge	None/None/2B.2	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; Rocky/perennial shrub/(Oct)Dec–Aug/35–1,640	Not expected to occur. No suitable vegetation present.
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/perennial stem/May–June/10–1,475	Not expected to occur. No suitable vegetation present.
Geothallus tuberosus	Campbell's liverwort	None/None/1B.1	Coastal scrub (mesic), Vernal pools/ ephemeral liverwort//35–1,965	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Githopsis diffusa ssp. *filicaulis*	Mission Canyon bluecup	None/None/3.1	Chaparral (disturbed areas, mesic)/ annual herb/Apr–June/1,475–2,295	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Grindelia hallii	San Diego gumplant	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/perennial herb/ May–Oct/605–5,725	Not expected to occur. The site is outside of the species' known elevation range.
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Openings/annual herb/Mar–May/65–3,130	Not expected to occur. No suitable vegetation present.
Hazardia orcuttii	Orcutt's hazardia	None/ST/1B.1	Chaparral (maritime), Coastal scrub; Clay (often)/perennial evergreen shrub/ Aug–Oct/260–280	Not expected to occur. No suitable vegetation present.
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	None/None/1B.1	Chaparral (coastal), Coastal dunes, Coastal scrub/perennial herb/Mar–Dec/ 0–4,015	Not expected to occur. No suitable vegetation present.
Holocarpha virgata ssp. *elongata*	graceful tarplant	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May–Nov/ 195–3,605	Not expected to occur. No suitable vegetation present.
Hordeum intercedens	vernal barley	None/None/3.2	Coastal dunes, Coastal scrub, Valley and foothill grassland (depressions, saline flats), Vernal pools/annual herb/ Mar–June/15–3,280	Not expected to occur. No suitable vegetation present.
Horkelia truncata	Ramona horkelia	None/None/1B.3	Chaparral, Cismontane woodland; Clay, Gabbroic/perennial herb/May–June/ 1,310–4,265	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Hulsea californica	San Diego sunflower	None/None/1B.3	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; Burned areas, Openings/perennial herb/Apr–June/3,000–9,560	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2	Chaparral, Coastal scrub (often disturbed areas, sandy)/perennial shrub/Apr–Nov/ 35–820	Not expected to occur. No suitable vegetation present.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2	Marshes and swamps, Playas/perennial herb/Apr–Oct/0–1,640	Not expected to occur. San Diego marsh elder would have been observed during reconnaissance surveys as San Diego marsh-elder is a large perennial shrub.
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/perennial deciduous tree/Mar–Aug/165–2,950	Not expected to occur. No suitable vegetation present.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps (alkaline seeps)/perennial rhizomatous herb/(Mar)May–June/10–2,950	Not expected to occur. Southwestern spiny rush would have been observed during reconnaissance surveys as southwestern spiny rush is a large perennial shrub.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/ Feb–June/5–4,000	Not expected to occur. Remnant specimens would likely been observed in present. In addition, Coulter's goldfields are more likely to occur in vernal pools and vernal areas or up on the edges of marshes or swamps with still waters.
Lathyrus splendens	pride-of-California	None/None/4.3	Chaparral/perennial herb/Mar–June/ 655–5,000	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Lepechinia cardiophylla	heart-leaved pitcher sage	None/None/1B.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest/perennial shrub/Apr–July/1,705–4,490	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/5–2,900	Not expected to occur. No suitable vegetation present.
Leptosiphon grandiflorus	large-flowered leptosiphon	None/None/4.2	Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland; Sandy (usually)/annual herb/Apr–Aug/ 15–4,000	Not expected to occur. No suitable vegetation present.
Leptosyne maritima	sea dahlia	None/None/2B.2	Coastal bluff scrub, Coastal scrub/perennial herb/Mar–May/15–490	Not expected to occur. No suitable vegetation present.
Lycium californicum	California box-thorn	None/None/4.2	Coastal bluff scrub, Coastal scrub/perennial shrub/Mar–Aug(Dec)/ 15–490	Not expected to occur. No suitable vegetation present.
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	None/None/4.2	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/annual herb/Mar–May/ 50–3,510	Not expected to occur. No suitable vegetation present.
Mobergia calculiformis	light gray lichen	None/None/3	Coastal scrub (?)/crustose lichen (saxicolous)//35–35	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Monardella breweri ssp. *microcephala*	small-headed monardella	None/None/2B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest; Disturbed areas (sometimes), Granitic, Openings/ annual herb/May–Aug/755–3,935	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Monardella hypoleuca ssp. *lanata*	felt-leaved monardella	None/None/1B.2	Chaparral, Cismontane woodland/perennial rhizomatous herb/June–Aug/985–5,165	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Monardella viminea	willowy monardella	FE/SE/1B.1	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; Alluvial Terraces, Washes/perennial herb/June–Aug/165–740	Not expected to occur. Remnant willowy monardella would have been observed during reconnaissance studies. In addition, larger cobbles and shrubs must be present to help hold seedlings in place to establish. Water flow is likely too fast in this area.
Myosurus minimus ssp. *apus*	little mousetail	None/None/3.1	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/ 65–2,095	Not expected to occur. No suitable vegetation present.
Navarretia fossalis	spreading navarretia	FT/None/1B.1	Chenopod scrub, Marshes and swamps (shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/ 100–2,145	Not expected to occur. Water flow from Beeler creek would be too high and fast to sustain spreading navarretia. Spreading navarretia is more likely to be observed in vernal pools or areas of still waters.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/ Apr–July/10–3,965	Not expected to occur. Water flow from Beeler creek would be too high and fast to sustain prostrate vernal pool navarretia. Prostate vernal pool navarretia is more likely to be observed in vernal pools or areas of still waters.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2	Coastal dunes/annual herb/Apr–Sep/ 0–330	Not expected to occur. No suitable vegetation present.
Ophioglossum californicum	California adder's-tongue	None/None/4.2	Chaparral, Valley and foothill grassland, Vernal pools (margins); Mesic/perennial rhizomatous herb/Jan–June(Dec)/ 195–1,720	Not expected to occur. No suitable vegetation present.
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/ 50–2,165	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Packera ganderi	Gander's ragwort	None/SR/1B.2	Chaparral (burned areas, gabbroic outcrops)/perennial herb/Apr–June/ 1,310–3,935	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Pentachaeta aurea ssp. *aurea*	golden-rayed pentachaeta	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/annual herb/Mar–July/260–6,065	Not expected to occur. No suitable vegetation present.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); Rocky (sometimes), Sandy/perennial herb/Mar–Aug/15–985	Not expected to occur. Remnant south coast branching phacelia would have been observed during reconnaissance studies. This large perennial herb can be observed year-round. No phacelia species were present.
Phacelia stellaris	Brand's star phacelia	None/None/1B.1	Coastal dunes, Coastal scrub/annual herb/Mar–June/5–1,310	Not expected to occur. No suitable vegetation present.
Pinus torreyana ssp. *torreyana*	Torrey pine	None/None/1B.2	Chaparral, Closed-cone coniferous forest; Sandstone/perennial evergreen tree//100–525	Not expected to occur. No suitable vegetation present.
Piperia cooperi	chaparral rein orchid	None/None/4.2	Chaparral, Cismontane woodland, Valley and foothill grassland/perennial herb/Mar–June/50–5,200	Not expected to occur. No suitable vegetation present.
Pogogyne abramsii	San Diego mesa mint	FE/SE/1B.1	Vernal pools/annual herb/Mar–July/ 295–655	Not expected to occur. No suitable vegetation present.
Pogogyne nudiuscula	Otay Mesa mint	FE/SE/1B.1	Vernal pools/annual herb/May–July/ 295–820	Not expected to occur. No suitable vegetation present.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; Gravelly, Sandy/perennial herb/ (July)Aug–Nov(Dec)/0–6,885	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Quercus cedrosensis	Cedros Island oak	None/None/2B.2	Chaparral, Closed-cone coniferous forest, Coastal scrub/perennial evergreen tree/ Apr–May/835–3,145	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Chaparral, Closed-cone coniferous forest, Coastal scrub; Clay, Loam, Sandy/ perennial evergreen shrub/ Feb–Apr(May–Aug)/50–1,310	Not expected to occur. No suitable vegetation present.
Quercus engelmannii	Engelmann oak	None/None/4.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/165–4,265	Not expected to occur. No suitable vegetation present.
Romneya coulteri	Coulter's matilija poppy	None/None/4.2	Chaparral, Coastal scrub; Burned areas (often)/perennial rhizomatous herb/ Mar–July(Aug)/65–3,935	Not expected to occur. No suitable vegetation present.
Rupertia rigida	Parish's rupertia	None/None/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland/perennial herb/June–Aug/2,295–8,200	Not expected to occur. The site is outside of the species' known elevation range.
Salvia munzii	Munz's sage	None/None/2B.2	Chaparral, Coastal scrub/perennial evergreen shrub/Feb–Apr/375–3,490	Not expected to occur. No suitable vegetation present.
Selaginella cinerascens	ashy spike-moss	None/None/4.1	Chaparral, Coastal scrub/perennial rhizomatous herb//65–2,095	Not expected to occur. No suitable vegetation present.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/ annual herb/Jan–Apr(May)/50–2,620	Not expected to occur. No suitable vegetation present.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/perennial herb/Mar–June/50–5,015	Not expected to occur. No suitable vegetation present.
Sphaerocarpos drewiae	bottle liverwort	None/None/1B.1	Chaparral, Coastal scrub; Openings/ ephemeral liverwort//295–1,965	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Stemodia durantifolia	purple stemodia	None/None/2B.1	Sonoran desert scrub (often mesic, sandy)/perennial herb/(Jan)Apr–Dec/ 590–985	Not expected to occur. Purple stemodia can be seen year-round in bloom. Purple stemodia was not present during reconnaissance studies.
Stipa diegoensis	San Diego County needle grass	None/None/4.2	Chaparral, Coastal scrub; Mesic (often), Rocky/perennial herb/Feb–June/ 35–2,620	Not expected to occur. No suitable vegetation present.
Stylocline citroleum	oil neststraw	None/None/1B.1	Chenopod scrub, Coastal scrub, Valley and foothill grassland; Clay/annual herb/Mar–Apr/165–1,310	Not expected to occur. No suitable vegetation present.
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/(Jan–May)July–Oct/ 0–15	Not expected to occur. The site is outside of the species' known elevation range.
Suaeda taxifolia	woolly seablite	None/None/4.2	Coastal bluff scrub, Coastal dunes, Marshes and swamps (coastal margins)/perennial evergreen shrub/Jan–Dec/0–165	Not expected to occur. Woolly seablite can be observed year-round and was not observed during reconnaissance studies. Woolly seablite occurs near the ocean in saline waters and saline marshes and swamps.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2	Chaparral, Coastal scrub/perennial deciduous shrub/Apr–May/540–3,280	Not expected to occur. No suitable vegetation present.
Texosporium sancti-jacobi	woven-spored lichen	None/None/3	Chaparral (openings)/crustose lichen (terricolous)//195–2,165	Not expected to occur. No suitable vegetation present.
Triquetrella californica	coastal triquetrella	None/None/1B.2	Coastal bluff scrub, Coastal scrub/moss//35–330	Not expected to occur. No suitable vegetation present.
Viguiera laciniata	San Diego County viguiera	None/None/4.3	Chaparral, Coastal scrub/perennial shrub/Feb–June(Aug)/195–2,460	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Xanthisma junceum	rush-like bristleweed	None/None/4.3	Chaparral, Coastal scrub/perennial herb/Jan–Oct/785–3,280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Attachment C

Plant Compendium

Plant Species

Angiosperms: Eudicots

AMARANTHACEAE – AMARANTH FAMILY

* *Amaranthus albus* – white tumbleweed

APIACEAE – CARROT FAMILY

* *Nerium oleander* – oleander

ASTERACEAE – SUNFLOWER FAMILY

Ambrosia psilostachya – western ragweed
Deinandra fasciculata – fascicled tarweed
Encelia californica – California encelia
Heterotheca grandiflora – telegraph weed
Xanthium strumarium – cocklebur

* *Centaurea melitensis* – tocalote
* *Dittrichia graveolens* – stinkwort
* *Erigeron bonariensis* – flax-leaf fleabane
* *Helminthotheca echioides* – bristly ox-tongue
* *Sonchus asper* ssp. *asper* – prickly sow-thistle
* *Sonchus oleraceus* – common sow-thistle

BRASSICACEAE – MUSTARD FAMILY

* *Hirschfeldia incana* – short-pod mustard

CHENOPODIACEAE – GOOSEFOOT FAMILY

* *Chenopodium album* – lamb's quarters
* *Chenopodium murale* – nettle-leaf goosefoot
* *Salsola tragus* – prickly russian-thistle, tumbleweed

EUPHORBIACEAE – SPURGE FAMILY

* *Euphorbia maculata* – spotted spurge

FABACEAE – LEGUME FAMILY

* *Melilotus albus* – white sweetclover
* *Melilotus indicus* – Indian sweetclover

GERANIACEAE – GERANIUM FAMILY

* *Erodium cicutarium* – red-stem filaree/storksbill

PAPAVERACEAE – POPPY FAMILY

Eschscholzia californica – California poppy

POLYGONACEAE – BUCKWHEAT FAMILY

* *Rumex crispus* – curly dock

SOLANACEAE – NIGHTSHADE FAMILY

Solanum douglasii – Douglas's nightshade

* *Nicotiana glauca* – tree tobacco

Angiosperms: Monocots

POACEAE – GRASS FAMILY

Stipa pulchra – purple needle grass

* *Festuca myuros* – rat-tail fescue
* *Polypogon monspeliensis* – annual beard grass
* *Bromus rubens* – foxtail chess, red brome
* *Cenchrus setaceus* – African fountain grass

* signifies introduced (non-native) species

Attachment D

Special-Status Wildlife Species' Potential to Occur

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. The site is too disturbed, and the banks do not consist of sandy habitat for arroyo toad.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. No suitable vegetation present. The habitat is disturbed.
Reptiles				
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. No leaf litter or sparse vegetation is present to provide habitat for southern California legless lizard.
Arizona elegans occidentalis	California glossy snake	None/SSC	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	Low potential to occur. The habitat is disturbed.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable vegetation present.
Coleonyx variegatus abbotti	San Diego banded gecko	None/SSC	Rocky areas within coastal scrub and chaparral	Not expected to occur. No suitable vegetation present.
Diadophis punctatus similis	San Diego ringneck snake	None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats	Not expected to occur. No suitable vegetation present.
Plestiodon skiltonianus interparietalis	Coronado skink	None/WL	Woodlands, grasslands, pine forests, and chaparral; rocky areas near water	Not expected to occur. No suitable vegetation present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. No suitable vegetation present.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable vegetation present.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No suitable vegetation present. The habitat is disturbed.
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present. The habitat is disturbed. No nesting habitat is present.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable vegetation present. No grassland with forbs are present. No nesting habitat is present.
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No suitable vegetation present. No suitable habitat is present. No nesting habitat is present.
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable vegetation present. No suitable habitat is present.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby	Not expected to occur. No suitable vegetation present. No nesting habitat is present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			grasslands and agricultural areas such as wheat and alfalfa fields and pasture	
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	None/SSC	Southern cactus scrub patches	Not expected to occur. No suitable vegetation present. No suitable habitat is present.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable vegetation present. No habitat is present.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. No suitable vegetation present. No habitat is present.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present. No habitat is present.
Eremophila alpestris actia	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Not expected to occur. No suitable vegetation present.
Falco mexicanus (nesting)	prairie falcon	None/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable vegetation present. No nesting habitat is present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Ixobrychus exilis (nesting)	least bittern	None/SSC	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation present.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	BCC/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. No suitable vegetation present.
Plegadis chihi (nesting colony)	white-faced ibis	None/WL	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. No nesting habitat is present.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable vegetation present. No suitable habitat is present.
Pyrocephalus rubinus (nesting)	vermilion flycatcher	None/SSC	Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches, or pastures	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Rallus obsoletus levipes	Ridgway's rail	FE/FP, SE, SCE	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable vegetation present.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Sternula antillarum browni (nesting colony)	California least tern	FE/FP, SE	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable vegetation present. No habitat is present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation present. No nesting habitat is present.
Mammals				
Aeorestes cinereus	northern hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No suitable vegetation present.
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Low potential to occur. No roosting habitat is present.
Chaetodipus californicus femoralis	Dulzura pocket mouse	None/SSC	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Not expected to occur. No suitable vegetation present.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Low potential to occur. No suitable vegetation present.
Choeronycteris mexicana	Mexican long-tongued bat	None/SSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable vegetation present.
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. No suitable vegetation present.
Dasypterus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Low potential to occur. No roosting habitat present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Dipodomys stephensi	Stephens' kangaroo rat	FT/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Not expected to occur. No suitable vegetation present.
Euderma maculatum	spotted bat	None/SSC	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	Not expected to occur. No suitable vegetation present.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. No suitable vegetation present.
Lasionycteris noctivagans	silver-haired bat	None/None	Old-growth forest, maternity roosts in trees, large snags 50 feet aboveground; hibernates in hollow trees, rock crevices, buildings, mines, caves, and under sloughing bark; forages in or near coniferous or mixed deciduous forest, stream or river drainages	Not expected to occur. No suitable vegetation present.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Not expected to occur. No suitable vegetation present.
Myotis ciliolabrum	western small-footed myotis	None/None	Arid woodlands and shrublands, but near water; roosts in caves, crevices, mines, abandoned buildings	Not expected to occur. No suitable vegetation present.
Myotis evotis	long-eared myotis	None/None	Brush, woodland, and forest habitats from sea level to 9,000 feet above MSL; prefers coniferous habitats; forages along habitat edges, in open habitats, and over water; roosts in buildings, crevices, under bark, and snags; uses caves as night roosts	Not expected to occur. No suitable vegetation present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Myotis yumanensis	Yuma myotis	None/None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. No suitable vegetation present.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable vegetation present.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Low potential to occur. No roosting habitat is present onsite and minimal vegetation is present.
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable vegetation present.
Perognathus longimembris pacificus	Pacific pocket mouse	FE/SSC	fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur. No suitable vegetation present.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No badger activity or burrows or setts were observed during reconnaissance studies.
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur. Nectaring plants were minimal onsite. The location consists almost entirely of stinkwort which is not a plant used by crotch's bumble bee.
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable vegetation present.
Carolella busckana	Busck's gallmoth	None/None	Coastal scrub dunes	Not expected to occur. No suitable vegetation present.

Row Labels	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Cicindela hirticollis gravida	sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Not expected to occur. The site is too disturbed.
Cicindela senilis frosti	senile tiger beetle	None/None	Inhabits marine shoreline, from Central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	Not expected to occur. The site is too disturbed.
Coelus globosus	globose dune beetle	None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	Not expected to occur. No suitable vegetation present.
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta, P. patagonica, and Antirrhinum coulterianum, among others	Not expected to occur. No suitable vegetation present.
Helminthoglypta coelata	mesa shoulderband	None/None	Known only from a few locations in coastal San Diego County	Not expected to occur. The site is too disturbed.
Melitta californica	California mellitid bee	None/None	Desert regions of southwestern Arizona, southeastern California, and Baja California, Mexico; also collected from Torrey Pines, San Diego County	Not expected to occur. No suitable vegetation present.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable vegetation present.
Tryonia imitator	mimic tryonia (=California brackishwater snail)	None/None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County	Not expected to occur the site has no estuaries or brackish water.

Attachment E

Wildlife Compendium

Wildlife Species

Birds

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Corvus corax – common raven

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Melozone crissalis – California towhee

Invertebrates

Butterflies

PIERIDAE – WHITES AND SULFURS

Pieris rapae – cabbage white

Pontia protodice – checkered white

Tarantula Hawks

POMPILIDAE – SPIDER WASPS

Pepsis sp. – tarantula hawk

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

Attachment F

Site Photo Document

Facing south- Photo taken above the north bank of Beeler Creek

Facing south -Pin flags represent the location of the proposed underground transmission route.

Facing south – Near northern edge of the creek walking underground transmission route

Facing south -Note the abundance of stinkwort (*Dittrichia graveolens*) within Beeler Creek

Facing south – Continuation of underground transmission route. The vegetation consists entirely of stinkwort and tumbleweed (*Salsola tragus*).

Facing south- Continuing south across Beeler Creek. No rare plant species occur anywhere across the Creek or on the edges. Vegetation here includes tumbleweed (*Salsola tragus*), stinkwort and cocklebur (*Xanthium strumarium*)

Facing south –Walking underground transmission route represented by pinflags. Majority of vegetation is tumbleweed and stinkwort.

Facing south –Walking underground transmission route represented by pinflags. Vegetation is an unvegetated channel besides the few annual weeds.

Facing south –Walking underground transmission route represented by pinflags.

Facing south- Most of the vegetation consists of stickwort. Some of the area also consists of shortpod mustard (*Hirschfeldia incana*).

Facing south- Dirt road above Beeler Creek walking underground transmission route.

Facing north – Up against fence facing Beeler Creek. Fence is adjacent to Beeler Creek road.

Facing west on dirt road above Beeler Creek (south end of Beeler Creek) near fence.

Facing East -on road above Beeler Creek (South end of Beeler Creek)

Facing north -walking back north across Beeler Creek walking underground transmission route

Facing north – walking underground transmission route north.

Facing north - walking underground transmission route -stinkwort population majority of vegetation

Facing north - walking underground transmission route -majority of vegetation in wash is stinkwort and tumbleweed

Facing east -standing on underground transmission route

Facing west - walking underground transmission route. Adjacent to northern side of Beeler creek on dirt road where northern pit will be dug (in the dirt road).

Facing east - walking underground transmission route. Adjacent to northern side of Beeler creek on dirt road. Northern pit will be dug in the dirt road.

Attachment G

Year 1 Annual Monitoring Report of the
Beeler Creek Restoration Project

Year 1 Annual Monitoring Report for the Beeler Creek Restoration Project

San Diego County, California

Certification No. 12C-079:786930:amonji

Prepared for:

Vulcan Materials Company
500 N. Brand Avenue, Suite 500
Glendale, California 91203

Prepared by:

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San Diego, California 92108
Contact: Mr. Josh Corona-Bennett

April 28, 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Numbers
BMPs	Best Management Practices
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CUP/RP	Conditional Use Permit and Reclamation Plan
ECORP	ECORP Consulting, Inc.
Granite	Granite Construction
Project	Beeler Creek Mitigation Site Project
Restoration Plan	Restoration Plan for Vulcan Materials Company's Poway Mine
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
USACE	United States Army Corps of Engineers
Vulcan	Vulcan Materials Company

1.0 INTRODUCTION

Aggregate extraction and processing activity was conducted by Padre Transit Mix at the Mining Site starting in 1975 under a permit issued by the County of San Diego. Aggregate extraction and processing activity was conducted by Padre Transit Mix at the Mining Site starting in 1975 under a permit issued by the County of San Diego prior to the City of Poway's incorporation. Padre Transit Mix was acquired by Cal Mat Co. in 1989. In August 1991, the City Council adopted Resolution No. P-91-48R approving CUP89-05 for the continuation and expansion of the aggregate operation. Granite Construction took over operation of the Mining Site in February 2020 with approval of CUP19-009.

Beeler Creek, an ephemeral stream running through the facility, was impacted during mining activities. Permits issued for mining at the facility require habitat restoration within Beeler Creek. For the Beeler Creek Restoration Project (Project), Granite Construction (Granite) was retained by Vulcan Materials Company (Vulcan) to restore the central reach of Beeler Creek and install a grade control structure. ECORP Consulting Inc. (ECORP) was hired to provide restoration implementation and maintenance oversight, as well as monitoring and reporting services for the Project during Year 1 of the 5-year maintenance and monitoring period. This annual monitoring report covers activities for Year 1 (March 23, 2022 – March 21, 2023) for the Project site (also referred to herein as Site).

1.1 Project Background and Description

Sand and gravel mining at the Poway Mine facility impacted an 894-foot-long section of the approximately 4,407 feet of Beeler Creek within the property. The central reach of the creek contained a series of undersized box/pipe culverts and was lined with concrete. In order to rehabilitate both the biological value and the ability to carry a 100-year storm event, Granite restored the central reach of Beeler Creek and installed a grade control structure/emergency access near the western, downstream end of the Project area to accommodate flooding and to re-establish biological value to the Site.

Implementation of the Project was conducted in accordance with the Restoration Plan for Vulcan Materials Company's Poway Mine (ECORP 2017; Restoration Plan); the United States Army Corps of Engineers (USACE) Clean Water Act (CWA) Section 404 permit (SPL-2008-01241-PJB), the Regional Water Quality Control Board (RWQCB) CWA Section 401 Water Quality Certification (No. 12C-079), the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) (No. 1600-2008-0238-R5), and the City of Poway Conditional Use Permit No. 19-009 and Reclamation Plan (RP 89-05).

1.2 Project Location

The Project is located in the City of Poway in San Diego County, California (Figures 1 and 2). The Site is located approximately 4.5 miles east of Interstate 15 and directly south of Kirkham Way along the southern border of the City of Poway (Figures 1 and 2). Beeler Creek forms the southern boundary of the Site. The property address is 13501 Kirkham Way, Poway, California. The Site includes three parcels encompassing a total of 169 acres (City of Poway Assessor's Parcel Numbers [APNs] 320-031-04, 320-031-03, and 320-031-06).

Location: N:\2006\2006-199 Poway Mine Site (Vulcan Poway)\MAPS\SITE_VICINITY\Beeler_LvN_20220907.mxd (JDS/TR)-trotellini 9/7/2022

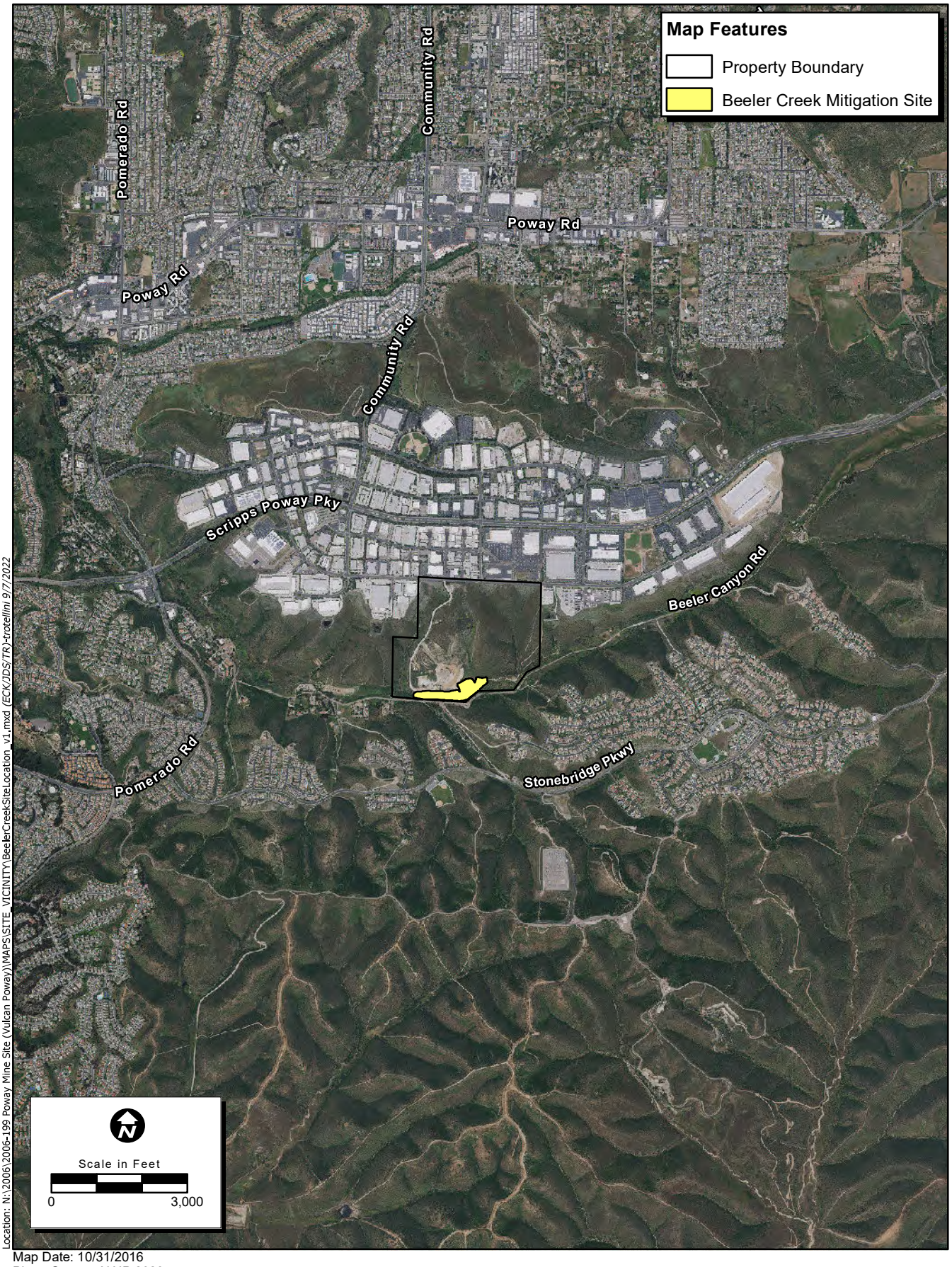
Map Date: 9/7/2022

Service Layer Credits: Sources: Esri, USGS, NOAA

Figure 1. Project Vicinity - Beeler Creek Mitigation Site

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2019-249 Vulcan Poway - Beeler Creek Mitigation Site



Location: N:\2006\2006-199 Poway Mine Site (Vulcan Poway)\MAPS\SITE_VICINITY\BeelerCreekSiteLocation_v1.mxd *(ECK/JDS/TR)-trotellini 9/7/2022*

Map Date: 10/31/2016
Photo Source: NAIP 2020

Figure 2. Project Location - Beeler Creek Mitigation Site

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2019-249 Vulcan Poway

1.3 Mitigation Site Description

The Beeler Creek mitigation area (also referred to herein as the *mitigation site*) is located in Beeler Canyon and includes upland and riparian restoration areas (Figure 3). Riparian restoration areas are along the lower banks/bed of Beeler Creek. Upland restoration areas are along the upper banks of Beeler Creek. The elevation ranges from approximately 615 above mean sea level (amsl) to approximately 585 amsl. The restored bed of Beeler Creek within the Project area has an average width of 150 feet and there is a low-flow channel that is sinusoidal in shape that runs for approximately 1,750 linear feet from the upstream end to the downstream end of the Project area. The low-flow channel is approximately 1.5 feet lower than the remainder of the channel bed and has an average width of eight (8) feet.

2.0 SUMMARY OF HABITAT RESTORATION IMPLEMENTATION

Granite retained Marina Landscape, Inc. to complete habitat restoration implementation with oversight provided by Guage Serna (Resident Engineer, Granite Construction), Josh Corona-Bennett (Restoration Ecologist, ECORP), and Greg Hampton (Restoration Specialist, ECORP). Habitat restoration implementation commenced on November 15, 2021 and comprised grading the mitigation site, followed by installation of container plants and application of native seed using a hydroseeding rig. Implementation (planting/seeding) was completed on March 23, 2022. It included restoration of 1.92 acres of coastal sage scrub and 0.52 acre of willow/mulefat scrub with 3.53 acres of unvegetated channel (Table 1 and Figure 3).

Table 1. Acreages of Mitigation Site

Restoration Areas	Acres
Coastal Sage Scrub	1.92
Willow/Mulefat Scrub	0.52
Channel	3.53
Total Acres	**5.97**

3.0 MITIGATION GOALS

The main goal of habitat mitigation for this Project is to restore areas impacted during mining with native habitat in accordance with Project permits, the CUP/RP, and Restoration Plan (ECORP 2017). Specifically, habitat restoration of riparian (willow/mulefat scrub) and upland (coastal sage scrub) habitat. In addition, the restoration is meant to restore the functions and values of the habitats and aquatic resources impacted by mining. The mitigation site will be maintained and monitored for a period of five years, starting March 23, 2022, and ending March 23, 2027, provided all success standards have been met.

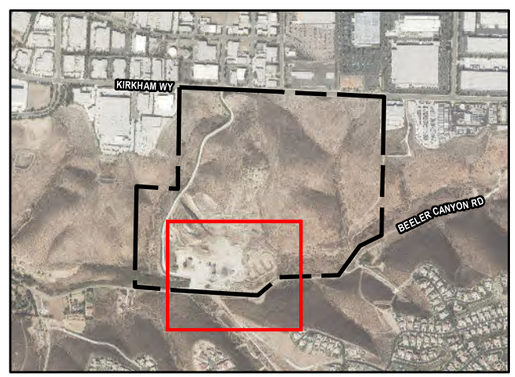
Figure 3.
Revegetation Area

Map Features

- Poway Property Boundary - 169.6 ac.
- Beeler Creek Mitigation Site
- Fill Areas
- Photo Stations

Beeler Creek Improvement Plans [1]

- Revegetated Willow/Mulefat Scrub - 0.52 ac.
- Coastal Sage Scrub Restoration Areas - 1.92 ac.
- Channel (No Plantings) - 3.53 ac.
- AC Service Road - 0.77 ac.
- Concrete Access Road - 0.09 ac.
- Grouted Riprap - 0.04 ac.
- Ungrouted Riprap - 0.09 ac.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2006\2006-199 Poway Mine Site (Vulcan Poway)\MAPS\REPORT_FIGURES\HEMP\v5_2023\Poway_Revegetation_PhotoLocations_20230330.mxd (JDS)-trotellini 3/31/2023

2006-199 Vulcan Poway

Scale in Feet
0 150

Photo Source: USGS 2014
[1] BDS Engineering, Inc.
1022 SITE.dwg

Map Date: 3/31/2023

4.0 SUMMARY OF YEAR 1 MAINTENANCE ACTIVITIES

Granite provided landscape maintenance services for Year 1 (March 23, 2022 – March 21, 2023) with oversight by ECORP.

4.1 Maintenance Summary

Maintenance activities during Year 1 focused on nonnative plant suppression/eradication and native plant survival. A total of 11 site visits occurred during Year 1 for the purpose of assessing plant health and maintenance needs. Protection against herbivory, pests, and disease were not necessary. Erosion occurred in a few locations with minor to moderate rills formed, though were repaired and erosion straw wattles were added. The mitigation site will continue to be maintained on a regular basis throughout the 5-year maintenance period.

4.1.1 Replacement Planting

Replacement planting was not necessary and not conducted during Year 1; however, following the survival count during Year 1 it is recommended that replacement planting occur at an appropriate time during Year 2 in order to achieve the Year 2 success criterion for plant survival.

4.1.2 Nonnative Plant Suppression and Eradication

Nonnative plant species controlled during Year 1 included bristly ox-tongue (*Helminthotheca echioides*), Russian thistle (*Salsola tragus*), tree tobacco (*Nicotiana glauca*), filaree (*Erodium cicutarium*), white sweetclover (*Melilotus albus*), black mustard (*Brassica nigra*), Mexican fan palm (*Washingtonia robusta*), lamb's quarters (*Chenopodium album*), salt cedar (*Tamarix ramosissima*), sweet fennel (*Foeniculum vulgare*), stinkwort (*Dittrichia graveolens*), and prickly sow thistle (*Sonchus asper*). Nonnative plant species were removed from the mitigation site during Year 1 by hand-pulling and with hand tools. Herbicide application was not conducted. A full list of nonnative plant species detected within the mitigation site is included in Appendix A.

4.1.3 Erosion Control

Some minor and moderate erosion occurred in the slopes of the mitigation area. Erosion control was implemented through the installation of extra straw wattles, replacing damaged straw wattles, and repairing the erosion rills.

4.1.4 Vandalism and Site Damage

No vandalism was documented, and damage did not occur during Year 1.

5.0 SUMMARY OF YEAR 1 MONITORING ACTIVITIES

5.1 Monitoring Overview

Monitoring activities during Year 1 focused on horticultural conditions of the mitigation site. Horticultural monitoring was performed 11 times and included monitoring the following conditions: soil moisture, container plant health, native seed germination, volunteers/recruits, nonnative plant species, estimated percent cover, pests/disease, erosion issues, and container plant survival. Photo documentation of the mitigation site at photo stations occurred quarterly. In addition, one other inspection occurred to monitor the condition of the mitigation site. Monitoring events that occurred during Year 1 are included in Table 2.

Table 1. Year 1 Monitoring Events

Date	Monitoring Type
4/20/22	Horticultural Monitoring
5/5/22	Horticultural Monitoring
6/14/22	Horticultural Monitoring
9/28/22	Horticultural Monitoring
10/19/22	Horticultural Monitoring
11/21/22	Horticultural Monitoring
12/14/22	Horticultural Monitoring
1/25/23	Horticultural Monitoring
2/6/23	Maintenance Monitoring
2/14/23	Horticultural Monitoring
3/13/23	Horticultural Monitoring

5.2 Horticultural Monitoring Summary

5.2.1 Soil Moisture

During horticultural monitoring visits for Year 1, soil moisture was assessed for areas that appeared dry by digging to a depth of 1 to 4 inches to determine where soil becomes visibly moist. Soil moisture helped track areas where supplemental irrigation was necessary. Soil moisture was lower than expected in some areas of the mitigation site, likely due to drought conditions during the spring and summer months. Soil moisture returned to typical moisture levels due to a series of rain events leading up to March 2023.

5.2.2 Container Plant Health / Survival

Upon completion of grading, container plant installation commenced on March 16, 2022. A total of 239 riparian shrubs and trees in containers were planted into the channel banks using methods described in the Restoration Plan (ECORP 2017).

Container plants experienced heat stress resulting in mortality of some of the plantings during the spring and summer of 2022. At the time of the September 28, 2022, monitoring event, approximately 44 percent of the original plants were observed to have died and another 20 percent were observed to be stressed. This high mortality is likely due to low soil moisture and insufficient irrigation during the dry, hot drought conditions in the summer of 2022.

Replacement planting was recommended by the ECORP biologist to be conducted in the wet season in Fall 2023 in order to meet the Year 1 success standard of 80 percent survival.

5.2.3 Native Seed Germination

Upon completion of grading and installation of container plants, seeding was conducted on March 21, 2022. Seeding of the mitigation site included the use of native species that were applied using hydroseeding according to the Restoration Plan (ECORP 2017). Approximately 6.24 pounds of willow scrub seed mix was applied to the 0.52-acre riparian restoration area and approximately 28.0 pounds of coastal sage scrub seed mix was applied to the 1.92-acre upland restoration area. All seeds were mixed with 2000 pounds per acre of virgin wood fiber, a colorant, 150 pounds per acre of binder, mycorrhizal inoculant, and sufficient water to allow the mix to be applied evenly over the revegetation area.

5.2.4 Native Plant Species Recruits and Volunteers

Several native plant species, volunteers, and recruits, germinated onsite during Year 1. Species observed include California poppy (*Eschscholzia californica*), miniature lupine *(Lupinus bicolor),* salt heliotrope *(Heliotropium curassavicum),* rough cocklebur (*Xanthium strumarium),* clustered tarweed *(Deinandra fasiculata),* California buckwheat (*Eriogonum fasciculatum)* and California sagebrush *(Artemisia californica)*. A full list of native plant species that have been detected within the mitigation site during Year 1 is included in Appendix A.

5.2.5 Nonnative Plant Species

Nonnative plant removal occurred throughout the mitigation site on a regular basis during maintenance events. Nonnative plant species were suppressed and controlled by hand-pulling or removal with tools to avoid dispersal of seed onto the mitigation site. Nonnative plant species rated as moderate/high threats to wildlands in the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory (tamarisk, tree tobacco, sweet fennel, Russian thistle, and Mexican fan palm) were prioritized but all observed nonnative species were targeted to avoid the formation of flowers and spread of seed. All nonnative plants that were removed were disposed of in a legal landfill.

Other species that were controlled in Year 1 include white sweet clover, filaree, and prickly sow thistle. Russian thistle and stinkwort proliferated throughout much of the mitigation site and tamarisk, sweet fennel, and Mexican fan palm were observed in the western portion of the channel. By March 2023, tamarisk was successfully removed, and significantly fewer Mexican fan palm were observed on the mitigation site. However, there is still a moderately high cover of herbaceous weeds. A full list of nonnative plant species that have been detected within the mitigation site during Year 1 is included in Appendix A.

5.2.6 Plant Pests and Disease

Minor rabbit and insect herbivory was observed during Year 1 on some of the container plantings, but damage was minimal, and no remedial measures were recommended. Plant disease was not observed during Year 1.

5.2.7 Erosion Issues

Erosion was observed on one of the slopes in the northeastern portion of the mitigation site during a horticultural monitoring event that occurred on April 20, 2022. Erosion was in the form of rills that spanned from the top to the bottom of the slope. ECORP recommended that straw wattles be installed to slow erosion and allow for plants to become established. Though they were partially effective in controlling erosion, maintenance and additional wattles may be needed to avoid further formation of erosional rills and gullies.

During the November 21, 2022 horticultural monitoring event, a few small rills were observed in the southeast portion of the mitigation site, along the southern bank of Beeler Creek. ECORP recommended that straw wattles be re-installed to prevent further erosion.

5.2.8 Irrigation

Supplemental irrigation for container plants was conducted during Year 1 through hand watering from a towable water tank. The watering schedule was recommended by ECORP to increase during the summer due to stress on container plants during the hot weather. During the winter, rain events provided moisture for plant growth but overall, supplemental irrigation was recommended for optimal container planting health.

5.2.9 Photo Documentation

Photo documentation occurred throughout Year 1 and additional photos were taken as necessary to document the progress of the mitigation site. Representative photos for the mitigation site are presented in Appendix B along with representative photos of hydroseed application. Associated photo-station locations are shown on Figure 3 (photos were not taken at all photo stations during Year 1, however, during future Years this will occur).

5.2.10 Horticultural Monitoring Memoranda

Horticultural monitoring memoranda for the 11 events in Year 1 were submitted to Granite so that maintenance could occur promptly.

5.3 Botanical Monitoring Summary

Botanical monitoring was conducted during monitoring Year 1, though will occur in Year 2 or Year 3 in accordance with the Plan.

5.4 Agency Correspondence

Notifications and reporting per the USACE Section 404 permit (SPL-2008-01241-PJB), the RWQCB CWA Section 401 Water Quality Certification, and the CDFW SAA (No. 1600-2008-0238-R5) were submitted during Year 1. For example, notifications of start and stop of work in Waters of the United States, and an as-built report documenting completion of habitat restoration implementation in Beeler Creek.

6.0 ACHIEVEMENT OF SUCCESS STANDARDS

This section details the progress of the restoration areas and whether the mitigation site has achieved success standards for Year 1. Success standards as listed in the Restoration Plan are provided in Table 3 for reference.

Table 3. Project Success Standards

Type	Success Standard	Achieved for Year 1
Erosion Control	No significant erosion of soils that will compromise plant/seed establishment.	Yes
Container Plant/Cuttings Survival	80% survival during Year 1 and then 80% total survival during remaining monitoring years. Native volunteers may be used to meet these standards.	No
Coastal Sage Scrub Species Richness	The presence of 6 different species in the coastal sage scrub restoration areas.	Yes
Plant Cover	**Riparian:** • 45% at 3 years • 65% at 5 years **Coastal Sage Scrub:** • 25% at 3 years • 35% at 5 years	Not Applicable at this Time
Plant Heights (in feet) **Riparian Containers/Cuttings** *Baccharis salicifolia* *Populus fremontii* *Quercus agrifolia* *Salix gooddingii/lasiolepis* **Coastal Sage Scrub (CSS) Shrubs** Average Height of CSS Shrubs	3-Year Height / 5-Year Height 4 / 6 3 / 6 2 / 4 6 / 10 3-Year Height / 5-Year Height 1 / 1.5	Not Applicable at this Time
Weed Cover	• No listed Invasive Exotic Species within the site or 100 feet from site by the third year after planting (refer to Section 1.4.1 for a list of invasive exotic plant species). • Cover of nonnative weed not above 5% by the third year after planting/seeding.	Yes
Survival Without Irrigation	Successful plantings after two years without supplemental irrigation.	Not Applicable at this Time
Wetlands Functions and Values	A significant increase over the existing degraded condition of the project area.	Not Applicable at this Time

7.0 FUNCTIONS AND VALUES

In accordance with the Restoration Plan, the success of the riparian restoration efforts at reestablishing the aquatic resource functions lost when Beeler Creek was originally lined with concrete were evaluated using criteria based general site characteristics as well as the functional condition of the riparian habitat restoration site. The functional evaluation was based on a framework developed to evaluate restoration success using the revised December 1999 U.S. Army Corps of Engineers' "Functional-Based Performance Standards for Evaluating the Success of Riparian and Depressional/Emergent Marsh Restoration Sites" publication (Stein 1999). The interim and ultimate targets established for riparian functionality within the restoration area reflect the nature of the jurisdictional habitat that was historically impacted and the functional habitat replacement. Results of the assessment of riparian functionality within the mitigation site at the end of Year 1 compared to target values for the interim and ultimate targets are provided in Table 4. All but one criterion are meeting or exceeding interim targets and three of the six are meeting ultimate targets. The only criterion not meeting the interim target is for biogeochemistry due to the mostly unvegetated channel area, though this aspect of functionality is anticipated to improve as vegetation becomes established.

Table 4. Year 1 Assessment of Riparian Functionality

Evaluation Criterion	Year 1 Value	Criteria Description[1]	Interim Target	Ultimate Target
Structural Diversity[2]	0.6	The patches of riparian vegetation on the site contain riparian trees and/or saplings (i.e., perennial dicots) but exhibit little or no shrub layer or herbaceous understory.	0.4	0.6
Spatial Diversity	0.6	Patches of diverse riparian vegetation covering up to 50% of the site, interspersed among grasses, exotic plants, or bare ground.	0.4	0.8
Exotic Vegetation	0.6	Site is covered by 10-39% exotic vegetation.	0.6	0.8
Hydrologic Regime	1.0	Site is within or adjacent to a stream, river, or other concentrated flow conduit, which provides the primary source of water to the site. The site contains some evidence of riparian processes such as overbank flow or scour or deposition.	0.7	1.0
Micro and Macro Topographic Complexity	0.8	Riparian area is not predominantly homogeneous, but is characterized by microtopographic features, such as pits, ponds, hummocks, and bars. However, there are no macro-topographic features, such as braiding, secondary channels, and backwaters.	0.2	0.8
Biogeochemistry	0.2	Channel supports at least 25 % relative cover composed of grasses, forbs, herbaceous, or taller riparian vegetation, and there is at least 10% relative cover of woody debris, leaf litter, or natural detritus in the channel.	0.4	0.6
TOTALS	3.8		2.7	4.6

[1] Per the Restoration Plan

[2] For the purposes of this method, trees are defined as perennial woody dicots greater than 3- centimeters diameter at breast height (DBH). Saplings are defined as perennial woody dicots less than 3-centimeters DBH.

Upland functions and values are on a trajectory to meet and exceed what was present prior to construction. The establishment of native plant species will facilitate future recruitment of native plants and provide an increase in available habitat for wildlife, such as least Bell's vireo (*Vireo bellii pusillus*). The increase in native vegetation cover will also assist with increasing soil moisture and subterranean microbiological processes characteristic of healthy natural habitat.

The mitigation site is generally progressing as expected and performing well. With lower than the 80 percent survival of container plants, supplemental planting may be conducted in fall of 2023, though the higher-than-average rainfall in the winter of 2022-2023 may support enough growth that it may not be needed (per Section 6.5 of the Restoration Plan [ECORP 2017]). The control and suppression of nonnative plant species will continue to be a high priority. Native plant species recruitment onsite has been positive, with black willow and mulefat observed in riparian areas, and species such as buckwheat and California sagebrush in upland areas. Hydrophytic plants have proliferated in riparian areas.

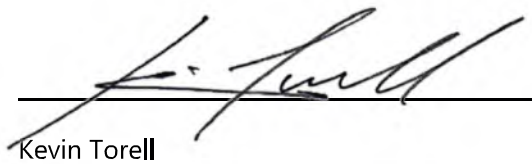
Threats to the performance of the mitigation site continue to be monitored. Erosional features will be monitored and Best Management Practices (BMPs) will be maintained or replaced as needed. Plant pests, such as invasive shot-hole borer, will be controlled using an early detection rapid response approach. Some pests, such as the shot-hole borer can infest and cause mortalities of willow trees. These pests have not been observed within the mitigation site to date.

8.0 CONCLUSION

The mitigation site is expected to meet all Year 5 success standards based on the current data trends and condition of the Site.

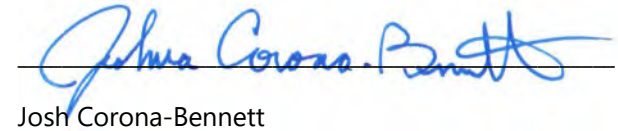
9.0 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



April 28, 2023

Kevin Torell — Date
Area Manager, Vulcan Materials Company



April 28, 2023

Josh Corona-Bennett — Date
Sr. Restoration Ecologist, ECORP Consulting, Inc.

10.0 REFERENCES

ECORP Consulting, Inc. 2017. Restoration Plan for Vulcan Materials Poway Mine. Prepared for Vulcan Materials Company, Glendale, California. March 17, 2017

Stein, E. 1999 Function-Based Method for Assigning Mitigation Ratios for Impacts to Riparian Systems. Prepared for U.S. Army Corps of Engineers, Los Angeles District – Regulatory Branch.

LIST OF APPENDICES

Appendix A – Plant Species Compendium

Appendix B – Photo Documentation

APPENDIX A

Plant Species Compendium

Plant Species Compendium

	Scientific Name	Common Name
Dicotyledoneae		
Apiaceae - Carrot Family	*Foeniculum vulgare**	sweet fennel
Asteraceae - Sunflower Family	*Artemisia californica*	California sagebrush
	Artemisia douglasiana	Douglas' sagewort
	Artemisia ludoviciana	mugwort
	Baccharis sarothroides	broom baccharis
	*Carduus pycnocephalus**	Italian thistle
	*Centaurea melitensis**	tocalote
	Deinandra fasciculata	clustered tarweed
	*Dittrichia graveolens**	stinkwort
	Encelia californica	California encelia
	Erigeron canadensis	horseweed
	Helianthus californicus	California sunflower
	*Helminthotheca echioides**	bristly ox-tongue
	Isocoma menziesii	Menzies' goldenbush
	*Lactuca serriola**	prickly lettuce
	*Oncosiphon pilulifer**	stinknet
	*Sonchus asper**	prickly sow thistle
	*Sonchus oleraceus**	common sow thistle
	Xanthium strumarium	rough cocklebur
Boraginaceae - Borage Family	*Heliotropium curassavicum*	salt heliotrope
	Phacelia cicutaria	caterpillar phacelia
Brassicaceae - Mustard Family	*Brassica nigra**	black mustard
	*Hirschfeldia incana**	short-pod mustard
	*Brassica tournefortii**	sahara mustard
	*Raphanus sativus**	wild radish
Chenopodiaceae - Goosefoot Family	*Chenopodium album**	lamb's quarters
	*Salsola tragus**	Russian thistle
Euphorbiaceae - Euphorbia Family	*Ricinus communis**	castor bean
Fabaceae - Pea Family	*Acmispon glaber*	deerweed
	*Melilotus albus**	white sweetclover
	Lupinus bicolor	miniature lupine
	Lupinus succulentus	arroyo lupine
	Acacia sp.	wattle
Geraniaceae – Geranium Family	*Erodium cicutarium**	filaree
Lamiaceae- Sage Family	*Salvia mellifera*	black sage
	Salvia apiana	white sage
Malvaceae - Mallow Family	*Malva parviflora**	cheeseweed
Papavaraceae - Poppy Family	*Eschscholzia californica*	California poppy
Plantaginaceae - Plantain Family	*Plantago erecta*	dot-seed plantain
	Plantago ovata	desert plantain
	*Veronica arvensis**	corn speedwell
Polygonaceae - Buckwheat Family	*Eriogonum fasciculatum*	California buckwheat
	*Rumex crispus**	curly dock
Primulaceae - Primrose Family	*Lysimachia arvensis**	scarlet pimpernel

	Scientific Name	Common Name
Solanaceae - Nightshade Family	*Datura wrightii*	jimson weed
	*Nicotiana glauca**	tree tobacco
Tamaricaceae - Tamarisk Family	*Tamarix ramosissima**	salt cedar
Monocotyledoneae		
Arecaceae- Palm Family	*Washingtonia robusta**	Mexican fan palm
Poaceae - Grass Family	*Avena barbata**	wild oat
	*Bromus diandrus**	rip-gut brome
	*Bromus hordeaceus**	soft brome
	*Schismus barbatus**	Mediterranean grass
	*Bromus madritensis**	foxtail brome
	*Brachypodium distachyon**	false brome

Sources:

* Not native to California.

Sources:

Baldwin, B. G., D.H Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual; Vascular Plants of California, Second Edition. University of California Press, Berkeley, California.

Calflora. 2022. Information on California plants for education, research and conservation, based on data contributed by dozens of public and private institutions and individuals, including the Consortium of Calif. Herbaria. [web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ Accessed: 14 July 2022.

APPENDIX B

Photo Documentation

Photo Documentation (Photo Station June 14, 2022)

Photo Station 1, Facing Southwest (4-20-22)

Photo Station 2, Facing Southwest (4-20-22)

Photo Station 3-1, Facing Southwest (4-20-22)

Photo Station 3-2, Facing West-Southwest (4-20-22)

Photo Station 3-3, Facing West (4-20-22)

Photo Station 4-1, Facing East-Southeast (4-20-22)

Photo Station 4-2, Facing Southwest (4-20-22)

Photo Station 4-3 (majority of frame outside of restoration area), Facing West (4-20-22)

Photo Station 8, Facing East-Northeast (6-14-22)

Photo Station 9, Facing East (6-14-22)

Photo Station 10-1, Facing East-Southeast (6-14-22)

Photo Station 10-2, Facing East (6-14-22)

Photo Station 10-3, Facing South-Southwest (6-14-22)

Photo Documentation (Implementation)

Hydroseeding (3/21/22)

Continuation of Hydroseeding Near Container Plants (3/23/22)

Appendix B
Historical Photo Documentation


DPI Direct
Ackley Moving Services
Ferguson Waterworks
Granite Construction - Poway Facility
Image © 2023 Maxar Technologies
Imagery Date: 7/11/2004

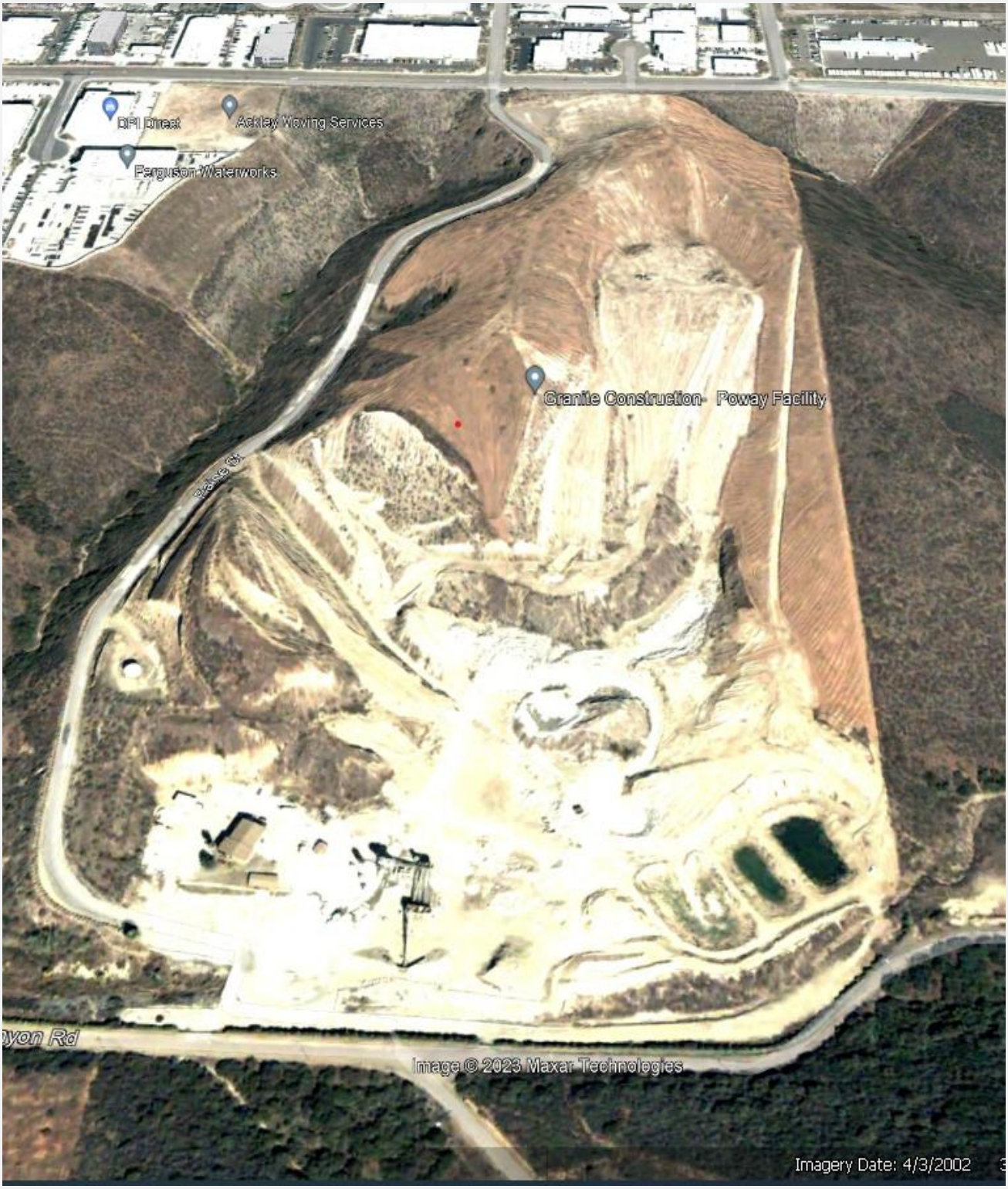
2004


DPI Direct
Ackley Moving Services
Ferguson Waterworks
Granite Construction - Poway Facility
Image © 2023 Maxar Technologies
Imagery Date: 1/26/2003

2003


DFI Direct
Ackley Mowing Services
Ferguson Waterworks
Granite Construction - Poway Facility
anyon Rd
Image U.S. Geological Survey
Imagery Date: 6/4/2002

2002


RPI Direct
Ackley Moving Services
Ferguson Waterworks
Granite Construction - Poway Facility
Image © 2023 Maxar Technologies
Imagery Date: 4/3/2002

2002


DPI Direct
Ackley Mowing Services
Ferguson Waterworks
Granite Construction - Poway Facility
Image U.S. Geological Survey
Imagery Date: 9/29/1996

1996

Appendix C
Plant Species List

Lycophytes [=Lycopods]

SELAGINELLACEAE – SPIKE-MOSS FAMILY

Selaginella cinerascens – mesa spike-moss

Angiosperms: Eudicots

ADOXACEAE – ADOXA FAMILY

Sambucus nigra ssp. *caerulea* – blue elderberry

AMARANTHACEAE – AMARANTH FAMILY

Malosma laurina – laurel sumac

* *Schinus molle* – Peruvian pepper tree

APIACEAE – CARROT FAMILY

Daucus pusillus – rattlesnake weed

* *Nerium oleander* – oleander

ASTERACEAE – SUNFLOWER FAMILY

Ambrosia psilostachya – western ragweed

Artemisia californica – coastal sagebrush

Baccharis salicifolia ssp. *salicifolia* – mule-fat, seep-willow

Baccharis sarothroides – broom baccharis

Corethrogyne filaginifolia var. *filaginifolia* – common sand-aster

Deinandra fasciculata – fascicled tarweed

Encelia californica – California encelia

Erigeron foliosus var. *foliosus* – leafy daisy

Eriophyllum confertiflorum var. *confertiflorum* – long-stem golden-yarrow

Hazardia squarrosa var. *grindelioides* – southern sawtooth goldenbush

Heterotheca grandiflora – telegraph weed

Isocoma menziesii var. *vernonioides* – coastal goldenbush

Iva hayesiana – San Diego marsh-elder

Microseris douglasii ssp. *platycarpha* – small-flower microseris

Osmadenia tenella – osmadenia

Porophyllum gracile – odora

Pseudognaphalium californicum – California everlasting

Uropappus lindleyi – silver puffs

* *Carduus pycnocephalus* ssp. *pycnocephalus* – Italian thistle

* *Centaurea melitensis* – tocalote

* *Dittrichia graveolens* – stinkwort

* *Hypochaeris glabra* – smooth cat's ear
* *Lactuca serriola* – prickly lettuce
* *Logfia gallica* – narrow-leaf cottonrose
* *Pulicaria paludosa* – Spanish false-fleabane rafinesquia californica nutt
* *Sonchus asper* ssp. *asper* – prickly sow-thistle
* *Sonchus oleraceus* – common sow-thistle
* *Hedypnois cretica* – crete hedypnois

BORAGINACEAE – BORAGE FAMILY

Cryptantha intermedia var. *intermedia* – Nievitas cryptantha

BRASSICACEAE – MUSTARD FAMILY

Lepidium nitidum – shining peppergrass
* *Hirschfeldia incana* – short-pod mustard

CARYOPHYLLACEAE – PINK FAMILY

* *Silene gallica* – common catchfly
* *Spergularia bocconi* – Boccone's sand-spurrey

CHENOPODIACEAE – GOOSEFOOT FAMILY

Chenopodium californicum – California goosefoot
* *Salsola tragus* – prickly russian-thistle, tumbleweed

CONVOLVULACEAE – MORNING-GLORY FAMILY

Calystegia macrostegia ssp. *tenuifolia* – San Diego morning-glory

CRASSULACEAE – STONECROP FAMILY

Dudleya pulverulenta – chalk dudleya

CUCURBITACEAE – GOURD FAMILY

Marah macrocarpa – manroot, wild-cucumber

EUPHORBIACEAE – SPURGE FAMILY

Croton setiger – doveweed

FABACEAE – LEGUME FAMILY

Acmispon glaber var. *glaber* – coastal deerweed
Lupinus bicolor – miniature lupine
Trifolium willdenovii – valley clover
* *Medicago polymorpha* – California burclover
* *Melilotus indicus* – Indian sweetclover

FAGACEAE – OAK FAMILY

Quercus agrifolia var. *agrifolia* – coast live oak, encina

GERANIACEAE – GERANIUM FAMILY

* *Erodium botrys* – long-beak filaree/storksbill
* *Erodium cicutarium* – red-stem filaree/storksbill

LAMIACEAE – MINT FAMILY

Salvia apiana – white sage

Salvia mellifera – black sage

MONTIACEAE – MONTIA FAMILY

Claytonia perfoliata – miner's-lettuce

MYRSINACEAE – MYRSINE FAMILY

* *Anagallis arvensis* – scarlet pimpernel, poor man's weatherglass

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia* – coastal wishbone plant

OLEACEAE – OLIVE FAMILY

* *Olea europaea* – olive

ONAGRACEAE – EVENING-PRIMROSE FAMILY

Oenothera elata ssp. *hookeri* – Hooker's evening-primrose

Clarkia purpurea – winecup clarkia

OROBANCHACEAE – BROOM-RAPE FAMILY

Cordylanthus rigidus – bird's beak

PHRYMACEAE – LOPSEED FAMILY

Diplacus puniceus – coast monkey flower

POLYGONACEAE – BUCKWHEAT FAMILY

Eriogonum fasciculatum var. *fasciculatum* – coast California buckwheat

* *Rumex crispus* – curly dock

RHAMNACEAE – BUCKTHORN FAMILY

Rhamnus crocea – spiny redberry

ROSACEAE – ROSE FAMILY

Cercocarpus minutiflorus – San Diego mountain-mahogany

RUBIACEAE – MADDER OR COFFEE FAMILY

Galium aparine – common bedstraw, goose grass

SOLANACEAE – NIGHTSHADE FAMILY

* *Nicotiana glauca* – tree tobacco

Angiosperms: Monocots

CYPERACEAE – SEDGE FAMILY

Schoenoplectus californicus – California bulrush

POACEAE – GRASS FAMILY

Melica imperfecta – coast range melic

Stipa pulchra – purple needle grass

* *Avena barbata* – slender wild oat
* *Avena fatua* – wild oat
* *Brachypodium distachyon* – purple false brome
* *Bromus diandrus* – ripgut grass
* *Bromus hordeaceus* – soft chess
* *Festuca myuros* – rat-tail fescue
* *Festuca perennis* – perennial rye grass
* *Lamarckia aurea* – golden-top
* *Melinis repens* ssp. *repens* – natal grass
* *Bromus rubens* – foxtail chess, red brome
* *Cenchrus setaceus* – African fountain grass

THEMIDACEAE – BRODIAEA FAMILY

Bloomeria crocea var. *crocea* – common goldenstar

TYPHACEAE – CATTAIL FAMILY

Typha domingensis – southern cattail

* Signifies introduced (non-native) species.

Appendix D
Wildlife Species List

Amphibians

Frogs

HYLIDAE – TREEFROGS

Pseudacris hypochondriaca – Baja California treefrog

Toads

BUFONIDAE – TRUE TOADS

Anaxyrus boreas – western toad

Birds

Blackbirds, Orioles, and Allies

ICTERIDAE – BLACKBIRDS

Agelaius phoeniceus – red-winged blackbird

Icterus bullockii – Bullock's oriole

Icterus cucullatus – hooded oriole

Bushtits

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus – bushtit

Cardinals, Grosbeaks, and Allies

CARDINALIDAE – CARDINALS AND ALLIES

Passerina caerulea – blue grosbeak

Pheucticus melanocephalus – black-headed grosbeak

Falcons

FALCONIDAE – CARACARAS AND FALCONS

Falco sparverius – American kestrel

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Spinus psaltria – lesser goldfinch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

Myiarchus cinerascens – ash-throated flycatcher

Sayornis nigricans – black phoebe

Tyrannus vociferans – Cassin's kingbird

Hawks

ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis – red-tailed hawk

Buteo lineatus – red-shouldered hawk

Herons and Bitterns

ARDEIDAE – HERONS, BITTERNS, AND ALLIES

Ardea alba – great egret

Hummingbirds

TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird

Selasphorus sasin – Allen's hummingbird

Jays, Magpies, and Crows

CORVIDAE – CROWS AND JAYS

Aphelocoma californica – California scrub-jay

Corvus brachyrhynchos – American crow

Corvus corax – common raven

Mockingbirds and Thrashers

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Toxostoma redivivum – California thrasher

New World Quail

ODONTOPHORIDAE – NEW WORLD QUAIL

Callipepla californica – California quail

Old World Warblers and Gnatcatchers

POLIOPTILIDAE – GNATCATCHERS

Polioptila californica californica – coastal California gnatcatcher

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove

Roadrunners and Cuckoos

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner

Shorebirds

CHARADRIIDAE – LAPWINGS AND PLOVERS

Charadrius vociferus – killdeer

Silky Flycatchers

PTILOGONATIDAE – SILKY-FLYCATCHERS

Phainopepla nitens – phainopepla

Swallows

HIRUNDINIDAE – SWALLOWS

Hirundo rustica – barn swallow

Petrochelidon pyrrhonota – cliff swallow

Thrushes

TURDIDAE – THRUSHES

Sialia mexicana – western bluebird

Waterfowl

ANATIDAE – DUCKS, GEESE, AND SWANS

Anas platyrhynchos – mallard

Wood Warblers and Allies

PARULIDAE – WOOD-WARBLERS

Geothlypis trichas – common yellowthroat

Woodpeckers

PICIDAE – WOODPECKERS AND ALLIES

Colaptes auratus – northern flicker

Dryobates nuttallii – Nuttall's woodpecker

Wrens

TROGLODYTIDAE – WRENS

Thryomanes bewickii – Bewick's wren

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Aimophila ruficeps – rufous-crowned sparrow

Melospiza melodia – song sparrow

Melozone crissalis – California towhee

Pipilo maculatus – spotted towhee

Spizella atrogularis – black-chinned sparrow

Typical Warblers, Parrotbills, Wrentit

SYLVIIDAE – SYLVIID WARBLERS

Chamaea fasciata – wrentit

Invertebrates

Butterflies

LYCAENIDAE – BLUES, HAIRSTREAKS, AND COPPERS

Brephidium exile – western pygmy-blue
Callophrys dumetorum – bramble hairstreak
Satyrium saepium – hedgerow hairstreak
Strymon melinus – gray hairstreak

NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES

Danaus plexippus – monarch
Junonia coenia – common buckeye
Libytheana carinenta – American snout
Nymphalis antiopa – mourning cloak
Speyeria callippe comstocki – Comstock's fritillary
Vanessa cardui – painted lady

RIODINIDAE – METALMARKS

Apodemia mormo virgulti – Behr's metalmark

HESPERIIDAE – SKIPPERS

Erynnis funeralis – funereal duskywing

PAPILIONIDAE – SWALLOWTAILS

Papilio eurymedon – pale swallowtail
Papilio rutulus – western tiger swallowtail

PIERIDAE – WHITES AND SULFURS

Anthocharis sara sara – Pacific sara orangetip
Pieris rapae – cabbage white
Pontia protodice – checkered white

Mammals

Canids

CANIDAE – WOLVES AND FOXES

Canis latrans – coyote

Cats

FELIDAE – CATS

Lynx rufus – bobcat

Hares and Rabbits

LEPORIDAE – HARES AND RABBITS

Sylvilagus audubonii – desert cottontail

Sylvilagus bachmani – brush rabbit

Mustelids

MEPHITIDAE – SKUNKS

Mephitis mephitis – striped skunk

Pocket Gophers

GEOMYIDAE – POCKET GOPHERS

Thomomys bottae – Botta's pocket gopher

Squirrels

SCIURIDAE – SQUIRRELS

Otospermophilus beecheyi – California ground squirrel

Ungulates

CERVIDAE – DEERS

Odocoileus hemionus – mule deer

Rats, Mice, and Voles

CRICETIDAE – RATS, MICE, AND VOLES

Neotoma macrotis – big-eared woodrat

Neotoma sp. – woodrat

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

Uta stansburiana – common side-blotched lizard

Snakes

COLUBRIDAE – COLUBRID SNAKES

Lampropeltis californiae – California kingsnake

Appendix E

Special-Status Plant Species with Potential to Occur within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–330	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present. Red sand verbena occurs in sandy beach dune habitat which are not present onsite. Red sand verbena does not have potential to occur onsite. A reference check was performed on 4/4/22 for a different project. Red sand verbena can be easily observed year-round as it is a large succulent perennial. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE/1B.1/NE	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay, Openings/ annual herb/Apr–June/ 35–3,145	**Not expected to occur.** A reference check was performed on 4/19/22 where some San Diego thorn-mint was blooming and others vegetative. Another check was performed on 4/21/22 where the majority of the San Diego thorn-mint was blooming. No San Diego thorn-mint was observed during spring rare plant surveys on 4/25/22 or 4/27/22. Some large collections of San Diego thorn mint occur east of the project site near Sycamore Canyon trailhead (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). The majority of the site is made up of Redding cobbly loam which is not a clay soil (USDA SoilWeb 2023; Reiser 1994). San Diego thorn mint requires clay soils.
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1/Covered	Coastal dunes, Coastal scrub/annual herb/ Mar–June(July)/0–35	**Not expected to occur.** The site is outside of the species' known elevation range. Nuttall's acmispon occurs in coastal dunes and does not have potential to occur onsite.

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Adolphia californica	California adolphia	None/None/2B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay/perennial deciduous shrub/Dec–May/35–2,425	**Not expected to occur.** A reference check was performed on 4/22/22 and 4/29/22 for California adolphia. California adolphia was in bloom at reference check locations. California adolphia was not observed during spring rare plant surveys on 4/25/22 or 4/27/22.California adolphia can be observed year-round as it is a large shrub. California adolphia collections are generally coastal and have not been collected east of Pomerado road (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Agave shawii var. *shawii*	Shaw's agave	None/None/2B.1/NE	Coastal bluff scrub, Coastal scrub/perennial leaf/ Sep–May/10–395	**Not expected to occur.** The site is outside of the species' known elevation range. Shaw's agave occurs in sandy coastal soils unless planted ornamentally. No Shaw's agave was observed during rare plant surveys.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2/None	Chaparral, Sonoran desert scrub; Sandy/perennial shrub/Aug–Nov/35–1,640	**Not expected to occur.** Singlewhorl burrobursh typically occurs within or on the edges of washes, streams, channels or riparian areas. Singlewhorl burrobrush was not observed during rare plant surveys on 4/25/22 or 4/27/22. Singlewhorl burrobrush is a large perennial shrub that can easily be observed year-round. Singlewhorl burrobrush collections are southern coastal within San Diego county. No collections have been made north of Santee, California. Locally, this species is out of range (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1/NE	Chaparral, Coastal scrub, Valley and foothill grassland,	**Not expected to occur.** San Diego ambrosia can be observed year-round and was not observed during

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			Vernal pools; Alkaline (sometimes), Clay (sometimes), Disturbed areas (often), Sandy (sometimes)/ perennial rhizomatous herb/Apr–Oct/65–1,360	rare plant surveys. San Diego ambrosia does not occur north of Mission Trails Regional Park or east of Interstate 15 (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). A reference check was performed on 4/23/22 and 6/1/22 and 7/22/22. San Diego ambrosia was vegetative the first two visits and blooming 7/22/22. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Aphanisma blitoides	aphanisma	None/None/1B.2/NE	Coastal bluff scrub, Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/ Feb–June/5–1,000	**Not expected to occur.** Aphanisma occurs only on coastal bluffs or coastal bluff scrub right next to the ocean. Locally, aphanisma would be far outside its range onsite. A rare plant reference check was performed 4/4/22 on coastal bluffs where it was vegetative. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/None/1B.1/Covered	Chaparral/perennial evergreen shrub/ June–Apr/0–1,195	**Not expected to occur.** No Arctostaphylos species were observed onsite during rare plant surveys. Del Mar manzanita occurs generally on the coast unless it is an ornamental planting (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Artemisia palmeri	San Diego sagewort	None/None/4.2/None/ None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; Mesic, Sandy/perennial deciduous shrub/ (Feb)May–Sep/50–3,000	**Not expected to occur.** San Diego sagewort was not observed during rare plant surveys. Collections have not been made near the site (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). San Diego sagewort occurs in riparian areas. One small riparian area occurs onsite where San Diego sagewort is absent.
Asplenium vespertinum	western spleenwort	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub;	**Not expected to occur.** This fern was not observed during rare plant surveys. Habitat for this species is limited onsite.

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			Rocky/perennial rhizomatous herb/Feb–June/590–3,280	
Astragalus deanei	Dean's milk-vetch	None/None/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian Forest/perennial herb/Feb–May/245–2,280	**Not expected to occur.** Dean's milk vetch was not observed during rare plant surveys. Locally, Dean's milk vetch is outside the range of the project site. Dean's milk vetch occurs east of highway 67 (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Astragalus oocarpus	San Diego milk-vetch	None/None/1B.2/None	Chaparral, Cismontane woodland/perennial herb/ May–Aug/1,000–5,000	**Not expected to occur.** San Diego milk-vetch was not observed during rare plant surveys. San Diego milk-vetch has a distribution that is east of Ramona, California (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). No collections or observations have been made near the project site.
Astragalus tener var. *titi*	coastal dunes milk-vetch	FE/SE/1B.1/NE	Coastal bluff scrub, Coastal dunes, Coastal prairie/annual herb/Mar–May/5–165	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/Mar–Oct/10–1,505	**Not expected to occur.** Coulter's saltbush was not observed during rare plant surveys. The majority of collections occur within the Ramona grasslands in alkaline moist areas or on the coast (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Atriplex pacifica	south coast saltscale	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/ annual herb/Mar–Oct/0–460	**Not expected to occur.** South coast saltscale was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Atriplex parishii	Parish's brittlescale	None/None/1B.1/None	Chenopod scrub, Playas, Vernal pools; Alkaline/annual herb/June–Oct/80–6,230	**Not expected to occur.** Parish's brittlescale was not observed during rare plant surveys. No suitable vegetation present onsite for this species.
Baccharis vanessae	Encinitas baccharis	FT/SE/1B.1/Covered	Chaparral, Cismontane woodland; Sandstone/	**Not expected to occur.** Encinitas baccharis was not observed during late season rare plant surveys.

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			perennial deciduous shrub/ Aug–Nov/195–2,360	
Bergerocactus emoryi	golden-spined cereus	None/None/2B.2/None	Chaparral, Closed-cone coniferous forest, Coastal scrub; Sandy/perennial stem/May–June/10–1,295	**Not expected to occur.** Golden-spined cereus was not observed during rare plant surveys. A reference check was performed on 4/7/22 in full bloom. Golden-spined cereus can be easily observed year-round. The distribution for golden-spined cereus is near the coast or on the US/Mexico border (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). No collections occur near the project site.
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1/Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/ perennial bulbiferous herb/Apr–May/165–1,525	**Not expected to occur.** Present during spring surveys within the San Diego section of the project site but absent from the Poway section of the project during rare plant surveys.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1/Covered	Chaparral, Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; Clay (often)/perennial bulbiferous herb/Mar–June/80–3,670	**Not expected to occur.** Thread-leaved brodiaea was not present during rare plant surveys. A rare plant reference check was performed on 4/25/22 where thread-leaved brodiaea was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). All collections occur west of interstate 15 (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). No collections occur near the project site.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1/Covered	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay, Mesic/perennial bulbiferous herb/May–July/100–5,550	**Not expected to occur.** Orcutt's brodiaea was not present during rare plant surveys. A rare plant reference check was performed on 4/25/22 where Orcutt's brodiaea was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). No collections

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				have been made near the project site (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Calandrinia breweri	Brewer's calandrinia	None/None/4.2/None	Chaparral, Coastal scrub; Burned areas, Disturbed areas, Loam (sometimes), Sandy (sometimes)/annual herb/(Jan)Mar–June/ 35–4,000	**Not expected to occur.** Brewer's calendrina was not observed during rare plant surveys.
Calochortus plummerae	Plummer's mariposa-lily	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Granitic, Rocky/ perennial bulbiferous herb/ May–July/330–5,575	**Not expected to occur.** Plummer's mariposa lily was not observed during rare plant surveys. Collections have not been made in San Diego county (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023). A rare plant reference check was performed on 6/9/22 where Plummer's mariposa lily was in full bloom, bud and fruit. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3/None	Cismontane woodland, Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Clay (sometimes), Sandy (sometimes)/annual herb/ Mar–May (June)/0–985	**Not expected to occur.** Lewis' evening primrose was not observed during rare plant surveys. A rare plant reference check was performed on 4/4/22 where Lewis' evening primrose was in bloom and vegetative. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). No collections have been made near the Poway area (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Castilleja plagiotoma	Mojave paintbrush	None/None/4.3/None	Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland/perennial herb	**Not expected to occur.** No suitable vegetation present.

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			(hemiparasitic)/Apr–June/ 985–8,200	
Ceanothus cyaneus	Lakeside ceanothus	None/None/1B.2/Covered	Chaparral, Closed-cone coniferous forest/perennial evergreen shrub/Apr–June/ 770–2,475	**Not expected to occur.** Lakeside ceanothus was not observed during rare plant surveys.
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2/None	Chaparral/perennial evergreen shrub/Jan–Apr/ 1,965–3,605	**Not expected to occur.** The site is outside of the species' known elevation range.
Ceanothus verrucosus	wart-stemmed ceanothus	None/None/2B.2/Covered	Chaparral/perennial evergreen shrub/Dec–May/ 5–1,245	**Not expected to occur.** Wart stemmed ceanothus has a coastal distribution. No collections have been made near Poway, California that are east of Interstate-15 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). Reference checks were performed for this species 4/19/22 in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). No wart-stemmed ceanothus was observed onsite during spring rare plant surveys.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1/None	Marshes and swamps, Valley and foothill grassland, Vernal pools/annual herb/ May–Nov/0–1,570	**Not expected to occur.** Southern tarplant was not observed during rare plant surveys. No collections have been documented near Poway, California. The majority of collections are within the Ramona grasslands and near Del Mar, California (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1/None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; Alkaline/ annual herb/Apr–Sep/ 0–2,095	**Not expected to occur.** A reference check was performed on 7/21/22 and 5/4/22. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). Smooth tarplant was not observed during rare plant surveys. The closest collection of smooth tarplant

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				is in Santee, California (CalFlora 2023, CCH 2023, San Diego Plant Atlas 2023).
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub, Coastal dunes/annual herb/Jan–Aug/ 0–330	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present.
Chamaebatia australis	southern mountain misery	None/None/4.2/None	Chaparral/perennial evergreen shrub/ Nov–May/985–3,345	**Not expected to occur.** The large scrub, southern mountain misery was not observed during rare plant surveys. Collections occur east of highway 67 or much further south near Otay mountain (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2/Covered	Coastal dunes, Marshes and swamps/annual herb (hemiparasitic)/ May–Oct (Nov)/0–100	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present.
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2/None	Chaparral, Coastal scrub, Lower montane coniferous forest; Granitic/annual herb/May–Aug/985–6,230	**Not expected to occur.** Peninsular spineflower was not observed during rare plant surveys. All collections occur east of highway 67 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). No collections have been observed near the project site.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/SE/1B.1/None	Chaparral, Closed-cone coniferous forest, Coastal scrub; Openings, Sandy/ annual herb/Mar–May/ 10–410	**Not expected to occur.** The site is outside of the species' known elevation range.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/1B.2/None	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay (often)/ annual herb/Apr–July/ 100–5,015	**Not expected to occur.** Long-spined spineflower was not observed during rare plant surveys. A reference check was performed for long-spined spineflower on 5/4/22 when in still had some blooms. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). Long-spined

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				spineflower has not been collected near the project site. Occurrences are west of interstate 15. Denser collections are in eastern San Diego county near Julian (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Cistanthe maritima	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Sandy/ annual herb/(Feb)Mar–June(Aug)/15–985	**Not expected to occur.** Seaside cistanthe was not observed during rare plant surveys. A rare plant reference check was performed 4/6/22. The plant was only vegetative. Another reference check was performed on 5/12/22 where it was still in bud. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). In addition, seaside cistanthe occurs near the coast. No collections have been made near Poway (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Clarkia delicata	delicate clarkia	None/None/1B.2/None	Chaparral, Cismontane woodland; Gabbroic (often)/annual herb/ Apr–June/770–3,280	**Not expected to occur.** Delicate clarkia was not observed during rare plant surveys. A rare plant reference check was performed on 4/24/22 when it was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023). No collections have been made near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Clinopodium chandleri	San Miguel savory	None/None/1B.2/Covered	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland; Gabbroic (sometimes), Rocky (sometimes)/perennial shrub/Mar–July/395–3,525	**Not expected to occur.** San Miguel savory was not observed during rare plant surveys. Collections occur east of highway 67. Other collections are much further south near Jamul, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).

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Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2/None	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/ 100–2,590	**Not expected to occur.** Summer holly was not observed during rare plant surveys. Summer holly has a coastal distribution and generally occurs west of Interstate 15. No collections have been made near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Convolvulus simulans	small-flowered morning-glory	None/None/4.2/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Seeps, Serpentinite/ annual herb/Mar–July/ 100–2,425	**Not expected to occur.** Small-flowered morning glory was not observed during rare plant surveys. A rare plant reference check was performed on 4/25/22 where small-flowered morning glory was in fruit and flower. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	None/None/1B.1/None	Chaparral, Coastal bluff scrub, Coastal scrub/ perennial herb/June–Sep/ 10–375	**Not expected to occur.** San Diego Sand aster occurs only near the coast in bluff scrub and coastal scrub. The project site is outside the range of San Diego sand aster (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). The site is outside of the species' known elevation range.
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	None/None/1B.1/Covered	Chaparral, Coastal bluff scrub, Coastal scrub; Sandy/ perennial herb/May–Sep/ 15–490	**Not expected to occur.** Del Mar Mesa sand aster occurs only near the coast in bluff scrub and coastal scrub. The project site is outside the range of Del Mar Mesa sand aster (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). The site is outside of the species' known elevation range.
Cylindropuntia californica var. *californica*	snake cholla	None/None/1B.1/NE	Chaparral, Coastal scrub/ perennial stem/Apr–May/ 100–490	**Not expected to occur.** Snake cholla was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Dichondra occidentalis	western dichondra	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/	**Not expected to occur.** Western dichondra was not observed during rare plant surveys. Collections have been made north of the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).

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			perennial rhizomatous herb/ (Jan)Mar–July/165–1,640	
Dieteria asteroides var. *lagunensis*	Mt. Laguna aster	None/SR/2B.1/None	Cismontane woodland, Lower montane coniferous forest/ perennial herb/ (May)July–Aug/2,590–7,870	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present. A reference check was performed on 7/24/22 to check bloom status and it was blooming. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Diplacus aridus	low bush monkeyflower	None/None/4.3/None	Chaparral, Sonoran desert scrub/perennial evergreen shrub/Apr–July/2,460–3,935	**Not expected to occur.** Low bush monkeyflower was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1/None	Chaparral, Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Clay (often), Rocky, Serpentinite/ perennial herb/Apr–June/ 15–1,475	**Not expected to occur.** Blochman's Dudleya was not observed during rare plant surveys. Blochman's Dudleya occurs in unique clay soil not present onsite. Blochman's Dudleya also has a coastal distribution. No collections occur near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Dudleya brevifolia	short-leaved dudleya	None/SE/1B.1/NE	Chaparral, Coastal scrub; Sandstone/perennial herb/ Apr–May/100–820	**Not expected to occur.** Short-leaved Dudleya was not observed during rare plant surveys. Short-leaved Dudleya occurs in unique sandstone soil not present onsite. Short-leaved Dudleya also has a coastal distribution. No collections occur near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Dudleya variegata	variegated dudleya	None/None/1B.2/NE	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/perennial herb/Apr–June/10–1,900	**Not expected to occur.** Variegated Dudleya was not observed during rare plant surveys. A rare plant reference check was performed on 4/22/22 where variegated Dudleya was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram

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				2023). A collection has been made near hill country trail and another near San Vicente reservoir somewhat near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). Therefore, a refence check was important as the site had some potential for occurrence. Rare plant surveys determined a lack of presence.
Dudleya viscida	sticky dudleya	None/None/1B.2/Covered	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub; Rocky/ perennial herb/May–June/ 35–1,800	**Not expected to occur.** Sticky Dudleya was not observed during rare plant surveys. Sticky Dudleya has a coastal distribution (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). Therefore, no collections have been made near the project site.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	None/None/1B.1/Covered	Chaparral, Coastal scrub; Mesic/perennial evergreen shrub/(July)Sep–Nov/ 100–1,965	**Not expected to occur.** Palmer's goldenbush was not observed during rare plant surveys. No collections have been made near the site. The majority of collections occur near Rancho San Diego, California where Palmer's goldenbush is more likely to occur (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Eriodictyon sessilifolium	sessile-leaved yerba santa	None/None/2B.1/None	Coastal scrub; Volcanic/perennial shrub/ July/560–560	**Not expected to occur.** The site is outside of the species' known elevation range.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/1B.1/Covered	Coastal scrub, Valley and foothill grassland, Vernal pools; Mesic/annual/ perennial herb/Apr–June/ 65–2,030	**Not expected to occur.** San Diego button celery was not observed during rare plant surveys. San Diego button celery only occurs within vernal pools. No vernal pools are present onsite. Reference checks were performed on 4/23/22 where San Diego button celery was in bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).

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Erysimum ammophilum	sand-loving wallflower	None/None/1B.2/Covered	Chaparral, Coastal dunes, Coastal scrub; Openings, Sandy/perennial herb/ Feb–June(July–Aug)/0–195	**Not expected to occur.** San Loving wallflower was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Erythranthe diffusa	Palomar monkeyflower	None/None/4.3/None	Chaparral, Lower montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/annual herb/ Apr–June/4,000–6,000	**Not expected to occur.** Palomar monkeyflower was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Euphorbia misera	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; Rocky/perennial shrub/(Oct)Dec–Aug/ 35–1,640	**Not expected to occur.** Cliff spurge was not observed during rare plant surveys. Cliff spurge has a coastal distribution (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). A rare plant reference check was performed 4/4/22 where cliff spurge was blooming and fruiting. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1/Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/perennial stem/ May–June/10–1,475	**Not expected to occur.** San Diego barrel cactus was not observed during rare plant surveys. A rare plant reference check was performed on 4/19/22 where San Diego barrel cactus was blooming. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Geothallus tuberosus	Campbell's liverwort	None/None/1B.1/None	Coastal scrub, Vernal pools/ephemeral liverwort//35–1,965	**Not expected to occur.** Cambell's liverwort was not observed during rare plant surveys. No collections have been made near the project site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Githopsis diffusa ssp. *filicaulis*	Mission Canyon bluecup	None/None/3.1/None	Chaparral/annual herb/ Apr–June/1,475–2,295	**Not expected to occur.** Mission canyon bluecup was not observed during rare plant surveys. The site is outside of the species' known elevation range.

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Grindelia hallii	San Diego gumplant	None/None/1B.2/None	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/perennial herb/ May–Oct/605–5,725	**Not expected to occur.** San Diego gumplant was not observed during rare plant surveys. The majority of collections occur east of Alpine, California and are found in areas like Cuyamaca Rancho State Park and Mt. Lauguna (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Openings/annual herb/Mar–May/65–3,130	**Not expected to occur.** Palmer's grapplinghook was not observed during rare plant surveys. A rare plant reference check was performed on 4/4/22. Numerous plants were fruiting and were observed fruiting throughout April. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Hazardia orcuttii	Orcutt's hazardia	None/ST/1B.1/None	Chaparral, Coastal scrub; Clay (often)/perennial evergreen shrub/Aug–Oct/260–280	**Not expected to occur.** Orcutt's hazardia was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	None/None/1B.1/None	Chaparral, Coastal dunes, Coastal scrub/perennial herb/Mar–Dec/0–4,015	**Not expected to occur.** Beach goldenaster was not observed during rare plant surveys. This variety of beach goldenaster occurs near the beach and has not been collected near the project site which is too far inland (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Holocarpha virgata ssp. *elongata*	graceful tarplant	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ annual herb/May–Nov/ 195–3,605	**Not expected to occur.** Graceful tarplant was not observed during rare plant surveys. A rare plant reference check was performed on 5/30/22 where it was blooming. However, graceful tarplant can be observed year-round because the dead stocks are also easy to identify when the plant is not vegetative or in flower. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Hordeum intercedens	vernal barley	None/None/3.2/None	Coastal dunes, Coastal scrub, Valley and foothill grassland, Vernal pools/annual herb/ Mar–June/15–3,280	**Not expected to occur.** Vernal barley was not observed during rare plant surveys. Vernal barley occurs within vernal pools which are not present onsite.
Horkelia truncata	Ramona horkelia	None/None/1B.3/None	Chaparral, Cismontane woodland; Clay, Gabbroic/ perennial herb/May–June/ 1,310–4,265	**Not expected to occur.** Ramona horkelia was not observed during rare plant surveys. A rare plant reference check was performed near Iron mountain. However, the site is outside of the species' known elevation range.
Hulsea californica	San Diego sunflower	None/None/1B.3/None	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; Burned areas, Openings/ perennial herb/Apr–June/ 3,000–9,560	**Not expected to occur.** San Diego sunflower was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Hymenothrix wrightii	Wright's hymenothrix	None/None/4.3/None	Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/ perennial herb/June–Oct/ 4,590–5,085	**Not expected to occur.** The site is outside of the species' known elevation range. A rare plant reference check was performed on 7/24/22 to check bloom status. Wright's hymenothrix was blooming.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2/None	Chaparral, Coastal scrub/ perennial shrub/Apr–Nov/ 35–445	**Not expected to occur.** Decumbent goldenbush was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2/None	Marshes and swamps, Playas/perennial herb/ Apr–Oct/35–1,640	**Observed within the buffer.** None were observed within the project boundary.
Juglans californica	Southern California black walnut	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/ perennial deciduous tree/Mar–Aug/165–2,950	**Not expected to occur.** Southern California walnut was not observed during rare plant surveys. This large tree is easy to observe year-round. No collections have been made near the project site

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
				(Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2/None	Coastal dunes, Marshes and swamps, Meadows and seeps/perennial rhizomatous herb/(Mar) May–June/ 10–2,950	**Observed within the buffer.** A rare plant reference check was performed on 6/15/22 but this large rush can be easily observed year-round. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1/None	Marshes and swamps, Playas, Vernal pools/annual herb/Feb–June/5–4,000	**Not expected to occur.** Coulter's goldfields typically grow in wet marshes or vernal habitat. This habitat was not present onsite. A reference check was performed on 5/4/22 and flowering status was ending. Only a few were in flower but many going to seed. Survey timing onsite for rare plant surveys fit peak bloom from Coulter's goldfields. No Coulter's goldfields were observed during spring rare plant surveys. Coulter's goldfields occur near the coast in San Diego county (west of I-15) and south of La Mesa, California. No collections occur near the site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Lathyrus splendens	pride-of-California	None/None/4.3/None	Chaparral/perennial herb/Mar–June/655–5,000	**Not expected to occur.** Pride of California was not observed during rare plant surveys. Pride of California generally has a range that is near the US/Mexico border and is more likely in eastern San Diego county today. No collections have been made near the site within recent decades (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Lepechinia cardiophylla	heart-leaved pitcher sage	None/None/1B.2/Covered	Chaparral, Cismontane woodland, Closed-cone	**Not expected to occur.** Heart-leaved pitcher sage was not observed during rare plant surveys. The

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
			coniferous forest/perennial shrub/Apr–July/1,705–4,490	site is outside of the species' known elevation range.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3/None	Chaparral, Coastal scrub/ annual herb/Jan–July/ 5–2,900	**Not expected to occur.** Robinson's pepper-grass was not observed during rare plant surveys. The closest collection is near Lake Miramar (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Leptosiphon grandiflorus	large-flowered leptosiphon	None/None/4.2/None	Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland; Sandy (usually)/annual herb/ Apr–Aug/15–4,000	**Not expected to occur.** Large flowered leptosiphon was not observed during rare plant surveys. The nearest collection is north of hwy 78 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Leptosyne maritima	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub/perennial herb/ Mar–May/15–490	**Not expected to occur.** Sea dahlia was not observed during rare plant surveys. The site is outside of the species' known elevation range. The distribution of sea dahlia is coastal (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). A rare plant reference check was performed on 4/19/22 and was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Lycium californicum	California box-thorn	None/None/4.2/None	Coastal bluff scrub, Coastal scrub/perennial shrub/ Mar–Aug (Dec)/15–490	**Not expected to occur.** California box thorn was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	None/None/4.2/None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/annual herb/ Mar–May/50–3,510	Observed onsite during surveys within the Poway boundary.

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Mobergia calculiformis	light gray lichen	None/None/3/None	Coastal scrub/crustose lichen (saxicolous)//35–35	**Not expected to occur.** Light gray lichen was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Monardella hypoleuca ssp. *lanata*	felt-leaved monardella	None/None/1B.2/Covered	Chaparral, Cismontane woodland/perennial rhizomatous herb/June–Aug/ 985–5,165	**Not expected to occur. Felt**-leaved monardella was not observed during rare plant surveys. No collections have been made near the site. All collections are east of hwy 67 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Monardella viminea	willowy monardella	FE/SE/1B.1/Covered	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland/ perennial herb/June–Aug/ 165–740	**Not expected to occur.** Willowy monardella was not observed during rare plant surveys. The closet collections are near Sycamore canyon trailhead (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Myosurus minimus ssp. *apus*	little mousetail	None/None/3.1/None	Valley and foothill grassland, Vernal pools/annual herb/ Mar–June/65–2,095	**Not expected to occur.** Little mousetail was not observed onsite during rare plant surveys. Vernal pools are required for little mousetail and no vernal pools are present onsite. No suitable habitat occurs onsite.
Navarretia fossalis	spreading navarretia	FT/None/1B.1/NE	Chenopod scrub, Marshes and swamps, Playas, Vernal pools/annual herb/Apr–June/ 100–2,145	**Not expected to occur.** Spreading navarretia was not observed during rare plant surveys. Vernal pools are required for this species and no vernal pools are present onsite. No suitable vegetation present. A rare plant reference check was performed on 4/25/22 where spreading navarretia was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.2/None	Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools/ annual herb/Apr–July/ 10–3,965	**Not expected to occur.** Prostrate vernal pool navarretia was not observed during rare plant surveys. No habitat occurs onsite for prostrate vernal pool navarretia.

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Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–330	**Not expected to occur.** The site is outside of the species' known elevation range and there is no suitable vegetation present. A reference check was performed on 4/21/22 where coast woolly heads were in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Ophioglossum californicum	California adder's-tongue	None/None/4.2/None	Chaparral, Valley and foothill grassland, Vernal pools/ perennial rhizomatous herb/ Jan–June(Dec)/195–1,720	**Not expected to occur.** California adder's tongue was not observed during spring rare plant surveys. A rare plant reference check was performed on 4/6/22. California adder's tongue was vegetative on this date. The reference check was at Iron Mountain. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Orcuttia californica	California Orcutt grass	FE/SE/1B.1/NE	Vernal pools/annual herb/ Apr–Aug/50–2,165	**Not expected to occur.** California Orcutt grass was not observed during rare plant surveys. California Orcutt grass is associated with vernal pool which are not present onsite. No suitable vegetation present.
Orobanche parishii ssp. *brachyloba*	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub/ perennial herb (parasitic)/ Apr–Oct/10–1,000	**Not expected to occur.** Short-lobed broomrape was not observed during rare plant surveys.
Packera ganderi	Gander's ragwort	None/SR/1B.2/Covered	Chaparral/perennial herb/ Apr–June/1,310–3,935	**Not expected to occur.** Gander's ragwort was not observed onsite during rare plant surveys. The site is outside of the species' known elevation range.
Pentachaeta aurea ssp. *aurea*	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/	**Not expected to occur.** Golden rayed pentachaeta was not observed during rare plant surveys. A rare plant reference check was performed on 5/15/22 when the blooms were coming to an end. April surveys would have observed peak bloom.

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			annual herb/Mar–July/ 260–6,065	Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2/None	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps/perennial herb/ Mar–Aug/15–985	**Not expected to occur.** South coast branching phacelia was not observed onsite. South coast branching phacelia has a coastal distribution. No collections have been made near Poway, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Phacelia stellaris	Brand's star phacelia	None/None/1B.1/None	Coastal dunes, Coastal scrub/annual herb/ Mar–June/5–1,310	**Not expected to occur.** Brand's star phacelia occurs in coastal sandy dunes. The site doesn't have any habitat for this species and is too far inland. A rare plant reference check was performed for Brand's star phacelia 4/21/22 where Brand's star phacelia was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Pinus torreyana ssp. *torreyana*	Torrey pine	None/None/1B.2/Covered	Chaparral, Closed-cone coniferous forest/perennial evergreen tree/100–525	**Not expected to occur.** The site is outside of the species' known elevation range.
Piperia cooperi	chaparral rein orchid	None/None/4.2/None	Chaparral, Cismontane woodland, Valley and foothill grassland/perennial herb/ Mar–June/50–5,200	**Not expected to occur.** Chaparral rein orchid was not observed during rare plant surveys in spring. No collections have been made near the site. Collections are west of interstate 15 and east of Hwy 67 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Pogogyne abramsii	San Diego mesa mint	FE/SE/1B.1/NE	Vernal pools/annual herb/ Mar–July/295–655	**Not expected to occur.** San Diego mesa mint was not observed during rare plant surveys. Venal pools are required for San Diego mesa mint and no vernal pools are present onsite. No suitable vegetation present.

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Pogogyne nudiuscula	Otay Mesa mint	FE/SE/1B.1/NE	Vernal pools/annual herb/ May–July/295–820	**Not expected to occur.** Otay mesa mint was not observed onsite. The majority of collections occur within Otay Mesa but generally occur south of Miramar (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). Otay mesa mint occurs within vernal pools and no vernal pools are present onsite. A rare plant reference check was performed on 4/22/22. Otay mesa mint was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).
Polygala cornuta var. *fishiae*	Fish's milkwort	None/None/4.3/None	Chaparral, Cismontane woodland, Riparian woodland/perennial deciduous shrub/May–Aug/ 330–3,280	**Not expected to occur.** Fish's milkwort was not observed during rare plant surveys. No collections have been made near Poway, California. The closest collections are east of hwy 67 (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/ perennial herb/ (July)Aug–Nov(Dec)/0–6,885	**Not expected to occur.** White rabbit tobacco was not observed during rare plant surveys. No collections have been made near Poway, California. The majority of collections occur within northern Camp Pendleton and San Clemente, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Quercus cedrosensis	Cedros Island oak	None/None/2B.2/None	Chaparral, Closed-cone coniferous forest, Coastal scrub/perennial evergreen tree/Apr–May/835–3,145	**Not expected to occur.** Cedros Island Oak was not observed during rare plant surveys. No collections have been made near Poway, California. Documented collections occur in Otay Open space preserve (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1/None	Chaparral, Closed-cone coniferous forest, Coastal scrub/perennial evergreen	Nuttall's scrub oak was observed within the buffer of the project site.

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			shrub/Feb–Apr (May–Aug)/ 50–1,310	
Quercus engelmannii	Engelmann oak	None/None/4.2/None	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/ 165–4,265	**Not expected to occur.** Engelmann oak was not observed during rare plant surveys. No collections have been made near Poway, California. The closest collection is near Sycamore Canyon trailhead (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Romneya coulteri	Coulter's matilija poppy	None/None/4.2/None	Chaparral, Coastal scrub/ perennial rhizomatous herb/ Mar–July (Aug)/65–3,935	**Not expected to occur.** Coulter's matilija poppy was not observed during rare plant surveys. No collections have been made near Poway, California or near the site. The closest collection is near Blue Sky preserve (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Rupertia rigida	Parish's rupertia	None/None/4.3/None	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland/perennial herb/June–Aug/ 2,295–8,200	**Not expected to occur.** Parish's rupertia was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Salvia munzii	Munz's sage	None/None/2B.2/None	Chaparral, Coastal scrub/ perennial evergreen shrub/ Feb–Apr/375–3,490	**Not expected to occur.** Munz's sage was not observed during rare plant surveys. Munz's sage generally occurs south of Santee, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023). A reference check was performed for Munz's sage on 4/22/22 where it was in full bloom. Reference check site photos are saved to Instagram account socalrare_plants (Instagram 2023).

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Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	None/None/1B.2/None	Chaparral, Cismontane woodland, Lower montane coniferous forest/perennial rhizomatous herb/June–Aug/ 1,390–6,560	**Not expected to occur.** Southern mountains skullcap was not observed during rare plant surveys. The site is outside of the species' known elevation range. A reference check was performed on 7/24/22 to check bloom status. Southern mountains skullcap was in full bloom.
Selaginella cinerascens	ashy spike-moss	None/None/4.1/None	Chaparral, Coastal scrub/ perennial rhizomatous herb//65–2,095	Observed onsite during rare plant surveys within the Poway boundary (CNPS list 4.1).
Senecio aphanactis	chaparral ragwort	None/None/2B.2/None	Chaparral, Cismontane woodland, Coastal scrub/ annual herb/Jan–Apr(May)/ 50–2,620	**Not expected to occur.** Chaparral ragwort was not observed onsite. Chaparral ragwort has not been collected near the project site and has a more coastal distribution. In addition, chaparral ragwort utilizes sandy soils which are not present onsite (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2/None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas/perennial herb/ Mar–June/50–5,015	**Not expected to occur.** Salt spring checkerbloom was not observed during rare plant surveys. No collections have been made near Poway, California. The majority of collections are near the Laguna mountains (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Sphaerocarpos drewiae	bottle liverwort	None/None/1B.1/None	Chaparral, Coastal scrub/ephemeral liverwort/ /295–1,965	**Not expected to occur.** Bottle liverwort was not observed during rare plant surveys. No collections have been made near Poway, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Stemodia durantifolia	purple stemodia	None/None/2B.1/None	Sonoran desert scrub/ perennial herb/ (Jan)Apr–Dec/590–985	**Not expected to occur.** Purple stemodia was not observed during rare plant surveys. No suitable vegetation present. Purple stemodia blooms year-round and can be observed in cobbly wash/stream habitats which are not present onsite.No collections occur near the site. I majority of

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
				collections at Mission Trails Regional Park south of the site (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Stipa diegoensis	San Diego County needle grass	None/None/4.2/None	Chaparral, Coastal scrub/ perennial herb/Feb–June/ 35–2,620	**Not expected to occur.** San Diego county needlegrass was not observed during rare plant surveys. San Diego county needlegrass generally occurs south of Mission Trails Regional Park (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Stylocline citroleum	oil neststraw	None/None/1B.1/None	Chenopod scrub, Coastal scrub, Valley and foothill grassland/annual herb/ Mar–Apr/165–1,310	**Not expected to occur.** No Stylocline species were observed during rare plant surveys. Collections of oil neststraw are near Bakersfield, Ca within the Central Valley (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Suaeda esteroa	estuary seablite	None/None/1B.2/None	Marshes and swamps/ perennial herb/(Jan–May) July–Oct/0–15	**Not expected to occur.** Esturary seablite was not observed onsite. Estuary seablite occurs in marshes and swamps. No marshes or swamps occur onsite. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Suaeda taxifolia	woolly seablite	None/None/4.2/None	Coastal bluff scrub, Coastal dunes, Marshes and swamps/perennial evergreen shrub/Jan–Dec/0–165	**Not expected to occur.** Woolly seablite was not observed during rare plant surveys. Woolly seablite occurs in marshes and swamps which are not present onsite. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2/Covered	Chaparral, Coastal scrub/ perennial deciduous shrub/ Apr–May/540–3,280	**Not expected to occur.** Parry's tetracoccus was not observed during rare plant surveys. No collections have been made near Poway, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Texosporium sancti-jacobi	woven-spored lichen	None/None/3/None	Chaparral/crustose lichen (terricolous)/195–2,165	**Not expected to occur.** Woven-spored lichen was not observed during rare plant surveys. No

Scientific Name	Common Name	Status (Federal/State/ CRPR/City of San Diego MSCP)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
				collections have been made near the project site or near Poway, California (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Triquetrella californica	coastal triquetrella	None/None/1B.2/None	Coastal bluff scrub, Coastal scrub/moss//35–330	**Not expected to occur.** Coastal triquetrella was not observed during rare plant surveys. The site is outside of the species' known elevation range.
Viguiera laciniata	San Diego County viguiera	None/None/4.3/None	Chaparral, Coastal scrub/ perennial shrub/ Feb–June(Aug)/195–2,460	**Not expected to occur.** San Diego county viguiera was not observed during rare plant surveys. No collections have been made near Poway. The majority of collections are in within the southwestern section of San Diego county (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).
Xanthisma junceum	rush-like bristleweed	None/None/4.3/None	Chaparral, Coastal scrub/ perennial herb/Jan–Oct/ 785–3,280	**Not expected to occur.** Rush-like bristleweed was not observed during rare plant surveys. Rush-like bristleweed can easily be observed year-round as it is a large perennial the size of a shrub. In addition, it blooms for the majority of the year and through the winter. Some collections occur just west of Iron mountain (Calflora 2023, CCH 2023, San Diego Plant Atlas 2023).

Status Legend
Federal
FC: Candidate for federal listing as threatened or endangered
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SCE: Candidate for state listing as endangered
SE: State listed as endangered
ST: State listed as threatened
SR: State listed as rare
CRPR: California Rare Plant Rank
1A: Plants presumed extirpated in California and either rare or extinct elsewhere
1B: Plants rare, threatened, or endangered in California and elsewhere
2A: Plants presumed extirpated in California, but common elsewhere

2B: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants about which more information is needed – A Review List
4: Plants of Limited Distribution – A Watch List

Threat Rank

0.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

MSCP: Multiple Species Conservation Plan
Covered under the MSCP

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Appendix F

Special-Status Wildlife Species Potential to Occur within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC/Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	**Low potential to occur.** Suitable chaparral and sagebrush present along with riparian woodland present. Beeler creek, a freshwater stream, runs beneath a portion of the site and is associated with coast live oak woodland. Stream channels onsite consist almost entirely of cobble habitat. Arroyo toad require sandy banks which are not present onsite. Upland habitat onsite could support foraging and wintering. No CNDDB occurrences within 5 miles (CDFW 2022). No arroyo toads were observed during wildlife surveys.
Spea hammondii	western spadefoot	None/SSC/None	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Low potential to occur.** Basins occur within the buffer only which have potential for western spadefoot. No vernal pools, basins, or ponds occur onsite. Beeler creek is north of the site which could also support spawning. However, this section of the creek is shallow and lacks areas for ponding. CNDDB occurrences from 2013 located about 3 miles northeast, and multiple occurrences within 5 miles (CDFW 2022). No western spadefoot were observed during wildlife surveys.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL/Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	**High potential to occur.** Live oak woodland associated with Beeler creek present. CNDDB occurrence from 1985 located 3.5 miles southeast in Sycamore canyon (CDFW 2022).
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST/Covered	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry;	**Low potential to occur.** The only suitable habitat for tricolored blackbird colonies would be within the buffer. However, Cattail

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
			forages in grasslands, woodland, and agriculture	populations lack height. Emergent wetland is not fully developed. Grassland and riparian canyon live oak woodland associated with freshwater Beeler creek stream present. CNDDB occurrence from 2000 located 4 miles southeast (CDFW 2022). Tricolored blackbird was not observed during wildlife surveys.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL/Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	**Present.** Observed during wildlife surveys. Open coastal scrub and chaparral present along with grassland. CNDDB occurrence records from 1998 located 0.75 miles northeast (CDFW 2022).
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC/None	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	**Low potential to occur.** Grassland onsite consists of very small patches. Grassland areas are not large enough to support grasshopper sparrow habitat or nesting. No CNDDB occurrence records within 5 miles (CDFW 2022). Grasshopper sparrow was not observed during wildlife surveys.
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL/Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	**Not expected to occur.** No nesting habitat is present. No cliff faces or suitable nesting areas present. No foraging habitat is present. Areas of grassland consist of very small patches of habitat. No CNDDB occurrence records within 5 miles (CDFW 2022). Golden eagle was not observed during wildlife surveys.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL/None	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	**Low potential to occur.** Coastal scrub and dry chaparral present, but not dominated by chamise. CNDDB occurrence from 1998 located 5 miles southeast in Sycamore canyon (CDFW 2022). Bell's sage sparrow was not observed during wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC/Covered	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Low potential to occur.** The site lacks burrows that are large enough for burrowing owl. No CNDDB occurrence records within 5 miles (CDFW 2022). Burrowing owl was not observed during wildlife surveys.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST/Covered	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Low potential to occur.** Riparian woodland is present. Grassland patches are small and patchy onsite. No CNDDB occurrence records within 5 miles (CDFW 2022). Swainson's hawk was not observed during wildlife surveys.
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	None/SSC/Covered	Southern cactus scrub patches	**Not expected to occur.** Arid scrub but no cacti present onsite or within the buffer. CNDDB occurrence records from 1984 located immediately northeast of the site. Coastal cactus wren was not observed during wildlife surveys.
Charadrius nivosus nivosus (nesting)	western snowy plover	FT, BCC/SSC/Covered	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	**Not expected to occur.** No suitable vegetation present. The site is not coastal. Western snowy plover was not observed during wildlife surveys.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE/None	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Low potential to occur.** Riparian woodland present onsite, but not dense or wide. No suitable habitat is present. Narrow strip of live oak woodland associated with Beeler creek present. No CNDDB occurrences within 5 miles (CDFW 2022). Western yellow-billed cuckoo was not observed during wildlife surveys.
Coturnicops noveboracensis	yellow rail	BCC/SSC/None	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	**Not expected to occur.** No suitable marsh vegetation present. Yellow rail was not observed during wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Elanus leucurus (nesting)	white-tailed kite	None/FP/None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Low potential to occur.** Grassland patches are small onsite to attract foraging and minimal mature woodlands are present onsite. Woodlands are patchy and narrow. Areas where trees occur are patchy and immature. Coastal sage scrub and disturbed lands present. Nearest CNDDB occurrence is from 1985 located 3.5 miles southeast in Sycamore canyon (CDFW 2022). White-tailed kite was not observed during wildlife surveys.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE/Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	**Low potential to occur.** Riparian woodland associated with Beeler creek is minimal and patchy. Nesting is unlikely due to minimal width and length of riparian patches. No CNDDB occurrences within 5 miles (CDFW 2022). Southwestern willow flycatcher was not observed during wildlife surveys.
Eremophila alpestris actia	California horned lark	None/WL/None	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	**Not expected to occur.** While grasslands and disturbed lands are present, the site outside the known species range. CNDDB occurrence from 2003 located 3.5 miles south, adjacent to MCAS Miramar (CDFW 2022).California horned lark was not observed during wildlife surveys.
Falco mexicanus (nesting)	prairie falcon	None/WL/None	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	**Not expected to occur.** Grassland suitable for foraging is present. Nearest CNDDB occurrence from 1980 approximately 4 miles south in entire La Mesa quadrant (CDFW 2022). Prairie falcon was not observed during wildlife surveys.
Icteria virens (nesting)	yellow-breasted chat	None/SSC/None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	**Not expected to occur.** Minimal patches of riparian woodland is present onsite, but is patchy and narrow. No CNDDB occurrences

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				within 5 miles (CDFW 2022). Yellow-breasted chat was not present during wildlife surveys.
Ixobrychus exilis (nesting)	least bittern	None/SSC/None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	**Not expected to occur.** No suitable marsh habitat or aquatic vegetation present. No CNDDB occurrences within 5 miles (CDFW 2022). Least bittern was not observed during wildlife surveys.
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	**Not expected to occur.** No suitable wet meadow or tidal marsh present and site is not within Sierra Nevada foothills. No CNDDB occurrences within 5 miles (CDFW 2022). California black rail was not observed during wildlife surveys.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	BCC/SE/Covered	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	**Not expected to occur.** No suitable vegetation present. Belding's savannah sparrow was not observed during wildlife surveys.
Plegadis chihi (nesting colony)	white-faced ibis	None/WL/Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	**Not expected to occur.** No suitable aquatic habitat present. Riparian oak woodland onsite associated with Beeler creek, a freshwater stream. No CNDDB occurrences within 5 miles (CDFW 2022). White-faced ibis was not observed during wildlife surveys.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC/Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	**Present.** Coastal California gnatcatcher was observed during wildlife surveys. Coastal sagebrush present throughout the site. CNDDB occurrence records from 1991 and 1998 within 1 mile. Focused surveys were conducted.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Pyrocephalus rubinus (nesting)	vermilion flycatcher	None/SSC/None	Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches, or pastures	**Not expected to occur.** Riparian woodland habitat is minimal and patchy. Nesting is unlikely. No CNDDB occurrences within 5 miles (CDFW 2022). Vermilion flycatcher was not observed during wildlife surveys.
Rallus obsoletus levipes	Ridgway's rail	FE/FP, SE/Covered	Coastal wetlands, brackish areas, coastal saline emergent wetlands	**Not expected to occur.** No suitable vegetation present. Site is not coastal. Ridgeway's rail was not observed during wildlife surveys.
Setophaga petechia (nesting)	yellow warbler	None/SSC/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Low potential to occur.** Riparian habitat onsite consists of one small patch, Suitable riparian patches present within the buffer only. CNDDB occurrences from 2017 located 1.5 miles east (CDFW 2022). Not observed during wildlife surveys.
Sternula antillarum browni (nesting colony)	California least tern	FE/FP, SE/Covered	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	**Not expected to occur.** No coastal sandy beaches or tidal influence present. California least tern was not observed during wildlife surveys.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE/Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Low potential to occur.** Riparian woodland patches present within buffer only. Adjacent shrubland onsite could support foraging. CNDDB occurrence record from 2017 located along Poway Creek approximately 1.75 miles north (CDFW 2022). Least Bell's vireo was not observed onsite during wildlife surveys.
Invertebrates				
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None/Covered	Vernal pools, non-vegetated ephemeral pools	**Not expected to occur.** No vernal pools or vernal areas present onsite. Riparian stream onsite is vegetated and maintains flow. In addition, basins with high densities of vegetation onsite consist of western toads which would feed on any potential fairy shrimp.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				No fairy shrimp were observed during wildlife surveys.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None/Covered	Vernal pools, non-vegetated ephemeral pools	**Not expected to occur.** No vernal pools or vernal areas present onsite. Riparian stream onsite is vegetated and maintains flow. In addition, basins with high densities of vegetation onsite consist of western toads which would feed on any potential fairy shrimp. No fairy shrimp were observed during wildlife surveys.
Lycaena hermes	Hermes copper	FT/None/None	Mixed woodlands, chaparral, and coastal scrub	**Not expected to occur.** Coastal scrub and southern riparian woodland onsite. While the Poway parcel buffer area contains *Rhamnus crocea* and CA buckwheat, along with other host plants and suitable nectar sources, none are present in the southern San Diego parcel buffer area. No CNDDB occurrences within 5 miles. Hermes copper was not observed during wildlife surveys.
Euphydryas editha quino	quino checkerspot butterfly	FE/SCE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta, Antirrhinum coulterianum, and Plantago patagonica (Silverado Occurrence Complex)	**Not expected to occur.** Suitable open coastal scrub and grassland with floral nectar resources present. CNDDB occurrence records from 2005 located 2 miles east in Sycamore Canyon (CDFW 2022). No Quino checkerspot were observed during focused surveys conducted in 2022. As such it is not expected to occur onsite.
Mammals				
Taxidea taxus	American badger	None/SSC/Covered	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur.** Dry open grasslands and coastal scrub present, but no friable soils. No CNDDB occurrences within 5 miles (CDFW 2022). American badger was not observed onsite during wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST/None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	**Not expected to occur.** Grassland and coastal scrub with disturbed areas present, but no alluvial fans and no CNDDB occurrences within 5 miles (CDFW 2022). Stephen's kangaroo rat was not observed onsite during wildlife surveys.
Euderma maculatum	spotted bat	None/SSC/None	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	**Not expected to occur.** No suitable desert vegetation present and no CNDDB occurrences within 5 miles (CDFW 2022). Spotted bat was not observed onsite during wildlife surveys.
Dasypterus xanthinus	western yellow bat	None/SSC/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	**Not expected to occur.** No suitable vegetation present. Limited riparian habitat at Beeler Creek located immediately north of the San Diego parcel boundary. No CNDDB occurrences within 5 miles (CDFW 2022). Western yellow bat was not observed onsite during wildlife surveys.
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC/None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	**Not expected to occur.** No suitable vegetation present. Limited mesic habitat in riparian woodland at Beeler Creek immediately north of the San Diego parcel Boundary. No CNDDB occurrences within 5 miles (CDFW 2022). Townsend's big-eared bat was not observed onsite during wildlife surveys.
Eumops perotis californicus	western mastiff bat	None/SSC/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	**Low potential to occur.** Coastal scrub present and limited trees for roosting within southern riparian woodland onsite. No CNDDB occurrences within 5 miles (CDFW 2022). Western mastiff bat was not observed during the wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Nyctinomops macrotis	big free-tailed bat	None/SSC/None	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	**Not expected to occur.** No rocky substrate present. Limited riparian woodland associated with Beeler Creek immediately north of the Poway parcel boundary could support foraging and roosting opportunities. No CNDDB occurrences within 5 miles (CDFW 2022). Big free-tailed bat was not observed onsite during wildlife surveys.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	**Low potential to occur.** Coastal scrub and wood rat middens are not present onsite or within the buffer. Nearest CNDDB occurrence is 3 miles southeast from 1998 (CDFW 2022). While San Diego woodrat was not observed onsite during diurnal wildlife surveys, it could still be present as it is mostly nocturnal. *N. macrotis* present.
Lasiurus blossevillii	western red bat	None/SSC/None	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	**Not expected to occur.** No suitable vegetation present. No CNDDB occurrences within 5 miles. Western red bat was not observed onsite during diurnal wildlife surveys.
Reptiles				
Thamnophis hammondii	two-striped gartersnake	None/SSC/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	**Not expected to occur.** No ponding or vernal pools onsite. May use Beeler creek which lies immediately north of the Poway parcel boundary. Nearest CNDDB occurrence is 3 miles southeast from 1998. Two-striped garter snake was not observed onsite during wildlife surveys.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC/None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	**Not expected to occur.** CA buckwheat scrub onsite but no small mammal burrows. No CNDDB occurrences within 5 miles (CDFW 2022). Coast patch-nosed snake was not observed onsite during wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC/Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Not expected to occur.** Open coastal scrub and grassland present but soils are cobbly, gravelly sandy loam. Southern riparian woodland present onsite and adjacent live oak riparian woodland lies immediately north of Poway parcel boundary. Nearest CNDDB occurrence record is 1.5 mils southeast from 1985 (CDFW 2022). Blainville's horned lizard was not observed onsite during wildlife surveys.
Emys marmorata	western pond turtle	None/SSC/Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	**Not expected to occur.** No ponding onsite but may use Beeler Creek immediately north of the Poway parcel boundary. Uplands onsite could be used for nesting and during winter if species is present in adjacent Beeler creek. No CNDDB occurrences within 5 miles (CDFW 2022). Western pond turtle was not observed during wildlife surveys.
Crotalus ruber	red diamondback rattlesnake	None/SSC/None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	**Low potential to occur.** Coastal scrub present onsite. In addition, live oak woodland occurs immediately north of the Poway parcel boundary. Nearest CNDDB occurrence is 2 miles south from 2011 (CDFW 2022). Red diamondback rattlesnake was not observed onsite during diurnal wildlife surveys.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC/None	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	**Not expected to occur.** Project site is hot and dry with southern riparian woodland, but foliage is dense, and soils are gravelly/cobbly sandy loam that is not loose/friable. CNDDB occurrence from 1997 located 2.5 miles east (CDFW 2022). San Diegan tiger whiptail was not observed onsite during wildlife surveys.

Scientific Name	Common Name	Status (Federal/State/ City of San Diego MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Aspidoscelis hyperythra	orange-throated whiptail	None/WL/Covered	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	**Not expected to occur.** Coastal scrub present. Historic CNDDB occurrence records 2 miles north from 1915 (CDFW 2022). Orange-throated whiptail was not observed onsite during wildlife surveys.

Status Legend
Federal
BCC: USFWS—Birds of Conservation Concern
FC: Candidate for federal listing as threatened or endangered
FD: Federally delisted; monitored for 5 years
FE: Federally listed as endangered
FPD: Federally proposed for delisting
FPE: Federally proposed for listing as endangered
FPT: Federally proposed for listing as threatened
FT: Federally listed as threatened
State
FP: CDFW Fully Protected species
SCD: State candidate for delisting
SCE: State candidate for listing as endangered
SCT: State candidate for listing as threatened
SE: State listed as endangered
SSC: California Species of Special Concern
ST: State listed as threatened
WL: CDFW Watch List species